
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549
FORM 10-K

(Mark one)

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the year ended December 31, 2023

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from _____ to _____

Commission file number 001-38410

BioXcel Therapeutics, Inc.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)
555 Long Wharf Drive
New Haven CT
(Address of principal executive offices)

82-1386754
(I.R.S. Employer
Identification No.)
06511
(Zip Code)

Registrant's telephone number, including area code: **(475) 238-6837**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of exchange on which registered
Common Stock, par value \$0.001 per share	BTAI	Nasdaq Capital Market

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

As of June 30, 2023, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately \$134,938,946 (based upon the closing sale price of the registrant's common stock reported on the Nasdaq Capital Market on that date). This calculation excludes shares held by the registrant's current directors and executive officers and stockholders that the registrant has concluded are affiliates of the registrant.

There were 30,576,671 shares of our common stock outstanding at March 18, 2024.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for its 2024 annual meeting of stockholders, which the registrant intends to file pursuant to Regulation 14A with the Securities and Exchange Commission not later than 120 days after the registrant's fiscal year ended December 31, 2023, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We intend such forward-looking statements to be covered by the safe harbor provisions for forward-looking statements contained in Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). The words “anticipate,” “believe,” “can,” “continue,” “could,” “designed,” “estimate,” “expect,” “forecast,” “goal,” “intend,” “may,” “might,” “plan,” “possible,” “potential,” “predict,” “project,” “should,” “target,” “will,” “would” and similar expressions are intended to identify forward-looking statements, though not all forward-looking statements use these words or expressions. All statements contained in this Annual Report on Form 10-K, other than statements of historical fact, are forward-looking statements, including, without limitation, statements regarding:

- our sales strategy for IGALMI™;
- strategy relating to, anticipated benefits from, and cost savings from our Reprioritization (as defined herein);
- our ability to raise additional capital and continue as a going concern;
- developments relating to our TRANQUILITY program;
- the size of our total addressable markets and related underlying estimates;
- our plans relating to clinical trials and marketing applications for our product candidates;
- our plans to research, develop and commercialize our current and future product candidates;
- our plans to seek to enter into collaborations for the development and commercialization of certain product candidates;
- the potential benefits of any future collaboration;
- the timing of and our ability to obtain and maintain regulatory approvals for our product candidates;
- the timing of and results of discussions we have with regulators;
- the rate and degree of market acceptance, clinical utility, number of prescribers and formulary wins of IGALMI™ and any product candidates for which we receive marketing approval;
- our commercialization, marketing and manufacturing capabilities and strategy, including the potential benefits from any advertising campaigns;
- our participation in, and any potential benefits from, events, conferences, presentations and conventions;
- our intellectual property position and strategy;
- our estimates regarding expenses, future revenue, capital requirements and need for additional financing;
- potential investments in, or other strategic options for, our subsidiary, OnkosXcel Therapeutics, LLC (“OnkosXcel”);
- developments relating to our competitors and our industry;
- compliance with covenants under our financing arrangements;
- the impact of government laws and regulations;
- developments related to legal proceedings and investigations; and
- our relationship with BioXcel LLC.

These forward-looking statements are based on management’s current expectations. These statements are neither promises nor guarantees, but involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements, including, but not limited to, those listed under Part I, Item 1A. “Risk Factors,” Part II, Item 7. “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this Annual Report on Form 10-K. These and other important factors discussed under the caption “Risk Factors” in our other filings with the Securities and Exchange Commission (“SEC”) could cause actual results to differ materially from those indicated by the forward-looking statements made in this filing. Given these uncertainties, you should not rely on these forward-looking statements as predictions of future events. While we may elect to update such forward-looking statements at some point in the future, we disclaim any obligation to do so, even if subsequent events cause our views to change.

This Annual Report on Form 10-K also contains estimates, projections and other information concerning our industry, our business, and the markets for certain diseases, including data regarding the estimated size of those markets, and the incidence and prevalence of certain medical conditions. Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. Unless otherwise

expressly stated, we obtained this industry, business, market and other data from reports, research surveys, studies and similar data prepared by market research firms and other third parties, industry, medical and general publications, government data and similar sources.

As used in this Annual Report on Form 10-K, unless otherwise specified or the context otherwise requires, the terms “we,” “our,” “us,” the “Company” or “BTI” refer to BioXcel Therapeutics, Inc., and “BioXcel, LLC” refers to the Company’s former parent company and significant stockholder, BioXcel LLC, and its predecessor, BioXcel Corporation. All brand names or trademarks appearing in this Annual Report on Form 10-K are the property of their respective owners, including IGALMI™, which is a trademark of BioXcel Therapeutics, Inc.

We may use our website as a distribution channel of material information about the Company. Financial and other important information regarding the Company is routinely posted on and accessible through the Investors & Media section of its website at www.bioxceltherapeutics.com. In addition, you may automatically receive email alerts and other information about the Company when you enroll your email address by visiting the “Email Alerts” option under the News / Events menu of the Investors & Media section of our website at www.bioxceltherapeutics.com.

SUMMARY RISK FACTORS

Our business is subject to numerous risks and uncertainties, including those described in Part I, Item 1A. “Risk Factors” in this Annual Report on Form 10-K. You should carefully consider these risks and uncertainties when investing in our common stock. The principal risks and uncertainties affecting our business include the following:

- We have a limited operating history and have not generated substantial product revenues to date, which may make it difficult to evaluate the success of our business to date and to assess our future viability.
- We have incurred significant operating losses since inception and anticipate that we will continue to incur substantial operating losses for the foreseeable future and may never achieve or maintain profitability.
- Our strategic reprioritization and related reduction in force may not achieve our intended outcome.
- We will need substantial additional funding, and if we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts or otherwise seek strategic alternatives. In addition, the failure to raise additional financing in accordance with the minimum capital raising requirements of our Credit Agreement (as defined herein) would trigger an event of default thereunder.
- We have significant indebtedness and other contractual obligations that could impair our liquidity, restrict our ability to do business and thereby harm our business, results of operations and financial condition. We may not have sufficient cash flow from operations to satisfy our obligations under our financing facilities.
- We have identified conditions and events that raise substantial doubt about our ability to continue as a going concern.
- We have limited experience in drug discovery and drug development.
- Developments relating to our TRANQUILITY II Phase 3 trial may impact the timing of our development plans for, and prospects for seeking or obtaining regulatory approval of, BXCL501 for the acute treatment of agitation (non-daily) associated with dementia in patients with probable Alzheimer’s disease and may also subject us to additional risks and uncertainties, including regulatory, stockholder or other actions, loss of investor confidence and negative impacts on the trading price of our common stock.
- In the near term, we are dependent on the success of IGALMI™, and four of our product candidates, BXCL501, BXCL502, BXCL701 and BXCL702. If we are unable to complete the clinical development of or obtain marketing approval for our product candidates or successfully commercialize IGALMI™ or our product candidates, either alone or with a collaborator, or if we experience significant delays in doing so, our business could be substantially harmed.
- Interim “top-line” and preliminary data from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.
- The regulatory approval processes of the United States (“U.S.”) Food and Drug Administration (“FDA”), and comparable foreign authorities are lengthy, time consuming, expensive and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.
- Clinical trials are expensive, difficult to design, difficult to conduct and involve an uncertain outcome.
- We depend on enrollment of patients in our clinical trials to continue development of our product candidates. If we are unable to enroll patients in our clinical trials, our research and development efforts could be adversely affected.

- Our estimated number of episodes of agitation and our corresponding estimated total addressable market are subject to inherent challenges and uncertainties. If we have overestimated the number of episodes or the size of our total addressable market for our current and potential future products or product candidates, or if any approval that we obtain is based on a narrower definition of the patient population, our revenue and ability to achieve profitability may be harmed.
- The discovery and development of product candidates based on EvolverAI, BioXcel LLC's proprietary pharmaceutical discovery and development engine, as well as our own AI platform is novel and unproven, and we do not know whether we will be able to develop any products of commercial value.
- Regulators may limit our ability to develop or implement our proprietary AI algorithms and/or may eliminate or restrict the confidentiality of our proprietary technology, which could have an adverse effect on our business, results of operations, and financial condition.
- Although the FDA has approved IGALMI™ for the acute treatment of agitation associated with schizophrenia or bipolar I or II disorder, we will still face extensive and ongoing regulatory requirements and obligations for IGALMI™ and for any product candidates for which we obtain approval.
- Although we obtained FDA approval for IGALMI™, our products and product candidates may not be accepted by physicians or the medical community in general, and there may be insufficient insurance coverage and reimbursement.
- If we are found in violation of federal, state or foreign health care "fraud and abuse" laws, we may be required to pay significant fines and penalties, which may adversely affect our business, financial condition and results of operations.
- We continue to depend on BioXcel LLC to provide us with certain services for our business.
- BioXcel LLC has significant influence over the direction of our business, and the concentrated ownership of our common stock will prevent you and other stockholders from influencing significant decisions.
- We are substantially dependent on third parties for the manufacture of our clinical supplies of our product candidates, and our commercial supplies of IGALMI™, and we intend to rely on third parties to produce commercial supplies of any other approved product candidate.
- We rely on third parties to conduct our preclinical and clinical trials. If these third parties do not successfully perform their contractual legal and regulatory duties or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.
- Data breaches or cyber-attacks could disrupt our business, operations and information technology systems, and financial results, or result in the loss or exposure of confidential or sensitive Company information.
- We are and may in the future be subject to legal proceedings, claims and investigations in or outside the ordinary course of business. Such proceedings, claims and investigations could be costly and time-consuming to defend and could result in unfavorable outcomes, which may have a material adverse effect on our business, operating results and financial condition, and negatively affect the price of our common stock.
- Unfavorable global political or economic events and conditions could adversely affect our business, financial condition or results of operations.
- We face risks associated with the increased scrutiny relating to environmental, social and governance matters.
- It is difficult and costly to protect our proprietary rights, and we may not be able to ensure their protection.

TRADEMARKS, TRADE NAMES AND SERVICE MARKS

This Annual Report includes our trademarks, trade names and service marks, including, without limitation, “IGALMI™” and our logo, which are our property and are protected under applicable intellectual property laws. Solely for convenience, trademarks, trade names and service marks may appear in this Annual Report without the ®, TM and SM symbols, but such references are not intended to indicate, in any way, that we or the applicable owner forgo or will not assert, to the fullest extent permitted under applicable law, our rights or the rights of any applicable licensors to these trademarks, trade names and service marks. We do not intend our use or display of other parties’ trademarks, trade names or service marks to imply, and such use or display should not be construed to imply, a relationship with, or endorsement or sponsorship of us by, these other parties.

INDUSTRY AND OTHER DATA

Unless otherwise indicated, information contained in this Annual Report concerning our industry and the markets in which we operate, including our general expectations, market position and market opportunity, is based on our management’s estimates and research, as well as industry and general publications and research, surveys and studies conducted by third parties. While we believe the information from these third-party publications, research, surveys and studies included in this Annual Report is reliable, we do not guarantee the accuracy or completeness of such information, and we have not independently verified this information. Management’s estimates are derived from publicly available information, their knowledge of our industry and their assumptions based on such information and knowledge, which we believe to be reasonable. This data involves a number of assumptions and limitations which are necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in this Annual Report under “Forward Looking Statements,” “Risk Factor Summary” and Part I, Item 1A “Risk Factors.” These and other factors could cause our future performance and market expectations to differ materially from our assumptions and estimates.

PART I

Item 1. Business

Overview

BioXcel Therapeutics, Inc. (“BTI,” the “Company,” “we,” “us” or “our”) is a biopharmaceutical company utilizing artificial intelligence (“AI”) to develop transformative medicines in neuroscience and, through the Company’s wholly owned subsidiary, OnkosXcel Therapeutics LLC (“OnkosXcel”), immuno-oncology. We are focused on utilizing cutting-edge technology and innovative research to develop high-value therapeutics aimed at transforming patients’ lives. We employ various AI platforms to reduce therapeutic development costs and potentially accelerate development timelines. Our approach leverages existing approved drugs and/or clinically evaluated product candidates together with big data and proprietary machine learning algorithms to identify new therapeutic indications. We believe this differentiated approach has the potential to reduce the expense and time associated with drug development in diseases with substantial unmet medical needs.

On April 6, 2022, we announced that the United States (“U.S.”) Food and Drug Administration (“FDA”) approved IGALMI™ (dexmedetomidine (or “Dex”)) sublingual film for the acute treatment of agitation associated with schizophrenia or bipolar I or II disorder in adults. IGALMI™ is approved to be self-administered by patients under the supervision of a health care provider. On July 6, 2022, we announced that IGALMI™ was commercially available in doses of 120 and 180 microgram (“mcg”).

Our most advanced neuroscience candidate is BXCL501. In indications other than those approved by the FDA as IGALMI™, BXCL501 is an investigational, proprietary, orally dissolving film formulation of Dex in development for the treatment of agitation associated with psychiatric and neurological disorders.

We are continuing to develop BXCL501 for the potential acute treatment of agitation associated with bipolar disorders or schizophrenia in the at-home setting and for the potential acute treatment of agitation (non-daily) associated with dementia due to probable Alzheimer’s disease in the at-home setting and in care facilities. As described further below, we have deprioritized the development of BXCL501 for certain other proposed indications, including development of BXCL501 as a potential adjunctive treatment for major depressive disorder (“MDD”), as well as our BXCL701 program, except as noted under “Immuno-Oncology” below.

Our most advanced immuno-oncology candidate, BXCL701, is an investigational oral innate immune activator being developed by OnkosXcel as a potential therapy for the treatment of aggressive forms of prostate cancer, pancreatic cancer, and other solid and liquid tumors.

Neuroscience

Our Neuroscience Strategy

Our goal is to become the leading AI-enabled neuroscience therapeutics company. We continue to evaluate all strategic options for our neuroscience assets, which could include licensing, partnering, and co-commercialization.

Our Novel Drug Re-Innovation Approach

We aim to deploy and implement, throughout the drug development process, an AI ecosystem designed to rapidly identify medications related to our key focus areas of neuroscience and immuno-oncology. Our in-house, uniquely integrated AI-to-drug-development capability is complemented by the services and technology of BioXcel LLC, our former parent company. It includes a labeled properties graph (also referred to as a “knowledge graph”) that visually relates collected big data in the form of entities and their properties that include neuropsychiatric symptoms, brain circuits, drug targets, and existing drugs. We believe that understanding the relation between entities relevant to drug development may lead to novel potential uses for existing drugs. Predictive algorithms or queries of the knowledge graph may uncover not only single drugs but potentially identify new combinations of drugs that we believe may be

more effective in treating disorders than single agents. New combinations of drugs may lower tolerable doses of drugs and provide the basis for stronger intellectual property positions. Our AI team works closely with our Business Development team to prioritize in a data-driven manner the most valuable external opportunities. These opportunities may be found in new potential uses for launched drugs, in drugs that are part of pharmaceutical company pipelines no longer being pursued, or within academic efforts to develop new drug candidates.

Traditional drug development is marred by low success rates, long drug development cycles, and exorbitant development costs that are increasing year over year. In addition, many serious diseases remain unaddressed due to limitations of the current drug discovery paradigm. The pharmacological universe spans more than 27,000 active pharmaceutical agents, of which only approximately 4,000 are approved and marketed. Marketed drugs may not be exclusively effective in the indication for which they are approved but relevant to other indications, including rare diseases, and thus represent an untapped potential for addressing unmet medical needs and recouping research and development costs. Many of the remaining agents are active clinical candidates that are shelved or have failed for reasons other than toxicity, which offers the opportunity to re-innovate for other indications or patient segments. Such agents potentially represent an unrealized investment of billions of research and development dollars by the private and public sectors, while failing to remediate immeasurable patient suffering and sacrifice during clinical development. Also, these compounds may have known pharmaco-dynamic and pharmaco-kinetic properties, potentially allowing for a more data-driven selection of appropriate doses for development programs. Finally, with respect to neuropsychiatric indications, we prioritize those compounds with structural design features that we believe may contribute to high blood-brain barrier permeability, and therefore could increase the likelihood of compound penetration into the brain. Lack of brain penetration is a common cause for failure of many drugs developed for neuropsychiatric indications. In addition, we are prioritizing compounds with available human safety data, acceptable pharmacokinetic results, and data that support a high probability of achieving reasonable brain concentrations after dosing. The compounds in our pipeline have been identified using this proprietary platform.

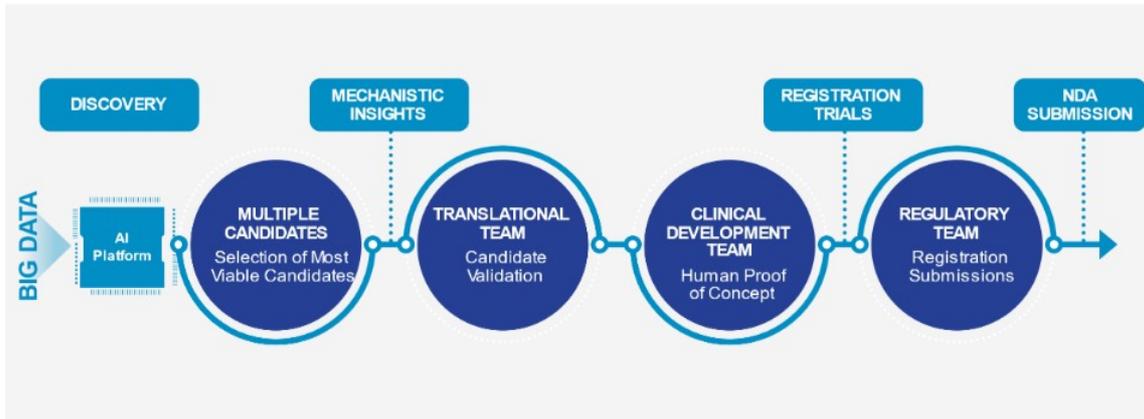
This drug re-innovation model has been exemplified by the successful development and commercialization of drugs such as Tecfidera[®] (Biogen, Inc.), Thalomid[®] (Celgene Corporation), and Viagra[®] (Pfizer, Inc.). All of these drugs were identified by insights in biology and disease pathophysiology. The successful business models of biotech companies like Axsome Therapeutics, Inc. and Karuna Therapeutics, Inc. are based on the re-innovation and combination of existing clinical candidates or marketed drugs to provide novel solutions for patients. Unfortunately, such discoveries have been severely limited in scope due to the lack of a genuinely integrated approach to mining big data and advanced analytics.

Our AI-based discovery and development process is the foundation of our drug re-innovation model for identifying the next wave of potential medicines. Our therapeutic area experts have over 200 years of combined experience across the drug discovery and development value chain. We believe that our method of finding potential product candidates gives us a higher probability of success because it combines AI expertise and intuition of human experience in drug development. We believe the combination of AI and drug discovery and development expertise facilitates the generation of therapeutic candidates and gives us a significant competitive advantage.

Our approach is illustrated below:

Integrated Drug Discovery & Development Approach

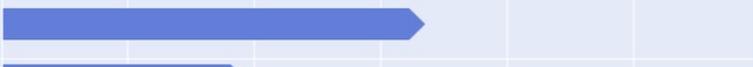
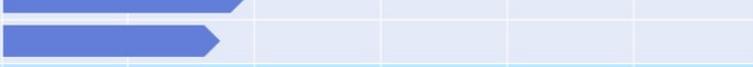
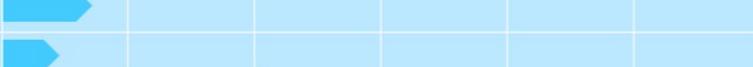
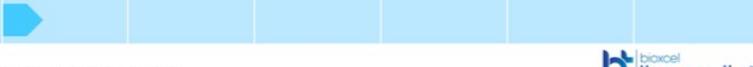
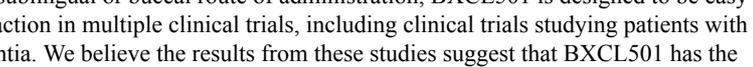
Utilizing Proprietary AI Platform



We continue to integrate and evolve our neuroscience and immuno-oncology AI machine learning and drug discovery and development platform. Our platform led to the identification of Dex, the rapid development of BXCL501, and its approval by the FDA as IGALMI™, as well as the advancement of BXCL501 for other potential indications. We are continuing to leverage our platform to identify and develop new neuroscience and immuno-oncology programs.

Our Neuroscience Programs

The following is a summary of the status of our neuroscience clinical development programs as of the date of this Annual Report on Form 10-K:

Compound	Indication/Proposed Indication	Preclinical	Phase 1	Phase 2	Phase 3	Registration	Marketed
 Igalmi (dexmedetomidine) <small>sublingual film 0.5mg/50mcg</small>	APPROVED APRIL 5, 2022 Acute treatment of agitation associated with schizophrenia or bipolar I or II disorder in adults under healthcare provider supervision						
	TRANQUILITY PROGRAM Acute treatment of agitation associated with Alzheimer's dementia						
BXCL501	SERENITY PROGRAM Acute treatment of agitation associated with bipolar disorders/schizophrenia (at home)						
	Opioid Use Disorder (OUD)*						
	Post Traumatic Stress Disorder (PTSD)*						
BXCL502	Neuropsychiatric symptoms Chronic agitation in Alzheimer's dementia						
Candidate BXCL503	Apathy in dementia						
Candidate BXCL504	Aggression in dementia						

*Government-funded, investigator-sponsored trials
The safety and efficacy of investigational agents and/or investigational uses of approved products have not been established



As a selective adrenergic agent with a sublingual or buccal route of administration, BXCL501 is designed to be easy to administer and has shown a rapid onset of action in multiple clinical trials, including clinical trials studying patients with schizophrenia, bipolar disorders, and dementia. We believe the results from these studies suggest that BXCL501 has the potential to generate a calming effect without producing excessive sedation. We believe that BXCL501 is highly differentiated from antipsychotics currently used as a standard of care for the treatment of agitation that often produce unwanted side effects such as excessive sedation and extra-pyramidal motor effects. Managing patient agitation in neuropsychiatric and neurodegenerative disorders represents a significant challenge for physicians and caregivers. We believe that BXCL501 has the potential to address these challenges while providing an efficient treatment regimen for patients.

Agitation Overview and Market Opportunity

Agitation in patients with neuropsychiatric diseases is a serious medical condition. Agitation is characterized by feelings of unease, excessive talking, and/or unintentional and purposeless motions, such as wringing of the hands or pacing. People experiencing agitation may also express excitement, hostility, poor impulse control, tension, uncooperativeness, and occasional disruptive behavior, which may lead to aggression and violence. In many cases, people develop agitation when treatment for their underlying disorder is not working well. Stressful situations or traumatic events can also trigger agitation. Agitation can occur suddenly or slowly and vary in length, lasting for a few minutes or for an extended period.

With the agitation issues associated with schizophrenia and bipolar disease coupled with a fast-growing elderly population that is potentially likely to experience agitation associated with Alzheimer's disease, the difficulties and expenses of acute treatment of agitation are expected to grow significantly. We estimate that in the United States, there are approximately 1.9 million patients diagnosed with Alzheimer's disease-related dementia ("AAD") and that those patients experience agitation at a rate of about six episodes per month, on average. In addition, we estimate that there are approximately 1.6 million Americans diagnosed with schizophrenia or bipolar disorders and that those patients experience agitation at a rate of about three episodes per month, on average. We, therefore, believe there is significant potential market opportunity for BXCL501 if approved for use in these patient populations in the at-home setting. The

foregoing estimates of the incidence of each patient population and the number of agitation episodes experienced and potential market opportunity are based on management's estimates and third-party data, which may be materially different from actual agitation episodes and actual treatable patients. For additional information regarding risks associated with these estimates, see Part I, Item 1A, Risk Factors "*— Our estimated number of episodes of agitation and our corresponding estimated total addressable market are subject to inherent challenges and uncertainties. If we have overestimated the number of episodes or the size of our total addressable market for our current and potential future products or product candidates, or if any approval that we obtain is based on a narrower definition of the patient population, our revenue and ability to achieve profitability may be harmed.*"

Treatments for Agitation

Antipsychotics, the current standard of care for acute treatment of agitation in schizophrenia and bipolar disorder, are also used off-label to treat agitation in dementia and other conditions. Side effects of these medications include movement disorders, including akathisia and extrapyramidal symptoms. One of the serious limitations of these drugs is that they can sedate the patient and do not permit verbal interaction with the hospital staff to continue. Intramuscular ("IM")-delivered antipsychotics, such as haloperidol and olanzapine, are used extensively in this setting but are invasive and often require patient restraint. This type of treatment can dehumanize patients and cause trauma that could have long-term impact on them. Furthermore, these treatments include a black box warning for use in elderly patients.

While sublingual tablet formulations utilizing antipsychotics have been developed, these formulations have long half-lives (21-24 hours) and significant side effects when given acutely or chronically. Oral agents such as benzodiazepines are also used but have a slow onset of action and are consequently ineffective in the acute treatment of agitation. Side effects of these agents include sedation, amnesia, confusion, and paradoxical responses. They can intensify cognitive slowing and worsen memory and motor impairment, contributing to an increased risk of falls and fractures. In addition, long-term use of benzodiazepines has been found to be habit-forming and can cause addiction or relapse to abuse substances. Nonadherence with oral agents can also be problematic as patients may attempt to spit out these medications. We believe that, based on the current method of administration of oral medicine for agitation, an orally dissolving, mucoadhesive film could offer compliance advantages by making it less likely that patients will avoid treatment.

The sublingual or buccal route of administration is an accepted alternative to oral administration of drug delivery to the central nervous system when rapid onset or more controlled delivery is required. Currently, there are six products approved for film administration, including our product, IGALMI™. For example, BioDelivery Sciences International, Inc., a commercial-stage specialty pharmaceutical company, has developed a buccal film formulation of buprenorphine for chronic pain management and buprenorphine and naloxone for opioid dependence. We developed BXCL501 as a differentiated sublingual film dosage form of Dex, which we believe may offer benefits such as ease of use and quick absorption for rapid therapeutic effects.

Mechanism of Action: α 2a Adrenergic Receptor and NE Role in Acute Agitation

BXCL501 is a sublingual formulation of Dex that is designed to be easily administered and have a rapid onset of action. Dex is approved in the U.S. for the sedation of initially intubated and mechanically ventilated patients during treatment in the intensive care unit ("ICU"). It is also used in the intensive care setting for sedation of non-intubated patients prior to and/or during surgical and other invasive procedures. Dex, launched in the U.S. as Precedex™ in 1999, is a selective α 2a adrenergic receptor agonist that has a strong safety record and has been studied in over 130 clinical trials to date. It has also been sold in the European Union ("EU") and other countries under the trade name Dexdor® as a sedative for intensive care patients. Dex was approved by the European Commission for sedation of adult ICU patients requiring a sedation level no deeper than arousal in response to verbal stimulation (corresponding to Richmond Agitation-Sedation Scale 0 to -3). It has been used to prevent or treat hyperactive delirium resulting from anesthesia in

the ICU. Given these uses of the IV formulation of Dex, we believe Dex formulated in a sublingual film and at much lower doses allows for ease of administration in settings where rapid acute treatment of agitation is needed.

IGALMI™ Commercial Progress

We continue to support IGALMI™ in the hospital setting through limited and focused commercial activity. On August 14, 2023, the Company announced it had implemented a shift in commercial strategy for IGALMI™ in the institutional setting, a reduction of in-hospital commercialization expenses, a suspension of programs no longer deemed core to the Company's business, and a shift to focus on the development of BXCL501 for use in the at-home and care facilities in the treatment of acute agitation in schizophrenia and bipolar disorders, and in the treatment of acute agitation (non-daily) associated with dementia due to probable Alzheimer's disease (collectively, the "Reprioritization"). Following the Reprioritization, a small Corporate Account Director ("CAD") team supports current customers and targeted Integrated Delivery Networks ("IDNs") with educational support and contracting opportunities, while our trade operation supports customers with drug supply. The goal of this approach is to help maintain current business and potentially broaden IGALMI™ utilization through volume contracting. Over time, we believe the revised commercial effort is expected to allow the Company to continue to make inroads into the institutional market in a more cost-efficient manner.

Commercial efforts for the IGALMI™ launch were impacted significantly in the six months ended December 31, 2023 due to the reduction in force, which included the elimination of sales, marketing, and commercial operations staff. The realigned CAD team generated \$376,000 in net revenue for the three-month period ended December 31, 2023 through legacy sales and volume-based contracts, up from \$341,000 for the three-month period ended September 30, 2023. Net revenues from IGALMI™ product sales for the years ended December 31, 2023 and 2022 were \$1.4 million and \$375,000 respectively.

On October 30, 2023, we announced that the Centers for Medicare & Medicaid Services ("CMS") assigned a new J-Code for IGALMI™ (J1105). J-Codes are permanent codes used by healthcare providers, commercial insurance plans, and government payers to help standardize the reimbursement process. A J-Code can help simplify claims submission as compared to use of a miscellaneous or unlisted code, which in turn can streamline the billing and reimbursement process. The J-Code for IGALMI™ has been published online in the CMS HCPCS Application Summaries and Coding Recommendations, Third Quarter, 2023 HCPCS Coding Cycle. We believe this J-Code, which became effective on January 1, 2024, will facilitate access to IGALMI™ for patients with agitation associated with bipolar disorder or schizophrenia.

If IGALMI™ is approved outside the U.S., we would consider launching the product through collaborations with third parties.

Our continued commercialization efforts for IGALMI™ are designed to build the foundation to launch additional potential follow-on indications, if any, paving the way for our expanding neuroscience business.

BXCL501 Development

In indications other than those approved by the FDA as IGALMI™, BXCL501 remains an investigational, proprietary, orally dissolving film formulation of Dex, a selective alpha-2 receptor agonist, targeting symptoms from stress-related behaviors such as agitation. BXCL501 is our most advanced neuroscience clinical program, being evaluated for the at-home acute treatment of agitation related to bipolar disorders or schizophrenia and for the acute treatment of agitation (non-daily) in patients with dementia due to probable Alzheimer's disease in care facilities and at-home settings.

As a selective adrenergic agent with a sublingual or buccal route of administration, BXCL501 is designed to be easily administered and, compared to medications that may take days or weeks, has shown a relatively rapid onset of action in multiple clinical trials, including those studying patients with bipolar disorders, schizophrenia, and Alzheimer's disease. We believe results from these studies suggest that BXCL501 has the potential to reduce agitation without producing excessive sedation. We also believe BXCL501 is highly differentiated from antipsychotics, which are

currently used as first-line standard-of-care treatments despite often producing unwanted side effects such as excessive sedation or extra pyramidal motor effects. Managing patient agitation in neuropsychiatric and neurodegenerative disorders represents a significant challenge for physicians and caregivers. We believe BXCL501 has the potential to address these challenges while providing an efficient treatment regimen for patients.

We also believe that BXCL501, if approved for the respective indications, has the potential to become the standard of care for the acute treatment of agitation arising from diseases such as schizophrenia and bipolar disorder and Alzheimer's disease.

In addition, given the differentiated design of BXCL501 and its potential mechanism of action, we believe BXCL501 has the potential to address several diseases or conditions for which agitation is a symptom of the condition or underlying disease, including opioid withdrawal and post-traumatic stress disorder ("PTSD"), which are being evaluated in clinical trials run by third-parties.

BXCL501 Clinical Trials

TRANQUILITY Program: Acute Agitation Associated with Dementia due to Probable Alzheimer's Disease (AAD)

On June 29, 2023, we announced positive topline results from TRANQUILITY II, a randomized, double-blind, placebo-controlled, parallel group trial that evaluated the safety and efficacy of BXCL501 for the acute treatment of Alzheimer's-related agitation in adults 65 years and older with mild to moderate dementia in assisted living facilities ("ALFs") and residential care settings who required minimal assistance with activities of daily living. The trial dosed 149 patients. Randomized patients self-administered 40 mcg or 60 mcg of BXCL501 or placebo for agitation episodes that occurred over a 12-week period. The primary endpoint was the change from pre-dose in PEC total score at 2 hours post-dose for the first treated episode of agitation. The key secondary efficacy endpoints were PEC change from pre-dose at 1-hour post-dose of study treatment for the first treated episode of agitation, and PEC change from pre-dose at 30 minutes post-dose of study treatment for the first treated episode of agitation.

The Phase 3 trial met its primary efficacy endpoint with the 60 mcg dose; a statistically significant and clinically meaningful 7.5 point reduction from baseline in Positive and Negative Syndrome Scale-Excitatory Component ("PEC") total score was observed at 2 hours versus 5.4 with placebo ($p=0.0112$). The 60 mcg dose also met the first key secondary endpoint of reducing agitation symptoms at 1 hour during the first episode of agitation ($p=0.0185$) but did not meet the other key secondary endpoint of change from baseline in PEC score at 30 minutes.

Efficacy for this dose was supported by several secondary measures, including CGI-Improvement and Agitation-Calmness Evaluation Scale. Most patients (76%) responded to the first 60 mcg dose and were determined to be "Very Much" or "Much Improved" (CGI-I of 1 or 2, respectively) compared to 50% with placebo. The primary endpoint was not met for the 40 mcg dose, with a 5.7 point reduction from baseline in PEC score.

On June 29, 2023, we also announced that we had learned that an investigator in this study, who enrolled approximately 40% of the patients, engaged in misconduct. Since that time, we have taken steps to further investigate and evaluate the conduct of the TRANQUILITY II trial at this clinical site. Based on these steps to date, we believe that there have been no further instances of misconduct or fraud or other findings that adversely impact the data integrity or reliability of the eligibility, safety, and efficacy data obtained at the clinical trial site in question.

Our TRANQUILITY III trial was designed to evaluate the safety and efficacy of BXCL501 in patients residing predominantly in nursing homes with moderate to severe dementia due to Alzheimer's disease who require moderate or greater assistance with activities of daily living. We halted additional enrollment in this Phase 3 after initial enrolled patients were observed to have more frequent episodes of agitation than originally anticipated, suggesting that agitation may present chronically in this population. Due to the chronic nature of agitation episodes observed in this population thus far, we believe that continued evaluation of BXCL501 in this population would require a different development program targeting more frequent or chronic use. We have chosen to focus our development efforts on the urgent need for episodic treatment in the care facility and at-home setting.

In a Type B/Breakthrough Therapy designation meeting with the FDA on October 11, 2023, we reviewed our

TRANQUILITY clinical trial program and discussed the data package required to support submission of an sNDA for the potential approval of BXCL501 for the acute treatment of agitation in patients with mild to moderate dementia due to probable Alzheimer's disease in the ALF and at-home settings. Specifically, we sought feedback from the FDA as to whether our data package consisting of TRANQUILITY I and II, along with the clinical pharmacology and toxicology programs previously discussed with the FDA, would be sufficient to support an sNDA submission for the potential use of BXCL501 to treat agitation in patients with mild to moderate dementia due to probable Alzheimer's disease in either the at-home or ALF setting, or, if not, what additional data would be required. Based on the FDA's feedback in this meeting, we understand that the FDA will require additional efficacy data, including repeat efficacy data, and that it requested long-term safety data. We therefore requested another meeting with the FDA to further discuss the additional data that would be required to support an sNDA submission.

On February 20, 2024, we held a Type B/Breakthrough Therapy designation meeting with the FDA. The original purpose of this meeting was to obtain feedback on the design of a proposed at-home study that did not include caregiver-collected efficacy endpoints, based on our belief that obtaining caregiver assessments of efficacy would be challenging. We believe there are no validated caregiver endpoints for assessing efficacy in Alzheimer's disease patients in the at-home setting. As a result, we focused on requesting feedback from the FDA regarding our proposal for an at-home clinical study with safety as the primary objective, and to better understand what additional data would be required to submit an sNDA to support labeling for BXCL501 to include the acute treatment of agitation associated with dementia in probable Alzheimer's disease or, in the alternative, in this population in the care setting only. In its preliminary responses, the FDA reiterated its prior comments that we generate additional efficacy data, including repeat-dose efficacy data, to support an sNDA submission, as the FDA indicated that our proposed efficacy database, which currently includes the 70 patients who have been treated with 60 mcg of BXCL501 in TRANQUILITY I and TRANQUILITY II, would not contain substantial evidence of effectiveness absent additional data. The FDA advised that we generate the necessary efficacy data in care facilities prior to conducting any trials in the at-home setting. In addition, the FDA indicated the need to generate long-term safety data to support an sNDA submission, including from probable Alzheimer's disease patients exposed to BXCL501, for up to one year. We have received the final meeting minutes from the FDA, which we believe are consistent with the FDA's preliminary responses and the subsequent meeting discussion. Based on the FDA's feedback, we are currently planning to generate additional Phase 3 efficacy and safety data, in a variety of relevant care-facility settings and across severity of dementia using the Positive and Negative Syndrome Scale-Excitatory Component ("PEC") as the primary efficacy measure, as used in the prior TRANQUILITY II study. In addition, we plan to discuss the details of the requirement for long-term safety data at a future meeting with the FDA. Also, although we announced in November 2023 that we were planning to conduct a Phase 3 trial in the at-home setting, with safety as the primary objective (TRANQUILITY At Home), given the priority to expand the database to generate additional efficacy and safety data in care facilities, we are re-evaluating the timing for initiating TRANQUILITY At Home.

SERENITY Program: Agitation Associated with Bipolar Disorders I and II and Schizophrenia (at-home use)

We initiated the SERENITY III clinical study of BXCL501 in patients with agitation associated with bipolar disorders or schizophrenia in SERENITY III, which consists of two parts. The first part was comparable to our pivotal SERENITY I and II studies. Using similar inclusion and exclusion criterion under a well-controlled in-patient setting, acutely agitated patients with schizophrenia or bipolar disorders were randomized to self-administer either 60 mcg of BXCL501 or placebo in a double-blind placebo-controlled trial. The primary endpoint of Part I was efficacy, as measured by the change in PEC score change from baseline at two hours post-dose. The secondary objectives of Part I were safety and tolerability.

On May 25, 2023, we reported topline results from Part I of the study. Although the trial did not meet its primary efficacy endpoint, we believe the efficacy results, observed with the 60 mcg dose, representing half of the lowest approved dose of IGALMI™ for in-patient use (120 mcg), were promising. Specifically, greater than 50% of individuals were responders, defined as those patients who achieved a 40% or greater reduction in PEC score. Furthermore, this population responder rate was consistent and dose-proportionate to the same response rates observed in the larger SERENITY I and II trials. Although the primary efficacy endpoint as a group mean change in PEC score from baseline at 2 hours was not statistically significant at the primary endpoint at 2 hours ($p=0.077$), BXCL501 statistically separated from placebo at 4 hours ($p=0.049$).

Part II of the SERENITY III study was designed to evaluate the same dose tested in Part I, 60 mcg (with an optional additional 60 mcg dose), but in the at-home setting and focusing on safety only. However, because the trial did not meet its primary efficacy endpoint using this 60 mcg dose in Part I, we paused continuation of Part II of the study pending feedback from the FDA. We held a Type C meeting on November 8, 2023 with the FDA to discuss changes to Part II of our SERENITY III study. We proposed the evaluation of an 80 mcg dose based on previous clinical experience with this dose during our Phase 1b trial in schizophrenia patients with agitation, and pharmacokinetic and pharmacodynamic modeling suggesting that use of an 80 mcg dose of BXCL501 could provide an optimal balance between safety and efficacy for at-home use. Based on feedback from the FDA during the meeting, we made the decision to evaluate a 120 mcg dose in the at-home setting. The 120 mcg dose has already demonstrated efficacy based on the approved conditions of use for IGALMI™ (when administered under the supervision of a healthcare provider, for a single agitation episode), so we sought further feedback from the FDA regarding the proposed design of this study amendment in a request for a follow-up meeting with the FDA, which was held on March 6, 2024.

Based on the FDA's feedback in advance of and during the March 6, 2024 meeting, we plan to move forward to evaluate at-home use of the 120 mcg dose of BXCL501, with safety as the primary objective and efficacy measures as exploratory endpoints to support continued efficacy in the at-home setting as recommended by the FDA in the November 8, 2023 meeting, for the acute treatment of agitation in bipolar disorders or schizophrenia. We also plan to conduct a clinical study designed to enroll approximately 30 patients to evaluate the correlation between patient-reported or informant-reported efficacy with trained rater-reported efficacy using PEC measurements, which the FDA had previously recommended.

IGALMI™ is already approved at the 120 mcg dose based on efficacy data that we previously generated in treating a single episode of agitation. Consistent with the data generated to date, the label for IGALMI™ currently includes a limitation on use ("LOU"), noting the lack of efficacy or safety data beyond 24 hours following the first dose. During our March 6, 2024 Type C meeting with the FDA, we discussed, among other things, whether evaluating the at-home use of BXCL501 120 mcg, with safety as the primary objective and efficacy measures as exploratory endpoints, if successful, could support the submission of an sNDA seeking expansion of the current label for IGALMI™ 120 mcg to allow at-home use and labeling without the current LOU. Based on FDA feedback, we believe that our ability to seek labeling without the current LOU will depend, in part, on the number of agitation episodes we observe during our planned study period. We plan to provide further guidance regarding our plans for the SERENITY program following receipt of the final meeting minutes from the FDA.

Adjunctive treatment in Major Depressive Disorder ("MDD")

We were previously evaluating BXCL501 as an adjunctive treatment for MDD. The initial clinical study in this program was a double-blind, placebo-controlled, multiple ascending dose ("MAD") trial to evaluate the safety and tolerability of daily doses of BXCL501 in healthy volunteers.

On May 16, 2023, we reported positive topline results from a MAD study. It enrolled 125 healthy adult volunteers across seven different cohorts in a 2:1 randomization to BXCL501 or placebo film. Healthy volunteers were dosed for 7 consecutive days. Both safety and pharmacokinetics were assessed. The study included 7 cohorts. Four distinct cohorts received 30 mcg, 60 mcg, 80 mcg, or 120 mcg doses of BXCL501 or placebo once daily. Two additional dosing cohorts received twice-daily (BID) BXCL501 at either 30 mcg in the morning and 60 mcg in the evening, or 40 mcg in the morning and 80 mcg in the evening. The final escalation cohort evaluated BXCL501 at 60 mcg in the morning and 80 mcg in the evening in combination with 30 mg of duloxetine BID. BXCL501 was generally well tolerated across all dosing cohorts. Based upon pre-specified stopping criteria, a maximum tolerated dose was not reached. All adverse events were reported as mild or moderate.

As part of the Reprioritization announced on August 14, 2023, we have paused our plan to develop a Phase 2 human proof-of-concept trial design to investigate BXCL501 as a potential adjunctive treatment and its potential accelerant effect in combination with first-line selective serotonin reuptake inhibitors or serotonin-norepinephrine reuptake inhibitors.

Pediatric Study

In June 2021, we initiated a global clinical trial designed to evaluate the safety and efficacy of BXCL501 in the acute treatment of agitation associated with pediatric schizophrenia and bipolar disorders, in part to fulfill pediatric study requirements agreed to with the FDA in connection with the approval of IGALMI™. The trial protocol has been reviewed by the FDA, as well as by the European Medicines Agency, to fulfill potential commitments to study the effects of BXCL501 in pediatric patients ages 13 to 17 with schizophrenia and ages 10 to 17 with bipolar disorders. Enrollment of patients with schizophrenia, schizoaffective disorder, bipolar I, and bipolar II disorder is ongoing in this multisite, double-blind, placebo-controlled parallel group trial. Approximately 54% of the 150 total subjects have been enrolled in the U.S. and 81 of such subjects have completed the clinical trial. In July 2023, we stopped activities in the European region as enrollment and site recruitment was unproductive. Similar to our registration trials in schizophrenia and bipolar disorder (SERENITY I and II), the primary endpoint is the change from baseline PEC total score at two hours. The U.S. portion of this program remains active following the Reprioritization.

Additional Neuroscience Opportunities

BXCL501 Pipeline Opportunities for Franchise Expansion

Given the differentiated design of BXCL501 and its selective mechanism of action, we believe BXCL501 has the potential for broad applicability across several indications where agitation is a symptom of a condition or underlying disease.

Government-Supported Investigator-Initiated Trial Programs

The Company has been awarded key opportunities for the development of BXCL501 in post-traumatic stress disorder (“PTSD”), alcohol use disorder (“AUD”), and opioid use disorder (“OUD”). These are being funded through Cooperative Agreements with the U.S. Department of Defense Congressionally Directed Medical Research Program and National Institute on Drug Abuse (“NIDA”). Clinical and regulatory responsibilities are led by clinical researchers and regulatory staff at the Veterans Affairs Connecticut Healthcare System, Yale University Medical School, RTI International, Columbia University New York State Psychiatric Institute, and NIDA. The Company has retained all rights to commercialization of BXCL501 in all potential indications evaluated in clinical trials supported by the U.S. government.

Opioid Use Disorder Program

As previously announced, NIDA awarded a grant to Columbia University to fund clinical testing of BXCL501 as a potential treatment for opioid withdrawal in patients diagnosed with OUD. The original 160-patient, three-site, four-arm study is a randomized, double-blind, double-dummy inpatient study comparing BXCL501 (180 mcg and 240 mcg BID), lofexidine (as a positive control), and placebo. The study’s goal is to evaluate the safety and efficacy of BXCL501 relative to lofexidine and placebo in subjects with OUD. A majority of OUD patients participating in the study are anticipated to be exposed to fentanyl adulterated or associated with xylazine. To date, all three initial sites have recruited, enrolled, and dosed patients diagnosed with OUD who are physically dependent on opioids, including prescription opioids. The Company is supplying the drug product for the conduct of this study, which is sponsored by Columbia University. We expect that the results from current study will be used to select a recommended dose of BXCL501 to compare to placebo in a later outpatient Phase 3 study sponsored by NIDA.

On November 6, 2023, we announced that NIDA has requested Columbia University, the trial coordinator, to add a fourth site to target trial completion in 2024. The patient screening and enrollment process for the fourth site commenced in March 2024. Pending favorable results, after completion of the trial, we plan to seek FDA feedback on potential registrational paths.

Alcohol Use Disorder with Comorbid Post-traumatic Stress Disorder Program

In December 2020, the Veterans Affairs Connecticut Healthcare System and Yale University Medical School were awarded a grant by the U.S. Department of Defense’s Congressionally Directed Medical Research Program with the

overall objective to evaluate BXCL501 in patients who suffer from AUD with comorbid PTSD. The Company provided BXCL501 for the inpatient Alcohol Interaction Study, which has been completed. We understand Yale is currently seeking approval from its IRB and allowance from the FDA to proceed with a trial evaluating the effects of up to 80 mcg BID of BXCL501 per day for 28 days on alcohol consumption, PTSD symptoms, cognitive function, memory, sleep, and mood in patients diagnosed with mild, moderate, or severe AUD and who meet Criterion A for comorbid PTSD. The new outpatient study has received funding approval from the Pharmacotherapies for Alcohol and Substance Use Disorders Alliance (funded through a Cooperative Agreement between the U.S. Department of Defense Congressionally Directed Medical Research Program and RTI International). We believe the results from this study will be used to inform a Phase 3 study intended to commence with support by the alliance.

Algorithms for Wearable Technologies

The Company completed a healthy volunteer study designed to train an algorithm to detect a state of hyper-arousal, which often precedes agitated behaviors. In hyper-aroused healthy volunteers, robust signals were measured using wearable technology (phones and watches). As part of the Reprioritization announced on August 14, 2023, we deprioritized our plan to develop wearable technology.

BXCL502 Development

We identified a second neuropsychiatric drug candidate, BXCL502 – Latrepirdine (Dimebon) – through our AI-based platform. We plan to evaluate BXCL502 initially as a monotherapy and possibly in combination with BXCL501 for the chronic treatment of agitation in patients with dementia and acute stress disorder. The active pharmaceutical ingredient (“API”) underlying BXCL502 is designed to affect serotonergic signaling in the brain. Our preclinical data suggests BXCL502 has the potential to treat stress-related neuropsychiatric symptoms in dementia and other stress-related disorders. In previously published third-party clinical trial data, daily administration of the API of BXCL502 demonstrated improvement in behaviors using a well-established, clinically validated symptom scale. Formulation and further clinical development planning are currently under way with BXCL502 and are expected to continue in 2024.

Other Product Candidates Leveraging the AI Platform

We are targeting neuropsychiatric disorders with high unmet medical needs. Our focus is on treating stress-related symptoms, such as agitation, that are responsible for increased levels of healthcare burden. We are also using AI approaches and machine learning to identify new candidates for rare neurological diseases and to re-innovate late-stage drug candidates, such as BXCL503, targeting apathy in dementia, and BXCL504, targeting aggression in dementia.

We utilize proprietary algorithms to identify associated mechanisms with existing pharmacology to test whether these agents can improve the disease profile in the animal model either through disease modification or symptomatic manner. The agents identified must be those we believe can enter the clinic with the potential for an efficient development path (similar to BXCL501). We are also developing an AI-based research and development platform to help identify potential product candidates and indications across a range of treatment areas.

Neuroscience Competition

The pharmaceutical and biotechnology industries are characterized by rapidly advancing technologies, intense competition, and a strong emphasis on proprietary products. The neuroscience and rare disease segments of the industry are highly competitive. While we believe that our technology, development experience, and scientific knowledge provide competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical, and biotechnology companies, academic institutions, governmental agencies, and public and private research institutions.

Many of our competitors may have significantly greater financial resources, and expertise in research and development, manufacturing, preclinical studies, conducting clinical trials, obtaining regulatory approvals, and marketing approved medicines than we do. Mergers and acquisitions in the pharmaceutical, biotechnology, and diagnostic industries may result in even more resources being concentrated among a smaller number of our competitors. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and in

establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to or necessary for our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

The key competitive factors affecting the success of our product candidates, if approved, are likely to be their efficacy, safety, convenience, price, the effectiveness of companion diagnostics in guiding the use of related therapeutics, if any, the level of generic competition, and the availability of reimbursement from government and other third-party payors.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize medicines that are safer, more effective, more convenient, less expensive, or have fewer or less severe side effects than any medicines we may develop. Our competitors also may obtain FDA or other regulatory approval for their medicines more rapidly than us, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic medicines. There are many generic medicines currently on the market for certain indications that we are pursuing, and additional generics are expected to become available over the coming years. We expect that any of our therapeutic product candidates that are approved will be priced at a significant premium over competitive generic medicines.

Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. IGALMI™ and any of our other product candidates that are approved, if any, will compete with the drugs discussed below, in addition to any other drugs currently in development.

Drugs used for the acute treatment of agitation related to schizophrenia and bipolar disorder are antipsychotics frequently administered via IM injection that typically requires patient restraint. These include IM aripiprazole, olanzapine, ziprasidone, and haloperidol. Oral products include the sublingually administered atypical antipsychotic asenapine, as well as benzodiazepines, lorazepam, and midazolam. The typical antipsychotic Adasuve® (loxapine) from Alexza is delivered via inhalation.

Neuroscience Manufacturing

We do not have manufacturing facilities. We currently rely on strategic manufacturing partners, in particular ARx, LLC (“ARx”), and expect to continue to rely on third parties for the manufacture of our product candidates for clinical research and our products for commercialization efforts. ARx has agreed to exclusively manufacture and supply all of our worldwide supply of film formulation of dexmedetomidine to be used for the commercial supply of IGALMI™ and for ongoing clinical trials of BXCL501, subject to certain alternative supply provisions.

BXCL501 drug product is manufactured using commercially available components and packaging materials. The equipment employed for manufacture and analysis is consistent with standard pharmaceutical production.

Neuroscience Commercialization

We plan to retain worldwide commercialization rights for IGALMI™ and other approved product candidates, if any, but could consider collaboration opportunities to maximize returns or facilitate commercialization efforts in foreign jurisdictions. For additional information regarding our commercialization efforts for IGALMI™, see above under “IGALMI™ Commercial Progress.”

As product candidates advance through our pipeline, our commercialization plans may change. Clinical data, the size of the development programs, the size of the target market, the required commercial infrastructure, and manufacturing needs may all influence global commercialization strategies.

Neuroscience Intellectual Property

Our policy is to protect and enhance the proprietary technologies, inventions, and improvements that are commercially important to our business by filing patent applications in the U.S. and other jurisdictions related to our

proprietary technology, inventions, improvements, and product candidates. We also rely on trademarks, trade secrets, and know-how relating to our proprietary technologies and product candidates, continuing innovation, and in-licensing technology and products. This reliance is expected to develop, maintain, and strengthen our proprietary position for novel therapeutics and novel formulations of existing therapeutics across multiple therapeutic areas. We also plan to rely on data exclusivity, market exclusivity, and patent term extensions when available.

We have multiple patent families filed to protect our Neuroscience program, including BXCL501. As of March 15, 2024, our neuroscience patent portfolio included two Patent Cooperation Treaty (“PCT”) applications not yet in national phase, 19 U.S. utility applications, seven U.S. provisional applications, one allowed US application, ten issued U.S. utility patents, 112 pending non-U.S. utility applications, 18 allowed or granted non-U.S. patents (including three in Japan), one pending U.S. design patent application, and 34 allowed or registered design patents (including two in Japan). Eight U.S. utility patents, directed to our proprietary sublingual film formulation of Dex and methods of treating agitation, are now listed in the FDA’s Approved Drug Products with Therapeutic Equivalence Evaluations (commonly known as the “Orange Book”) for IGALMI™ with expiration dates between 2039 and 2043. In the formulation family, we also have a granted patent in China, two granted patents in Eurasia, and pending applications in the U.S., China, and other major markets. We expect that patents issued in this family will expire no earlier than 2039. We have also filed applications in additional patent families that are relevant to BXCL501. We have applications pending in the U.S., Europe and Japan directed to methods of treating insomnia using sublingual Dex. We expect that patents issued from these applications, if any, will expire no earlier than 2035. We also have applications filed in 16 regions/countries, including the U.S., Europe, Japan, and China, directed to methods of treating agitation. We expect that patents issued from these applications, if any, will expire between 2039 and 2043. We also have one PCT application directed to treating mania and another to treating depression. If patents are issued from those cases, we expect them to expire no earlier than 2041 and 2042, respectively.

In March 2024, the Company announced that the European Patent Office granted the Company’s European Patent No. 3,562,486 (the “’486 patent”), which covers the use of dexmedetomidine administered sublingually to treat agitation in individuals with dementia. The ‘486 patent encompasses a broad range of dosage forms, including films such as BXCL501 (sublingual dexmedetomidine), wafers, and tablets, at dexmedetomidine doses ranging from 3 mcg to 100 mcg. The ‘486 patent will expire no earlier than December 29, 2037.

In February 2024, the Company announced that the United States Patent and Trademark Office (“USPTO”) had allowed U.S. Patent Application No. 17/496,470 with claims pertaining to a method of treating agitation in patients with Alzheimer’s disease using the oromucosal administration of 60 mcg of dexmedetomidine in a water-soluble dosage form. The broad claims encompass film formulations such as BXCL501 (sublingual dexmedetomidine), tablets, or wafers. The patent, when issued, is expected to have an expiration date of December 29, 2037, subject to patent term adjustment (“PTA”), patent term extension (“PTE”) and terminal disclaimers.

In February 2024, the Company also announced the USPTO issued U.S. Patent No. 11,890,272 (the “’272 Patent”) on February 6, 2024. The ‘272 Patent claims a method of treating agitation associated with schizophrenia or bipolar disorder through oromucosal administration of about 120 mcg to about 180 mcg of dexmedetomidine where the patient has a QT interval of less than 470 msec. The ‘272 Patent has an expiration date of July 17, 2040, subject to PTA, PTE and terminal disclaimers. The ‘272 Patent has been accepted for listing in the FDA Approved Drug Products with Therapeutic Equivalence Evaluations (commonly known as the “Orange Book”).

In February 2024, the Company also received notice that the USPTO had allowed U.S. Patent Application No. 18/216,890 with claims pertaining to a method of treating agitation using an oromucosal formulation of dexmedetomidine or a pharmaceutically acceptable salt thereof through the administration of an initial dose of 60 mcg, 80 mcg, 90 mcg, 120 mcg or 180 mcg of dexmedetomidine and, after at least two hours, administering an oromucosal formulation of dexmedetomidine or a pharmaceutically acceptable salt thereof in a second dose of 40 mcg, 60 mcg, 80 mcg or 90 mcg of dexmedetomidine, where the patient has a QT interval of less than 470 msec. The patent, when issued, is expected to have an expiration date of July 17, 2040, subject to PTA, PTE and terminal disclaimers. The Company expects that this patent, when issued, will be submitted for listing in the Orange Book with the eight currently listed U.S.

patents for IGALMI™ (dexmedetomidine) sublingual film. Collectively, these nine patents will in general extend patent protection for IGALMI™ until January 12, 2043.

The term of individual patents depends upon the legal term for patents in the countries in which they are obtained. In most countries, including the U.S., the patent term is 20 years from the earliest filing date of a non-provisional patent application. Depending upon the timing, duration, and specifics of FDA approval of our product candidates, a U.S. patent that we own or license may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984 (a.k.a., the “Hatch-Waxman Act”). The act permits a patent restoration term of up to five years as compensation for patent term lost during product development and the drug approval regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product’s approval date. The patent term restoration period is generally one-half the time between the effective date of an IND, and the submission date of a new drug application (“NDA”), plus the time between the submission date of an NDA and the approval of that application. Only one patent applicable to an approved drug is eligible for the extension, and the application for extension must be made prior to patent expiration. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we intend to apply for restorations of patent term for some of our currently owned or licensed patents to add patent life beyond their current expiration date, depending on the expected length of clinical trials and other factors involved in the submission of the relevant NDA.

The term of a patent can also be extended by Patent Term Adjustment (“PTA”) established in 35 U.S.C. 154(b). The intention of the PTA is to accommodate for delays caused by the USPTO during the prosecution of a US utility or plant patent application. Under PTA, the USPTO delay is divided into three types: type A (delays after 14 months from the filing date of the application until the USPTO issues a first Office Action and delays after four months from the filing of certain actions by the applicant until the USPTO responds to such actions); type B (delays after three years from the earliest effective filing date until a patent is granted); and type C (delays due to interferences, secrecy orders, and successful appeals). The total amount of PTA is calculated by adding the types A, B, and C delays, and then subtracting any delay that is overlapped among three types or that is attributable to the applicant.

The term of a patent can also be shortened by a terminal disclaimer. A terminal disclaimer is a statement filed by a patent owner in which the owner disclaims or dedicates to the public the terminal part of the term of a patent. Often, the terminal disclaimer is filed in cases where at least one claim of a pending application would have been obvious in light of at least one claim in an earlier-filed patent, (or non-statutory obviousness-type double patenting rejection).

The patent positions of companies such as ours are generally uncertain and involve complex legal and factual questions. No consistent policy regarding the scope of claims allowable in patents in the field of method of use patents or reformulation patents has emerged in the U.S. patent laws and their interpretation outside of the U.S. are also uncertain. Changes in either the patent laws or their interpretation in the U.S. and other countries may diminish our ability to protect our technology or product candidates and enforce the patent rights that we license, and also could affect the value of such intellectual property. In particular, our ability to stop third parties from making, using, selling, offering to sell, or importing products that infringe our intellectual property will depend in part on our success in obtaining and enforcing patent claims that cover our technology, inventions, and improvements. With respect to both licensed and company owned intellectual property, we cannot guarantee that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications we may file in the future, nor can we be sure that any patents that may be granted to us in the future will be commercially useful in protecting our products, the methods of use, or the manufacture of those products. In addition, if a pending patent application is granted, it is possible that only a subset of the claims that are currently contained in the pending patent application will be issued. Further, the coverage claimed in a patent application can be significantly reduced before the patent is issued, and its scope can be reinterpreted after issuance. Patent and other intellectual property rights in the pharmaceutical and biotechnology space are evolving and involve many risks and uncertainties. For example, third parties may have blocking patents that could be used to prevent us from commercializing our product candidates and practicing our proprietary technology, and the issued patents that we in-license and those that may issue in the future may be challenged, invalidated, or circumvented, which could limit our ability to stop competitors from marketing related products or could limit the term of patent protection that otherwise may exist for our product candidates. In addition, the scope of the rights granted under any issued patents may not provide us with protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies outside the scope of the rights granted under any issued

patents that we own or exclusively in license. For these reasons, we may face competition with respect to our product candidates. Moreover, because of the extensive time required for development, testing, and regulatory review of a potential product, it is possible that, before any particular product candidate can be commercialized, any patent protection for such product may expire or remain in force for only a short period following commercialization, thereby reducing the commercial advantage the patent provides. For additional information regarding intellectual property regulations and risks, see below under “Immuno-Oncology Intellectual Property” and Part I, Item 1A, “Risk Factors - Risks Related to Our Intellectual Property.”

Immuno-Oncology

On April 19, 2022, we announced the formation of a wholly owned subsidiary, OnkosXcel to develop potentially transformative medicines in oncology. OnkosXcel uses proprietary AI capabilities to drive the capital-efficient development of innovative anti-cancer therapeutics. On March 14, 2023, we announced that OnkosXcel had confidentially submitted a draft registration statement on Form S-1 with the SEC relating to the proposed initial public offering of its common stock following its conversion into a corporation. The Company is continuing to evaluate strategic options for OnkosXcel. With the Company’s Reprioritization announcement on August 14, 2023, further work on the immuno-oncology programs described below have generally been paused, except as noted below.

Our approach to drug discovery leverages the application and methodology of our proprietary AI-based research and development platform, complemented by EvolverAI, utilized in the successful development of IGALMI™ with the aim of efficiently identifying and developing immuno-oncology product candidates. We believe that BXCL701 reflects the potential of this discovery approach in immuno-oncology. BXCL701 is an investigational, oral innate immune activator which demonstrated a 25% composite response rate in a Phase 2a clinical trial to treat patients with small cell neuroendocrine (“SCNC”)–phenotype metastatic castration-resistant prostate cancer (“mCRPC”). On February 12, 2024, the Company announced that the FDA has designated as a Fast Track development program the investigation of BXCL701 in combination with a checkpoint inhibitor for the treatment of patients with metastatic SCNC with progression on chemotherapy and no evidence of microsatellite instability. We intend to finalize a potential registrational trial design in mCRPC patients with SCNC phenotype following planned meetings with the FDA in the first half of 2024. However, the start of any such trial is paused following our Reprioritization.

mCRPC is often characterized as a “cold” tumor, which is a tumor with an immunosuppressive tumor microenvironment (“TME”) and poor immune cell infiltration. Currently approved checkpoint inhibitors (“CPIs”) that target programmed cell death 1 (“PD-1”) or cytotoxic T-lymphocyte-associated protein 4 (“CTLA-4”) have failed to demonstrate meaningful single-agent activity against such difficult-to-treat tumor types, including mCRPC. BXCL701 is designed to promote an immune-induced inflammatory response in the TME primarily via inhibition of dipeptidyl peptidases (“DPP”) 8 and 9, which we believe can provide enhanced CPIs therapeutic utility. We believe BXCL701 can potentially provide significant benefits for the approximately 20% of the estimated 299,010 men who will be diagnosed with prostate cancer in the U.S. in 2024 and are expected to progress to the more aggressive mCRPC form of the disease, including approximately 20%, or 11,960, of those patients who develop the SCNC phenotype, for which there are currently limited treatment options. Immune checkpoints represent a myriad of inhibitory pathways that act to regulate the duration and intensity of an antigen-induced immune response and factor prominently in mediating immune tolerance. They function as critical gatekeepers that prevent the indiscriminate attack of normal host cells by components of the immune system. Certain cancers co-opt these pathways and overexpress immune checkpoint molecules to camouflage themselves to avoid detection and destruction. CPIs, designed to harness the intrinsic power resident in the immune system, work by disabling the suppressive function of immune checkpoints, allowing the immune system to bypass such cancers’ shield of immune tolerance. CPIs are expected to generate sales of more than \$50 billion worldwide by 2025, up from sales of approximately \$29 billion in 2020. While CPIs have proven to be a significant advancement in cancer therapy, those currently approved by the FDA do not produce meaningful results in a majority of patients, as the clinical benefit is generally viewed to be limited to between 13% and 30% of cancer patients, and the duration of response is relatively short.

We believe the limited efficacy of approved CPIs results primarily from their intervention at later stages of the immune response. As a result, other targets and pathways can be exploited by the tumor to create a TME that can evade the enhanced immunological response enabled by approved CPIs. While numerous agents designed to target the earlier stages of an immune response are in development for use in combination with CPIs, their activity is restricted to a single

component of the immune response. In contrast, we have developed BXCL701 to simultaneously address multiple components of the immune response, including:

- *Cancer antigen presentation by dendritic cells*: stimulation of dendritic cell trafficking to tumor draining lymph nodes.
- *Priming and activation of T cells*: acceleration of tumor-induced priming of T cells and the formation of potent cytotoxic T lymphocytes (“CTLs”).
- *Infiltration of immune cells into the tumor*: stimulation of release of chemokines that attract effector T cells but block regulatory T cells, and also induce NK cell and neutrophil migration.
- *Killing of tumor cells*: induction of formation of CTLs and NK cells expressing tumor-killing perforins and granzymes, as well as the formation of memory T cells that can selectively kill returning tumor cells.

Accordingly, we believe BXCL701 may have utility in stimulating increased activation, proliferation, and infiltration of tumor cells by immune effector cells, enabling its potential application in combination with currently approved CPIs, across a range of solid tumors and hematological malignancies, to potentially:

- *Convert immunological cold tumors into ones sensitive to CPIs;*
- *Enhance hot tumors’ response rate and depth of response to CPIs; and*
- *Restore CPI sensitivity to tumors that were previously responsive.*

Central to our drug discovery initiatives are proprietary, AI-driven platform technologies we employ to identify novel therapeutic uses for approved therapeutics and candidates in clinical evaluation. The first and most advanced of our AI-driven discovery programs is our innate immune modulation program, which supported the pursuit of BXCL701 as a development candidate. We believe the application of this program provides us actionable insights into the inflammasome, a component of the innate immune system responsible for activation of the inflammatory response. We are working to develop our second AI-driven product candidate, BXCL702, by leveraging our innate immunity modulation program via re-innovation or in-licensing and we intend to nominate a candidate by 2025.

Our Immuno-Oncology Programs

Below is a summary of the status of our immuno-oncology clinical development programs as of the date of this Annual Report on Form 10-K. We believe our product candidates, if successfully developed and approved, have the potential to become compelling treatment options for their respective indications. With our Strategic Reprioritization announcement on August 14, 2023, further work on our immuno-oncology program has been paused, other than as noted below.

Compound	Proposed Indication	Preclinical	Phase 1	Phase 2	Phase 3	Expected Upcoming Milestone	Collaborator
BXCL701 Company-sponsored trials	Small Cell Neuroendocrine Prostate Cancer (SCNC)	▶				FDA Meeting	13 centers US / UK
	Small Cell Lung Cancer (SCLC)	▶				Initiate Phase 1b/2	
BXCL701 Investigator-sponsored trials	Metastatic Pancreatic Ductal Adenocarcinoma	▶				Phase 2 readout	Georgetown Lombardi Comprehensive Cancer Center Supply agreement: Merck & Co.
	Acute Myeloid Leukemia (AML)	▶				Phase 1b readout	Dana-Farber Cancer Institute
BXCL702 BXCL701 follow-on/ novel DPP inhibitor	Solid Tumors	▶				Candidate nomination	

The safety and efficacy of these investigational agents have not been established.



An Overview of the Immune System

The immune system is a host defense system comprised of multiple structures and processes within an organism that protects against disease. As with other mammalian species, the human immune system is comprised of the innate immune system and the adaptive immune system. The innate immune system involves an immediate, non-specific response to infected or diseased cells. Triggering its activation are pathogen-associated and damage-associated molecular patterns recognized by pattern-recognition receptors, which reside on the surface of various types of leukocytes, or white blood cells, making up the innate immune system including phagocytes, eosinophils, and natural killer cells. The innate immune response also participates in promoting activity of the adaptive immune system.

The adaptive immune system is made up of special types of leukocytes known as T and B lymphocytes, or T cells and B cells, respectively. T cells participate primarily in the cell-mediated immune response while B cells are involved in the humoral immune response. T lymphocytes can be further segregated into distinct cell types, with the primary types being CD8, or cytotoxic, T cells and CD4 T cells. CTLs directly eliminate cells that are infected with viruses or other pathogens or are otherwise damaged or dysfunctional. Anti-cancer activity is primarily CD8 T cell mediated. CD4 T cells, which have limited cytotoxic activity, mediate the activity of other cells to eliminate pathogens. Activation of a resting CD4 T cell causes it to release cytokines that influence the activity of an array of cell types. Cytokines released by activated Type 1 CD4 T cells enhance the microbicidal activity of macrophages and the activity of CD8 T cells.

A critical capability of the immune system is its ability to distinguish between healthy, functioning host cells and either non-self-infectious agents or damaged or dysfunctional host cells. The ability to differentiate between these entities is the central feature of immune tolerance. A significant limitation of currently approved therapeutics against endogenous diseases such as cancer is the inability to overcome host immune tolerance and elicit a strong, target-specific immune response while avoiding off-target complications.

Immune Tolerance and the Role of Immune Checkpoints

The immune system's ability to distinguish between a normal, healthy cell and an infected, damaged, dysfunctional, or cancer cell is accomplished through an immunological selection process that occurs in the thymus during early development. Antigen specific immune cells, such as T cells, B cells and NK cells, which recognize molecular markers originating from normal, healthy tissues are eliminated in the thymic medulla to avoid possible autoimmune consequences through a negative selection process. This results in the suppression of immune effector cell activation and proliferation. Immune checkpoints represent a myriad of inhibitory pathways that act to regulate the duration and intensity of antigen-induced immune responses and factor prominently in mediating immune tolerance. A number of

checkpoint molecules have been identified and studied in cancer therapy in the past decades. Two of the more well-characterized immune checkpoint molecules are CTLA-4 and PD-1, and its related ligand, PD-L1.

As key regulators of the immune system, immune checkpoints are critical gatekeepers that prevent the indiscriminate attack of normal host cells by components of the immune system. Their suppressive function usually depends on ligand-induced signaling, with protein structures on the surface of immune effector cells binding to complementary molecular structures on partnered cells. This signaling not only dampens the generation of co-stimulatory cytokines instrumental in triggering and sustaining a robust immune response, such as interleukin 2 and interferon gamma, but also results in an upregulation of regulatory T cells, which acts to further suppress immune effector cell activity. These factors bias the immune response towards anergy and senescence rather than activation and proliferation. Certain tumors co-opt these pathways and overexpress immune checkpoint molecules on their cell surface to camouflage themselves to evade detection and destruction by the immune system.

Immunotherapy and the Emergence of Checkpoint Inhibitors

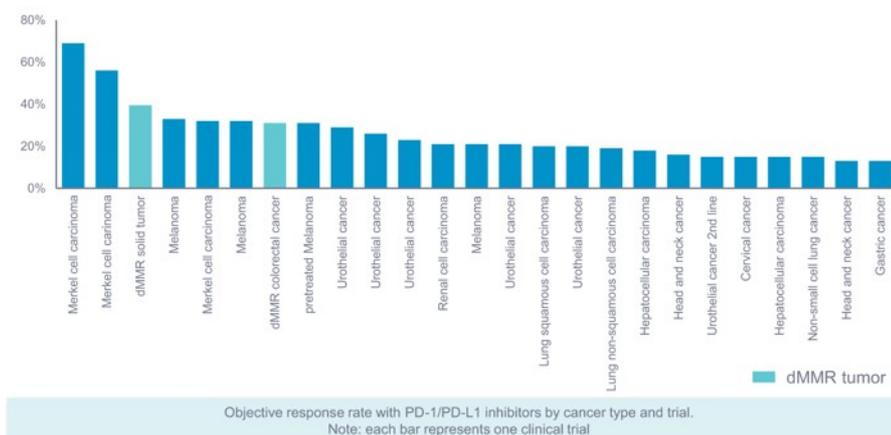
Cancer immunotherapy, designed to harness the intrinsic power resident in the immune system by modulating immune cell function, has proven to be a major advancement in cancer treatment. Immune CPIs have emerged as one of the most promising classes of cancer immunotherapy. CPIs work by disabling the inhibitory function of immune checkpoint proteins. Disabling immune checkpoints allows the immune system to bypass the shield of immune tolerance the checkpoints provide, allowing the tumor-directed immune effector cells to engage the tumor. Seven CPIs targeting PD1/PD-L1 and CTLA-4 have been approved by the FDA to treat more than a dozen different types of cancer. CPIs directed towards other validated checkpoints, including lymphocyte activation gene 3 and T cell immunoreceptor with immunoglobulin and ITIM domain have recently been approved or are advancing through clinical development. These CPIs are largely involved in modulating the activity of the adaptive immune system. Immune checkpoint molecules, such as CD47, which regulate responses mediated by the innate immune system, are also under evaluation as potential therapeutic targets for checkpoint inhibition. CPIs across a spectrum of cancer types are expected to generate sales of more than \$50 billion worldwide by 2025, up from sales of \$29 billion in 2020.

Limitations of Current Approaches

While CPIs have proven to be a significant advancement in cancer therapy, those currently approved by the FDA do not produce meaningful results in a majority of patients: clinical benefit is generally viewed to be limited to between 13% and 30% of cancer patients and the duration of response to treatment is often short. CPIs require the infiltration of anti-tumor CD8 T cells for therapeutic activity, and patients whose tumors are characterized by a TME that lacks activated TILs, typically fail to respond to therapy. Moreover, the expression of positive costimulatory signals is critical to the amplification and diversification of a TIL-based response following initial activation, without which treatment durability is limited. We are focused on advancing therapeutic candidates designed to overcome these challenges and

enhance the sensitivity of immunologically inaccessible, or cold, tumors to an efficacious immune response. The chart below shows the single agent objective response rate (“ORR”) of CPIs by different cancer types and clinical trial.

Single Agent ORR of CPIs by Cancer Type and Trial



Objective response rate with PD-1/PD-L1 inhibitors by cancer type and trial.
Note: each bar represents one clinical trial

Source publication: adapted from Japan Society of Clinical Oncology International Journal of Clinical Oncology (2020) 25:217-239 <https://doi.org/10.1007/s10147-019-01498-8>



Immuno-Oncology Clinical Trials

Leveraging the insights enabled by the application and methodology of our proprietary AI-based platform complemented by EvolverAI, which was used to identify novel therapeutic uses for our approved therapeutics and product candidates in clinical evaluation, and our industry expertise, we are pursuing two proprietary discovery programs to advance our goal of developing anti-cancer therapeutics. The first program, which encompasses BXCL701 across a range of indications, is based on the application of innate immune modulation technology. This program has been constructed to embrace key distinguishing characteristics of the innate immune system and we believe it is supported by our development efforts. This approach has driven the development of BXCL701, which we are currently evaluating in a Phase 1b/2a clinical proof-of-concept trial as a potential treatment for mCRPC with either SCNC or adenocarcinoma phenotype. Fundamental to the innate immune modulation program is BXCL701’s potential to:

- Convert cold tumors into ones sensitive to CPIs;
- Enhance hot tumors’ response rate and depth of response to CPIs; and
- Restore CPI sensitivity to tumors which had previously been responsive.

BXCL701 Innate Immune Activator

BXCL701 is an oral small molecule inhibitor of a class of enzymes called DPPs, specifically DPP8/9 and DPP4. Inhibition of DPP8/9 initiates activation of the inflammasome and ultimately activation of the innate immune system. Key characteristics of BXCL701 include:

- Orally bioavailable, potentially sole inhibitor of both DPP8/9 and DPP4, key regulators of the inflammasome directed innate immune response, currently in clinical development for cancer.

- Novel proposed mechanism of action may complement CPIs activity, enabling therapeutic access to immunologically cold tumors as well as other difficult-to-treat cancers, including relapsed or refractory tumor types.
- Phase 2 clinical proof-of-concept achieved in treating mCRPC patients with either adenocarcinoma or SCNC phenotype.

The initial focus on mCRPC with SCNC phenotype is designed to provide for a more efficient clinical development pathway than current industry standards.

BXCL701 as a Potential Treatment for mCRPC

Prostate cancer is the most common malignancy and the second-leading cause of cancer-related deaths in men in the U.S. According to the American Cancer Society, approximately 299,010 men will be diagnosed with, and 35,250 men will die of, prostate cancer in 2024. The majority of these cases are classified as adenocarcinomas and involve low risk, localized or regional disease for which the five-year survival rate ranges from 60% to 99%. However, an estimated 20% of these newly diagnosed cases will progress to the more aggressive metastatic disease. The five-year survival rate for men with metastatic prostate cancer drops significantly, to approximately 30%. Approximately 20% of patients with mCRPC will develop the SCNC phenotype, which is characterized by poor prognosis and low survival rate with a five-year life expectancy of 14%.

Prostate function requires the presence of various androgens, such as testosterone. Early cancerous prostate cells typically also require androgens to proliferate. Accordingly, aggressive forms of prostate cancer can initially be treated using androgen deprivation therapy (“ADT”). While ADT offers temporary therapeutic benefit, in almost all patients the treatment eventually loses efficacy, referred to as “castration resistance.” Cases of castration-resistant prostate cancer (“CRPC”) are generally treated with a second-generation androgen receptor (“AR”) inhibitor, such as XTANDI[®] (enzalutamide), or an androgen synthesis inhibitor, such as ZYTIGA[®] (abiraterone), which targets the enzyme CYP17 to block the production of testosterone. These therapeutics have widely become the standard of care, though only ZYTIGA has been approved to treat mCRPC, as well as metastatic high-risk castration-sensitive prostate cancer. XTANDI has been approved to treat CRPC and metastatic castration-sensitive prostate cancer.

Virtually all patients who initially respond to ZYTIGA and XTANDI are expected to progress to even more aggressive forms of prostate cancer requiring further treatment. Patients whose disease has progressed after treatment with these second-generation targeted endocrine therapies are administered a docetaxel containing drug regimen that provides a survival benefit of only 10 months. The poly-ADP ribose polymerase (“PARP”) inhibitors LYNPARZA[®] (olaparib) and RUBRACA[®] (rucaparib) are approved for the treatment of mCRPC in patients whose disease has progressed after receiving XTANDI or ZYTIGA, but their approval is limited to instances of mCRPC linked to a BRCA gene mutation. As such, an unmet medical need remains for patients with mCRPC who are not eligible for PARP inhibitor treatment after treatment with the targeted endocrine therapy and docetaxel.

In addition, a number of men, both newly diagnosed patients and men whose disease has progressed after second-generation targeted endocrine therapy, will develop an aggressive tumor that typically expresses very little AR and accordingly does not respond to therapeutics targeting the AR signaling pathway. Prostate cancer with this phenotype is referred to as SCNC, for which there is currently no effective treatment. The incidence of SCNC is increasing with the widespread use of AR inhibitor therapy. Treatment protocols for patients with SCNC typically involve cytotoxic chemotherapies despite their short duration of response and considerable toxicities. These patients represent an additional unmet medical need among men with prostate cancer. We believe BXCL701 may prove efficacious in addressing the unmet needs of both adenocarcinoma and SCNC prostate cancer phenotypes.

mCRPC is often characterized as a cold tumor, or a tumor with an immunosuppressive TME and poor immune cell infiltration. Currently approved CPIs, which target PD-1 and CTLA-4, have not demonstrated significant single-agent therapeutic activity. For instance, a Phase 2 investigator sponsored trial (“IST”) to assess the efficacy of the PD-L1 inhibitor avelumab, marketed by EMD Serono and Pfizer as BAVENCIO[®], to treat mCRPC with SCNC phenotype, as well as aggressive variant prostate cancer with adenocarcinoma histology, generated an ORR of 6.7% (representing 1 of 15 patients who was known to be microsatellite instability-high, an established marker of response to CPIs).

We believe the limited efficacy of CPIs results primarily from their intervention at later stages of the immune response. As a result, other targets and pathways can be exploited by the tumor to create a TME that can evade the enhanced immunological response enabled by approved CPIs. BXCL701 is designed to act on multiple components of immune system functioning, including:

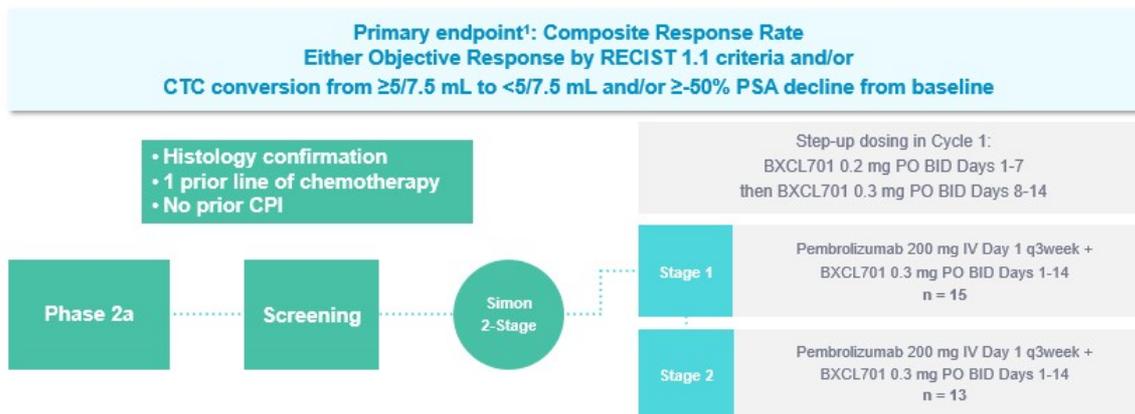
- *Cancer antigen presentation by dendritic cells*: stimulation of dendritic cell trafficking to tumor draining lymph nodes.
- *Priming and activation of T cells*: acceleration of tumor-induced priming of T cells and the formation of potent CTLs.
- *Infiltration of immune cells into the tumor*: stimulation of release of chemokines that attract effector T cells but block regulatory T cells and also induce NK cell and neutrophil migration.
- *Killing of tumor cells*: induction of formation of CTLs and NK cells expressing tumor-killing perforins and granzymes as well as the formation of memory T cells that can selectively kill returning tumor cells.

We believe BXCL701 may have utility in stimulating increased activation, proliferation, and infiltration of tumor cells by immune effector cells, enabling its potential use in combination with currently approved CPIs to treat cold tumors, such as mCRPC. We elected to pursue mCRPC as an indication for BXCL701 due to its enrichment for DPP mutations, which are especially prevalent in tumors with SCNC phenotype.

BXCL701 is being evaluated in a Phase 1b/2a clinical proof-of-concept trial that we are sponsoring to investigate its potential efficacy when used in combination with pembrolizumab. Enrollment in this trial is complete.

We received initial comments from the FDA on our proposed clinical development plan, and we plan to meet with the FDA in an End-of-Phase 2 meeting in the first half of 2024 to discuss the development path forward. However, the start of any such additional trial is paused following the Company's Reprioritization. The Phase 1b portion of our Phase 1b/2 clinical trial was a dose escalation safety lead-in which employed a standard 3 x 3 trial design to determine the recommended Phase 2 dose ("RP2D"). During each 21-day treatment cycle, 200 mg of pembrolizumab were administered intravenously on day one, with BXCL701 taken twice daily on days one through 14, for a minimum of two cycles. The results of this Phase 1b trial, which were presented at The Society for Immunotherapy of Cancer's 35th Anniversary Annual Meeting, allowed us to identify 0.3 mg, taken twice daily, as the RP2D.

Design of Phase 2a in SCNC and Adenocarcinoma



¹ Additional objectives: duration of response, OS, PFS, changes in circulating cytokines, correlation of outcome with baseline tumor characteristics
 RECIST 1.1 = Response Evaluation Criteria in Solid Tumors Version 1.1
 CTC = Circulating Tumor Cell

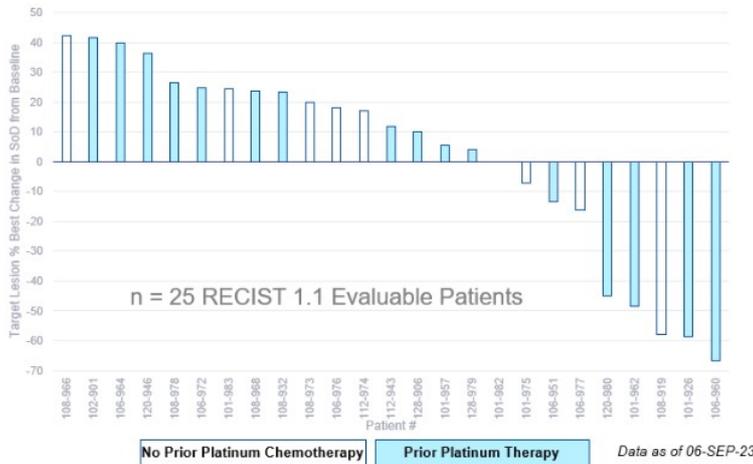
The Phase 2a portion of the trial was segregated into two 28-patient trial cohorts, one cohort consisting of mCRPC patients with SCNC phenotype and a second cohort consisting of mCRPC patients with adenocarcinoma phenotype. Initially, we focused on mCRPC with SCNC phenotype as the primary patient population for BXCL701, since DPP9 is amplified in approximately 17% of treatment-emergent mCRPC with SCNC phenotype, compared to 5% or less in the broader prostate cancer population. However, we also observed responses in mCRPC patients with adenocarcinoma phenotype who were microsatellite stable in the Phase 1b portion of the trial. On this basis, we widened our Phase 2a trial to include relapsed mCRPC patients with either SCNC or adenocarcinoma phenotype. Both cohorts employed a Simon two-stage trial design of 15 trial participants followed by 13 additional patients. The primary endpoint of the Phase 2a portion of this trial was a composite response rate, determined as either a RECIST 1.1 response (defined as a reduction in RECIST score of 30% or more), and/or a reduction in prostate specific antigen (“PSA”) level of 50% or more, and/or a conversion in circulating tumor cells (“CTCs”) from 5 or more CTCs/7.5 milliliter (“ml”) to less than 5 CTCs/7.5 ml. Secondary endpoints included duration of response, progression-free survival, overall survival, changes in circulating cytokines, and certain disease-specific biomarkers.

We believe the results observed in the Phase 2a trial of BXCL701 administered in combination with pembrolizumab support further development.

We were particularly encouraged by the results observed in the cohort consisting of mCRPC patients with SCNC phenotype. Updated Phase 2a results for the SCNC cohort were presented at the 30th Annual Prostate Cancer Foundation Scientific Retreat (PCF 2023). BXCL701 in combination with pembrolizumab demonstrated a 25% (seven out of 28 evaluable patients) composite response rate in mCRPC patients with SCNC phenotype, for whom there is no standard of care. As of a data cutoff of September 6, 2023, five of these responders were RECIST 1.1 responders (four confirmed responses and one unconfirmed response) with decreases in tumor size ranging from -45% to -67% and a median duration of response of 7.6 months.

Best Tumor Response Observed in SCNC

All responders were MSS and/or TMB low



Composite Response Rate: 25%
(7 / 28 evaluable patients)

RECIST response rate: 20%

**4 confirmed PR +
1 unconfirmed PR**

Disease control rate: 48%

**Median duration of response for
RECIST confirmed responses 7.6
months**

**All responders are
MSS and/or TMB low**

¹ SoD = Sum of Diameters ² DoR = Duration of response

AEs consistent with cytokine activation, including fever, nausea, chills, fatigue, headache, and dizziness were observed during the trial and were generally mild to moderate. SAEs experienced by six trial participants - one patient hospitalized with Grade 1 orthostatic hypotension, one patient hospitalized with Grade 3 hypotension and acute kidney injury (“AKI”), which resolved, one patient with Grade 3 hypothyroidism which resolved, one patient with Grade 3 colitis, one patient with Grade 3 generalized oedema, and one patient hospitalized with Grade 4/5 tumor lysis syndrome/AKI, which resulted in fatality after the patient voluntarily discontinued dialysis - were reported as related or possibly related to BXCL701 or pembrolizumab, though there was no evidence that BXCL701 potentiated immune-related AEs associated with CPIs. The table below summarizes treatment-related AEs observed in the SCNC cohort as of December 19, 2022.

SCNC Safety Results

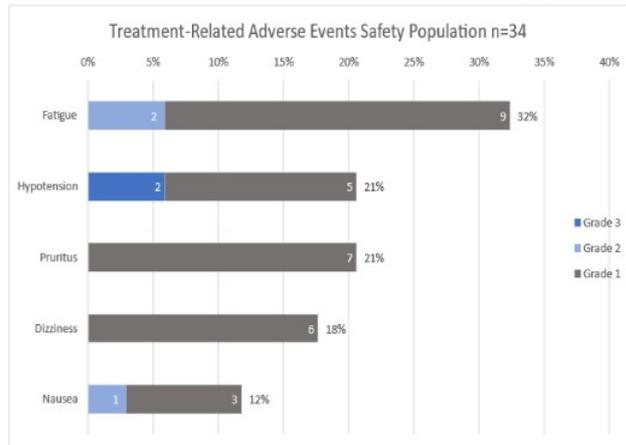


Treatment-Emergent Adverse Events	n = 34 n (%)
Any Grade	33 (97)
<i>Attributed to BXCL701</i>	<i>29 (85)</i>
<i>Attributed to Pembrolizumab</i>	<i>23 (68)</i>
Grade 3	16 (47)
Grade 4	0 (0)
Grade 5	1 (3)*
AE Leading to Treatment Discontinuation	6 (18)
<i>Attributed to BXCL701</i>	<i>6 (18)</i>
<i>Attributed to Pembrolizumab</i>	<i>5 (15)</i>
Immune Related Adverse Events	
Any Grade	14 (41%)
Grade ≥ 3 [^]	1 (7%)

* Grade 5 tumor lysis

[^] Grade 3 colitis (resolved)

n = number of patients experiencing an AE



TRAEs at least possibly related to BXCL701 or pembrolizumab, occurring in >10% of patients

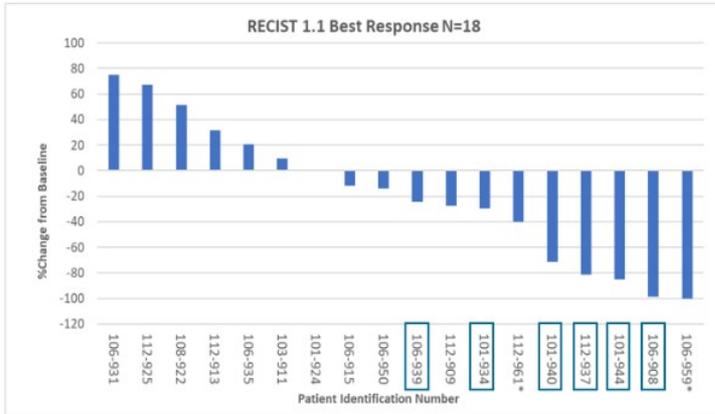
On October 10, 2023, we reported positive overall survival (OS) results from the Phase 2a portion of the trial in SCNC patients. BXCL701 in combination with pembrolizumab demonstrated a compelling median OS and 12-month survival rate. As of a data cutoff of September 6, 2023, evaluable patients with SCNC (n = 28) showed a median OS of 13.6 months (95% CI 10.9–NR), and a 12-month survival rate of 56.5%.

On February 12, 2024 the Company announced that the FDA designated as a Fast Track development program the investigation of BXCL701 in combination with a checkpoint inhibitor for treatment of patients with metastatic SCNC with progression on chemotherapy and no evidence of microsatellite instability.

The Phase 2a trial has also been completed for the adenocarcinoma cohort. Updated results for this trial cohort were also presented at PCF 2023. BXCL701 in combination with pembrolizumab demonstrated a 21% (six out of 29 evaluable patients) composite response rate in mCRPC patients with adenocarcinoma phenotype, for whom there are limited treatment options. As of a cutoff date of September 6, 2023, five of these composite responders were RECIST 1.1 responders (four confirmed responses and one unconfirmed response) with decreases in tumor size ranging from -30% to -99% and a median duration of response to 19 months.

Best Tumor Response Observed in Adenocarcinoma

5 responders were MSS and/or TMB low
1 responder was MSI-High / TMB High



Evaluable patients with measurable disease (not shown 11 patients with only non-target lesions)

Composite Responders

*Bony Progression

Composite response rate: 21%
(6 / 29 evaluable patients)

- RECIST-defined PR*: 28%
- Disease control rate: 67%
- PSA₅₀: 17%—including 5 patients with -100% to -57% PSA decrease
- Median duration of response for both RECIST confirmed and PSA₅₀ responses 19 months
- CTC response: 18%

* Includes confirmed and unconfirmed PRs
Data as of 30-AUG-23

As of the cutoff date of December 19, 2022, the majority of AEs experienced by patients in the adenocarcinoma cohort were low grade. AEs consistent with cytokine activation were observed, including fever, myalgia, nausea, chills, fatigue, dyspnea, headache and dizziness. SAEs experienced by five patients (12%) were reported as possibly related to BXCL701 or pembrolizumab: two reports of hypotension; one report of dizziness; one report of peripheral edema; one report of pyrexia; one report of Myasthenia Gravis; and one report of Cytokine Release Syndrome. Two patients (5%) discontinued therapy due to AEs. There was no evidence that BXCL701 potentiated immune-related AEs related to CPIs. The table below summarizes treatment-related AEs observed in the adenocarcinoma cohort.

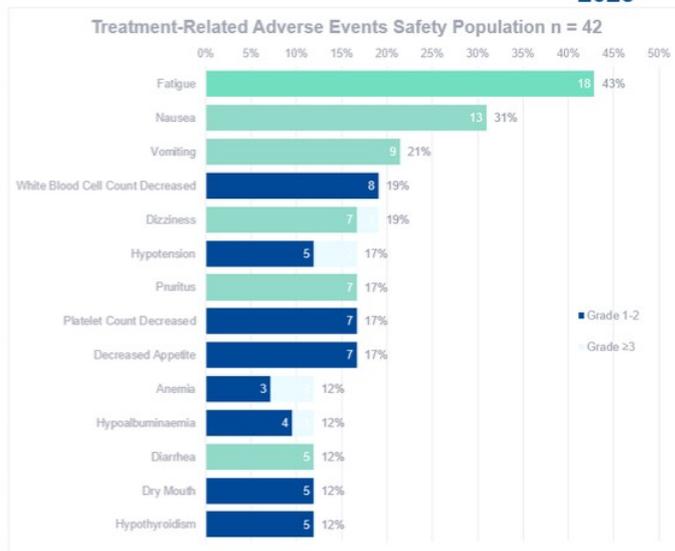
Adenocarcinoma Safety Results



Treatment-Emergent Adverse Events	n = 42 n (%)
Any Grade	39 (93)
<i>Attributed to BXCL701</i>	36 (86)
<i>Attributed to Pembrolizumab</i>	32 (76)
Grade 3	22 (52)
Grade 4	2 (5)
Grade 5	1* (2)
AE Leading to Treatment Discontinuation	2 (5)
<i>Attributed to BXCL701</i>	2 (5)
<i>Attributed to Pembrolizumab</i>	2 (5)

* Grade 5 Disease Progression Not Related to Drug Treatment
n = number of patients experiencing an AE

AEs consistent with cytokine activation were observed



TRAEs at least possibly related to BXCL701 or pembrolizumab, occurring in >10% of patients

On November 8, 2023, we reported positive OS results from the Phase 2a portion of the trial in patients with adenocarcinoma. As of a data cutoff of September 6, 2023, among evaluable patients with adenocarcinoma (n = 29) BXCL701 in combination with pembrolizumab demonstrated a median OS of 15.5 months (95% CI 9.6–NR), and a 12-month survival rate of 59.3%.

BXCL701 as a Potential Treatment for Small Cell Lung Cancer (“SCLC”)

The American Cancer Society estimates that in 2024, about 35,187 cases of SCLC will be diagnosed in the U.S. Approximately 60-70% of these patients present with extensive disease, and first-line therapy for a majority of these patients involves the combination of a CPI with platinum-based chemotherapy or etoposide.

We are encouraged by the therapeutic potential of BXCL701 for SCLC given the activity it has demonstrated in the ongoing SCNC clinical trial. We are preparing the protocol for a Phase 1b/2 trial design to be a dose-escalation safety lead-in to establish a RP2D. However, the start of any such trial is paused following the Reprioritization.

BXCL701 as a Potential Treatment for Other Cancers

In addition to its potential use in combination with CPIs to treat mCRPC, an immunologically cold tumor, we are developing BXCL701 as a therapeutic for pancreatic cancer, and other solid tumors with greater, or “non-cold,” immunological activity that are nonetheless regarded as difficult-to-treat, and hematological malignancies. We believe the synergistic potential of BXCL701 and CPIs, when administered in combination, could increase cancer cell susceptibility to an enhanced immune response, potentially increasing the clinical benefit of CPIs, whose single-agent efficacy in treating these tumor types is generally viewed to be limited to between 13% and 30% of cancer patients and the duration of response to treatment is often short. As such, we envision the potential therapeutic benefit of BXCL701 increasing the sensitivity of cold tumors to CPI therapy, enabling the potential treatment of a range of cancers including pancreatic cancer, breast cancer, colorectal cancer, and ovarian cancer, as well as enhancing the depth of response to CPIs in other cancers. In addition, based on the preclinical observation that BXCL701 showed direct cytotoxic activity

against certain leukemic cells, we have initiated clinical development targeting relapsed or refractory acute myeloid leukemia (“AML”).

Pancreatic Cancer

The American Cancer Society estimates that in 2024, approximately 66,440 cases of pancreatic cancer will be diagnosed in the U.S. We are supporting a Phase 2 IST sponsored by Georgetown Lombardi Comprehensive Cancer Center (“Georgetown Lombardi”), designed to evaluate the use of BXCL701 along with pembrolizumab to treat pancreatic cancer. Few therapeutic options are available for patients with this disease, which has a five-year survival rate of less than 10%, among the lowest of all cancers. Pancreatic cancer has among the highest levels of overexpression and amplification of DPPs. Preclinical models demonstrated synergy between DPP inhibition with BXCL701 and anti-PD-1 antibody in the pancreatic cancer tumor microenvironment. Based on these preclinical observations, Georgetown Lombardi has initiated a Phase 2 IST to assess the safety of BXCL701 when administered in combination with pembrolizumab (safety lead-in), as well as to estimate the 18-week progression-free survival rate (primary objective of the efficacy phase) in previously treated metastatic pancreatic ductal adenocarcinoma. This trial started in the third quarter of 2023. On February 6, 2024, we announced the completion of patient enrollment in the safety lead-in portion of the trial. As part of the trial’s safety lead-in, the first six patients have been enrolled and will be observed for a six-week safety window period. The trial is then expected to enroll approximately 39 patients in its efficacy phase in a Simon 2-stage single-arm, open-label design (19 patients in stage 1 and 20 patients in stage 2). Patients will be monitored radiographically and by tumor markers for response assessment. Tumor biopsies and blood samples will also be collected over the course of treatment to better understand the potential mechanism of action for the combination. The human proof of concept portion of the trial is expected to start in the first half of 2024.

Relapsed or Refractory AML

The American Cancer Society estimates that in 2024, about 20,800 new cases of AML will be diagnosed in the U.S. We are supporting a Phase 1b IST sponsored by the Dana-Farber Cancer Institute (“Dana-Farber”) designed to evaluate the use of BXCL701, along with the current standard of care to treat relapsed or refractory AML. We believe that pyroptosis triggered by BXCL701 may provide potent single agent cytotoxicity directed towards AML. We also believe that DPP9 copy number may provide an actionable biomarker, as high copy number has been observed to correlate with BXCL701 toxicity in human AML cell lines. DPP8/9 inhibition has been shown to be cytotoxic to THP-1 cells, monocytic cancer cells cultured from a patient with AML, but not other cell lines, suggesting a specific vulnerability of AML to these inhibitors which we believe can be exploited for therapeutic benefit. Based on these preclinical observations, Dana-Farber has initiated a Phase 1b trial to assess the safety of BXCL701 and to determine the maximum tolerated dose or the RP2D of BXCL701 as a single agent. This trial started in the first quarter of 2023. Subject to successful completion of this Phase 1b trial, we anticipate that Dana-Farber will conduct further studies to determine BXCL701’s objective response rate in AML in combination with the standard of care.

Other Potential Anti-cancer Programs

We collaborated with the University of Texas MD Anderson Cancer Center in a Phase 2a IST to evaluate the potential efficacy of BXCL701 administered in combination with pembrolizumab in patients with advanced solid cancer. The design of this open label trial included two cohorts and incorporated a two-stage configuration, which allowed for an expansion of patient enrollment to a total of 17 patients in each cohort if a RECIST 1.1 complete response or partial response was observed in at least one of the initial nine patients. The first cohort enrolled patients who previously had not received CPI therapy, with a second cohort consisting of patients that were either refractory to CPI therapy or had relapsed while on CPI therapy, meaning that no further response to CPI treatment is anticipated among patients in the second cohort. Trial participants received 200 mg of pembrolizumab on day 1 of a 21-day cycle, with 0.2 mg of BXCL701 administered twice-daily (“BID”) on days 1 through 7 during the first cycle, the dose increasing to 0.3 mg BID on Days 8 through 14 during the first and the subsequent cycles. Evaluable trial participants were required to receive a minimum of two treatment cycles. A preliminary assessment of BXCL701 dosed in combination with a CPI, as of completion of the first stage, noted responses in one patient in each of the CPI naïve and CPI refractory/relapsed cohorts, including a partial response in CPI-naïve, microsatellite stable endometrial carcinoma, PD-L1 negative (CPS <1) and a partial response in CPI-refractory uveal melanoma. These preliminary results were presented at the 2021

American Society of Clinical Oncology annual meeting (ASCO 2021). Patient enrollment in this trial was completed in the third quarter of 2022.

We believe BXCL701 may have potential application in breast cancer, as its use in combination with monoclonal antibody therapy generated encouraging in vivo data in a preclinical disease model where enhanced antibody-dependent cellular cytotoxicity was observed.

The FDA has granted BXCL701 orphan drug designation for the treatment of AML, stage IIb to IV melanoma, pancreatic cancer, and soft tissue sarcoma. As we consider BXCL701's therapeutic potential for additional indications that represent unmet medical needs, we intend to apply for additional orphan drug designations for BXCL701.

Biomarker Development Initiatives Intended to Complement BXCL701 Administration

We are also actively engaged in the identification and development of predictive biomarkers that we believe could be used in conjunction with BXCL701 to predict the likelihood of patient response to therapy across the range of targeted indications. Based on preliminary data from AML patients, we believe DPP9 copy number could correlate to BXCL701 response rate, with a greater likelihood of BXCL701 cytotoxicity in patients with increased DPP9 copy number. We are pursuing its use in our biomarker discovery activities as a potential companion diagnostic. At the Society for Immunotherapy of Cancer's 38th Annual Meeting (SITC 2023), we presented data from the Phase 2a trial in SCNC patients, which indicated DPP9 overexpression is a potential response-predictive biomarker of BXCL701 and pembrolizumab combination treatment in mCRPC patients with SCNC phenotype.

Immuno-Oncology Manufacturing

We rely on third party contract manufacturing organizations to support development and manufacture of product candidates for our clinical trials, and, if any of our current or future product candidates receives marketing approval, we expect to rely on such manufacturers to meet commercial demand. We expect this strategy will enable us to maintain a more efficient infrastructure, avoiding dependence on our own manufacturing facility and equipment, while simultaneously enabling us to focus our expertise on the clinical development and future commercialization of our products. Currently, the Patheon pharma services division of Thermo Fisher Scientific Inc. and another third-party contract manufacturer supply the drug substance and clinical trial supplies for BXCL701, and we expect to enter into commercial supply agreements with such manufacturers prior to any potential approval of BXCL701.

BXCL701 drug product is manufactured via conventional pharmaceutical processing procedures, employing commercially available excipients and packaging materials. The procedure and equipment employed for manufacture and analysis are consistent with standard organic synthesis or pharmaceutical production, and are transferable to a range of manufacturing facilities, if needed. We have selected a larger third-party drug product manufacturer and will be executing technology transfer of drug product manufacture to a larger manufacturer. We also plan to maintain the current drug substance and product manufacturer as part of our supply chain strategy.

Immuno-Oncology Competition

The biotechnology and pharmaceutical industries have made substantial investments in recent years into the rapid development of novel immunotherapies for the treatment of a range of pathologies, including infectious diseases and cancers, making this a highly competitive market. We believe BXCL701 is the only innate immune system activator in clinical development specifically addressing the cold tumor problem in immuno-oncology.

We face substantial competition from multiple sources, including large and specialty pharmaceutical, biopharmaceutical and biotechnology companies, academic research institutions and governmental agencies, and public and private research institutions. Our competitors compete with us on the level of the technologies employed, or on the level of development of product candidates. In addition, many small biotechnology companies have formed collaborations with large, established companies to (i) obtain support for their research, development, and commercialization of products or (ii) combine several treatment approaches to develop longer lasting or more efficacious treatments that may potentially directly compete with our current or future product candidates. We anticipate that we

will continue to face increasing competition as new therapies and combinations thereof, technologies, and data emerge within the field of immunotherapy and, furthermore, within the treatment of infectious diseases and cancers.

In addition to the current standard of care treatments for patients with infectious diseases or cancers, numerous commercial and academic preclinical studies and clinical trials are being undertaken by a large number of parties to assess novel technologies and product candidates in the field of immunotherapy. Results from these studies and trials have fueled increasing levels of interest in the field of immunotherapy.

Large pharmaceutical companies that have commercialized or are developing immunotherapies to treat cancer include AstraZeneca AB, Bristol-Myers Squibb Company, Merck & Co., Inc., Novartis AG, Pfizer Inc., and F. Hoffmann-La Roche Ltd.

We face significant competition from pharmaceutical and biotechnology companies that target specific tumor-associated antigens using immune cells or other cytotoxic modalities. These generally include immune cell redirecting therapeutics such as T cell engagers, adoptive cellular therapies such as CAR-Ts, antibody drug conjugates, targeted radiopharmaceuticals, targeted immunotoxin, and targeted cancer vaccines.

Clinical stage companies that compete with us directly on the level of the development of product candidates targeting the innate immune system include Amgen Inc., Mirati Therapeutics, Inc., Bristol-Myers Squibb Company, Ryvu Therapeutics, Merck & Co., Inc., Replimune Group Inc., Nektar Therapeutics, Novartis AG, Xbiotech Inc., Stingthera, Inc., AstraZeneca AB, F. Hoffmann-La Roche Ltd and Aravive, Inc. Clinical stage companies that compete with us directly on the level of the development of product candidates targeting the mCRPC include Astellas Pharma Inc., Pfizer Inc., Bayer AG, Janssen, Sanofi S.A., Clovis Oncology, Inc., AstraZeneca AB, Merck & Co., Inc., GSK plc, Tempest Therapeutics, Inc., Zenith Epigenetics Ltd. and Gossamer Bio, Inc. Clinical stage companies that compete with us directly on the level of the development of product candidates utilizing the therapeutic potential of synthetic lethality include Repare Therapeutics Inc., IDEAYA Biosciences, Inc. and Tango Therapeutics, Inc.

Many of our competitors, either alone or in combination with their respective strategic partners, have significantly greater financial resources and expertise in research and development, manufacturing, the regulatory approval process, and marketing than we do. Mergers and acquisition activity in the pharmaceutical, biopharmaceutical and biotechnology sector is likely to result in greater resource concentration among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through sizeable collaborative arrangements with established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Our commercial opportunity could be reduced or eliminated if one or more of our competitors develop and commercialize products that are safer, more effective, better tolerated, or of greater convenience or economic benefit than our proposed product offerings. Our competitors also may be in a position to obtain FDA or other regulatory approval for their products more rapidly, resulting in a stronger or dominant market position before we are able to enter the market. The key competitive factors affecting the success of all of our programs are likely to be product safety, efficacy, convenience and treatment cost.

Immuno-Oncology Intellectual Property

Intellectual property is of vital importance in our field and in biotechnology generally. We seek to protect and enhance proprietary technology, inventions, and improvements that are commercially important to the development of our business by seeking, maintaining, enforcing, and defending patent and other intellectual property rights, whether developed internally or licensed from third parties. We will also seek to rely on regulatory protection afforded through inclusion in expedited development and review, data exclusivity, market exclusivity, and patent term extensions where available.

As of February 29, 2024, we have multiple patent families filed to protect our immuno-oncology program, including our core patent family directed to methods of using BXCL701 with immune checkpoint inhibitors, which is granted in the U.S., Japan, Australia, Canada, Russia, China, South Africa, Mexico, New Zealand, and United Arab Emirates, and

with at least one pending application in the U.S., China, Mexico, the Republic of Korea, New Zealand, Russia, Australia, Brazil, Hong Kong, and Europe. Patents issued from this family, if any, are expected to expire no earlier than 2036. We have one additional patent issued in the U.S. directed to a method of selecting patients based on a biomarker, with an expected expiration date no earlier than 2039.

Additional applications are directed to administering BXCL701 in combinations with various other molecules, biomarkers, and dosing regimens. We also have four provisional applications directed to novel formulations of BXCL701, various dosing regimens, methods of use, and combination therapies. We expect that patents issued from these applications, if any, will expire from 2039 to 2044.

We expect to file additional patent applications in support of current and new immuno-oncology clinical candidates as well as new platform and core technologies. For additional information regarding intellectual property regulations and risks, see above under “—Neuroscience—Neuroscience Intellectual Property” and Part I, Item 1A, “Risk Factors - Risks Related to Our Intellectual Property.”

Our Relationship with BioXcel LLC

BioXcel LLC currently holds an ownership interest of approximately 29% in the Company and our pipeline compounds were identified by applying our growing internal AI capabilities, along with BioXcel LLC’s EvolverAI, a proprietary pharmaceutical discovery and development engine, for drug re-innovation.

We entered into the Amended and Restated Asset Contribution Agreement (the “Contribution Agreement”), pursuant to which BioXcel LLC, agreed to contribute BioXcel LLC’s rights, title and interest in BXCL501, BXCL701, BXCL502 and BXCL702, and all of the assets and liabilities associated in consideration for (i) 9,480,000 shares of our common stock, (ii) \$1 million upon completion of an initial public offering, (iii) \$500,000 upon the later of the 12-month anniversary of an initial public offering and the first dosing of a patient in the bridging bioavailability/bioequivalence study for the BXCL501 program, (iv) \$500,000 upon the later of the 12 month anniversary of an initial public offering and the first dosing of a patient in the Phase 2 proof of concept open-label monotherapy or combination trial with Keytruda for the BXCL701 program and (v) a one-time payment of \$5 million within 60 days after the achievement of \$50 million in cumulative net sales of any product or combination of products resulting from the development and commercialization of any one of the contributed product candidates or a product derived therefrom. As of December 31, 2023, all of the foregoing have been paid except for (v).

We entered into a Separation and Shared Services Agreement with BioXcel LLC that took effect on June 30, 2017, as amended and restated thereafter (the “Services Agreement”), pursuant to which services provided by BioXcel LLC through its subsidiaries in India and the U.S. will continue indefinitely, as agreed upon by the parties. These services include certain intellectual property prosecution and management and research and development activities. The Company has an option, exercisable until December 31, 2024, to enter into a collaborative services agreement with BioXcel LLC pursuant to which BioXcel LLC shall perform product identification and related services for us utilizing EvolverAI, its proprietary pharmaceutical discovery and development engine. To maintain the ability to exercise the foregoing option, pursuant to an amendment to the Services Agreement effective as of April 19, 2022, the Company has agreed to pay BioXcel LLC \$18,000 per month from March 13, 2023 to December 31, 2024. The parties are obligated to negotiate the collaborative services agreement in good faith and to incorporate reasonable market-based terms, including consideration for BioXcel LLC reflecting a low, single-digit royalty on net sales and reasonable development and commercialization milestone payments, provided that (i) development milestone payments shall not exceed \$10 million in the aggregate and not be payable prior to proof of concept in humans and (ii) commercialization milestone payments shall be based on reaching annual net sales levels, be limited to 3% of the applicable net sales level, and not exceed \$30 million in the aggregate.

Service charges recorded under the Services Agreement were \$1.3 million and \$1.4 million for the years ended December 31, 2023 and 2022, respectively.

Government Regulation

Government Regulation and Product Approval

Government authorities in the U.S., at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, marketing and export and import of drug products. A new drug must be approved by the FDA through the NDA process before it may be legally marketed in the U.S. We, along with any third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval of our products and product candidates. The process of obtaining regulatory approvals and the subsequent compliance with applicable U.S. federal, state, and local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Drug Development Process

In the U.S., the FDA regulates drugs under the federal Food, Drug, and Cosmetic Act (“FDCA”), and its implementing regulations. The process required by the FDA before a drug may be marketed in the U.S. generally involves the following:

- completion of preclinical laboratory tests, animal studies, and formulation studies in accordance with FDA’s Good Laboratory Practice requirements and other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval by an independent Institutional Review Board (“IRB”) or ethics committee at each clinical site before each clinical trial may be initiated;
- performance of adequate and well-controlled human clinical trials in accordance with good clinical practices (“GCPs”) to establish the safety and efficacy of the proposed drug for its intended use;
- preparation of and submission to the FDA of an NDA after completion of all pivotal clinical trials;
- a determination by the FDA within 60 days of its receipt of an NDA to file the application for review;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the drug is produced to assess compliance with current Good Manufacturing Practice (“cGMP”) requirements to assure that the facilities, methods, and controls are adequate to preserve the drug’s identity, strength, quality and purity, and potential inspection of selected clinical investigation sites to assess compliance with GCPs; and
- FDA review and approval of the NDA to permit commercial marketing of the product for specified indications for use in the U.S.

Prior to beginning the first clinical trial with a product candidate in the U.S., a sponsor must submit an IND to the FDA. An IND is a request for allowance from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol(s) for clinical studies. The IND also includes results of animal and in vitro studies assessing the toxicology, pharmacokinetics, pharmacology, and pharmacodynamic characteristics of the product; chemistry, manufacturing, and controls information; and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before any clinical trials can begin. Submission of an IND may or may not result in FDA allowance to begin a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include among other things, the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. While the IND is active, progress reports summarizing the results of the clinical trials and nonclinical studies performed since the last progress report, among other information, must be submitted at least annually to the FDA, and written IND safety reports must be submitted to the FDA and its investigators for actual or suspected serious and adverse events, along with any findings from other studies suggesting a significant risk to humans exposed to the same or similar drugs and findings from animal or in vitro testing suggesting a significant risk to humans, as well as any clinically important increased incidence of a suspected serious adverse reaction compared to that listed in the protocol or investigator brochure.

Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site and must monitor the study until completed. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether a study can move forward at designated check points, based on access to data from the study, and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other for other grounds, such as no demonstration of efficacy. The FDA or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1: The product candidate is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.
- Phase 2: The product candidate is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule, and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3: The product candidate is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product labeling.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may be conducted after initial marketing approval and may be used to gain additional experience from the treatment of patients in the intended therapeutic indication. In certain instances, the FDA may mandate the performance of Phase 4 clinical trials as a condition of approval of an NDA.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the manufacturer must develop methods for testing the identity, strength, quality and purity of the final drug. In addition, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

In addition, during the development of a drug, sponsors are given opportunities to periodically meet with or seek feedback from the FDA. These interactions may be requested, for example, prior to submission of an IND, at the end of Phase 2, and before an NDA is submitted. These interactions can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice, and for the sponsor and the FDA to reach alignment on the next phase of development.

U.S. Review and Approval Process

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, including results from preclinical and other non-clinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of a use of the product, or from a number of alternative sources, including studies initiated by independent investigators. The submission of an NDA is subject to the payment of substantial user fees; a waiver of such fees may be obtained under certain limited circumstances. Additionally, no user fees are assessed on NDAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

The FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once filed, the FDA reviews an NDA to determine, among other things, whether a product is safe and effective for its intended use and whether its manufacturing is cGMP-compliant to assure and preserve the product's identity, strength, quality and purity. Under the Prescription Drug User Fee Act guidelines that are currently in effect, the FDA has a goal of ten months from the filing date to complete a standard review of an NDA for a drug that is a new molecular entity, and of ten months from the date of NDA receipt to complete a standard review of an NDA for a drug that is not a new molecular entity.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that review, evaluate and provide a recommendation as to whether the NDA should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities comply with cGMP and are adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical trial sites to assure compliance with GCPs.

After the FDA evaluates an NDA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response Letter ("CRL"). An approval letter authorizes commercial marketing and sale of the product with specific prescribing information for specific indications. A CRL usually describes the specific deficiencies in the NDA identified by the FDA and may require additional clinical data, including additional clinical trials, or other significant and time-consuming requirements related to clinical trials, nonclinical studies or manufacturing. If a CRL is issued, the sponsor must resubmit the NDA or, address all of the deficiencies identified in the letter, or withdraw the application. Even if such data and information are submitted, the FDA may decide that the NDA does not satisfy the criteria for approval.

If regulatory approval of a product is granted, such approval will be granted for specific indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the NDA with a Risk Evaluation and Mitigation Strategy ("REMS") to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a medicine and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries, and other

risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. The FDA may also require one or more post-market studies and additional surveillance programs to further assess and monitor the product's safety and effectiveness after commercialization and may limit further marketing of the product based on the results of these post-marketing studies.

In addition, the Pediatric Research Equity Act ("PREA"), requires a sponsor to conduct pediatric clinical trials for most drugs, for a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration. Under PREA, original NDAs and supplements must contain a pediatric assessment unless the sponsor has received a deferral or waiver. The required assessment must evaluate the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The sponsor or FDA may request a deferral of pediatric clinical trials for some or all of the pediatric subpopulations. A deferral may be granted for several reasons, including a finding that the drug is ready for approval for use in adults before pediatric clinical trials are complete or that additional safety or effectiveness data needs to be collected before the pediatric clinical trials begin. The FDA must send a non-compliance letter to any sponsor that fails to submit the required assessment, keep a deferral current or fails to submit a request for approval of a pediatric formulation.

Expedited Development and Review Programs

The FDA offers expedited development and review programs for qualifying product candidates. For example, the Fast Track program is intended to expedite or facilitate the process for reviewing product candidates that are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast Track designation applies to the combination of the product candidate and the specific indication for which it is being studied. The sponsor of a Fast Track product candidate has opportunities for more frequent interactions with the applicable FDA review team during product development and, once an NDA is submitted, the NDA may be eligible for priority review. An NDA for a Fast Track product candidate may also be eligible for rolling review, where the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

A product candidate intended to treat a serious or life-threatening disease or condition may also be eligible for Breakthrough Therapy designation to expedite its development and review. A product candidate can receive Breakthrough Therapy designation if preliminary clinical evidence indicates that the product candidate, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The Breakthrough Therapy designation includes the Fast Track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product candidate, including involvement of senior managers.

Any application for a drug submitted to the FDA for approval, including a product candidate with a Fast Track designation and/or Breakthrough Therapy designation, may be eligible for other FDA review programs intended to expedite the FDA review and approval process, such as priority review. An NDA is eligible for priority review if the product candidate is designed to treat a serious or life-threatening disease or condition, and if approved, would provide a significant improvement in safety or effectiveness compared to available alternatives for such disease or condition. For new-molecular-entity NDAs, priority review designation means the FDA's goal is to take action on the application within six months of the 60-day filing date, or with respect to non-new-molecular-entity NDAs, within six months of the NDA receipt date.

Additionally, depending on the design of the applicable clinical studies, product candidates studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval,

the FDA will generally require the sponsor to perform adequate and well-controlled confirmatory clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit, and may require that such confirmatory studies be underway prior to granting accelerated approval. Products receiving accelerated approval may be subject to expedited withdrawal procedures if the sponsor fails to conduct the required confirmatory studies or if such studies fail to verify the predicted clinical benefit. In addition, the FDA currently requires pre-approval of promotional materials as a condition for accelerated approval, which could adversely impact the timing of the commercial launch of the relevant product.

Fast Track designation, Breakthrough Therapy designation, priority review, and accelerated approval do not change the standards for approval, but such designations may expedite the development or approval process. Even if a product candidate qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions to qualify for such program or may decide that the time period for FDA review or approval will not be shortened.

Orphan Drug Designation and Exclusivity

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug intended to treat a rare disease or condition, defined as a disease or condition with a patient population of fewer than 200,000 individuals in the U.S., or a patient population greater than 200,000 individuals in the U.S. and when there is no reasonable expectation that the cost of developing and making available the drug in the U.S. will be recovered from sales in the U.S. for that drug. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA.

If a product that has orphan drug designation subsequently receives the first FDA approval for a particular active ingredient for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full NDA, to market the same drug for the same disease or condition for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or if the FDA finds that the holder of the orphan drug exclusivity has not shown that it can assure the availability of sufficient quantities of the orphan drug to meet the needs of patients with the disease or condition for which the drug was designated. Orphan drug exclusivity does not prevent the FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research costs and a waiver of the NDA user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the disease or condition for which it received orphan designation. In addition, orphan drug exclusive marketing rights in the U.S. may be lost if the FDA later determines that the request for designation was materially defective or, as noted above, if a second applicant demonstrates that its product is clinically superior to the approved product with orphan exclusivity or the manufacturer of the approved product is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

Post-approval Requirements

Drug products manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse events, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing, annual program fees for any marketed products. Drug manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting requirements. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain compliance with cGMP and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- Restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market, or product recalls;
- fines, warning letters, or untitled letters;
- clinical holds on clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal health care programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases, and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising, and promotion of drug products. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe, in their independent professional medical judgment, legally available products for uses that are not described in the product's labeling and that differ from those approved by the FDA. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturers' communications on the subject of off-label use of their products. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA-approved labelling.

Hatch-Waxman Act

Section 505 of the FDCA describes three types of marketing applications that may be submitted to the FDA to request marketing authorization for a new drug. A Section 505(b)(1) NDA is an application that contains full reports of investigations of safety and efficacy. A 505(b)(2) NDA is an application that contains full reports of investigations of safety and efficacy but where at least some of the information required for approval comes from investigations that were not conducted by or for the applicant and for which the applicant has not obtained a right of reference or use from the person by or for whom the investigations were conducted. This regulatory pathway enables the applicant to rely, in part, on the FDA's prior findings of safety and efficacy for an existing product, or published literature, in support of its application. Section 505(j) establishes an abbreviated approval process for a generic version of approved drug products through the submission of an Abbreviated New Drug Application ("ANDA"). An ANDA provides for marketing of a generic drug product that has the same active ingredients, dosage form, strength, route of administration, labeling, performance characteristics and intended use, among other things, to a previously approved product. ANDAs are termed "abbreviated" because they are generally not required to include preclinical (animal) and clinical (human) data to establish safety and efficacy. Instead, generic applicants must scientifically demonstrate that their product is

bioequivalent to, or performs in the same manner as, the innovator drug through in vitro, in vivo, or other testing. The generic version must deliver the same amount of active ingredients into a subject's bloodstream in the same amount of time as the innovator drug and can often be substituted by pharmacists under prescriptions written for the reference listed drug. In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent with claims that cover the applicant's drug or a method of using the drug. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an ANDA or 505(b)(2) NDA.

Upon submission of an ANDA or a 505(b)(2) NDA, an applicant must certify to the FDA that (1) no patent information on the drug product that is the subject of the application has been submitted to the FDA; (2) such patent has expired; (3) the date on which such patent expires; or (4) such patent is invalid or will not be infringed upon by the manufacture, use or sale of the drug product for which the application is submitted. Generally, the ANDA or 505(b)(2) NDA cannot be approved until all listed patents have expired, except where the ANDA or 505(b)(2) NDA applicant challenges a listed patent through the last type of certification (a "paragraph IV certification"). If the applicant does not challenge the listed patents or indicates that it is not seeking approval of a patented method of use, the ANDA or 505(b)(2) NDA application will not be approved until all of the listed patents claiming the referenced product have expired. If the ANDA or 505(b)(2) NDA applicant has provided a paragraph IV certification to the FDA, the applicant must send notice of the paragraph IV certification to the NDA and patent holders once the application has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the paragraph IV certification. If the paragraph IV certification is challenged by an NDA holder or the patent owner(s) asserts a patent challenge to the paragraph IV certification, the FDA may not approve that application until the earlier of 30 months from the receipt of the notice of the paragraph IV certification, the expiration of the patent, when the infringement case concerning each such patent was favorably decided in the applicant's favor or settled, or such shorter or longer period as may be ordered by a court. This prohibition is generally referred to as the 30-month stay. In instances where an ANDA or 505(b)(2) NDA applicant files a paragraph IV certification, the NDA holder or patent owner(s) regularly take action to trigger the 30-month stay, recognizing that the related patent litigation may take many months or years to resolve. Thus, approval of an ANDA or 505(b)(2) NDA could be delayed for a significant period of time depending on the patent certification the applicant makes and the reference drug sponsor's decision to initiate patent litigation.

The Hatch-Waxman Act establishes periods of non-patent regulatory exclusivity for certain approved drug products, during which the FDA cannot approve (or in some cases accept) an ANDA or 505(b)(2) application that relies on the branded reference drug. For example, the holder of an NDA, including a 505(b)(2) NDA, may obtain five years of non-patent data exclusivity upon approval of a new drug containing new chemical entities that have not been previously approved by the FDA. A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the therapeutic activity of the drug substance. During the exclusivity period, the FDA may not accept for review an ANDA or a 505(b)(2) NDA submitted by another company that contains the previously approved active moiety. However, an ANDA or 505(b)(2) NDA may be submitted after four years if it contains a certification of patent invalidity or non-infringement. The Hatch-Waxman Act also provides three years of non-patent exclusivity to the holder of an NDA (including a 505(b)(2) NDA) for a particular condition of approval, or change to a marketed product, such as a new formulation for a previously approved product, if one or more new clinical studies (other than bioavailability or bioequivalence studies) was essential to the approval of the application and was conducted or sponsored by the applicant. This three-year exclusivity period protects against FDA approval of ANDAs and 505(b)(2) NDAs for the condition of the new drug's approval. As a general matter, the three-year exclusivity does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for generic versions of the original, unmodified drug product. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA; however, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and efficacy.

FDA Approval and Regulation of Medical Devices and Companion Diagnostics

If safe and effective use of a therapeutic depends on an in vitro diagnostic, then the FDA generally will require approval or clearance of that diagnostic, known as a companion diagnostic, at the same time that the FDA approves the therapeutic product. In August 2014, the FDA issued final guidance clarifying the requirements that apply to approval of therapeutic products and in vitro companion diagnostics. According to the guidance, if the FDA determines that a

companion diagnostic device is essential to the safe and effective use of a novel therapeutic product or indication, the FDA generally will not approve the therapeutic product or new therapeutic product indication if the companion diagnostic device is not approved or cleared for that indication. Approval or clearance of the companion diagnostic device will ensure that the device has been adequately evaluated and has adequate performance characteristics in the intended population.

Under the FDCA, in vitro diagnostics, including companion diagnostics, are regulated as medical devices. In the U.S., the FDCA and its implementing regulations, and other federal and state statutes and regulations govern, among other things, medical device design and development, preclinical and clinical testing, premarket clearance or approval, registration and listing, manufacturing, labeling, storage, advertising and promotion, sales and distribution, export and import, and post-market surveillance. Unless an exemption applies, medical devices, including companion diagnostic tests, require marketing clearance or approval from the FDA prior to commercial distribution.

The two primary types of FDA marketing authorization applicable to a medical device are premarket notification (“510(k) clearance”) and premarket approval (“PMA”). To obtain 510(k) clearance, a manufacturer must submit to the FDA a premarket notification submission demonstrating that the proposed device is “substantially equivalent” to a legally marketed predicate device. The FDA’s 510(k) clearance process usually takes from three to twelve months but may take longer. The FDA may require additional information, including clinical data, to make a determination regarding substantial equivalence. If the FDA agrees that the device is substantially equivalent to a predicate device currently on the market, it will grant 510(k) clearance to commercially market the device. If the FDA determines that the device is “not substantially equivalent” to a previously cleared device, the device is automatically designated as a Class III (i.e., high-risk) device. The device sponsor must then fulfill more rigorous PMA requirements or can request a risk-based classification determination for the device in accordance with the “de novo” process, which is a route to market for novel medical devices that are low to moderate risk and are not substantially equivalent to a predicate device.

After a device receives 510(k) clearance, any modification that could significantly affect its safety or effectiveness, or that would constitute a major change or modification in its intended use, will require a new 510(k) clearance or depending on the modification, approval of a PMA application or de novo classification. The FDA requires each manufacturer to determine whether the proposed change requires submission of a 510(k), de novo classification or a PMA in the first instance, but the FDA can review any such decision and disagree with a manufacturer’s determination. If the FDA disagrees with a manufacturer’s determination, the FDA can require the manufacturer to cease marketing and/or request the recall of the modified device until it receives 510(k) clearance, approval of a PMA application, or issuance of a de novo classification. Also, in these circumstances, the manufacturer may be subject to significant regulatory fines or penalties.

The PMA process, including the gathering of clinical and preclinical data and the submission to and review by the FDA, can take several years or longer. It involves a rigorous premarket review during which the applicant must prepare and provide the FDA with reasonable assurance of the device’s safety and effectiveness and information about the device and its components regarding, among other things, device design, manufacturing and labeling. PMA applications are subject to an application fee. In addition, PMAs for certain devices must generally include the results from extensive preclinical and adequate and well-controlled clinical trials to establish the safety and effectiveness of the device for each indication for which FDA approval is sought. In particular, for a diagnostic, a PMA application typically requires data regarding analytical and clinical validation studies. As part of the PMA review, the FDA will typically inspect the manufacturer’s facilities for compliance with the QSR which imposes elaborate testing, control, documentation and other quality assurance requirements.

Approval of a PMA is not guaranteed, and the FDA may ultimately respond to a PMA submission with a not approvable determination based on deficiencies in the application and require additional clinical trial or other data that may be expensive and time-consuming to generate and that can substantially delay approval. If the FDA’s evaluation of the PMA application is favorable, the FDA typically issues an approvable letter requiring the applicant’s agreement to specific conditions, such as changes in labeling, or specific additional information, such as submission of final labeling, in order to secure final approval of the PMA. If the FDA’s evaluation of the PMA or manufacturing facilities is not favorable, the FDA will deny approval of the PMA or issue a not approvable letter. A not approvable letter will outline the deficiencies in the application and, where practical, will identify what is necessary to make the PMA approvable. The FDA may also determine that additional clinical trials are necessary, in which case the PMA may be delayed for several

months or years while the trials are conducted and then the data submitted in an amendment to the PMA. If the FDA concludes that the applicable criteria have been met, the FDA will issue a PMA for the approved indications, which can be more limited than those originally sought by the applicant. The PMA can include post-approval conditions that the FDA believes necessary to ensure the safety and effectiveness of the device, including, among other things, restrictions on labeling, promotion, sale and distribution. Once granted, approval may be withdrawn by the FDA if compliance with post approval requirements, conditions of approval or other regulatory standards are not maintained, or problems are identified following initial marketing.

After a device is placed on the market, it remains subject to significant regulatory requirements. Medical devices may be marketed only for the uses and indications for which they are cleared or approved. Device manufacturers must also establish registration and device listings with the FDA. A medical device manufacturer's manufacturing processes and those of its suppliers are required to comply with the applicable portions of the QSR, which currently cover the methods and documentation of the design, testing, production, processes, controls, quality assurance, labeling, packaging and shipping of medical devices. Domestic facility records and manufacturing processes are subject to periodic unscheduled inspections by the FDA. The FDA also may inspect foreign facilities that export products to the U.S.

In January 2024, the FDA announced that it intends to initiate the process to reclassify most in vitro diagnostic tests ("IVDs") that are currently Class III into Class II, including companion diagnostics. If such reclassification efforts occur, any companion diagnostics that are the subject of the down-classification may no longer require premarket approval, but rather may become subject to the generally less burdensome 510(k) clearance process.

International Regulations

In addition to regulations in the U.S., we are and will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials, marketing authorization, post-marketing requirements, and any commercial sales and distribution of our products. We must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of any products in those countries. The requirements and process governing the conduct of clinical trials, product licensing, pricing, and reimbursement vary from country to country. Failure to comply with applicable foreign regulatory requirements, may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions, and criminal prosecution.

Non-Clinical Studies and Clinical Trials

Similar to the U.S., the various phases of non-clinical and clinical research in the EU are subject to significant regulatory controls.

Non-clinical studies are performed to demonstrate the health or environmental safety of new chemical or biological substances. Non-clinical (pharmaco-toxicological) studies must be conducted in compliance with the principles of good laboratory practice ("GLP") as set forth in EU Directive 2004/10/EC (unless otherwise justified for certain particular medicinal products, e.g., radio-pharmaceutical precursors for radio-labeling purposes). In particular, non-clinical studies, both in vitro and in vivo, must be planned, performed, monitored, recorded, reported and archived in accordance with the GLP principles, which define a set of rules and criteria for a quality system for the organizational process and the conditions for non-clinical studies. These GLP standards reflect the Organization for Economic Co-operation and Development requirements.

Clinical trials of medicinal products in the EU must be conducted in accordance with EU and national regulations and the International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use ("ICH") guidelines on GCP as well as the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki. If the sponsor of the clinical trial is not established within the EU, it must appoint an EU entity to act as its legal representative. The sponsor must take out a clinical trial insurance policy, and in most EU countries, the sponsor is liable to provide 'no fault' compensation to any study subject injured in the clinical trial.

The regulatory landscape related to clinical trials in the EU has been subject to recent changes. The EU Clinical Trials Regulation ("CTR") which was adopted in April 2014 and repeals the EU Clinical Trials Directive, became

applicable on January 31, 2022. Unlike directives, the CTR is directly applicable in all EU member states without the need for member states to further implement it into national law. The CTR notably harmonizes the assessment and supervision processes for clinical trials throughout the EU via a Clinical Trials Information System, which contains a centralized EU portal and database.

While the EU Clinical Trials Directive required a separate clinical trial application (“CTA”) to be submitted in each member state in which the clinical trial takes place, to both the competent national health authority and an independent ethics committee, much like the FDA and IRB, respectively, the CTR introduces a centralized process and only requires the submission of a single application for multi-center trials. The CTR allows sponsors to make a single submission to both the competent authority and an ethics committee in each member state, leading to a single decision per member state. The CTA must include, among other things, a copy of the trial protocol and an investigational medicinal product dossier containing information about the manufacture and quality of the medicinal product under investigation. The assessment procedure of the CTA has been harmonized as well, including a joint assessment by all member states concerned, and a separate assessment by each member state with respect to specific requirements related to its own territory, including ethics rules. Each member state’s decision is communicated to the sponsor via the centralized EU portal. Once the CTA is approved, clinical study development may proceed.

The CTR foresees a three-year transition period. The extent to which ongoing and new clinical trials will be governed by the CTR varies. Clinical trials for which an application was submitted (i) prior to January 31, 2022 under the EU Clinical Trials Directive, or (ii) between January 31, 2022 and January 31, 2023 and for which the sponsor has opted for the application of the EU Clinical Trials Directive remain governed by said Directive until January 31, 2025. After this date, all clinical trials (including those which are ongoing) will become subject to the provisions of the CTR.

During the development of a medicinal product, the EMA and national regulators provide the opportunity for dialogue and guidance on the development program. At the EMA level, this is usually done in the form of scientific advice, which is given by the Scientific Advice Working Party of the Committee for Medicinal Products for Human Use (“CHMP”). A fee is incurred with each scientific advice procedure. Advice from the EMA is typically provided based on questions concerning, for example, quality (chemistry, manufacturing and controls testing), nonclinical testing and clinical trials, and pharmacovigilance plans and risk-management programs. Advice is not legally binding to any future MA application (“MAA”) of the product concerned.

Marketing Authorization

In order to market our product candidates in the EU and many other foreign jurisdictions, we must obtain separate regulatory approvals. More concretely, in the EU, medicinal products candidates can only be placed on the market after obtaining a MA. To obtain regulatory approval of a product candidate in the EU, we must submit a MAA. The process for doing this depends, among other things, on the nature of the medicinal product. There are two types of MAs:

- “Centralized MA”: are issued by the European Commission through the centralized procedure based on the opinion of the EMA’s CHMP and are valid throughout the EU. The centralized procedure is compulsory for certain types of medicinal products such as (i) medicinal products derived from biotechnology processes, such as genetic engineering, (ii) medicinal products containing a new active substance indicated for the treatment of certain diseases, such as HIV or AIDS, cancer, diabetes, neurodegenerative diseases, autoimmune and other immune dysfunctions and viral diseases, (iii) designated orphan medicinal products, and (iv) advanced therapy medicinal products (“ATMPs”) such as gene therapy, somatic cell therapy or tissue-engineered medicines. The centralized procedure is optional for product candidates containing a new active substance not yet authorized in the EU, or for product candidates that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the EU.
- “National MA”: are issued by the competent authorities of the EU member states, only cover their respective territory, and are available for product candidates not falling within the mandatory scope of the centralized MAs. Where a product has already been authorized for marketing in an EU member state, this national MA can be recognized in another member state through the mutual recognition procedure. If the product has not received a national MA in any member state at the time of application, it can be approved simultaneously in various member states through the decentralized procedure. Under the decentralized procedure, an identical

dossier is submitted to the competent authorities of each of the member states in which the MA is sought, one of which is selected by the applicant as the reference member state.

Under the centralized procedure, the maximum timeframe for the evaluation of a MAA by the EMA is 210 days. This excludes so-called clock stops, during which additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP. At the end of the review period, the CHMP provides an opinion to the European Commission. If this opinion is favorable, the European Commission may then adopt a decision to grant an MA. In exceptional cases, the CHMP might perform an accelerated review of a MAA in no more than 150 days (not including clock stops). Innovative products that target an unmet medical need and are expected to be of major public health interest may be eligible for a number of expedited development and review programs, such as the PRIME scheme, which provides incentives similar to the Breakthrough Therapy designation in the U.S. PRIME is a voluntary scheme aimed at enhancing the EMA's support for the development of medicines that target unmet medical needs. It is based on increased interaction and early dialogue with companies developing promising medicines, to optimize their product development plans and speed up their evaluation to help them reach patients earlier. Many benefits accrue to sponsors of product candidates with PRIME designation, including but not limited to, early and proactive regulatory dialogue with the EMA, frequent discussions on clinical trial designs and other development program elements, and accelerated MAA assessment once a dossier has been submitted. Importantly, a dedicated contact and rapporteur from the CHMP is appointed early in the PRIME scheme, facilitating increased understanding of the product at EMA's committee level. An initial meeting initiates these relationships and includes a team of multidisciplinary experts at the EMA to provide guidance on the overall development and regulatory strategies.

MAAs have an initial duration of five years. After these five years, the authorization may be renewed on the basis of a reevaluation of the risk-benefit balance. Once renewed, the MA is valid for an unlimited period unless the European Commission or the national competent authority decides on justified grounds relating to pharmacovigilance, to proceed with one additional five-year renewal.

Data and Marketing Exclusivity

The EU also provides opportunities for market exclusivity. Upon receiving an MA, reference product generally receives eight years of data exclusivity and an additional two years of market exclusivity. If granted, the data exclusivity period prevents generic or biosimilar applicants from relying on the pre-clinical and clinical trial data contained in the dossier of the reference product when applying for a generic or biosimilar MA in the EU during a period of eight years from the date on which the reference product was first authorized in the EU. The market exclusivity period prevents a successful generic or biosimilar applicant from commercializing its product in the EU until 10 years have elapsed from the initial MA of the reference product in the EU. The overall 10-year market exclusivity period can be extended to a maximum of 11 years if, during the first eight years of those 10 years, the MA holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies. However, there is no guarantee that a product will be considered by the EU's regulatory authorities to be a new chemical entity, and products may not qualify for data exclusivity.

Orphan Medicinal Products

The criteria for designating an "orphan medicinal product" in the EU are similar in principle to those in the U.S. A medicinal product may be designated as orphan if (1) it is intended for the diagnosis, prevention, or treatment of a life-threatening or chronically debilitating condition; (2) either (a) such condition affects no more than five in 10,000 persons in the EU when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the EU to justify investment; and (3) there exists no satisfactory method of diagnosis, prevention, or treatment of such condition authorized for marketing in the EU, or if such a method exists, the product will be of significant benefit to those affected by the condition.

The application for orphan drug designation must be submitted before the MAA. Orphan designation entitles a party to incentives such as fee reductions or fee waivers, protocol assistance, and access to the Centralized MA process. Upon grant of a MA, orphan medicinal products are entitled to 10 years of market exclusivity for the approved therapeutic indication. During the 10-year market exclusivity period, the competent authorities cannot accept a MAA, or grant a

MA, or accept an application to extend a MA, for the same indication, in respect of a similar medicinal product. The period of market exclusivity is extended by two years for orphan medicinal products that have also complied with an agreed pediatric investigation plan (“PIP”). No extension to any supplementary protection certificate can be granted on the basis of pediatric studies for orphan indications. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process.

The 10-year market exclusivity may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, for example, if the product is sufficiently profitable not to justify maintenance of market exclusivity. Additionally, a MA may be granted to a similar product for the same indication at any time if (1) the second applicant can establish that its product, although similar, is safer, more effective, or otherwise clinically superior; (2) the applicant consents to a second orphan medicinal product application; or (3) the applicant cannot supply enough orphan medicinal product.

Failure to comply with EU and member state laws that apply to the conduct of clinical trials, manufacturing approval, MA of medicinal products and marketing of such products, both before and after grant of the MA, manufacturing of pharmaceutical products, statutory health insurance, bribery and anti-corruption or with other applicable regulatory requirements may result in administrative, civil, or criminal penalties. These penalties could include delays or refusal to authorize the conduct of clinical trials, or to grant MA, product withdrawals and recalls, product seizures, suspension, withdrawal or variation of the MA, total or partial suspension of production, distribution, manufacturing or clinical trials, operating restrictions, injunctions, suspension of licenses, fines, and criminal penalties.

The aforementioned EU rules are generally applicable in the European Economic Area (“EEA”), which consists of the 27 EU member states plus Iceland, Liechtenstein, Norway, Switzerland and Turkey, as well as cooperating countries Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, and Serbia.

Since the end of the Brexit transition period on January 1, 2021, Great Britain (England, Scotland and Wales) has not been directly subject to EU laws, however under the terms of the Ireland/Northern Ireland Protocol, EU laws generally apply to Northern Ireland. The EU laws that have been transposed into UK law through secondary legislation remain applicable in Great Britain, however new legislation such as the EU CTR is not applicable in Great Britain (“GB”).

The Trade and Cooperation Agreement (“TCA”) became effective on January 1, 2021. The TCA includes specific provisions concerning pharmaceuticals, which include the mutual recognition of Good Manufacturing Practice (“GMP”) inspections of manufacturing facilities for medicinal products and GMP documents issued, but does not foresee wholesale mutual recognition of UK and EU pharmaceutical regulations.

Other Foreign Regulations

For other countries outside of Europe, such as countries in Eastern Europe, Latin America, or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing, and reimbursement vary from country to country. In all cases, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions, and criminal prosecution.

Regulation of Companion Diagnostics

In the EU, in vitro diagnostic medical devices were regulated by Directive 98/79/EC, which regulated the placing on the market, the CE marking, the essential requirements, the conformity assessment procedures, the registration obligations for manufacturers and devices, as well as the vigilance procedure. In vitro diagnostic medical devices had to comply with the requirements provided for in the Directive, and with further requirements implemented at national level (as the case may be).

The regulation of companion diagnostics is subject to further requirements since in-vitro medical diagnostic devices Regulation (No 2017/746) (“IVDR”) became applicable on May 26, 2022. The IVDR applies since May 26, 2022, but there is a tiered system extending the grace period for many devices (depending on their risk classification) before they have to be fully compliant with the Regulation.

The IVDR introduced a new classification system for companion diagnostics, which are now specifically defined as diagnostic tests that support the safe and effective use of a specific medicinal product, by identifying patients that are suitable or unsuitable for treatment. Companion diagnostics will have to undergo a conformity assessment by a notified body. Before it can issue an EU certificate, the notified body must seek a scientific opinion from the EMA on the suitability of the companion diagnostic to the medicinal product concerned if the medicinal product falls exclusively within the scope of the centralized procedure process for the authorization of medicines, or the medicinal product is already authorized through the centralized procedure process, or an MAA for the medicinal product has been submitted through the centralized procedure process. For other substances, the notified body can seek the opinion from a national competent authority or the EMA.

The aforementioned EU rules are generally applicable in the EEA.

Pharmaceutical Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of drug products for which we obtain regulatory approval. In the U.S. and other countries, sales of products for which we receive regulatory approval for commercial sale will depend in part on the availability of reimbursement from third-party payors. Third-party payors include government health administrative authorities, managed care providers, private health insurers, and other organizations. The process for determining whether a payor will provide coverage for a drug product may be separate from the process for setting the price or reimbursement rate that the payor will pay for the drug product. Third-party payors may limit coverage to specific drug products on an approved list, or formulary, which might not include all of the FDA-approved drugs for a particular indication. Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor’s decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Different pricing and reimbursement schemes exist in other countries. In the EU, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Member states are free to restrict the range of pharmaceutical products for which their national health insurance systems provide reimbursement, and to control the prices and reimbursement levels of pharmaceutical products for human use. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines but monitor and control company profits. The downward pressure on health care costs in general, particularly prescription drugs, has become very intense. As a result, new products are facing increasingly high barriers to entry. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of products for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, an increasing emphasis on managed care in the U.S. has increased and we expect will continue to increase the pressure on pharmaceutical pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is secured for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

To raise sufficient financial resources to commercialize our approved products and continue to advance our product candidates, we will need to address pricing pressures and potential third-party reimbursement coverage for our approved products and product candidates. In the U.S. and elsewhere, sales of pharmaceutical products depend in significant part on the availability of reimbursement to the consumer from third-party payors, such as government payors, like Medicare and Medicaid, and private insurance plans. Third-party payors are increasingly challenging the prices charged for medical products and services. It is and will continue to be time consuming and expensive for us or our strategic collaborators to go through the process of seeking reimbursement from Medicare and private payors. Our products may not be considered cost-effective, and coverage and reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis.

Healthcare Reform

We participate in the Medicaid Drug Rebate Program and other federal and state government pricing programs in the U.S., and we may participate in additional government pricing programs in the future. The U.S. government and other governments have shown significant interest in pursuing health care reform, which has resulted in changes to these programs and impacts IGALMI™ and our product candidates that may be approved. For example, in March 2010, the Patient Protection and Affordable Care Act (“ACA”) was enacted and substantially changed the way health care is financed in the U.S. by both government and private insurers. Among other cost containment measures, the ACA established:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents;
- a Medicare Part D coverage gap discount program, in which pharmaceutical manufacturers who wish to have their drugs covered under Part D must offer discounts to eligible beneficiaries during their coverage gap period, or the “donut hole”; and
- a new formula that increases the rebates a manufacturer must pay under the Medicaid Drug Rebate Program.

Since its enactment, there have been judicial, executive and congressional challenges to certain aspects of the ACA. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA without specifically ruling on the constitutionality of the ACA. Thus, the ACA will remain in effect in its current form. In addition, we expect that federal, state, and local governments in the U.S. will continue to consider legislation to limit the growth of health care costs, including the cost of prescription drugs. Future legislation could limit payments for pharmaceuticals such as IGALMI™ and the product candidates that we are developing.

Other legislative changes have been proposed and adopted since the ACA was enacted, including aggregate reductions of Medicare payments to providers, which will remain in effect through 2032, absent additional congressional action. In January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several providers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. More recently, in March 2021, Congress enacted the American Rescue Plan Act of 2021, which, among other things, eliminated the statutory Medicaid drug rebate cap, effective January 1, 2024. The rebate was previously capped at a drugs average manufacturer price.

Most significantly, on August 16, 2022, President Biden signed the Inflation Reduction Act of 2022 (“IRA”) into law. This statute marks the most significant action by Congress with respect to the pharmaceutical industry since adoption of the ACA in 2010. Among other things, the IRA requires manufacturers of certain drugs to engage in price negotiations with Medicare (beginning in 2026), with prices that can be negotiated subject to a cap; imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpace inflation (first due in 2023); and replaces the Part D coverage gap discount program with a new discounting program (beginning in 2025). The IRA permits the Secretary of the Department of Health and Human Services (HHS) to implement many of these provisions through guidance, as opposed to regulation, for the initial years. On August 29, 2023, HHS announced the list of the first ten drugs that will be subject to price negotiations. HHS has issued and will continue to issue guidance implementing the IRA, although the Medicare drug price negotiation program is currently subject to legal challenges. While the

impact of the IRA on the pharmaceutical industry and our business cannot yet be fully determined, it is likely to be significant.

In addition, individual U.S. states have also become increasingly active in implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures and, in some cases, mechanisms to encourage importation from other countries and bulk purchasing. Furthermore, there has been increased interest by third-party payors and governmental authorities in reference pricing systems and publication of discounts and list prices.

Future legislation could limit payments for pharmaceuticals such as IGALMI™ and the product candidates that we are developing. We expect that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for our products or additional pricing pressures. The implementation of cost-containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products.

Other Health Care Laws and Compliance Requirements

For approved products, we may be subject to various federal, state, and foreign laws targeting fraud and abuse in the health care industry. Such laws include, without limitation, U.S. federal and state anti-kickback, fraud and abuse, false claims, consumer fraud, and transparency laws and regulations with respect to drug pricing and payments and other transfers of value made to physicians and other health care professionals, as well as similar foreign laws in jurisdictions outside the U.S.

The federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce either the referral of an individual, or the furnishing, recommending, or arranging for a good or service, for which payment may be made under a federal health care program, such as the Medicare and Medicaid programs. A person or entity does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. Many states have adopted laws similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for health care items or services reimbursed by any source, not only the Medicare and Medicaid programs.

The federal False Claims Act imposes liability on any person who, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal health care program. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act. The “qui tam” provisions of the False Claims Act allow a private individual to bring civil actions on behalf of the federal government alleging that the defendant has submitted a false claim to the federal government, and to share in any monetary recovery. In addition, various states have enacted false claims laws analogous to the False Claims Act. Many of these state laws apply where a claim is submitted to any third-party payer and not merely a federal health care program. When an entity is determined to have violated the False Claims Act, it may be required to pay up to three times the actual damages sustained by the government, plus significant civil penalties for each separate false claim.

Also, the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) created several federal crimes, including health care fraud, and false statements relating to health care matters. The health care fraud statute prohibits knowingly and willfully executing a scheme to defraud any health care benefit program, including private third-party payers. The false statements statute prohibits knowingly and willfully falsifying, concealing, or covering up a material fact or making any materially false, fictitious, or fraudulent statement in connection with the delivery of or payment for health care benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation.

The Physician Payment Sunshine Act (the “Sunshine Act”), which was enacted as part of the ACA, requires applicable manufacturers of drugs, devices, biologicals, or medical supplies covered under Medicare, Medicaid or the Children’s Health Insurance Program, to report annually to the Secretary of the Department of Health and Human Services payments or other transfers of value made by that entity, or by a third-party as directed by that entity, to

physicians (defined to include doctors, dentists, optometrists, podiatrists, and chiropractors), certain non-physician providers including physician assistants and nurse practitioners, and teaching hospitals, or to third parties on behalf of such providers, as well as ownership and investment interests held by physicians and their immediate family members during the course of the preceding calendar year. Failure to comply with the reporting requirements can result in significant civil monetary penalties for any payment or other transfer of value that is not reported.

Moreover, analogous state and foreign laws and regulations may be broader in scope than the provisions described above and may apply regardless of payor. Some state laws require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and relevant federal government compliance guidance; require drug manufacturers to report information related to payments and other transfers of value to physicians and other health care providers, many of which differ from each other in significant ways, thus further complicating compliance efforts; and restrict marketing practices or require disclosure of marketing expenditures and pricing information.

Violations of any of these laws or any other governmental laws and regulations that may apply include, without limitation, significant civil, criminal and administrative penalties, damages, fines, imprisonment, exclusion of products from government funded health care programs, such as Medicare and Medicaid, disgorgement, contractual damages, reputational harm, diminished profits, and the curtailment or restructuring of our operations.

Data Privacy & Security

Numerous state, federal and foreign laws, including consumer protection laws and regulations, govern the collection, dissemination, use, access to, confidentiality and security of personal information, including health-related information. In the U.S., numerous federal and state laws and regulations, including data breach notification laws, health information privacy and security laws, including HIPAA, and federal and state consumer protection laws and regulations (e.g., Section 5 of the Federal Trade Commission Act), that govern the collection, use, disclosure, and protection of health-related and other personal information could apply to our operations or the operations of our partners. In addition, certain state and non-U.S. laws, such as the California Consumer Privacy Act ("CCPA"), the California Privacy Rights Act ("CPRA"), and the EU General Data Protection Regulation ("GDPR"), govern the privacy and security of personal information, including health-related information in certain circumstances, some of which are more stringent than HIPAA and many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. Failure to comply with these laws, where applicable, can result in the imposition of significant civil and/or criminal penalties and private litigation. Privacy and security laws, regulations, and other obligations are constantly evolving, may conflict with each other to complicate compliance efforts, and can result in investigations, proceedings, or actions that lead to significant civil and/or criminal penalties and restrictions on data processing. Additionally, our use of AI and machine learning may be subject to laws and evolving regulations regarding the use of AI or machine learning, controlling for data bias, and anti-discrimination.

Human Capital

Our Employees

In August 2023, our Board of Directors approved the Reprioritization. Following a comprehensive review of the business, we determined to focus on high-potential agitation-market opportunities using our innovative, AI-based clinical drug development platforms. We intend to reduce more than 50% of our cash burn, as compared to our cash burn levels during the second quarter of 2023, to approximately \$80 million on a go-forward annualized basis. As part of the Reprioritization, our Board of Directors approved a reduction of approximately 60% of our workforce, from approximately 190 to 80 employees. These actions also included a shift in commercial strategy for IGALMI™ in the institutional setting, a reduction of in-hospital commercialization expenses, a suspension of programs no longer deemed core to our business, and a shift in focus to develop BXCL501 for use in the at-home setting in the treatment of agitation in schizophrenia, bipolar disorders, and in patients with mild to moderate dementia due to probable Alzheimer's disease. We recorded restructuring costs of \$4.2 million in the year ended December 31, 2023, including severance and benefit costs of \$4.1 million and contract termination costs of \$0.1 million, substantially all of which were paid in 2023. As of December 31, 2023, we had 74 full-time employees. We also leverage certain experts in drug development and AI that are employed by BioXcel LLC to provide flexibility for our business needs.

Our Culture

We believe that the success of our human capital management investments is evidenced by our low employee turnover, a number which is regularly reviewed by our Board of Directors as part of their oversight of our human capital strategy.

Employee Engagement, Talent Development & Benefits

We believe that our future success largely depends upon our continued ability to attract and retain highly skilled employees. We provide our employees with competitive salaries, bonuses, opportunities for equity ownership and other comparable benefits for our industry.

Employee and Visitor Safety Protocols

We follow health and safety guidelines to protect the well-being of our employees and visitors.

Diversity & Inclusion

Much of our success is rooted in the diversity of our teams and our commitment to inclusion. We value diversity at all levels and continue to focus on extending our diversity and inclusion initiatives across our entire workforce. We believe that our business benefits from the different perspectives a diverse workforce brings, and we pride ourselves on having a strong, inclusive and positive culture based on our shared mission and values.

Our Corporate Information

The Company was incorporated as a Delaware corporation on March 29, 2017. Our principal executive offices are located at 555 Long Wharf Drive, New Haven, CT 06511 and our telephone number is (475) 238-6837.

Available Information

Our website address is www.bioxceltherapeutics.com. The contents of, or information accessible through, our website are not part of this Annual Report on Form 10-K. We make our filings with the SEC, including our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports, available free of charge on our website as soon as reasonably practicable after we file such reports with, or furnish such reports to, the SEC.

We may use our website as a distribution channel of material information about the Company. Financial and other important information regarding the Company is routinely posted on and accessible through the Investors & Media sections of our website at www.bioxceltherapeutics.com. In addition, you may automatically receive email alerts and other information about the Company when you enroll your email address by visiting the “Email Alerts” option under the News / Events menu of the Investors & Media section of our website at www.bioxceltherapeutics.com.

The reference to our website address does not constitute incorporation by reference of the information contained on or available through our website, and you should not consider such information to be a part of this Annual Report on Form 10-K.

Item 1A. Risk Factors

You should carefully consider the risks described below, as well as general economic and business risks and the other information in this Annual Report on Form 10-K. The occurrence of any of the events or circumstances described below or other adverse events could have a material adverse effect on our business, results of operations and financial condition and could cause the trading price of our common stock to decline. Additional risks or uncertainties not presently known to us or that we currently deem immaterial may also harm our business.

Risks Related to Financial Position and Need for Additional Capital

We have a limited operating history and have not generated substantial product revenues to date, which may make it difficult to evaluate the success of our business and to assess our future viability.

We were incorporated in March 2017 and our operations to date have been largely focused on staffing our Company, raising capital, advancing the development of our product candidates, including conducting clinical and preclinical studies and establishing our commercial organization. We have only one product approved for commercial sale, and have limited experience in obtaining marketing approvals, manufacturing products on a commercial scale, and conducting sales and marketing activities necessary for successful commercialization. Consequently, predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully commercializing products.

We expect our financial condition and operating results to continue to fluctuate from quarter to quarter and year to year due to a variety of factors, many of which are beyond our control. We are transitioning from a company with primarily a research and development focus to a company also capable of undertaking commercial activities. We may encounter unforeseen expenses, difficulties, complications and delays, and may not be successful in such a transition.

We have incurred significant operating losses since inception and anticipate that we will continue to incur substantial operating losses for the foreseeable future and may never achieve or maintain profitability.

Since our inception, we have incurred significant operating losses. Our net loss was \$179.1 million and \$165.8 million for the years ended December 31, 2023 and 2022, respectively. As of December 31, 2023, we had a stockholders' deficit of approximately \$56.5 million. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. We have only one product candidate approved for marketing in the U.S., none in any other jurisdiction, and may never receive approval beyond the one product approved to date. It could be several years, if ever, before we have a commercialized product that generates significant revenues through sales of IGALMI™ or our product candidates, if approved. As a result, we are uncertain when or if we will achieve profitability and, if so, whether we will be able to sustain it. The net losses we incur may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses may increase in the long term as we:

- evaluate the development of our product candidates;
- conduct preclinical studies and clinical trials for our current product candidates and any future product candidates that we may pursue;
- continue to develop, maintain, expand and protect our intellectual property portfolio;
- pursue regulatory approvals for our current and future product candidates that successfully complete clinical trials;
- develop an appropriate sales, marketing, and distribution infrastructure to commercialize IGALMI™ and any other product candidates for which we may obtain marketing approval;
- potentially hire additional clinical, commercial, regulatory, scientific and finance personnel; and
- incur additional legal, accounting and other expenses in operating as a public company.

To become and remain profitable, we must develop and commercialize more products or product candidates with significant market potential. This will require us to be successful in a range of challenging activities, including completing clinical trials of our product candidates, developing commercial scale manufacturing processes, obtaining marketing approval, manufacturing, marketing, and selling IGALMI™ and any current and future product candidates for which we may obtain marketing approval, and satisfying any post-marketing requirements. We may never succeed in any or all of these activities and, even if we do, we may never generate sufficient revenue to achieve profitability.

Although we have obtained U.S. Food and Drug Administration (“FDA”) approval for IGALMI™, because of the numerous risks and uncertainties associated with product development, we are unable to accurately predict the timing or amount of expenses or when, or if, we will obtain marketing approval to commercialize any additional product candidates. If we are required by the FDA, or other regulatory authorities such as the European Medicines Agency (“EMA”) to perform studies and trials in addition to those currently expected, or if there are any delays in the development, or in the completion of any planned or future preclinical studies or clinical trials of our current or future product candidates, our expenses could increase and profitability could be further delayed. For example, developments with respect to our TRANQUILITY program evaluating BXCL501 in patients with dementia due to probable Alzheimer’s disease may increase the likelihood that we experience such costs or delays, as discussed in the risk factor below entitled: *“Developments relating to our TRANQUILITY II Phase 3 trial may impact the timing of our development plans for, and prospects for seeking or obtaining regulatory approval of, BXCL501 for the acute treatment of agitation (non-daily) associated with dementia in patients with probable Alzheimer’s disease.”*

Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis.

Our failure to become and remain profitable would decrease the value of our Company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations. A decline in the value of our Company also could cause you to lose all or part of your investment.

Our strategic reprioritization and related reduction in force may not achieve our intended outcome.

In August 2023, we announced a broad-based strategic reprioritization (the “Reprioritization”). We have taken actions to reduce certain operational and workforce expenses that are no longer deemed core to our ongoing operations in order to extend our cash runway and drive innovation and growth in high potential clinical development and value creating opportunities. These actions include a shift in commercial strategy for IGALMI™ in the institutional setting, a reduction of in-hospital commercialization expenses, a suspension of programs no longer determined to be core to ongoing operations, and a prioritization on at-home treatment setting opportunities for BXCL501. As part of this strategy, we reduced our workforce by approximately 60%. As of December 31, 2023, the Reprioritization was substantially completed.

The reduction in force may result in unintended consequences and costs, such as the loss of institutional knowledge and expertise, attrition beyond the intended number of employees, decreased morale among our remaining employees, and the risk that we may not achieve the anticipated benefits of the reduction in force. In addition, while positions have been eliminated, certain functions necessary to our operations remain, and we may be unsuccessful in distributing the duties and obligations of departed employees among our remaining employees. The reduction in workforce could also make it difficult for us to pursue, or prevent us from pursuing, new opportunities and initiatives due to insufficient personnel, or require us to incur additional and unanticipated costs to hire new personnel to pursue such opportunities or initiatives. The workforce reduction could also harm our reputation, making our ability to recruit skilled personnel difficult. If we are unable to realize the anticipated benefits from the reduction in force, or if we experience significant adverse consequences from the reduction in force, our business, financial condition, and results of operations may be materially adversely affected.

In addition, we may not realize the benefits of or there may be unanticipated costs associated with our Reprioritization. As a result of the Reprioritization, including our strategic refocus, we may not generate material revenues from IGALMI™ in the near term because our commercial force will be significantly reduced. If we are unable to commercialize IGALMI™ in a different setting or unable to develop, receive marketing approval for and successfully commercialize BXCL501, BXCL701 and any of our other product candidates on our own or with any future

collaborator, or experience delays because of any of these factors or otherwise, our business could be materially and substantially harmed.

In addition, because we have limited financial and managerial resources, under our Reprioritization, we intend to focus on specific product candidates, indications and development programs. We may also conduct several clinical trials for our product candidates in parallel over the next several years, which may make our decision as to which product candidates to focus on more difficult. As a result, we may forgo or delay pursuit of opportunities with other product candidates or other indications that could have had greater commercial potential or likelihood of success. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through future collaborations, licenses and other similar arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate. If we are not successful in increasing our efficiency as a result of this Reprioritization, our efforts to develop and commercialize our product candidates may be delayed or halted and our business could be materially adversely impacted.

Furthermore, we may undertake further similar cost-saving initiatives, which may include additional restructuring or workforce reductions. These types of cost-reduction activities can be complex and result in unintended consequences and costs, including decreased employee morale, loss of institutional knowledge and expertise and adversely impact our business.

We will need substantial additional funding, and if we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts or otherwise seek strategic alternatives. In addition, the failure to raise additional financing in accordance with the minimum capital raising requirements of our Credit Agreement (as defined herein) would trigger an event of default thereunder.

We will require additional future funding to support current and anticipated future expenses. We currently anticipate continuing to develop and conduct clinical trials with respect to our current and any future product candidates; seek to identify and develop additional product candidates; acquire or in-license other product candidates or technologies; seek regulatory approvals for our product candidates that successfully complete clinical trials, if any; establish sales, marketing, distribution and other commercial infrastructure to support the commercialization of products for which we may obtain marketing approval; require the manufacture of larger quantities of product candidates for clinical development and, potentially, commercialization; maintain, expand and protect our intellectual property portfolio; hire and retain limited additional personnel, such as clinical, quality control and scientific personnel; add operational, financial and management information systems and personnel, including personnel to support our product development and help us comply with our obligations as a public company; and add equipment and physical infrastructure to support our research and development programs.

We may be required to expend significant funds to continue to commercialize IGALMI™ in the U.S. and advance the development of BXCL501, BXCL701, BXCL502 and our other product candidates. In addition, while we may seek one or more collaborators for future development of our current product candidates or any future product candidates that we may develop for one or more indications, we may not be able to enter into a collaboration for any of our product candidates for such indications on suitable terms, on a timely basis or at all. In any event, our existing cash will not be sufficient to fund all of the efforts that we plan to undertake or to fund the completion of development of our product candidates or our other preclinical programs. Accordingly, we will be required to obtain further funding through public or private equity offerings, debt financings, collaborations and licensing arrangements or other sources. We may also seek third-party investments in or other strategic options for our subsidiary, OnkosXcel. Further financing may not be available to us on acceptable terms, or at all. In addition, we are reliant on the financial institutions with which we hold our cash and cash equivalents. If such institutions were to close, we may not be able to recover all of our cash or cash equivalents held at such institutions. Moreover, market volatility resulting from COVID-19, credit crises, adverse macroeconomic conditions, such as high interest or inflation rates, or other factors, as well as Company-specific factors such as the progress of our development pipeline, adverse clinical events or results, regulatory investigations, or ongoing or potential legal proceedings, could also adversely impact our ability to access capital as and when needed. Our failure

to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy.

Management believes that, after giving effect to the Reprioritization, the Company's cash and cash equivalents of \$65.2 million as of December 31, 2023 will allow the Company to fund its operations and meet its liquidity requirements into mid-2024. However, the expected cost benefit of the Reprioritization cannot be assured, and there can be no assurance that we will be able to extend our cash runway by meeting the conditions for additional funding under the terms of our Credit Agreement (defined below) or otherwise. In addition, the failure to raise additional financing in accordance with the minimum capital raising requirements of our Credit Agreement would trigger an event of default thereunder. The Fourth Amendment to our Credit Agreement includes covenants that we will receive, (i) after March 20, 2024, which is the effective date of the Fourth Amendment, and on or before April 15, 2024, at least \$25.0 million in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or in non-refundable cash consideration from partnering transactions entered into after March 20, 2024 (so long as such partnering transactions would not require us or any of our subsidiaries to make any cash investments in connection with the partnering transactions and no such cash investments are made), and (ii) after March 20, 2024 and on or before November 30, 2024, at least \$50.0 million (for the avoidance of doubt, inclusive of amounts previously counted toward the preceding clause (i)) in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent (as defined in the Credit Agreement) in its sole discretion from partnering transactions entered into after March 20, 2024. Failure to perform this covenant would constitute (A) a default under the Credit Agreement and (B) an event of default under the Credit Agreement, subject to a cure period in the case of clause (i) of the preceding sentence, until May 15, 2024. For the avoidance of doubt, failure to perform clause (ii) would constitute an immediate event of default under the Credit Agreement without any cure or grace period.

Furthermore, our estimate as to how long we expect our existing cash to be able to continue to fund our operations is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we currently expect. Further, changing circumstances, some of which may be beyond our control, could cause us to consume capital significantly faster than we currently anticipate, and we may need to seek additional funds sooner than planned. Our future funding requirements, both short-term and long-term, will depend on many factors, including:

- the scope, progress, timing, costs, and results of clinical trials of our product candidates, including any delays that have occurred or may occur due to the recent developments with the TRANQUILITY program;
- our ability to enter into and the terms and timing of any collaborations, licensing agreements or other arrangements;
- the costs, timing and outcome of seeking regulatory approvals;
- the costs of commercialization activities for IGALMITM and for any of our product candidates that receive marketing approval, to the extent such costs are not the responsibility of any future collaborators, including the costs and timing of establishing product sales, marketing, distribution and manufacturing capabilities;
- our headcount growth and associated costs as we expand our research and development and establish a commercial infrastructure;
- revenue received from commercial sales of IGALMITM and our current and future product candidates;
- the costs of preparing, filing and prosecuting patent applications, maintaining and protecting our intellectual property rights and defending against intellectual property related claims;
- the number of future product candidates that we pursue and their development requirements;
- changes in regulatory policies or laws that may affect our operations;
- changes in physician acceptance or medical society recommendations that may affect commercial efforts;

- the costs of acquiring potential new product candidates or technology;
- the costs of operating as a public company;
- the extent to which our operations continue;
- the costs of legal proceedings and investigations; and
- costs associated with any adverse market conditions or other macroeconomic factors.

As we continue our research and development activities, we will require additional resources to continue as a going concern. We can provide no assurance that we will successfully obtain additional resources to improve our financial condition. If we are unable to obtain necessary additional capital, we could be compelled to pursue alternative options, including, without limitation, implementing further workforce reductions, reducing or ceasing product development programs and advancement of our clinical trials and product candidates, selling our assets or seeking other strategic alternatives.

We have significant indebtedness and other contractual obligations that could impair our liquidity, restrict our ability to do business and thereby harm our business, results of operations and financial condition. We may not have sufficient cash flow from operations to satisfy our obligations under the Credit Agreement.

As of December 31, 2023, we had aggregate principal indebtedness of \$102.7 million outstanding under our Credit Agreement and Guaranty (as amended, the “Credit Agreement”) by and among the Company, as the borrower, certain subsidiaries of the Company from time to time party thereto as subsidiary guarantors, the lenders party thereto (the “Lenders”), and Oaktree Fund Administration LLC (“OFA”) as administrative agent.

Restrictive covenants in the Credit Agreement place limits on our ability to conduct our business. The Credit Agreement contains customary representations and warranties and customary affirmative and negative covenants, including, among other things, restrictions on indebtedness, liens, investments, mergers, dispositions, prepayment of other indebtedness, and dividends and other distributions, subject to certain exceptions, including specific exceptions with respect to product commercialization and development activities. In addition, certain events, including receipt of a warning letter from the FDA, may constitute an event of default. We must also comply with certain covenants under the Credit Agreement, including a financial covenant that requires we maintain a minimum cash liquidity amount of \$15 million (or higher upon certain events, including as described in the Fourth Amendment to the Credit Agreement described in Note 19, Subsequent Events in the audited financial statements included elsewhere in this Annual Report on Form 10-K) and a minimum revenue requirement measured on a quarterly basis based on the revenue attributable to BXCL501 for the six consecutive month period ending on the last day of the relevant quarter, subject to cure payments of not less than \$1.0 million if we fail to meet the minimum revenue requirement. The minimum revenue requirement applies beginning with the preceding six-month period ending on December 31, 2024, and ranges from approximately \$4.5 million for the fourth quarter of 2024 to approximately \$47.9 million for the first quarter of 2027. If we fail to meet the minimum revenue requirements for the preceding six-month periods ending on December 31, 2024, March 31, 2025, June 30, 2025 and September 30, 2025, we could be required to make revenue cure payments for the revenue shortfalls of up to \$4.5 million, \$6.2 million, \$8.5 million, and \$8.5 million, respectively, plus aggregate prepayment fees of \$1.9 million. Under the Credit Agreement, these cure payments would be due on April 21, 2025, June 6, 2025, September 5, 2025 and December 8, 2025, respectively. We are only permitted to make cure payments for revenue shortfalls up to three times during the term of the Credit Agreement, after which we would default on the Credit Agreement if we are unable to satisfy the minimum revenue requirement for any subsequent fiscal quarter. In addition, certain events, including certain regulatory events and any “going concern” or similar qualification in a report of the Company’s independent registered public accountants relating to the Company’s annual financial statements, constitute an event of default under the Credit Agreement. The report of our independent registered public accounting firm included in this Annual Report on Form 10-K contains a “going concern” explanatory paragraph. In March 2024 we entered into a Fourth Amendment to the Credit Agreement, pursuant to which the Lenders waived compliance with this covenant with respect to the report contained in this Annual Report on Form 10-K. The Fourth Amendment to the Credit Agreement also includes other covenants relating to minimum cash liquidity covenants and minimum capital raising requirements, as described further in Note 19, Subsequent Events in the audited financial statements included elsewhere in this Annual

Report on Form 10-K, and failure to comply with such obligations, or other obligations required under the Credit Agreement, could trigger an event of default. Certain change of control events can also trigger an event of default under the Credit Agreement, including control by any entity or group of entities, other than BioXcel LLC and its affiliates, that acquires 35% or more of our voting capital stock.

Our ability to make scheduled payments or payments to maintain compliance with covenants or to restructure or refinance these and other outstanding debt obligations depends on our financial and operating performance, including growth in revenue from IGALMI™ and BXCL501, which will be affected by prevailing economic, industry and competitive conditions and by financial, business and other factors beyond our control. A failure to pay our debt, fixed costs and other obligations or a breach of our contractual obligations or other event of default could result in a variety of adverse consequences, including the acceleration of our obligations or the exercise of remedies by our creditors and lessors. In such a situation, it is unlikely that we would be able to cure our breach, fulfill our obligations, make required payments or otherwise cover our fixed costs, which would have a material adverse effect on our business, results of operations and financial condition.

In addition, historically we have relied on debt and equity financings as our primary sources of liquidity. If our future cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to reduce or delay expenditures, sell assets, seek additional capital or seek to restructure or refinance our indebtedness. Any refinancing or restructuring of our indebtedness could be at higher interest rates and may require us to comply with more onerous covenants. These alternative measures may not be successful and may not permit us to meet our scheduled or any accelerated debt service obligations. In the absence of such cash flows and resources, we could face substantial liquidity problems and might be required to sell material assets or pursue other strategic alternatives to attempt to meet our debt service obligations.

We have identified conditions and events that raise substantial doubt regarding our ability to continue as a going concern.

As of December 31, 2023, we had \$65.2 million in cash and cash equivalents. Based on our existing cash, cash equivalents and lack of current availability under our funding facilities, we do not believe we have sufficient cash on hand to support current operations and service our debt obligations for at least one year from the date of issuance of the audited consolidated financial statements appearing in this Annual Report on Form 10-K. This condition raises substantial doubt about our ability to continue as a going concern for at least one year from the date that our financial statements for the year ended December 31, 2023 are issued. In order to mitigate the current and potential future liquidity issues, we have undertaken the Reprioritization and may, among other things, seek to raise capital through the issuance of common stock, or by restructuring, refinancing, and/or amending the terms of the Credit Agreement (including with respect to regulatory related events of default that do not contain a cure period) or pursue other strategic alternatives. However, such transactions may not be successful and we may not be able to raise additional equity and/or financing necessary to meet our obligations. Moreover, our Credit Agreement contains covenants that we may be unable to comply with and which could result in the acceleration of our debt service obligations, further reducing our capital resources and ability to fund our operations. As such, there can be no assurance that we will be able to continue as a going concern and we may be forced to delay, reduce or discontinue our product development programs or commercialization efforts in order to preserve cash. For additional cost-saving and other strategic initiatives we may be compelled to pursue, see the risk factor entitled, “*We will need substantial additional funding, and if we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts or otherwise seek strategic alternatives.*”

Risks Related to the Discovery and Development of Product Candidates

We have limited experience in drug discovery and drug development.

Prior to the acquisition of our product and product candidates, we were not involved in and had no control over their preclinical and clinical development. In addition, we are relying upon the parties we acquired our product candidates from to have conducted research and development in accordance with the applicable protocol, legal, regulatory and scientific standards, accurately reported the results of all clinical trials conducted prior to our acquisition of the applicable product candidate, and correctly collected and interpreted the data from these studies and trials. To the extent

any of these activities did not occur, our expected development time and costs could increase, which could adversely affect our prospects for marketing approval of, and receiving any future revenue from, these product candidates.

Developments relating to our TRANQUILITY II Phase 3 trial may impact the timing of our development plans for, and prospects for seeking or obtaining regulatory approval of, BXCL501 for the acute treatment of agitation (non-daily) associated with dementia in patients with probable Alzheimer's disease.

Following our discovery of principal investigator misconduct at one of the clinical sites in our TRANQUILITY II Phase 3 clinical trial, we initiated an investigation into the issues associated with the trial. This principal investigator had previously been subject to a December 2022 FDA inspection of her clinical site in connection with the TRANQUILITY II clinical trial. At the conclusion of this inspection, the FDA issued an FDA Form-483 identifying three inspectional observations. These observations related to the principal investigator's failure to adhere to the informed consent form approved by the Institutional Review Board for a limited number of subjects whose records the FDA reviewed, maintain adequate case histories for certain patients whose records the FDA reviewed, and adhere to the investigational plan in certain instances. For example, the FDA cited the principal investigator's delay in informing the sponsor's medical monitor or pharmacovigilance safety vendor of an SAE, for one of the subjects, which report was made to our vendor outside of the 24 hour time period prescribed by the clinical trial protocol. The principal investigator for this clinical site responded to the FDA observations within the time period requested. The FDA inspection remains open, however, as the FDA has not issued an Establishment Inspection Report.

In May 2023, it came to our attention that this same principal investigator in the TRANQUILITY II clinical trial may have fabricated email correspondence around the time of the FDA inspection, purporting to demonstrate that the investigator timely submitted to our pharmacovigilance safety vendor a report of an SAE from a different subject than the one cited in the FDA Form-483, and purporting to show that the vendor had confirmed receipt. Upon receipt of this information, we promptly initiated an investigation and received confirmation that the principal investigator fabricated the email correspondence related to the timing of the reporting of this SAE to our pharmacovigilance vendor to make it appear as though this SAE had been timely reported as required by the clinical trial protocol. This principal investigator has not participated in any other clinical trial sponsored or conducted by us. Both we and the principal investigator's employer have reported this incident to the FDA.

Since that time, we have taken steps to further investigate and evaluate the conduct of the TRANQUILITY II trial at this clinical site. Based on these steps to date, we believe that there have been no further instances of misconduct or fraud or other findings that adversely impact the data integrity or reliability of the eligibility, safety, and efficacy data obtained at the clinical trial site in question.

However, the FDA may not accept or agree with our conclusions or analyses or may interpret or weigh their importance differently. Further, if we or the FDA determine that there are issues with data integrity and/or compliance with good clinical practice ("GCP") requirements at the trial site, we may be unable to use some or all of the subject data generated at this clinical site to support a marketing application. Any issues identified at this trial site may also be identified at other trial sites. If all of data from this clinical trial site were discarded, the TRANQUILITY II trial would no longer be adequately powered for statistical significance or would not be considered adequately well-controlled by the FDA, and in either case, we would need to conduct a new comparable clinical trial before we are able to seek any approval of BXCL501 for use in patients with acute agitation (non-daily) due to dementia in probable Alzheimer's disease. If a substantial portion of the data were discarded, similar outcomes may also occur.

In addition, we are continuing to seek feedback from the FDA with respect to our TRANQUILITY program. For example, on February 20, 2024, we held a Type B/Breakthrough Therapy designation meeting with the FDA. The original purpose of this meeting was to obtain feedback on the design of a proposed at-home study that did not include caregiver-collected efficacy endpoints, based on our belief that obtaining caregiver assessments of efficacy would be challenging. We believe there are no validated caregiver endpoints for assessing efficacy in Alzheimer's disease patients in the at-home setting. As a result, we focused on requesting feedback from the FDA regarding our proposal for an at-home clinical study with safety as the primary objective, and to better understand what additional data would be required to submit an sNDA to support labeling for BXCL501 to include the acute treatment of agitation associated with dementia in probable Alzheimer's disease or, in the alternative, in this population in the care setting only. In its preliminary responses, the FDA reiterated its prior comments that we generate additional efficacy data, including repeat-

dose efficacy data, to support an sNDA submission, as the FDA indicated that our proposed efficacy database, which currently includes the 70 patients who have been treated with 60 mcg of BXCL501 in TRANQUILITY I and TRANQUILITY II, would not contain substantial evidence of effectiveness absent additional data. The FDA advised that we generate the necessary efficacy data in care facilities prior to conducting any trials in the at-home setting. In addition, the FDA indicated the need to generate long-term safety data to support an sNDA submission, including from probable Alzheimer's disease patients exposed to BXCL501, for up to one year. We have received the final meeting minutes from the FDA, which we believe are consistent with the FDA's preliminary responses and the subsequent meeting discussion. Based on the FDA's feedback, we are currently planning to generate additional Phase 3 efficacy and safety data, in a variety of relevant care-facility settings and across severity of dementia using the PEC as the primary efficacy measure, as used in the prior TRANQUILITY II study. In addition, we plan to discuss the details of the requirement for long-term safety data at a future meeting with the FDA. Also, although we announced in November 2023 that we were planning to conduct a Phase 3 trial in the at-home setting, with safety as the primary objective (TRANQUILITY At Home), given the priority to expand the database to generate additional efficacy and safety data in care facilities, we are re-evaluating the timing for initiating TRANQUILITY At Home. Conducting any new clinical trial can take significant time, funding and resources, and there are no assurances we could raise the capital or have the liquidity and resources to conduct further clinical trials in our TRANQUILITY program. Any new clinical trials conducted in our target patient populations may have different safety or efficacy results from the topline data the Company previously announced for the TRANQUILITY II clinical trial. Further, any government investigation, disqualification, or debarment of, or proceeding or action against the principal investigator, or any government investigation, proceeding or action against us, could further delay development and approval of BXCL501 for this indication, and otherwise have a material adverse effect on us, our financial condition (including triggering a potential event of default under our Credit Agreement), results of operations and prospects.

We have limited clinical data supporting potential safety or efficacy of BXCL501 for use in the at-home setting.

In August 2023, we announced our intention to pursue a strategic reprioritization of our commercialization and development efforts (the "Reprioritization"), including among other things, a shift in focus to primarily develop BXCL501 for use in expanded settings, including the at-home setting and care facilities, for the acute treatment of agitation in patients with dementia due to probable Alzheimer's disease and the acute treatment of agitation in schizophrenia and bipolar patients in the at-home setting. Although we have conducted several clinical trials that evaluated BXCL501 in the institutional setting, we have limited data supporting BXCL501's potential use in the at-home setting. In particular, we have not conducted a clinical trial evaluating the at-home use of BXCL501 in the acute treatment of agitation in patients with dementia due to probable Alzheimer's disease.

Although we will seek additional feedback from the FDA regarding the potential of its ongoing or completed clinical trials to support submission of one or more sNDAs and to support a label for use in the home, it is possible that the FDA may not consider our available data adequate to support such submissions. For example, on October 11, 2023, we received feedback from the FDA that TRANQUILITY I and TRANQUILITY II alone are not sufficient to support an sNDA submission for the use of BXCL501 to treat acute agitation (non-daily) in patients with dementia due to probable Alzheimer's disease in either the at-home setting or care facilities, and the FDA indicated that we should, among other things, conduct a further clinical trial to evaluate safety and collect efficacy data of BXCL501 before we are able to submit an sNDA seeking approval of BXCL501 for use in such populations.

For a description of recent developments relating to our TRANQUILITY program, please see the prior risk factor, "*Developments relating to our TRANQUILITY II Phase 3 trial may impact the timing of our development plans for, and prospects for seeking or obtaining regulatory approval of, BXCL501 for the acute treatment of agitation (non-daily) associated with dementia in patients with probable Alzheimer's disease.*" We cannot provide assurance that we will be able to seek or obtain approval of BXCL501 for treatment of agitation in patients with dementia due to probable Alzheimer's disease in the at-home setting based on this updated development plan.

Although we continue to seek feedback from the FDA with respect to our TRANQUILITY program, the FDA may not agree that any trial designs we propose are sufficient to establish both the safety and efficacy of BXCL501 for the acute treatment of agitation associated with dementia due to probable Alzheimer's disease in either a care setting or an at-home setting. For example, to assess safety, the FDA has indicated that we need to expose more patients to BXCL501 for a longer period of time and that an efficacy trial of a shorter duration, combined with the patients in its previous

trials, would not support submissions of an sNDA. Further, to assess efficacy in the home setting, the FDA may determine that we cannot rely on our previous studies of BXCL501 for this proposed indication since those studies were conducted in assisted living facilities and they are not comparable to the at-home setting. The FDA may also require us to seek approval for BXCL501 for use in care facilities prior to seeking any approval for at-home use in the targeted AD patient population. In particular, we are planning to generate additional Phase 3 safety and efficacy data in a variety of relevant care-facility settings, but even if our planned clinical efforts are successful and even if we are able to obtain approval of BXCL501 for use in patients with dementia due to probable Alzheimer's disease, we cannot provide assurance that we will be able to seek or obtain approval of BXCL501 for the treatment of agitation in patients with dementia due to probable Alzheimer's disease in the at-home setting based on this data and we will be required to generate additional data to evaluate the at-home use of BXCL501 in our targeted Alzheimer's dementia population before we are able to seek approval for such at-home use in this population, if ever. In addition, the FDA may determine that we cannot rely on the data from our prior TRANQUILITY II Phase 3 trial to support an sNDA as a result of potential data integrity issues at the trial site, as the FDA may not agree with our belief that data reliability and integrity remain intact. See Part II, Item 1A, "Risk Factors—Risks Related to the Discovery and Development of Product Candidates—*Developments relating to its TRANQUILITY II Phase 3 trial may impact the timing of its development plans for, and prospects for seeking or obtaining regulatory approval of, BXCL501 for the acute treatment of agitation (non-daily) associated with dementia in patients with probable Alzheimer's disease*" for additional information. If the FDA does not accept the data from our prior TRANQUILITY II Phase 3 trial, we could be required to conduct additional clinical trials beyond those we currently contemplate, which would increase our costs and delay potential submission of an sNDA for BXCL501 which in turn would adversely affect our financial position and operations.

Accordingly, if the FDA reaches these conclusions or otherwise finds that our proposed clinical studies would not adequately evaluate the safety and efficacy of BXCL501 for the acute treatment of agitation associated with dementia due to probable Alzheimer's disease in an at-home setting and/or care setting, we may need to evaluate more patients for a longer period of time to demonstrate the safety and efficacy of BXCL501.

With respect to our SERENITY program, we also held a Type C Meeting with the FDA on March 6, 2024 to obtain further feedback on our proposed changes to the design of SERENITY III Part 2, including with respect to the trial endpoints, and to discuss the content and format of a potential sNDA submission to expand the label of IGALMI™ 120 micrograms to the acute treatment of agitation associated with schizophrenia and bipolar disorders in the outpatient setting. IGALMI™ is already approved at the 120 mcg dose based on efficacy data that we previously generated in treating a single episode of agitation. Consistent with the data generated to date, the label for IGALMI™ currently includes a limitation on use ("LOU"), noting the lack of efficacy or safety data beyond 24 hours following the first dose. During our March 6, 2024 Type C meeting with the FDA, we discussed, among other things, whether evaluating the at-home use of BXCL501 120 mcg, with safety as the primary objective and efficacy measures as exploratory endpoints, if successful, could support the submission of an sNDA seeking expansion of the current label for IGALMI™ 120 mcg to allow at-home use and labeling without the current LOU. Based on current FDA feedback, we plan to amend the SERENITY III protocol to evaluate the safety and efficacy of the 120 mg dose in the at-home setting. We believe that our ability to seek labeling without the current LOU will depend, in part, on the number of agitation episodes we observe during our planned study period. Even if our amended SERENITY III trial is successful in demonstrating safety in the at-home setting, and even if the IGALMI™ 120 mcg label is expanded to allow outpatient use, there is no guarantee that we will observe and/or treat a sufficient number of agitation episodes during the study period to support removal of the current LOU. We plan to provide further guidance regarding our plans for the SERENITY program following receipt of the final meeting minutes from the FDA. Even if the protocol for SERENITY III Part 2 is amended as described above, and even if the study produces favorable data, such data may not be sufficient for approval without additional clinical studies.

Any modifications to our proposed trial designs by the FDA would delay our initiation of such proposed trials, increase the costs of any trial that we do conduct and delay our submission of an sNDAs for BXCL501. Requirements to conduct additional clinical trials evaluating BXCL501 in support of our planned sNDAs seeking approvals for BXCL501 for our targeted patient populations in at-home settings would increase our costs, and could have a material adverse effect on our prospects and results of operations.

In the near term, we are dependent on the success of IGALMI™, and the development of four of our product candidates, BXCL501, BXCL502, BXCL701 and BXCL702. If we are unable to complete the clinical development of or obtain marketing approval for our product candidates or successfully commercialize IGALMI™ and our other product candidates, either alone or with a collaborator, or if we experience significant delays in doing so, our business could be substantially harmed.

We currently have only one product that has received regulatory approval and may never be able to develop additional marketable product candidates. We are continuing to invest a significant portion of our efforts and financial resources in the commercialization of IGALMI™ and development of our four product candidates, BXCL501, BXCL502, BXCL701 and BXCL702, as well as other product candidates. In connection with the Reprioritization, we have significantly reduced the resources devoted to commercialization of IGALMI™ and it is possible that will have adverse consequences on the revenue that we are able to generate from IGALMI™ in the near term. As part of the Company's Reprioritization, the IGALMI™ commercial team shifted focus to a hospital/Integrated Delivery Network ("IDN") contracting strategy with a Corporate Account Director (CAD) team. The goal of the realigned CAD team is to work with large IDNs and drive sales utilizing a top-down approach. Over time, the revised commercial effort is expected to allow the Company to continue to make inroads into the institutional market in a more cost-efficient manner. However, we have limited experience in drug development and commercialization, and our prospects are substantially dependent on our ability, or that of any future collaborator, to develop, obtain marketing approval for and successfully commercialize product candidates in one or more additional disease indications.

The success of IGALMI™, and of BXCL501, BXCL701, BXCL502 and our other product candidates will depend on several factors, including the following:

- acceptance of an investigational new drug application ("IND") by the FDA or acceptance of comparable applications by foreign regulatory authorities allowing us to conduct clinical trials of our product candidates in the U.S. or in foreign jurisdictions;
- initiation, progress, timing, costs and results of clinical trials of our product candidates and potential product candidates, including any delays caused by the developments relating to the TRANQUILITY program, and any additional trials we may need to conduct prior to seeking approvals for BXCL501 in at-home and/or care facilities;
- demonstration of safety and efficacy of our product candidates to the satisfaction of the FDA, or any comparable foreign regulatory authority, and sufficient for marketing approval;
- the timing and performance of our current and future collaborators;
- the nature of any required post-marketing clinical trials or other commitments to applicable regulatory authorities;
- establishment of supply arrangements with third-party raw materials suppliers and manufacturers;
- establishment of arrangements with third-party manufacturers to obtain finished drug product that is appropriately packaged for sale;
- adequate ongoing availability of raw materials and drug product for clinical development and any commercial sales;
- obtaining and maintaining patent, trade secret protection and regulatory exclusivity, both in the U.S. and internationally;
- protection of our rights in our intellectual property portfolio;
- successful launch of commercial sales following any marketing approval;

- a continued acceptable safety profile following any marketing approval;
- commercial acceptance by patients, the medical community and third-party payors; and
- our ability to compete with other therapies.

Many of these factors are beyond our control, including the results of clinical trials, the time required for the FDA, or any comparable foreign regulatory authorities, to review any regulatory submissions we may make, potential threats to our intellectual property rights and the manufacturing, marketing and sales efforts of any future collaborator. If we are unable to commercialize IGALMI™ or develop, receive marketing approval for and successfully commercialize BXCL501, BXCL701 and our other product candidates, on our own or with any future collaborator, or experience delays because of any of these factors or otherwise, our business could be substantially harmed.

Interim “top-line” and preliminary data from our clinical trials, that we announce or publish from time to time, may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publicly disclose top-line or preliminary data from our clinical trials, which is based on a preliminary analysis of then-available data. The results and related findings and conclusions based on such preliminary data are subject to change, and have in the past changed, following a more comprehensive review of the data related to the particular study or trial. We also make assumptions, estimations, calculations and conclusions as part of our analyses of data, and we may not have received or had the opportunity to fully and carefully evaluate all data. As a result, the top-line or preliminary results that we report may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated. Top-line or preliminary data also remain subject to audit and verification procedures that may result in the final data being materially different from the top-line or preliminary data we previously published. As a result, top-line and preliminary data should be viewed with caution until the final data are available.

From time to time, we may also disclose interim data from our preclinical studies and clinical trials. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Adverse differences between interim data and final data could significantly harm our business prospects. Further, disclosure of interim data by us or by our competitors could result in volatility in the price of our common stock.

Further, others, including regulatory agencies, may not accept or agree with our assumptions, estimates, calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular program, the approvability or commercialization of the particular product candidate or product and our Company in general. In addition, the information we choose to publicly disclose regarding a particular study or clinical trial is based on what is typically extensive information, and you or others may not agree with what we determine is material or otherwise appropriate information to include in our disclosure.

If the interim, top-line or preliminary data that we report differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, our ability to obtain approval for, and commercialize, our product candidates may be harmed, which could harm our business, operating results, prospects or financial condition.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, expensive and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through preclinical studies and initial clinical trials. It is not uncommon for companies in the biopharmaceutical industry to suffer significant

setbacks in advanced clinical trials due to nonclinical findings made while clinical studies are underway and safety or efficacy observations made in clinical studies, including previously unreported adverse events. Our future clinical trial results may not be successful, and notwithstanding any potential promising results in earlier studies, we cannot be certain that we will not face similar setbacks. The historical failure rate for product candidates in our industry is high. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during a product candidate's clinical development and may vary among jurisdictions. We obtained regulatory approval for our first product candidate for the acute treatment of agitation associated with schizophrenia or bipolar I or II disorder, which is in the early stages of commercialization. It is possible that none of our other product candidates, or any product candidates we may seek to develop in the future, will ever obtain regulatory approval.

Our current product candidates, or any that may be developed in the future, could fail to receive regulatory approval for many reasons, including the following:

- the FDA, or comparable foreign regulatory authorities, may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA, or comparable foreign regulatory authorities, that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA, or comparable foreign regulatory authorities, for approval;
- the FDA, or comparable foreign regulatory authorities, may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of an NDA or other submission or to obtain regulatory approval in the U.S. or elsewhere;
- the FDA, or comparable foreign regulatory authorities, may disagree that our changes to branded reference drugs meet the criteria for the 505(b)(2) regulatory pathway or comparable foreign regulatory pathways;
- the FDA, or comparable foreign regulatory authorities, may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA, or comparable foreign regulatory authorities, may significantly change in a manner rendering our clinical data insufficient for approval.

We have limited experience in completing clinical trials of product candidates. Consequently, we may not have the necessary capabilities, including adequate staffing, to successfully manage the execution and completion of clinical trials we initiate in a way that leads to our obtaining marketing approval for our product candidates in a timely manner, or at all. This lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market our product candidates, which would significantly harm our business, results of operations and prospects.

In addition, even if we were to obtain approval, regulatory authorities may approve our product candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials, may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate or may restrict its distribution. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

We have only submitted one NDA to the FDA and have not submitted any similar marketing applications to comparable foreign authorities, for any product candidate, and we cannot be certain that our product candidates currently in development, or any that may be developed in the future, will be successful in clinical trials or receive regulatory approval. Further, our product candidates currently in development, or any that may be developed in the future, may not

receive regulatory approval even if we believe they are successful in clinical trials. If we do not receive regulatory approvals for additional product candidates, we may not be able to continue our operations. For any regulatory approvals to market one or more of our product candidates, our revenues will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval and have commercial rights. If the markets for patients that we are targeting for IGALMI™ or our other product candidates are not as significant as we estimate, we may not generate significant revenues from sales of IGALMI™ or such other product candidates, if approved.

We plan to seek regulatory approval to commercialize our product candidates in the U.S., the European Union (“EU”) and in additional foreign countries. While the scope of regulatory approval is similar in other countries, to obtain separate regulatory approval in many other countries we must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of our product candidates, and we cannot predict success in these jurisdictions.

In addition, the FDA’s and other regulatory authorities’ policies with respect to clinical trials may change and additional government regulations may be enacted. For instance, the regulatory landscape related to clinical trials in the EU recently evolved. The EU Clinical Trials Regulation (“CTR”), which was adopted in April 2014 and repeals the EU Clinical Trials Directive, became applicable on January 31, 2022. While the Clinical Trials Directive required a separate clinical trial application (“CTA”), to be submitted in each member state in which the clinical trial takes place, to both the competent national health authority and an independent ethics committee, the CTR introduces a centralized process and only requires the submission of a single application for multi-center trials. The CTR allows sponsors to make a single submission to both the competent authority and an ethics committee in each member state, leading to a single decision per member state. The assessment procedure of the CTA has been harmonized as well, including a joint assessment by all member states concerned, and a separate assessment by each member state with respect to specific requirements related to its own territory, including ethics rules. Each member state’s decision is communicated to the sponsor via the centralized EU portal. Once the CTA is approved, clinical study development may proceed. The CTR foresees a three-year transition period. The extent to which ongoing and new clinical trials will be governed by the CTR varies. For clinical trials whose CTA was made under the Clinical Trials Directive before January 31, 2022, the Clinical Trials Directive will continue to apply on a transitional basis for three years. Additionally, sponsors could choose to submit a CTA under either the Clinical Trials Directive or the CTR until January 31, 2023 and, if authorized, those are governed by the Clinical Trials Directive until January 31, 2025. By that date, all ongoing trials will become subject to the provisions of the CTR.

If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies governing clinical trials, our development plans may be impacted.

Clinical trials are expensive, time-consuming, difficult to design, difficult to conduct, and involve an uncertain outcome.

Before obtaining marketing approval from the FDA, or other comparable foreign regulatory authorities, for the sale of our product candidates, we must complete preclinical development and extensive clinical trials to demonstrate the safety and efficacy of our product candidates, in accordance with applicable law and regulations. Failure can occur at any time during the clinical trial process. Although we are planning for certain clinical trials relating to BXCL501, BXCL701, BXCL502 and our other product candidates, there can be no assurance that the FDA, or other comparable foreign regulatory authorities, will accept our proposed trial designs as sufficient to establish the safety and/or efficacy of our product candidates.

We may experience delays in our clinical trials and we do not know whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including delays related to:

- the FDA, or comparable foreign regulatory authorities, disagreeing as to the design or implementation of our clinical studies;

- obtaining regulatory allowances or authorizations to commence a trial or consensus with regulatory authorities on trial designs;
- reaching agreement on acceptable terms with prospective contract research organizations (“CROs”) and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining institutional review board approval at each site, or independent ethics committee approval at any sites outside the U.S.;
- dependence on the needs and timing of third-party collaborators;
- changes to clinical trial protocols;
- recruiting suitable patients to participate in a trial in a timely manner and in sufficient numbers;
- clinical sites deviating from trial protocol or dropping out of a trial;
- addressing patient safety concerns that arise during the course of a trial;
- having patients complete a trial or return for post-treatment follow-up;
- imposition of a clinical hold by regulatory authorities, including as a result of unforeseen safety issues or side effects or failure of trial sites to adhere to regulatory requirements;
- the occurrence of SAEs in trials of the same class of agents conducted by other companies or institutions;
- subjects choosing an alternative treatment for the indications for which we are developing our product candidates, or participating in competing trials;
- adding a sufficient number of clinical trial sites;
- manufacturing sufficient quantities of a product candidate for use in clinical trials;
- lack of adequate funding to continue the clinical trial;
- selection of clinical end points that require prolonged periods of clinical observation or analysis of the resulting data;
- a facility manufacturing our product candidates or any of their components being ordered by the FDA, or comparable foreign regulatory authorities, to temporarily or permanently shut down due to violations of current good manufacturing practice (“cGMP”) regulations or other applicable requirements, or infections or cross-contaminations of product candidates in the manufacturing process;
- any changes to our manufacturing process that may be necessary or desired;
- third-party clinical investigators losing the licenses or permits necessary to perform our clinical trials, not performing our clinical trials on our anticipated schedule or consistent with the clinical trial protocol, GCPs or other regulatory requirements; or
- third-party contractors not performing data collection or analysis in a timely or accurate manner; third-party contractors not complying with training and trial protocol; or third-party contractors becoming debarred or suspended or otherwise penalized by the FDA, such as in the case of the recent events relating to the TRANQUILITY II clinical trial, or other government or regulatory authorities, for violations of regulatory

requirements, in which case, we may need to find a substitute contractor, and we may not be able to use some or all of the data produced by such contractors in support of our marketing applications.

We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by the Data Safety Monitoring Board (“DSMB”) for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. Furthermore, we rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and, while we have agreements governing their committed activities, we have limited influence over their actual performance, which increases the risk that such CROs or trial sites may fail to perform in accordance with regulatory requirements, clinical trial protocols or with the agreements governing their services to us. For example, investigator misconduct affecting our TRANQUILITY II trial, which evaluated BXCL501 in patients with probable Alzheimer’s disease, may have a material adverse impact on our development program for BXCL501 in these patients, as described more fully in the risk factor above entitled: *“Developments relating to our TRANQUILITY II Phase 3 trial may impact the timing of our development plans for, and prospects for seeking or obtaining regulatory approval of, BXCL501 for the acute treatment of agitation (non-daily) associated with dementia in patients with probable Alzheimer’s disease.”*

Further, conducting clinical trials in foreign countries, as we may do for our current and future product candidates, presents additional risks that may delay completion of our clinical trials. These risks include the failure of enrolled patients in foreign countries to adhere to clinical protocol due to differences in health care services or cultural customs, managing additional administrative burdens associated with foreign regulatory schemes, as well as political and economic risks relevant to such foreign countries. For example, current geopolitical conflicts in Eastern Europe and the Middle East may adversely impact our ability to conduct trials in those regions and elsewhere.

If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may harm our business, financial condition and prospects significantly. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

We depend on enrollment of patients in our clinical trials to continue development of our product candidates. If we are unable to enroll patients in our clinical trials, our research and development efforts could be adversely affected.

The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. Patient enrollment is affected by many factors including the size and nature of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, the size of the patient population required for analysis of the trial’s primary endpoints, our ability to recruit clinical trial investigators with the appropriate competencies and experience, our ability to obtain and maintain patient consents, the risk that patients enrolled in clinical trials will drop out of the trials before completion, and competing clinical trials and clinicians’ and patients’ perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating. Many pharmaceutical companies are conducting clinical trials in patients with the disease indications that our product candidates are designed to target. As a result, we must compete with them for clinical sites, physicians and the limited number of patients who fulfill the stringent requirements for participation in clinical trials. Also, due to the confidential nature of clinical trials, we do not know how many of the eligible patients may be enrolled in competing studies and who are consequently not available to us for our clinical trials. Our clinical trials may be delayed or terminated due to the inability to enroll enough patients. The delay or inability to meet planned patient enrollment may result in increased costs and delay or termination of our trials, which could have a harmful effect on our ability to develop products.

Our product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign authorities. The clinical evaluation of BXCL501, BXCL502, BXCL701, BXCL702 and our other product candidates in patients, in many cases, is ongoing and it is possible that there may be side effects associated with their use. Results of our trials could reveal a high and unacceptable severity and prevalence of these or other side effects. For example, in our Phase 2 clinical trial of BXCL701 for the treatment of emergent neuroendocrine prostate cancer, one patient experienced acidosis with a fatal outcome. Although the clinical investigator could not determine that the fatality was related to treatment with BXCL701, it is possible that BXCL701 could be tied to unacceptable side effects in the future.

If we observe drug-related AEs or other unacceptable safety concerns in clinical trials, we, the FDA, the IRBs at the institutions in which our studies are conducted, or the DSMB could suspend or terminate our clinical trials or the FDA, or comparable foreign regulatory authorities, could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. For example, the FDA placed Point Therapeutics, Inc.'s IND for BXCL701 on clinical hold following an increase in observed mortality in patients receiving BXCL701 in a Phase 3 trial in patients with non-small cell lung cancer. Though we believe that this result was caused by, among other things, an imbalance in the disease severity of patients enrolled in the active arm of the clinical trial, there is no guarantee that excess mortality will not be observed in future clinical studies. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete the clinical trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our product candidates to understand the side effect profiles observed in our clinical trials and upon commercialization of any of our product candidates that may receive regulatory approval. Inadequate training in recognizing or managing the potential side effects of our product candidates could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

Additionally, if we or others later identify undesirable side effects caused by IGALMITM or any other product candidate that receives marketing approval, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw approvals of such products;
- we may be required to recall a product or change the way such a product is administered to patients;
- additional restrictions may be imposed on the marketing or distribution of the particular product or the manufacturing processes for the product or any component thereof;
- regulatory authorities may require additional warnings on the label, such as a “black box” warning or contraindication;
- we may be required to implement Risk Evaluation and Mitigation Strategies (“REMS”) or create a medication guide outlining the risks of such side effects for distribution to patients, or similar risk management measures;
- we could be sued and held liable for harm caused to patients;
- our product may become less competitive; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product or product candidate, if approved, and could significantly harm our business, results of operations and prospects.

The discovery and development of product candidates based on EvolverAI, BioXcel LLC's proprietary pharmaceutical discovery and development engine, and our artificial intelligence ("AI") platform is novel and unproven, and we do not know whether we will be able to develop any products of commercial value.

We are leveraging our own AI platform and BioXcel LLC's EvolverAI, a proprietary pharmaceutical discovery and development engine, to create a pipeline of neuroscience and immuno-oncology product candidates for patients whose diseases have not been adequately addressed to date by other approaches and to design and conduct efficient clinical trials with a higher likelihood of success. While we believe that applying our AI platform and BioXcel LLC's EvolverAI to create medicines for defined patient populations may potentially enable drug research and clinical development that is more efficient than conventional drug research and development, our approach is novel. Although we obtained FDA approval for IGALMI™, because our approach is novel, the cost and time needed to develop our product candidates is difficult to predict, and our efforts may not result in the discovery and development of commercially viable medicines. We may also be incorrect about the effects of our product and product candidates on the diseases of our defined patient populations, which may limit the utility of our approach or the perception of the utility of our approach. Furthermore, our estimates of our defined patient populations available for study and treatment may be lower than expected, which could adversely affect our ability to conduct clinical trials and may also adversely affect the size of any market for medicines we may successfully commercialize. Our approach may not result in time savings, higher success rates or reduced costs as we expect it to, and if not, we may not attract collaborators or develop new drugs as quickly or cost effectively as expected and therefore we may not be able to commercialize our approach as originally expected.

The Company's AI platform and BioXcel LLC's EvolverAI may fail to help us discover and develop additional potential product candidates.

Any drug discovery that we are conducting using the Company's AI platform and BioXcel LLC's EvolverAI may not be successful in identifying compounds that have commercial value or therapeutic utility. The Company's AI platform and BioXcel LLC's EvolverAI may initially show promise in identifying potential product candidates, yet fail to yield viable additional product candidates for clinical development or potential commercialization for a number of reasons, including:

- research programs to identify new product candidates will require substantial technical, financial and human resources, and we may be unsuccessful in our efforts to identify new product candidates. If we are unable to identify suitable additional compounds for preclinical and clinical development, our ability to develop product candidates and obtain product revenues in future periods could be compromised, which could result in significant harm to our financial position and adversely impact our stock price;
- compounds found through the Company's AI platform and BioXcel LLC's EvolverAI may not demonstrate efficacy, safety or tolerability;
- potential product candidates may, on further study, be shown to have harmful side effects or other characteristics that indicate that they are unlikely to receive marketing approval and achieve market acceptance;
- competitors may develop alternative therapies that render our potential product candidates non-competitive or less attractive; or
- a potential product candidate may not be capable of being produced at an acceptable cost.

Regulators may limit our ability to develop or implement our proprietary AI algorithms and/or may eliminate or restrict the confidentiality of our proprietary technology, which could have an adverse effect on our business, results of operations, and financial condition.

Our future success depends on our ability to continue to develop and implement our proprietary AI algorithms and models, and to maintain the confidentiality of this technology. Changes to existing regulations, their interpretation or implementation, or new regulations could impede our use of this technology or require that we disclose our proprietary

technology to our competitors, which could impair our competitive position and result in an adverse effect on our business, results of operations and financial condition.

We obtained Fast Track designation for certain of our product candidates, and we may seek Fast Track designation for other indications or for our other product candidates, but we might not receive such designations, and even if we do, such designations may not actually lead to a faster development or regulatory review or approval process.

If a product candidate is intended for the treatment of a serious condition and nonclinical or clinical data demonstrate the potential to address unmet medical need for this condition, a product sponsor may apply for FDA Fast Track designation. The sponsor of a Fast Track product candidate has opportunities for more frequent interactions with the applicable FDA review team during product development and, once an NDA is submitted, the product candidate may be eligible for priority review if the relevant criteria are met. An NDA for a Fast Track product candidate may also be eligible for rolling review, where the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA. We obtained Fast Track designation for BXCL501 for the acute treatment of mild-to-moderate agitation associated with schizophrenia, bipolar disorder, and dementia, and we further obtained Fast Track designation for BXCL701, in combination with a checkpoint inhibitor, for the treatment of patients with metastatic SCNC with progression on chemotherapy and no evidence of microsatellite instability, and we may seek additional Fast Track designation for BXCL501 or BXCL701 or for one or more of our other product candidates, but we might not receive such designations from the FDA. However, even if we receive Fast Track designation, Fast Track designation does not ensure that we will receive marketing approval or that approval will be granted within any particular timeframe. We may not experience a faster development or regulatory review or approval process with Fast Track designation compared to conventional FDA procedures. In addition, the FDA may withdraw Fast Track designation if it believes that the designation is no longer supported by data from our clinical development program. Fast Track designation alone does not guarantee qualification for the FDA's priority review procedures.

A Breakthrough Therapy designation by the FDA, even if granted for any of our product candidates, may not lead to a faster development or regulatory review or approval process and it does not increase the likelihood that our product candidates will receive marketing approval.

We obtained Breakthrough Therapy Designation for BXCL501 for the acute treatment of agitation associated with dementia, and we may seek additional Breakthrough Therapy designations for our product candidates if the clinical data support such a designation for one or more product candidates. A Breakthrough Therapy is defined as a drug or biologic that is intended, alone or in combination with one or more other drugs or biologics, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. For product candidates that have been designated as Breakthrough Therapies, interaction and communication between the FDA and the sponsor of the trial can help to identify the most efficient path for clinical development while minimizing the number of patients placed in ineffective control regimens. Product candidates designated as Breakthrough Therapies by the FDA also receive the benefits associated with Fast Track designation, including the potential for rolling review of an NDA.

Designation as a Breakthrough Therapy is within the discretion of the FDA. Accordingly, even if we believe one of our product candidates meets the criteria for designation as a Breakthrough Therapy, the FDA may disagree and instead determine not to make such designation. In any event, the receipt of a Breakthrough Therapy designation for a product candidate may not result in a faster development process, review or approval compared to drugs considered for approval under non-expedited FDA review procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of our product candidates qualify as breakthrough therapies, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the period for FDA review or approval will not be shortened.

If the FDA does not conclude that our product candidates satisfy the requirements for the 505(b)(2) regulatory approval pathway, or if the requirements for approval of any of our product candidates under Section 505(b)(2) are not as we expect, the approval pathway for our product candidates will likely take significantly longer, cost significantly more and encounter significantly greater complications and risks than anticipated, and in any case may not be successful.

We intend to seek FDA approval through the 505(b)(2) regulatory pathway for certain of our product candidates. The Hatch-Waxman Act added Section 505(b)(2) to the Federal Food, Drug and Cosmetic Act (“FDCA”). Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies that were not conducted by or for the applicant. If the FDA does not allow us to pursue the 505(b)(2) regulatory pathway for our product candidates as anticipated, we may need to conduct additional clinical trials, provide additional data and information and meet additional standards for regulatory approval. If this were to occur, the time and financial resources required to obtain FDA approval for our product candidates would likely substantially increase. Moreover, the inability to pursue the 505(b)(2) regulatory pathway could result in new competitive products reaching the market faster than our product candidates, which could materially adversely impact our competitive position and prospects. Even if we are allowed to pursue the 505(b)(2) regulatory pathway for a product candidate, we cannot assure you that we will receive the requisite or timely approvals for commercialization of such product candidate. In addition, we expect that our competitors will file citizens’ petitions with the FDA in an attempt to persuade the FDA that our product candidates, or the clinical studies that support their approval, contain deficiencies. Such actions by our competitors could delay or even prevent the FDA from approving any NDA that we submit under Section 505(b)(2).

If we are required by the FDA, or similar regulatory authorities, to obtain approval (or clearance, or certification) of a companion diagnostic device in connection with approval of one of our product candidates, and we do not obtain, or face delays in obtaining approval (or clearance, or certification) of a companion diagnostic device, we will not be able to commercialize the product candidate, and our ability to generate revenue will be materially impaired.

According to FDA guidance, if the FDA determines that a companion diagnostic device is essential to the safe and effective use of a novel therapeutic product or indication, the FDA generally will not approve the therapeutic product or new therapeutic product indication if the companion diagnostic is not also approved or cleared for that indication. If a satisfactory companion diagnostic is not commercially available, we may be required to create or obtain one that would be subject to regulatory approval requirements. For example, we may decide to collaborate with patient diagnostic companies during our clinical trial enrollment process for BXCL701 to help identify patients with tumor gene alterations that we believe may be most likely to respond to treatment with BXCL701. The process of obtaining or creating such diagnostic is time consuming and costly.

Companion diagnostics are developed in conjunction with clinical programs for the associated product and are subject to regulation as medical devices by the FDA and comparable foreign regulatory authorities, and, to date, the FDA has generally required premarket approval of companion diagnostics for cancer therapies. Generally, when a companion diagnostic is essential to the safe and effective use of a therapeutic product, the FDA requires that the companion diagnostic be approved before or concurrent with approval of the therapeutic product and before a product can be commercialized. The approval of a companion diagnostic as part of the therapeutic product’s labeling limits the use of the therapeutic product to only those patients who express the specific genetic alteration that the companion diagnostic was developed to detect. In January 2024, the FDA announced that it intends to initiate the process to reclassify most in vitro diagnostic tests (“IVDs”) that are currently Class III into Class II, including companion diagnostic IVDs. If such reclassification efforts occur, any companion diagnostics that are the subject of the down-classification may no longer require premarket approval, but rather may be marketed pursuant to the generally less burdensome 510(k) clearance process. However, there is no assurance that any companion diagnostic required for our pharmaceutical development programs will benefit from the reclassification, or that the reclassification, even if it does occur, will result in a shorter timeline to development or marketing of the companion diagnostic.

If the FDA, or a comparable foreign regulatory authority, requires approval (or certification or clearance) of a companion diagnostic for any of our product candidates, whether before or after the product candidate obtains marketing approval, we and/or third-party collaborators may encounter difficulties in developing and obtaining approval (or clearance, or certification) for these companion diagnostics. Any delay or failure by us or third-party collaborators to develop or obtain regulatory approval (or clearance, or certification) of a companion diagnostic could delay or prevent

approval or continued marketing of our related product candidates. We may also experience delays in developing a sustainable, reproducible and scalable manufacturing process for the companion diagnostic or in transferring that process to commercial partners or negotiating insurance reimbursement plans, all of which may prevent us from completing our clinical trials or commercializing our product candidates, if approved, on a timely or profitable basis, if at all.

Approval, clearance or certification of companion diagnostics may be subject to further legislative or regulatory reforms notably in the EU. On May 25, 2017, the new In Vitro Medical Devices Regulation No. 2017/746 (“IVDR”) entered into force. The IVDR repeals and replaces the EU In Vitro Diagnostic Medical Devices Directive. Unlike directives, which must be implemented into the national laws of the EU member states, regulations are directly applicable (i.e., without the need for adoption of EU member states laws implementing them) in all EU member states and are intended to eliminate current differences in the regulation of medical devices among EU member states. The IVDR, among other things, is intended to establish a uniform, transparent, predictable and sustainable regulatory framework across the EU for medical devices and ensure a high level of safety and health while supporting innovation. The IVDR became effective in May 2022. However, on October 14, 2021, the European Commission proposed a “progressive” roll-out of the IVDR to prevent disruption in the supply of in vitro diagnostic medical devices. The European Parliament and Council adopted the proposed regulation on December 15, 2021. The IVDR has applied since May 26, 2022, but there is a tiered system extending the grace period for many devices (depending on their risk classification) before they have to be fully compliant with the regulation.

The regulation of companion diagnostics in the EU is subject to further requirements since the IVDR became applicable as it introduced a new classification system for companion diagnostics. Companion diagnostics will have to undergo a conformity assessment by a notified body. Before it can issue an EU certificate, the notified body must seek a scientific opinion from the EMA on the suitability of the companion diagnostic to the medicinal product concerned if the medicinal product falls exclusively within the scope of the centralized procedure for the authorization of medicines, or the medicinal product is already authorized through the centralized procedure, or a marketing authorization (“MA”) application for the medicinal product has been submitted through the centralized procedure. For other substances, the notified body can seek the opinion from a national competent authority or the EMA.

These modifications may make it more difficult and costly for us to obtain regulatory clearances, approvals or certifications for our companion diagnostics or to manufacture, market or distribute our products after clearance, approval or certification is obtained.

Although the FDA has approved IGALMI™ for the acute treatment of agitation associated with schizophrenia or bipolar I or II disorder, we will still face extensive and ongoing regulatory requirements and obligations for IGALMI™ and for any product candidates for which we obtain approval.

Any regulatory approvals that we may receive for IGALMI™ or any of our product candidates will require the submission of reports to regulatory authorities and surveillance to monitor the safety and efficacy of the product, may contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, and may include burdensome post-approval study or risk management requirements. For example, the FDA-approved label for IGALMI™ includes certain warnings and precautions regarding hypotension, orthostatic hypotension, bradycardia, somnolence, and QT interval prolongation. The FDA may also require a REMS to approve a product candidate, which could entail requirements for a medication guide, physician training and communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools.

In addition, the manufacturing processes, labeling, packaging, distribution, AE reporting, storage, advertising, promotion, import, export and recordkeeping for IGALMI™ are and will remain subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, and on-going compliance with cGMPs, and GCPs for any clinical trials that we conduct post-approval. In addition, manufacturers of drug products and their facilities are subject to continual review and periodic, unannounced inspections by the FDA and other regulatory authorities for compliance with cGMP regulations and standards. If we or a regulatory authority discover previously unknown problems with a product, such as AEs of unanticipated severity or frequency, or problems with the facilities where the product is manufactured, a regulatory

authority may impose restrictions on that product, the manufacturing facility or us, including requiring recall or withdrawal of the product from the market or suspension of manufacturing.

In addition, discovery of previously unknown AEs or other problems with our products, manufacturers or manufacturing processes or failure to comply with regulatory requirements, may yield various results, including:

- restrictions on manufacturing such products;
- restrictions on the labeling or marketing of products;
- restrictions on product manufacturing, distribution or use;
- requirements to conduct post-marketing studies or clinical trials;
- warning letters or untitled letters;
- withdrawal of the products from the market;
- refusal to approve pending applications or supplements to approved applications that we submit;
- recall of products;
- fines, restitution or disgorgement of profits or revenues;
- suspension or withdrawal of marketing approvals;
- refusal to permit the import or export of our products;
- product seizure; or
- injunctions or the imposition of civil or criminal penalties.

Further, the policies of the FDA and other regulatory authorities may change, and additional government regulations may be enacted that could impose extensive and ongoing regulatory requirements and obligations on any product candidate for which we obtain marketing approval. We also cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the U.S. or abroad.

The FDA and other regulatory agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses.

The FDA and other regulatory authorities strictly regulate marketing, labeling, advertising and promotion of prescription drugs. These regulations include standards and restrictions for direct-to-consumer advertising, industry-sponsored scientific and educational activities, promotional activities involving the internet and off-label promotion. Any regulatory approval that the FDA or any other regulatory authority may grant is limited to those specific diseases and indications for which a product is deemed to be safe and effective. For example, the FDA-approved label for IGALMI™ is currently limited to the acute treatment of agitation associated with schizophrenia or bipolar I or II disorder in adults to be self-administered by patients under the supervision of a health care provider.

While physicians in the U.S. may choose, and are generally permitted, to prescribe drugs for uses that are not described in the product's labeling and for uses that differ from those tested in clinical trials and approved by the regulatory authorities, our ability to promote the products is narrowly limited to those indications that are specifically approved by the FDA. These "off-label" uses are common across medical specialties and may constitute an appropriate treatment for some patients in varied circumstances. For example, other formulations of Dex, the active ingredient in IGALMI™, have been approved for uses beyond those authorized in IGALMI™ approved labeling, such as for use in sedation of surgical patients, and we are continuing to develop BXCL501 for potential use in patients with dementia, MDD, Alzheimer's disease and other indications. We do not market or promote IGALMI™ for these uses.

Regulatory authorities in the U.S. generally do not regulate the behavior of physicians in their choice of treatments. Regulatory authorities do, however, restrict communications by pharmaceutical companies on off-label use. If we are found to have promoted our products for any off-label uses, the U.S. federal government (and other foreign governments) could levy civil, criminal and/or administrative penalties, and seek fines against us. The FDA, or other regulatory authorities, could also require that we enter into a consent decree or a corporate integrity agreement, or seek a permanent injunction against us under which specified promotional conduct is monitored, changed or curtailed. If we cannot successfully manage the promotion of IGALMI™ or our product candidates, if approved, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

Disruptions at the FDA and other government agencies caused by funding shortages or global health concerns could hinder their ability to hire, retain or deploy key leadership and other personnel, or otherwise prevent new or modified products from being developed, approved or commercialized in a timely manner or at all, which could negatively impact our business.

The ability of the FDA and foreign regulatory authorities to review and approve new products can be affected by a variety of factors, including government budget and funding levels, statutory, regulatory and policy changes, the FDA's or foreign regulatory authorities' ability to hire and retain key personnel and accept the payment of user fees, and other events that may otherwise affect the FDA's or foreign regulatory authorities' ability to perform routine functions. Average review times at the FDA and foreign regulatory authorities have fluctuated in recent years as a result of some of these aforementioned issues. In addition, government funding of other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies, such as the EMA, following its relocation to Amsterdam and corresponding staff changes, may also slow the time necessary for new drug or modifications to approved drugs to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. For example, over the last several years, the U.S. government has shut down several times and certain regulatory agencies, such as the FDA, have had to furlough critical FDA employees and stop critical activities.

Separately, in response to the COVID-19 pandemic, the FDA postponed most inspections of domestic and foreign manufacturing facilities at various points. Even though the FDA has since resumed standard inspection operations, any resurgence of the virus or emergence of new variants may lead to further inspectional delays. If a prolonged government shutdown occurs, or if global health concerns prevent the FDA or other regulatory authorities from conducting their regular inspections, reviews or other regulatory activities, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business.

We may conduct certain of or portions of our clinical trials for our product candidates outside of the U.S. and the FDA may not accept data from such trials, in which case our development plans will be delayed, which could materially harm our business.

We may choose to conduct one or more of our clinical trials or a portion of our clinical trials for our product candidates outside the U.S. The acceptance of study data from clinical trials conducted outside the U.S. or another jurisdiction by the FDA or comparable foreign regulatory authority may be subject to certain conditions or may not be accepted at all. In cases where data from foreign clinical trials are intended to serve as the sole basis for marketing approval in the U.S., the FDA will generally not approve the application on the basis of foreign data alone unless (i) the data are applicable to the U.S. population and U.S. medical practice; (ii) the trials were performed by clinical investigators of recognized competence and pursuant to GCP regulations; and (iii) the data may be considered valid without the need for an on-site inspection by the FDA, or if the FDA considers such inspection to be necessary, the FDA is able to validate the data through an on-site inspection or other appropriate means. In addition, even where the foreign study data are not intended to serve as the sole basis for approval, if the clinical trial was not otherwise subject to an IND, the FDA will not accept the data as support for an application for marketing approval unless the study was conducted in accordance with GCP requirements and the FDA is able to validate the data from the study through an on-site inspection if deemed necessary. Many foreign regulatory authorities have similar approval requirements. In addition, such foreign trials would be subject to the applicable local laws of the foreign jurisdictions where the trials are conducted. There can be no assurance that the FDA or any comparable foreign regulatory authority will accept data from trials conducted outside of the U.S. or the applicable jurisdiction. If the FDA or any comparable foreign regulatory

authority does not accept such data, it would result in the need for additional trials, which could be costly and time-consuming, and could result in current or future product candidates that we may develop not receiving approval for commercialization in the applicable jurisdiction.

We may be subject to extensive regulations outside the U.S. and may not obtain marketing approvals for products in Europe and other jurisdictions.

In addition to regulations in the U.S., should we or our collaborators pursue marketing approvals for IGALMI™, and for BXCL501, BXCL502, BXCL701, BXCL702 and our other product candidates internationally, we and our collaborators will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products. Whether or not we, or our collaborators, obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country.

We expect to pursue marketing approvals for IGALMI™, and may pursue marketing approvals for BXCL501, BXCL502, BXCL701, BXCL702 and our other product candidates in Europe and other jurisdictions outside the U.S. with collaborative partners. The time and process required to obtain regulatory approvals and reimbursement in Europe and other jurisdictions may be different from those in the U.S. Also, regulatory approval in one jurisdiction does not ensure approvals in any other jurisdiction; however, negative regulatory decisions in any jurisdiction may have a negative impact on the regulatory process in other jurisdictions.

Following a national referendum and enactment of legislation by the government of the United Kingdom (“UK”), the UK formally withdrew from the EU on January 31, 2020 and ratified a trade and cooperation agreement governing its future relationship (commonly referred to as “Brexit”). The agreement, which was applied provisionally from January 1, 2021 and entered into force on May 1, 2021, addresses trade, economic arrangements, law enforcement, judicial cooperation and a governance framework including procedures for dispute resolution, among other things. Because the agreement merely sets forth a framework in many respects and requires complex additional bilateral negotiations between the UK and the EU as both parties continue to work on the rules for implementation, significant political and economic uncertainty remains about how the precise terms of the relationship between the parties will differ from the terms before withdrawal.

Since January 1, 2021, the UK operates under a distinct regulatory regime to the EU. EU pharmaceutical laws only apply in respect of the UK to Northern Ireland (as set out in the Protocol on Ireland/Northern Ireland). EU laws which have been transposed into UK law through secondary legislation continue to be applicable as “retained EU law”. While the UK has indicated a general intention that new laws regarding the development, manufacture and commercialization of medicinal products in the UK will align closely with EU law, there are limited detailed proposals for future regulation of medicinal products. The trade and cooperation agreement includes specific provisions concerning medicinal products, which include the mutual recognition of cGMP, inspections of manufacturing facilities for medicinal products and cGMP documents issued (such mutual recognition can be rejected by either party in certain circumstances) but does not foresee wholesale mutual recognition of UK and EU pharmaceutical regulations. For example, it is not clear to what extent the UK will adopt legislation aligned with, or similar to, the EU CTR which became applicable on January 31, 2022 and which significantly reforms the assessment and supervision processes for clinical trials throughout the EU. On January 17, 2022, the UK Medicines and Healthcare products Regulatory Agency (“MHRA”) launched an eight-week consultation on reframing the UK legislation for clinical trials which aimed to streamline clinical trials approvals, enable innovation, enhance clinical trials transparency, enable greater risk proportionality, and promote patient and public involvement in clinical trials. The MHRA responded to the consultation on March 21, 2023 and confirmed that it would bring forward changes to the legislation. The final legal texts introduced by the UK Government will ultimately determine the extent to which the UK clinical trials framework aligns with or diverges from the EU CTR. A decision by the UK not to closely align its regulations with the new approach that will be adopted in the EU may have an effect on the cost of conducting clinical trials in the UK as opposed to other countries.

Therefore, there remains political and economic uncertainty regarding to what extent the regulation of medicinal products will differ between the UK and the EU in the future. Any divergences will increase the cost and complexity of running our business, including with respect to the conduct of clinical trials. Brexit also materially impacted the

regulatory regime with respect to the approval of our product candidates. Great Britain is no longer covered by the EU's procedures for the grant of MAs (Northern Ireland is covered by the centralized authorization procedure and can be covered under the decentralized or mutual recognition procedures). As of January 1, 2021, all existing centralized MAs were automatically converted into UK MAs effective in Great Britain and issued with a UK MA number on January 1, 2021 (unless MA holders opted out of this scheme). A separate MA is now required to market drugs in Great Britain. It is currently unclear whether the regulator in the UK, the MHRA, is sufficiently prepared to handle the increased volume of MA applications that it is likely to receive. Any delay in obtaining, or an inability to obtain, any regulatory approvals, as a result of Brexit or otherwise, would prevent us from commercializing our product candidates in Great Britain and restrict our ability to generate revenue and achieve and sustain profitability. If any of these outcomes occur, we may be forced to restrict or delay efforts to seek regulatory approval in Great Britain for our product candidates, which could significantly and materially harm our business. Any of these factors could have a significant adverse effect on our business, financial condition, results of operations and prospects.

If we are found in violation of federal, state or foreign health care “fraud and abuse” laws, we may be required to pay significant fines and penalties, including, without limitation, debarment, suspension or exclusion from participation in federal, state or similar health care programs, which may adversely affect our business, financial condition and results of operations.

In the U.S., we are subject to various federal and state health care “fraud and abuse” laws, including anti-kickback laws, false claims laws and other laws intended to reduce fraud and abuse in federal and state health care programs, which could affect us, and our ability to successfully commercialize our products in the U.S. We may have to comply with similar laws and regulations outside the U.S. These laws include:

- the federal Anti-Kickback Statute makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf), to knowingly and willfully solicit, receive, offer or pay any remuneration that is intended to induce the referral of business, including the purchase, order or prescription of a particular drug for which payment may be made under a federal health care program, such as Medicare or Medicaid. A person or entity does not need to have actual knowledge of this statute or specific intent to violate it to have committed a violation;
- false claims laws prohibit anyone from knowingly and willfully presenting or causing to be presented for payment to third-party payers, including government payers, claims for reimbursed drugs or services that are false or fraudulent, claims for items or services that were not provided as claimed, or claims for medically unnecessary items or services. Cases have been brought under false claims laws alleging that off-label promotion of pharmaceutical products or the provision of kickbacks has resulted in the submission of false claims to governmental health care programs. In addition, the government may assert that a claim, including items or services resulting from a violation of the federal Anti-Kickback Statute, constitutes a false or fraudulent claim for purposes of the false claims laws. Further, private individuals have the ability to bring actions on behalf of the government under the federal False Claims Act;
- the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”) prohibits persons or entities from knowingly and willfully executing a scheme to defraud any health care benefit program, including private payers, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for health care benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of these statutes or specific intent to violate them to have committed a violation;
- federal civil monetary penalties laws, which impose civil fines for, among other things, the offering or transfer of remuneration to a Medicare or state health care program beneficiary if the person knows, or should know, it is likely to influence the beneficiary's selection of a particular provider, practitioner, or supplier of services reimbursable by Medicare or a state health care program, unless an exception applies;
- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers;

- the federal physician sunshine requirements under the Patient Protection and Affordable Care Act (“ACA”), which requires certain manufacturers of drugs, devices, biologics, and medical supplies to report annually to the Centers for Medicare & Medicaid Services (“CMS”) information related to payments and other transfers of value to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors), certain non-physician practitioners (physician assistants, nurse practitioners, clinical nurse specialists, certified registered nurse anesthetists, anesthesiologist assistants, and certified nurse midwives), and teaching hospitals, and ownership and investment interests held by physicians and their immediate family members;
- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws, which may apply to items or services reimbursed by any third-party payor, including commercial insurers; state laws that require pharmaceutical companies to comply with the pharmaceutical industry’s voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government, or otherwise restrict payments that may be made to health care providers and other potential referral sources; and state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other health care providers or marketing expenditures and pricing information; and
- European and other foreign law equivalents of each of the laws, including reporting requirements detailing interactions with and payments to health care providers.

The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management’s attention from the operation of our business. If our operations are found to be in violation of any of the laws described above or any other governmental laws and regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, the curtailment or restructuring of our operations, the exclusion from participation in federal and state or foreign health care programs, additional reporting obligations and oversight if we become subject to a corporate integrity agreement or other agreement to resolve allegations of non-compliance with these laws, any of which could adversely affect our ability to market our products and adversely impact our financial results.

We may be unable to maintain sufficient clinical trial liability insurance.

Our inability to retain sufficient clinical trial liability insurance at an acceptable cost to protect against potential liability claims could prevent or inhibit our ability to conduct clinical trials for product candidates we develop. We may be unable to obtain appropriate levels of such insurance. Even if we do secure clinical trial liability insurance for our programs, we may not be able to achieve sufficient levels of such insurance. Any claim that may be brought against us could result in a court judgment or settlement in an amount that is not covered, in whole or in part, by our insurance or that exceeds the limits of our insurance coverage. We have supplemented our clinical trial coverage with product liability coverage in connection with the commercial launch of IGALMI™ and expect that we would similarly supplement our coverage for any of our other product candidates that may receive regulatory approval, but we may be unable to obtain such increased coverage on acceptable terms or at all. If we are found liable in a clinical trial lawsuit or a product liability lawsuit in the future, we will have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts.

Risks Related to Commercialization of Our Product Candidates

If our products do not gain market acceptance or if we fail to accurately forecast demand or manage our inventories, our business will suffer because we might not be able to fund future operations.

A number of factors may affect the market acceptance of our products or any other products or product candidates we develop or acquire, including, among others:

- the price of our products relative to other products for the same or similar treatments;

- the perception by patients, physicians and other members of the health care community of the effectiveness, utility and safety of our products for their indicated applications and treatments;
- our ability to fund our sales and marketing efforts; and
- the effectiveness of our sales and marketing efforts, including our strategic refocus to hospital/IDNs as part of the Reprioritization.

If our products do not gain market acceptance, we may not be able to fund future operations, including developing, testing and obtaining regulatory approval for new product candidates and expanding our sales and marketing efforts for our approved products, which would cause our business to suffer.

We plan to continue to commercialize IGALMI™ sublingual film for the acute treatment of agitation associated with schizophrenia or bipolar I or II disorder, to be self-administered by patients under the supervision of a healthcare provider, which is our only approved product to date. However, in connection with the Reprioritization, we significantly reduced the resources devoted to commercialization of IGALMI™ and it is possible that will have adverse consequences on the revenue that we are able to generate from IGALMI™. Revenues for IGALMI™ for the year ended December 31, 2023 were \$1.4 million. If our commercial products do not gain market acceptance, we may not be able to fund future operations, including developing, testing and obtaining regulatory approval for an sNDA for other BXCL501 indications, including in the at-home setting for the acute treatment of agitation (non-daily) associated with dementia due to probable Alzheimer's disease, or for other product candidates that it may develop. Our results of operations could be materially harmed if we are unable to successfully commercialize IGALMI™ for any currently or additionally approved indications or any future product candidates that we may have approved.

Our results of operations could be materially harmed if we are unable to accurately forecast customer demand for IGALMI™ and manage our inventory. To ensure adequate inventory supply, we must forecast inventory needs and place orders with our suppliers based on our estimates of future demand for IGALMI™. Our ability to accurately forecast demand for IGALMI™ could be negatively affected by many factors, including our failure to accurately manage our expansion strategy, product introductions by competitors, an increase or decrease in customer demand for IGALMI™ or for products of our competitors, our failure to accurately forecast customer acceptance of new products, unanticipated changes in general market conditions or regulatory matters, and weakening of economic conditions or consumer confidence in future economic conditions. Inventory levels in excess of customer demand may result in inventory write-downs or write-offs, which would cause our gross margin to be adversely affected and could impair the strength of our brand. Conversely, if we underestimate customer demand for IGALMI™, our third-party contract manufacturer may not be able to deliver products to meet our requirements, and this could result in damage to our reputation and customer relationships. In addition, if we experience a significant increase in demand, additional supplies of raw materials or additional manufacturing capacity may not be available when required on terms that are acceptable to us, or at all, or suppliers or our third-party manufacturers may not be able to allocate sufficient capacity in order to meet our increased requirements, which could have an adverse effect on our ability to meet customer demand for IGALMI™ and our results of operations.

We seek to maintain sufficient levels of inventory to protect ourselves from supply interruptions. As a result, we are subject to the risk that a portion of our inventory will become obsolete or expire, which could have a material adverse effect on our earnings and cash flows due to the resulting costs associated with the inventory impairment charges and costs required to replace such inventory.

Our estimated number of episodes of agitation and our corresponding estimated total addressable market are subject to inherent challenges and uncertainties. If we have overestimated the number of episodes or the size of our total addressable market for our current and potential future products or product candidates, or if any approval that we obtain is based on a narrower definition of the patient population, our revenue and ability to achieve profitability may be harmed.

We have based our potential market opportunity on a number of internal and third-party estimates and resources, including, without limitation, management's estimates and research, as well as industry and general publications and

research, surveys and studies conducted by third parties, which may be incorrect. Our estimated potential market opportunity is based on estimates of episodes of agitation across our indications, and these estimated episodes of agitation are also based on internal and third-party estimates and market resources using data self-reported by patients. The conditions supporting our assumptions or estimates and the market data supporting these assumptions and estimates may change at any time or otherwise be inaccurate, thereby reducing the predictive accuracy of these underlying factors. Our total addressable market will ultimately depend upon, among other things, the number of actual treatable episodes, the diagnosis criteria included in the final label for each of our product candidates, if approved for sale for these indications, acceptance by the medical community and patient access, drug pricing and reimbursement. The number of patients and treatable episodes in the United States and other major markets and elsewhere may turn out to be materially lower than expected, the number of treatable episodes may be significantly fewer than total episodes experienced, patients may not be otherwise amenable to treatment with our product candidates or new patients may become increasingly difficult to identify or gain access to, all of which would harm our results of operations and our business. For example, our estimates of the monthly average episodes for patients diagnosed with bipolar disorder and patients diagnosed with schizophrenia and, therefore, our estimated total addressable market are based on third-party market surveys which differ from an observational study in the EU of inhaled loxapine for the treatment of agitation in patients with schizophrenia or bipolar disorder conducted which found that only 40% of enrolled patients reported agitation episodes in the six-month study period. If third-party or internally generated data prove to be inaccurate or we make errors in our assumptions based on that data, our total addressable market may be meaningfully smaller than we have estimated, our future growth opportunities and sales growth may be impaired, any of which could have a material adverse effect on our business, financial condition and results of operations.

We obtained Orphan Drug Designation for BXCL701 for the treatment of pancreatic cancer, melanoma, acute myeloid leukemia and soft tissue sarcoma and we may seek Orphan Drug Designation for other indications or product candidates, and we may be unable to maintain the benefits associated with Orphan Drug Designation, including the potential for market exclusivity, and may not receive Orphan Drug Designation for other indications or for our other product candidates.

Regulatory authorities in some jurisdictions, including the U.S. and EU, may designate drugs intended for relatively small patient populations as orphan drugs. Under the Orphan Drug Act, the FDA may designate a drug as an orphan drug if it is a drug intended to treat a rare disease or condition, which is generally defined as a patient population of fewer than 200,000 individuals in the U.S., or a patient population greater than 200,000 individuals in the U.S. where there is no reasonable expectation that the cost of developing the drug will be recovered from sales in the U.S. In the EU, orphan drug designation is granted by the European Commission based on a scientific opinion of the EMA's Committee for Orphan Medicinal Products. A medicinal product may be designated as orphan if its sponsor can establish that (i) the product is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (ii) either (a) such condition affects no more than 5 in 10,000 persons in the EU when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the EU to justify investment; and (iii) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the EU, or if such a method exists, the medicinal product will be of significant benefit to those affected by the condition. The application for orphan designation must be submitted before the application for MA.

In the U.S., orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. In addition, if a product that has orphan drug designation subsequently receives the first FDA approval for the disease or condition for which it has such designation, the product is entitled to orphan drug exclusivity. Orphan drug exclusivity in the U.S. provides that the FDA may not approve any other applications, including a full NDA, to market the same drug for the same disease or condition for seven years. In limited circumstances, the applicable exclusivity period is 10 years in the EU. The EU exclusivity period can be reduced to six years if, at the end of the fifth year, it is established that a drug no longer meets the criteria for orphan drug designation or if the drug is sufficiently profitable so that market exclusivity is no longer justified.

In January 2021, the FDA granted Orphan Drug Designation to BXCL701 for the treatment of soft tissue sarcoma. In September 2019, the FDA granted Orphan Drug Designation to BXCL701 for the treatment of acute myeloid leukemia. Prior to 2019, the FDA granted Orphan Drug Designation to BXCL701 for the treatment of pancreatic cancer and melanoma. We may seek Orphan Drug Designations for BXCL701 in other diseases or conditions or for other product candidates. There can be no assurances that we will be able to obtain such designations.

Even if we, or any future collaborators, obtain orphan drug designation for a product candidate, we, or they, may not be able to obtain or maintain orphan drug exclusivity for that product candidate. We may not be the first to obtain marketing approval of any product candidate for which we have obtained orphan drug designation for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products, and it is possible that another company also holding orphan drug designation for the same product candidate will receive marketing approval for the same disease or condition before we do. If that were to happen, our applications for that disease or condition may not be approved until the competing company's period of exclusivity expires. In addition, exclusive marketing rights in the U.S. and abroad may be limited if we seek approval for an indication broader than the orphan-designated disease or condition or may be lost if the FDA or foreign regulatory authorities later determines that the request for designation was materially defective or if we are unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we, or any future collaborators, obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs with different active ingredients may be approved for the same disease or condition. Even after an orphan drug is approved, the FDA or foreign regulatory authorities can subsequently approve the same drug with the same active ingredient for the same condition if the FDA or foreign regulatory authorities conclude that the later drug is clinically superior in that it is shown to be safer, more effective or makes a major contribution to patient care or the manufacturer of the product with orphan exclusivity is unable to maintain sufficient product quantity. Orphan drug designation neither shortens the development or regulatory review time of a drug, nor gives the drug any advantage in the regulatory review or approval process and does not prevent competitors from obtaining approval of the same product candidate as ours for indications other than those in which we have been granted orphan drug designation.

If we are unable to develop satisfactory sales and marketing capabilities, we may not succeed in commercializing IGALMI™ or any product candidate for which we may obtain regulatory approval.

We have limited experience in marketing and selling drug products. We have not entered into arrangements for the sale and marketing of IGALMI™, BXCL501, BXCL502, BXCL701, BXCL702 or any other product candidate. Typically, pharmaceutical companies would employ groups of sales representatives and associated sales and marketing staff numbering in the hundreds to thousands of individuals to call on the large number of physicians and hospitals. Following our Reprioritization, we may need to rebuild a commercial sales and marketing team if we seek to modify our commercial strategy for IGALMI™ or initiate commercial sales for any product candidate in the future, which will likely require significant cost. We may seek to collaborate with a third-party to market our drugs or may seek to market and sell our drugs by ourselves. If we seek to collaborate with a third-party, we cannot be sure that a collaborative agreement can be reached on terms acceptable to us. We may also need to hire additional personnel skilled in marketing and sales for our direct marketing and selling efforts. We cannot be sure that we will be able to acquire, or establish third-party relationships to provide, any or all of these marketing and sales capabilities. The maintenance and expansion of our direct sales force or establishment of a contract sales force, or a combination thereof, as applicable, to market our products is expensive and time-consuming and could delay any product launch. In addition, reputational harm from the Reprioritization may adversely impact our efforts to hire personnel skilled in marketing and sales. Further, we can give no assurances that we will be able to maintain a direct and/or contract sales force for any period of time or that our sales efforts will be sufficient to grow our revenues or that our sales efforts will ever lead to profits. A direct sales force has in the past subjected and may in the future subject us to higher fixed costs than those of companies that market competing products through independent third parties, due to the costs that we bear associated with employee benefits, training, and managing sales personnel. As a result, we could be at a competitive disadvantage. Additionally, these fixed costs may slow our ability to reduce costs if needed, which could have a material adverse effect on our business, financial condition, and results of operations.

We operate in a highly competitive and rapidly changing industry.

Biopharmaceutical product development is highly competitive and subject to rapid and significant technological advancements. Our success is highly dependent upon our ability to in-license, acquire, develop and obtain regulatory approval for new and innovative products on a cost-effective basis and to market them successfully. In doing so, we face and will continue to face intense competition from a variety of businesses, including large, fully integrated, well-established pharmaceutical companies who already possess a large share of the market, specialty pharmaceutical and biopharmaceutical companies, academic institutions, government agencies and other private and public research institutions in the U.S., the EU and other jurisdictions.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved drugs than we do. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Mergers and acquisitions in the biopharmaceutical industry could result in even more resources being concentrated among a small number of our competitors.

Competition may further increase as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors may succeed in developing, acquiring or licensing, on an exclusive basis, products that are more effective or less costly than any product candidate that we may develop.

Established biopharmaceutical companies may invest heavily to accelerate discovery and development of novel compounds or to in-license novel compounds that could make our product candidates less competitive. In addition, any new product that competes with an approved product must demonstrate compelling advantages in efficacy, convenience, tolerability and safety to overcome price competition and to be commercially successful. Accordingly, our competitors may succeed in obtaining patent protection, discovering, developing, receiving FDA approval for or commercializing drugs before we do, which would have an adverse impact on our business and results of operations.

The availability of our competitors' products could limit the demand and the price we are able to charge for products and product candidates, if any, that we commercialize. The inability to compete with existing or subsequently introduced drugs would harm our business, financial condition and results of operations.

Although we obtained FDA approval for IGALMI™, our products and product candidates may not be accepted by physicians or the medical community in general, and there may be insufficient insurance coverage and reimbursement.

There can be no assurance that IGALMI™, or BXCL501, BXCL502, BXCL701, BXCL702 and our other product candidates or any other product candidate successfully developed by us, independently or with partners, if approved, will be accepted by physicians, hospitals and other health care facilities. IGALMI™ competes, and BXCL501, BXCL502, BXCL701, BXCL702 and any future product candidates we develop will compete, with a number of products manufactured and marketed by major pharmaceutical and biotechnology companies. The degree of market acceptance of IGALMI™ and any drugs we develop depends on a number of factors, including:

- our demonstration of the clinical efficacy and safety of our products and product candidates;
- timing of market approval and commercial launch of our products and product candidates;
- the clinical indication(s) for which our products and product candidates are approved;
- product label and package insert requirements;
- advantages and disadvantages of our products and product candidates compared to existing therapies;
- continued interest in and growth of the market for anti-cancer or anti-agitation drugs;
- strength of sales, marketing, and distribution support;
- product pricing in absolute terms and relative to alternative treatments;
- future changes in health care laws, regulations, and medical policies; and
- availability of coverage and reimbursement in select jurisdictions, and future changes to coverage and reimbursement policies of government and third-party payors.

Significant uncertainty exists as to the coverage and reimbursement status of IGALMI™ or any product candidate for which we obtain regulatory approval. In the U.S. and other countries, sales of IGALMI™ and any other products for which we receive regulatory approval for commercial sale will depend in part on the availability of coverage and reimbursement from third-party payors. Third-party payors include government health administrative authorities, such as Medicaid and Medicare, managed care providers, private health insurers and other organizations.

Third-party payors are increasingly challenging the prices charged for medical products and services. It will be time consuming and expensive for us to go through the process of seeking coverage and reimbursement from Medicare and private payors. IGALMI™ and any other products for which we receive regulatory approval may not be considered cost-effective, and coverage and reimbursement may not be available or sufficient to allow us to sell our proposed products on a profitable basis. Further federal, state and foreign government proposals and health care reforms are likely which could limit the prices that can be charged for IGALMI™ and the product candidates that we develop and may further limit our commercial opportunities. Our results of operations could be materially adversely affected by proposed health care reforms, by the Inflation Reduction Act and other drug pricing legislation in the U.S., by the possible effect of such current or future legislation on amounts that private insurers will pay and by other health care reforms that may be enacted or adopted in the future.

Health care reform measures could hinder or prevent our product candidates' commercial success.

The U.S. government and other governments have shown significant interest in pursuing health care reform. Any government-adopted reform measures could adversely impact the pricing of health care products and services in the U.S. or internationally and the amount of reimbursement available from governmental agencies or other third-party payors for IGALMI™ and the product candidates that we develop. The continuing efforts of the U.S. and foreign governments, insurance companies, managed care organizations and other payors of health care services to contain or reduce health care costs may adversely affect our ability to set prices for our products, which we believe are fair, and our ability to generate revenues and achieve and maintain profitability.

New laws, regulations and judicial decisions, or new interpretations of existing laws, regulations and decisions, that relate to health care availability, methods of delivery or payment for products and services, or sales, marketing or pricing, may limit our potential revenue, and we may need to revise our research and development programs. The pricing and reimbursement environment may change in the future and become more challenging due to several reasons, including policies advanced by the current executive administration in the U.S., new health care legislation or fiscal challenges faced by government health administration authorities. Specifically, in both the U.S. and some foreign jurisdictions, there have been a number of legislative and regulatory proposals to change the health care system in ways that could affect our ability to sell our products profitably.

For example, in the U.S., the ACA, which was enacted in 2010, has substantially changed the way health care is financed by both government health plans and private insurers, and significantly impacts the pharmaceutical industry. For example, the ACA imposed a non-deductible excise tax on pharmaceutical manufacturers or importers that sell branded prescription drugs to government programs. In addition, as part of the ACA's provisions closing a funding gap that existed in the Medicare Part D prescription drug program, manufacturers are required to provide a discount on branded prescription drugs for drugs provided to certain beneficiaries who fall within the "donut hole." Similarly, the ACA increased the level of Medicaid rebates payable by manufacturers of brand-name drugs from 15.1% to 23.1% of the average manufacturer price and required collection of rebates for drugs paid by Medicaid managed care organizations. The ACA also included changes to the Public Health Service's 340B drug pricing program (the "340B program") including expansion of the list of eligible covered entities that may purchase drugs under the program.

Since its enactment, there have been judicial, executive and Congressional challenges to certain aspects of the ACA. On June 17, 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the ACA brought by several states without specifically ruling on the constitutionality of the ACA. Thus, the ACA will remain in effect in its current form.

In addition, other legislative changes have been proposed and adopted in the U.S. since the ACA was enacted. These changes include the Budget Control Act of 2011, which resulted in aggregate reductions of Medicare payments to providers, which went into effect on April 1, 2013, and, due to subsequent legislative amendments to the statute, will

remain in effect through 2032, unless additional Congressional action is taken. Furthermore, the American Taxpayer Relief Act of 2012, further reduced Medicare payments to several types of providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. More recently, on March 11, 2021, President Biden signed the American Rescue Plan Act of 2021 into law, which eliminates the statutory Medicaid drug rebate cap, beginning January 1, 2024.

Most significantly, on August 16, 2022, President Biden signed the Inflation Reduction Act of 2022 (“IRA”) into law. This statute marks the most significant action by Congress with respect to the pharmaceutical industry since adoption of the ACA in 2010. Among other things, the IRA requires manufacturers of certain drugs to engage in price negotiations with Medicare (beginning in 2026), with prices that can be negotiated subject to a cap; imposes rebates under Medicare Part B and Medicare Part D to penalize price increases that outpace inflation (first due in 2023); and replaces the Part D coverage gap discount program with a new discounting program (beginning in 2025). The IRA permits the Secretary of the Department of Health and Human Services (“HHS”) to implement many of these provisions through guidance, as opposed to regulation, for the initial years. On August 29, 2023, HHS announced the list of the first ten drugs that will be subject to price negotiations. HHS has issued and will continue to issue guidance implementing the IRA, although the Medicare drug price negotiation program is currently subject to legal challenges. While the impact of the IRA on the pharmaceutical industry and our business cannot yet be fully determined, it is likely to be significant.

The cost of prescription pharmaceuticals in the U.S. will likely continue to be the subject of considerable discussion. Members of Congress and the Biden Administration have indicated they will continue to pursue further legislative or administrative measures to control prescription drug costs. There have been several Congressional inquiries, as well as legislative and regulatory initiatives and executive orders designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. We cannot predict with certainty what impact any federal or state health reforms will have on us, but such changes could impose new or more stringent regulatory requirements on our activities or result in reduced reimbursement for our products, any of which could adversely affect our business, results of operations and financial condition.

Individual states in the U.S. continue to consider and have enacted legislation to limit the growth of health care costs, including the cost of prescription drugs and combination products. A number of states have either implemented or are considering implementation of drug price transparency legislation that may prevent or limit our ability to take price increases at certain rates or frequencies. Requirements under such laws include advance notice of planned price increases, reporting price increase amounts and factors considered in taking such increases, wholesale acquisition cost information disclosure to prescribers, purchasers, and state agencies, and new product notice and reporting. Such legislation could limit the price or payment for certain drugs, and a number of states are authorized to impose civil monetary penalties or pursue other enforcement mechanisms against manufacturers who fail to comply with drug price transparency requirements, including the untimely, inaccurate, or incomplete reporting of drug pricing information. If we are found to have violated state law requirements, we may become subject to penalties or other enforcement mechanisms, which could have a material adverse effect on our business. Furthermore, there has been increased interest by third-party payors and governmental authorities in reference pricing systems and publication of discounts and list prices.

It is likely that federal and state legislatures within the U.S. and foreign governments will continue to consider changes to existing health care legislation. We cannot predict the reform initiatives that may be adopted in the future or whether initiatives that have been adopted will be repealed or modified. The continuing efforts of governments, insurance companies, managed care organizations and other payors of health care services to contain or reduce costs of health care may adversely affect the demand for IGALMI™ and any other drug products for which we may obtain regulatory approval, our ability to set a price that we believe is fair for our products, our ability to obtain adequate coverage and reimbursement approval for a product, our ability to generate revenues and achieve or maintain profitability, and the level of taxes that we are required to pay.

In the EU, similar developments may affect our ability to profitably commercialize our product candidates, if approved. In addition to continuing pressure on prices and cost containment measures, legislative developments at the EU or member state level may result in significant additional requirements or obstacles that may increase our operating costs. The delivery of healthcare in the EU, including the establishment and operation of health services and the pricing

and reimbursement of medicines, is almost exclusively a matter for national, rather than EU, law and policy. National governments and health service providers have different priorities and approaches to the delivery of health care and the pricing and reimbursement of products in that context. In general, however, the healthcare budgetary constraints in most EU member states have resulted in restrictions on the pricing and reimbursement of medicines by relevant health service providers. Coupled with ever-increasing EU and national regulatory burdens on those wishing to develop and market products, this could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to commercialize our product candidates, if approved. In markets outside of the U.S. and EU, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies.

On December 13, 2021, Regulation No 2021/2282 on Health Technology Assessment (“HTA”) amending Directive 2011/24/EU, was adopted. While the regulation entered into force in January 2022, it will only begin to apply from January 2025 onwards, with preparatory and implementation-related steps to take place in the interim. Once applicable, it will have a phased implementation depending on the concerned products. The regulation intends to boost cooperation among EU member states in assessing health technologies, including new medicinal products as well as certain high-risk medical devices, and provide the basis for cooperation at the EU level for joint clinical assessments in these areas. It will permit EU member states to use common HTA tools, methodologies, and procedures across the EU, working together in four main areas, including joint clinical assessment of the innovative health technologies with the highest potential impact for patients, joint scientific consultations whereby developers can seek advice from HTA authorities, identification of emerging health technologies to identify promising technologies early, and continuing voluntary cooperation in other areas. Individual EU member states will continue to be responsible for assessing non-clinical (e.g., economic, social, ethical) aspects of health technology, and making decisions on pricing and reimbursement.

If we fail to comply with reporting and payment obligations under the Medicaid Drug Rebate Program or other governmental pricing programs in the U.S., we could be subject to additional reimbursement requirements, penalties, sanctions and fines, which could have a material adverse effect on our business, results of operations and financial condition.

We participate in the Medicaid Drug Rebate Program (“MDRP”) and other federal and state government pricing programs in the U.S., and we may participate in additional government pricing programs in the future. These programs generally require manufacturers to pay rebates or otherwise provide discounts to government payors in connection with drugs that are dispensed to beneficiaries of these programs. As a condition of having federal funds being made available for covered outpatient drugs under Medicaid and Medicare Part B, a manufacturer must enroll in the MDRP. Under this program, we must pay a rebate to state Medicaid programs for each unit of our covered outpatient drug dispensed to a Medicaid beneficiary and paid for by a state Medicaid program. Medicaid drug rebates are based on pricing data that we must report on a monthly and quarterly basis to CMS. For the MDRP, this data includes the average manufacturer price (“AMP”) for each drug and, in the case of an innovator product, like IGALMI™, the best price. If we become aware that our MDRP price reporting submission for a prior period was incorrect or has changed as a result of recalculation of the pricing data, we must resubmit the corrected data for up to three years after the data originally was due. Further, under the IRA, AMP figures we report will also be used to calculate a rebate on Medicare Part D utilization, triggered by price increases that outpace inflation. If we fail to provide information timely or are found to have knowingly submitted false information to the government, we may be subject to civil monetary penalties and other sanctions, including termination from the MDRP, which would result in payment not being available for our covered outpatient drugs under Medicaid or, if applicable, Medicare Part B. Failure to make necessary disclosures and/or to identify overpayments additionally could result in allegations against us under the Federal False Claims Act and other laws and regulations.

Federal law requires that a manufacturer that participates in the MDRP also participate in the 340B program in order for federal funds to be available for the manufacturer’s drugs under Medicaid and Medicare Part B, and we participate in the 340B program. The 340B program is administered by the Health Resources and Services Administration (“HRSA”) and requires us to charge statutorily defined covered entities no more than the 340B “ceiling price” for our covered outpatient drugs used in an outpatient setting. These 340B program covered entities include a variety of community health clinics and other entities that receive health services grants from the Public Health Service, as well as hospitals that serve a disproportionate share of low-income patients. The 340B ceiling price is calculated using a statutory formula, which is based on the AMP and rebate amount for the covered outpatient drug as calculated under the MDRP. In general, products subject to Medicaid price reporting and rebate liability are also subject to the 340B ceiling price calculation and discount requirement. We must report 340B ceiling prices to HRSA on a quarterly basis, and HRSA

publishes them to 340B covered entities. HRSA has finalized regulations regarding the calculation of the 340B ceiling price and the imposition of civil monetary penalties on manufacturers that knowingly and intentionally overcharge covered entities for 340B eligible drugs. HRSA has also finalized an administrative dispute resolution process through which 340B covered entities may pursue claims against participating manufacturers for overcharges, and through which manufacturers may pursue claims against 340B covered entities for engaging in unlawful diversion or duplicate discounting of 340B drugs. In addition, legislation may be introduced that, if passed, would further expand the 340B program, such as adding further covered entities or requiring participating manufacturers to agree to provide 340B program discounted pricing on drugs used in an inpatient setting.

In order to be eligible to have drug products paid for with federal funds under Medicaid and Medicare Part B and purchased by certain federal agencies and grantees, we also must participate in the U.S. Department of Veterans Affairs (“VA”) Federal Supply Schedule (“FSS”) pricing program. Under the VA/FSS program, we must report the Non-Federal Average Manufacturer Price (“Non-FAMP”) for our covered drugs to the VA and charge certain federal agencies no more than the Federal Ceiling Price, which is calculated based on Non-FAMP using a statutory formula. These four agencies are the VA, the U.S. Department of Defense, the U.S. Coast Guard, and the U.S. Public Health Service (including the Indian Health Service). We must also pay rebates on products purchased by military personnel and dependents through the TRICARE retail pharmacy program. If we fail to provide timely information or are found to have knowingly submitted false information, we may be subject to civil monetary penalties.

Individual states continue to consider and have enacted legislation to limit the growth of health care costs, including the cost of prescription drugs and combination products. A number of states have either implemented or are considering implementation of drug price transparency legislation that may prevent or limit our ability to take price increases at certain rates or frequencies. Requirements under such laws include advance notice of planned price increases, reporting price increase amounts and factors considered in taking such increases, wholesale acquisition cost information disclosure to prescribers, purchasers, and state agencies, and new product notice and reporting. Such legislation could limit the price or payment for certain drugs, and a number of states are authorized to impose civil monetary penalties or pursue other enforcement mechanisms against manufacturers who fail to comply with drug price transparency requirements, including the untimely, inaccurate, or incomplete reporting of drug pricing information. If we are found to have violated state law requirements, we may become subject to penalties or other enforcement mechanisms, which could have a material adverse effect on our business.

Pricing and rebate calculations are complex, vary among products and programs, and are often subject to interpretation by manufacturers, governmental or regulatory agencies, and the courts. The terms, scope and complexity of these government pricing programs change frequently, as do interpretations of applicable requirements for pricing and rebate calculations. Responding to current and future changes may increase our costs and the complexity of compliance will be time-consuming. Any required refunds to the U.S. government or responding to a government investigation or enforcement action would be expensive and time consuming and could have a material adverse effect on our business, results of operations and financial condition. Price recalculations under the MDRP also may affect the ceiling price at which we may be required to offer products under the 340B program. Civil monetary penalties can be applied if we are found to have knowingly submitted any false price or product information to the government, if we fail to submit required price data on a timely basis, or if we are found to have charged 340B program covered entities more than the statutorily mandated ceiling price. In the event that CMS were to terminate our Medicaid rebate agreement, pursuant to which we participate in the MDRP, no federal payments would be available under Medicaid or Medicare for our covered outpatient drugs. We cannot assure you that price data submissions we make will not be found to be incomplete or incorrect.

Risks Related to Our Relationship with BioXcel LLC

BioXcel LLC has significant influence over the direction of our business, and the concentrated ownership of our common stock will prevent you and other stockholders from influencing significant decisions.

As of December 31, 2023, BioXcel LLC owned approximately 29% of the economic interest and voting power of our outstanding common stock and BioXcel LLC is controlled by BioXcel Holdings, Inc. Our Chief Executive Officer and member of our board of directors, Vimal Mehta, Ph.D., is the Chief Executive Officer, President, Treasurer and Secretary and a member of the board of managers of BioXcel LLC and Chief Executive Officer, President, Treasurer

and Secretary and the sole member of the board of directors of BioXcel Holdings, Inc. See “*The management of and beneficial ownership in BioXcel LLC by our executive officers and our directors may create, or may create the appearance of, conflicts of interest.*” below. Even though BioXcel LLC controls less than a majority of the voting power of our outstanding common stock, it may influence the outcome of such corporate actions so long as it owns a significant portion of our common stock.

Approval of commercial terms between us and BioXcel LLC does not preclude the possibility of stockholder litigation, including but not limited to derivative litigation nominally against BioXcel LLC and against its directors and officers and also against us and our directors and officers.

The commercial terms of the Separation and Shared Services Agreement (as amended and/or restated and in effect as of the date hereof, the “Services Agreement”), and the Amended and Restated Asset Contribution Agreement (as amended and/or restated and in effect as of the date hereof, the “Contribution Agreement”), that we entered into with BioXcel LLC have not been negotiated by persons consisting solely of disinterested directors.

No assurance can be given that any equity or debt holder of BioXcel LLC or the Company will not claim in a lawsuit that such terms in fact are not in the best interests of BioXcel LLC or the Company and its applicable equity holders, that the directors and officers of BioXcel LLC or the Company breached their fiduciary duties in connection with such agreements and that any disclosures by the Company to its stockholders regarding these agreements and the relationship between BioXcel LLC and us did not satisfy applicable requirements. In any such instance, we and our directors and officers may also be named as defendants and we would have to defend ourselves and our directors and officers. While we would seek indemnification from BioXcel LLC under the terms of these agreements against any damages or other costs, which could be substantial, no such indemnification has yet been agreed to or may be agreed to and be in effect. Further, any such litigation would be time-consuming and would divert focus and resources from the development of our product candidates and our business, including but not limited to possibly delaying our clinical trials due to our management having to spend time and attention on such litigation.

We continue to depend on BioXcel LLC to provide us with certain services for our business.

We rely, in part, on BioXcel LLC and access to its EvolverAI, to complement our in-house, uniquely integrated AI-to-drug-development capability. EvolverAI is a research and development engine created and owned by BioXcel LLC, to identify, research and develop potential product candidates in neuroscience and immuno-oncology. We negotiated the Services Agreement with BioXcel LLC pursuant to which BioXcel LLC agreed to perform certain intellectual property prosecution and management and research and development activities for us utilizing its EvolverAI.

Under the Services Agreement, we have an option, exercisable until December 31, 2024, to enter into a separate collaborative services agreement with BioXcel LLC pursuant to which BioXcel LLC shall perform product identification and related services for us utilizing its EvolverAI. We agreed to pay BioXcel LLC \$18,000 per month from March 13, 2023, to December 31, 2024 in exchange for this option. We agreed to negotiate any such collaborative services agreement in good faith and to incorporate reasonable market-based terms, including consideration for BioXcel LLC reflecting a low, single-digit royalty on net sales and reasonable development and commercialization milestone payments, provided that (i) development milestone payments shall not exceed \$10 million in the aggregate and not be payable prior to proof of concept in humans and (ii) commercialization milestone payments shall be based on reaching annual net sales levels, be limited to 3% of the applicable net sales level, and not exceed \$30 million in the aggregate.

In addition, at the time of our initial public offering (“IPO”), BioXcel LLC granted us (i) a first right to negotiate exclusive rights to any additional product candidates in the fields of neuroscience and immuno-oncology that BioXcel LLC may identify on its own and not in connection with BioXcel LLC’s provision of services to us under the Services Agreement and (ii) an exclusivity agreement in the neuroscience and immuno-oncology fields whereby BioXcel LLC agreed not develop drugs, or engage in preclinical discovery for the purpose of developing drugs, in the neuroscience and immuno-oncology fields for or on behalf of a third party, utilizing EvolverAI or otherwise. This first right to negotiate and exclusivity period expired on March 12, 2023, and there is no assurance that we will extend the terms of the agreement. We are continuing to assess our ongoing business needs.

On September 19, 2023, the Company, Krishnan Nandabalan, Ph.D., InveniAI LLC (“Inveni”) and Invea Therapeutics, Inc. (“Invea”) and the other parties thereto entered into a non-compete agreement pursuant to which Dr. Nandabalan, Inveni and Invea agreed not to compete with the Company and its controlled affiliates in the fields of neuroscience and immuno-oncology for a period of five years from September 19, 2023 and not to solicit employees of the Company or its controlled affiliates for a period of two years from September 19, 2023. Inveni and Invea are subsidiaries of BioXcel LLC.

If our rights under the Services Agreement were to become limited or if we are otherwise precluded from conducting research and development using EvolverAI, or if BioXcel LLC, Inveni or Invea do not fulfill their obligations under the agreements, such development could materially adversely affect our future operating results, financial condition, and prospects. Furthermore, certain individuals conducting services on our behalf are not our employees, and we cannot control whether they devote sufficient time, skill and resources to our ongoing development programs. We also cannot ensure that BioXcel LLC retains sufficient resources or personnel or otherwise to conduct its operations. BioXcel LLC may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting research and development activities, which could impede their ability to devote appropriate time to our research and development programs. BioXcel LLC is not currently restricted from using EvolverAI to perform drug discovery services for our direct competitors, and if we do not extend the exclusivity period in the neuroscience and immuno-oncology fields, this could harm our competitive position and adversely affect our future operating results and financial condition.

The management of and beneficial ownership in BioXcel LLC may create, or may create the appearance of, conflicts of interest.

Our Chief Executive Officer and member of our board of directors, Vimal Mehta, Ph.D., is the Chief Executive Officer, President, Treasurer and Secretary and a member of the board of managers of BioXcel LLC and Chief Executive Officer, President, Treasurer and Secretary and the sole member of the board of directors of BioXcel Holdings, Inc. Additionally, as of December 31, 2023, Dr. Mehta, through his beneficial ownership of BioXcel LLC, beneficially owned approximately 31% of the Company. The management and ownership of BioXcel LLC by Dr. Mehta may create the appearance of conflicts of interest when Dr. Mehta is faced with decisions that could have different implications for BioXcel LLC than the decisions have for us, including decisions that relate to our Services Agreement and Contribution Agreement, as well as potential agreements relating to future product candidates and AI-related services or collaborations. Any perceived conflicts of interest resulting from investors questioning the independence of our management or the integrity of corporate governance procedures may materially affect our stock price and expose us to litigation risk.

Any disputes that arise between us and BioXcel LLC with respect to our past and ongoing relationships could harm our business operations.

Disputes may arise between BioXcel LLC and us in a number of areas relating to our past and ongoing relationships, including:

- intellectual property, technology and business matters, including failure to make required technology transfers and failure to comply with contractual provisions applicable to BioXcel LLC and us;
- labor, tax, employee benefit, indemnification and other matters arising from the separation of BTI from BioXcel LLC;
- distribution and supply obligations;
- employee retention and recruiting;
- business combinations involving us;
- sales or distributions by BioXcel LLC of all or any portion of its ownership interest in us;

- the nature, quality and pricing of services BioXcel LLC has agreed to provide us; and
- business opportunities that may be attractive to both BioXcel LLC and us.

We entered into the Services Agreement with BioXcel LLC related to the separation of our business operations from those of BioXcel LLC that contains certain limitations on BioXcel LLC's ability to control various aspects of our business and operations, notwithstanding BioXcel LLC's substantial ownership position. This agreement may be amended upon agreement between us and BioXcel LLC.

BioXcel LLC may experience challenges with the acquisition, development, enhancement, or deployment of technology necessary for EvolverAI. We may face similar challenges with other AI platforms that we utilize, including our own in-house proprietary platform.

BioXcel LLC operates in businesses that require sophisticated computer systems and software for data collection, data processing, cloud-based platforms, analytics, statistical projections and forecasting, mobile computing, social media analytics and other applications and technologies. BioXcel LLC seeks to address its technology risks by increasing its reliance on the use of innovations by cross-industry technology leaders and adapt these for their pharmaceutical, biotechnology, biopharmaceutical, diagnostic, medical device and contract research and manufacturing clients. Some of the technologies supporting the industries they serve are changing rapidly and we must continue to adapt to these changes in a timely and effective manner at an acceptable cost. They also must continue to deliver data to their clients in forms that are easy to use while simultaneously providing clear answers to complex questions. We also utilize our own in-house AI platform.

There can be no guarantee that we or BioXcel LLC will be able to develop, acquire or integrate new technologies, that these new technologies will meet our and BioXcel LLC's needs or achieve our expected goals, or that we will be able to do so as quickly or cost-effectively as our competitors. Significant technological change could render BioXcel LLC's EvolverAI or other AI platforms that we utilize obsolete. BioXcel LLC's and our continued success will depend on the ability to adapt to changing technologies, manage and process ever-increasing amounts of data and information and improve the performance, features and reliability of these services in response to changing client and industry demands. If EvolverAI or other AI and machine learning models that we use are incorrectly designed, do not operate properly, the data we use to train them is incomplete, inadequate or biased in some way, or if we do not have sufficient rights to use the data on which our AI and machine learning models rely, the performance of our products, services and businesses, as well as our reputation, could suffer or we could incur liability through the violation of laws, third-party privacy rights or contracts to which we are a party. BioXcel LLC or we may experience difficulties that could delay or prevent the successful design, development, testing, and introduction of advanced versions of EvolverAI, limiting our ability to identify new product candidates. New services, or enhancements to existing EvolverAI services, may not adequately meet our requirements. Any of these failures could have a material adverse effect on our operating results and financial condition.

Risks Related to Our Reliance on Third Parties

We are substantially dependent on third parties for the manufacture of our clinical supplies of our product candidates and our commercial supplies of IGALMI™, and we intend to rely on third parties to produce commercial supplies of any other approved product candidate. Therefore, our development of our products could be stopped or delayed, and our commercialization of any future product could be stopped, delayed or made less profitable if third-party manufacturers fail to obtain approval of the FDA or comparable regulatory authorities or fail to provide us with drug product in sufficient quantities or at acceptable prices.

We entered into a commercial supply agreement with ARx, LLC ("ARx") pursuant to which ARx has agreed to exclusively manufacture and supply us with all of our worldwide demand of film formulation of Dex to be used for the commercial supply of IGALMI™ and for ongoing clinical trials of our product candidate BXCL501, subject to certain alternative supply provisions. If ARx is unable or ceases to produce our supply of Dex in sufficient quantities as and when needed or if the ARx agreement becomes too costly, our business would be harmed because there can be no assurance that we will be able to identify or enter into agreements with alternative suppliers on a timely basis on acceptable terms, if at all. An interruption in our ability to sell our products to customers could occur if we encounter

delays or difficulties in securing Dex, or if the quantity or quality supplied does not meet our specifications, or if we cannot then obtain an acceptable substitute. If any of these events occur, our business and operating results could be harmed. Our specified minimum annual payment could adversely affect our cash flows in the future, such as in times when we have sufficient inventory and would otherwise be able to use our cash for other purposes.

The manufacture of biotechnology and pharmaceutical products is complex and requires significant expertise, capital investment, process controls and know-how. Common difficulties in biotechnology and pharmaceutical manufacturing may include: sourcing and producing raw materials, transferring technology from chemistry and development activities to production activities, validating initial production designs, scaling manufacturing techniques, improving costs and yields, establishing and maintaining quality controls and stability requirements, eliminating contaminations and operator errors, and maintaining compliance with regulatory requirements. We do not currently have nor do we plan to acquire the infrastructure or capability internally to produce an adequate supply of compounds to meet future requirements for clinical trials and commercialization of our products or to produce our products in accordance with cGMP prescribed by the FDA or similar foreign requirements. Drug manufacturing facilities are subject to inspection before the FDA or foreign regulatory authorities will issue an approval to market a new drug product, and ARx, the Patheon pharma services division of Thermo Fisher Scientific Inc., and any other manufacturers that we may use must adhere to the cGMP or similar foreign regulations prescribed by the FDA or foreign regulatory authorities.

As such, these third-party manufacturers will be required to comply with cGMPs, and other applicable laws and regulations. We have no control over the ability of these third parties to comply with these requirements, or to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or any other applicable regulatory authorities do not approve the facilities of these third parties for the manufacture of our other product candidates or any products that we may successfully develop, or if it withdraws any such approval, or if our suppliers or contract manufacturers decide they no longer want to supply or manufacture for us, we may need to find alternative manufacturing facilities, in which case we might not be able to identify manufacturers for clinical or commercial supply on acceptable terms, or at all. Any of these factors would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates and adversely affect our business.

We, ARx, the Patheon pharma services division of Thermo Fisher Scientific Inc., and/or our other third-party manufacturers may be adversely affected by developments outside of our control, and these developments may delay or prevent further manufacturing of our products. Adverse developments may include labor disputes, resource constraints, shipment delays, inventory shortages, lot failures, unexpected sources of contamination, lawsuits related to our manufacturing techniques, equipment used during manufacturing, or composition of matter, unstable political environments, acts of terrorism, war, natural disasters, and other natural and man-made disasters. If we, ARx, the Patheon pharma services division of Thermo Fisher Scientific Inc., or our other third-party manufacturers were to encounter any of the above difficulties, or otherwise fail to comply with contractual obligations, our ability to provide any product for clinical trial or commercial purposes would be jeopardized. This may increase the costs associated with completing our clinical trials and commercial production. Further, production disruptions may cause us to terminate ongoing clinical trials and/or commence new clinical trials at additional expense. We may also have to take inventory write-offs and incur other charges and expenses for products that fail to meet specifications or pass safety inspections. Moreover, as a result of the COVID-19 pandemic, third-party manufacturers have been and may in the future be affected, which could disrupt their activities and, as a result, we could face difficulty sourcing key components necessary to produce supply of our commercial product and product candidates, which may negatively affect our preclinical and clinical development activities. If production difficulties cannot be solved with acceptable costs, expenses, and timeframes, we may be forced to abandon our clinical development and commercialization plans, which could have a material adverse effect on our business, prospects, financial condition, and the value of our securities.

We, or third-party manufacturers on whom we rely, including ARx, may be unable to successfully scale-up manufacturing of our product and product candidates in sufficient quality and quantity, which would delay or prevent us from developing our product candidates and commercializing any approved products.

In order to conduct clinical trials of our product candidates and commercialize any approved product candidates, we, or our manufacturers, including ARx, and the Patheon pharma services division of Thermo Fisher Scientific Inc., will need to manufacture them in large quantities. We, or our manufacturers, may be unable to successfully increase the manufacturing capacity for any of our approved products or product candidates in a timely or cost-effective manner, or

at all. In addition, quality issues may arise during scale-up activities. If we, or any of our manufacturers, are unable to successfully scale up the manufacture of our approved products or product candidates in sufficient quality and quantity, the development, testing, and clinical trials of that product candidate may be delayed or infeasible, and regulatory approval or commercial launch of any resulting product may be delayed or not obtained, which could significantly harm our business. If we are unable to obtain or maintain third-party manufacturing for commercial supply of our approved products, or to do so on commercially reasonable terms, we may not be able to develop and commercialize our approved products or product candidates successfully.

Our failure to find third-party collaborators to assist or share in the costs of product development could materially harm our business, financial condition, and results of operations.

Our strategy for the development and commercialization of our proprietary products and product candidates may include the formation of collaborative arrangements with third parties. Collaborators have significant discretion in determining the efforts and resources they apply and may not perform their obligations as expected. Potential third-party collaborators include biopharmaceutical, pharmaceutical and biotechnology companies, academic institutions and other entities. Third-party collaborators may assist us in:

- funding research, preclinical development, clinical trials and manufacturing;
- seeking and obtaining regulatory approvals; and
- successfully commercializing IGALMI™ or product candidates.

If we are not able to establish collaboration agreements, we may be required to undertake product development and commercialization at our own expense. Such an undertaking may limit the number of product candidates that we will be able to develop, significantly increase our capital requirements and place additional strain on our internal resources. Our failure to enter into collaborations could materially harm our business, financial condition and results of operations.

In addition, our dependence on licensing, collaboration and other agreements with third parties may subject us to a number of risks. These agreements may not be on terms that prove favorable to us and may require us to relinquish certain rights in our product candidates. To the extent we agree to work exclusively with one collaborator in a given area, our opportunities to collaborate with other entities could be curtailed. Lengthy negotiations with potential new collaborators may lead to delays in the research, development or commercialization of product candidates. The decision by our collaborators to pursue alternative technologies or the failure of our collaborators to develop or commercialize successfully any product candidate to which they have obtained rights from us could materially harm our business, financial condition and results of operations.

We rely on third parties to conduct our preclinical and clinical trials. If these third parties do not successfully perform their contractual legal and regulatory duties or meet expected deadlines, we may not be able to obtain regulatory approval for or commercialize our product candidates and our business could be substantially harmed.

We have relied upon and plan to continue to rely upon third-party medical institutions, clinical investigators, contract laboratories and other third-party CROs to monitor and manage data for our ongoing preclinical and clinical programs. We rely on these parties for execution of our preclinical and clinical trials, and control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on the CROs does not relieve us of our regulatory responsibilities. We and our CROs are required to comply with GCPs, which are regulations and guidelines enforced by the FDA, the competent authorities of the European Economic Area (“EEA”) countries and comparable foreign regulatory authorities for all of our products in clinical development.

Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If regulatory authorities determine that we or any of our CROs failed to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, the EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that

any of our clinical trials comply with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP and similar foreign regulations. Any failure, whether by us or our CROs, to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

In addition, if any of our relationships with our third-party CROs terminate, we may not be able to enter into arrangements with alternative CROs or to do so on commercially reasonable terms. In addition, our CROs are not our employees, and except for remedies available to us under our agreements with such CROs, we cannot control whether they devote sufficient time and resources to our on-going clinical, nonclinical and preclinical programs. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. For example, investigator misconduct during our TRANQUILITY II trial evaluating BXCL501 in patients with probable Alzheimer's disease could require us to conduct additional clinical trials before we are able to seek or obtain approval for BXCL501 for use in this patient population, as described more fully in the risk factor above entitled: "*Developments relating to our TRANQUILITY II Phase 3 trial may impact the timing of our development plans for, and prospects for seeking or obtaining regulatory approval of, BXCL501 for the acute treatment of agitation (non-daily) associated with dementia in patients with probable Alzheimer's disease.*" As a result, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed.

Many of the third parties with whom we contract may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials or other drug development activities that could harm our competitive position. If the third parties conducting our GCP preclinical studies or our clinical trials do not perform their contractual duties or obligations, experience work stoppages, do not meet expected deadlines, terminate their agreements with us or need to be replaced, or if the quality or accuracy of the clinical data they obtain is compromised due to their failure to adhere to our clinical trial protocols or to GCPs, or for any other reason, we may need to enter into new arrangements with alternative third parties. Switching or adding CROs involves additional cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we carefully manage our relationships with our CROs, there can be no assurance that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

Risks Related to Our Business and Industry

Pandemics, epidemics or outbreaks of an infectious disease, such as COVID-19, may materially and adversely impact our business, including our preclinical studies and clinical trials.

As a result of outbreaks from variants of COVID-19, or other pandemics, epidemics or outbreaks of infectious disease, we may experience disruptions that could severely impact our business, preclinical studies and clinical trials, including:

- delays or difficulties in initiating, operating and completing our clinical trials;
- interruption of key clinical trial activities, such as clinical trial site data monitoring, due to limitations on travel imposed or recommended by governments, employers and others or interruption of clinical trial subject visits and study procedures, which may impact the integrity of subject data and clinical study endpoints;
- interruption or delays in the operations of the FDA or other regulatory authorities, which may impact review and approval timelines;
- interruption of, or delays in receiving, supplies of our product candidates from our contract manufacturing organizations due to staffing shortages, production slowdowns or stoppages and disruptions in delivery systems; and

- other interruptions or delays to our sourced discovery and clinical activities.

If we or any of the third parties with whom we engage were to experience shutdowns or other business disruptions from COVID-19 or other pandemics, epidemics or outbreaks of infectious disease, our ability to conduct our business in the manner and on the timelines presently planned could be materially and negatively impacted.

Unfavorable global political or economic events and conditions could adversely affect our business, financial condition or results of operations.

Our results of operations could be adversely affected by general conditions in the world, and their impact on the global economy and in the global financial markets. The global economy, including credit and financial markets, has recently experienced extreme volatility and disruptions, including severely diminished liquidity and credit availability, rising interest and inflation rates, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. A severe or prolonged economic downturn or recession and a continued increase in inflation rates or interest rates could result in a variety of risks to our business, and our ability to raise additional capital when needed on acceptable terms, if at all. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not occur. A weak or declining economy could also strain our suppliers, possibly resulting in supply disruption, or cause our customers to delay making payments for our services. Increased inflation rates and related increases in interest rates can adversely affect us by increasing our costs, including labor and employee benefit costs. In addition, events such as pandemics, epidemics, or outbreaks of an infectious disease may materially and adversely impact our business if we or any of the third parties with whom we engage were to experience shutdowns or other business disruptions. Furthermore, geopolitical conflicts and war, such as the current military conflict between Russia and Ukraine and the war between Israel and Hamas, could disrupt or otherwise adversely impact our operations and those of third parties upon which we rely. Related sanctions, export controls or other actions have and may in the future be initiated by nations including the U.S., the EU or Russia (e.g., potential cyberattacks, disruption of energy flows, etc.), which could adversely affect our business and/or our supply chain, our CROs, CMOs and other third parties with which we conduct business. Any of the foregoing could harm our business and we cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact our business.

Our future success may depend on our ability to attract and retain qualified personnel, including consultants.

We are dependent on the principal members of our management and scientific teams. Our success and the execution of our operating strategy, to the extent we continue operations, depend largely on the continued service of our employees. In addition to our employees, we have access to certain of BioXcel LLC's employees and resources through the various agreements we have with BioXcel LLC. We have expanded our management team to include an operational ramp-up of additional technical staff required to achieve our business objectives. We will need to retain such employees, and may need to continue to expand our managerial, commercial, operational, technical, and scientific, financial, and other resources to manage our operations and clinical trials, continue our research and development activities, and any approved product candidates. Our management and scientific personnel, systems and facilities currently in place may not be adequate to support our future growth.

We may utilize the services of third-party vendors to perform tasks including preclinical and clinical trial management, statistics and analysis, regulatory affairs, medical advisory, market research, formulation development, chemistry, manufacturing and control activities, other drug development functions, legal, auditing, financial advisory, and investor relations. Because we rely on numerous consultants to outsource many key functions of our business, we will need to be able to effectively manage these consultants to ensure that they successfully carry out their contractual obligations and meet expected deadlines. However, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for our product candidate or otherwise advance our business. There can be no assurance that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all. If we are not able to recruit and retain qualified personnel, we may be unable to successfully implement the tasks necessary to further develop and commercialize our product candidate and, accordingly, may not achieve our research, development and commercialization goals.

We depend on our senior management team, and the loss of one or more of our executive officers or key employees or an inability to attract and retain highly skilled employees could adversely affect our business.

Our success depends largely upon the continued services of our key executive officers, including Vimal Mehta, our Chief Executive Officer, President and a member of our Board, as well as the other principal members of our management, scientific, clinical teams and commercial readiness teams. We do not maintain “key person” insurance for any of these executive officers or any of our other key employees. We also rely on our leadership team in the areas of research and development, marketing, services and selling, general and administrative functions. From time to time, there may be changes in our executive management and leadership teams resulting from the hiring or departure of executives or other key employees, which could disrupt our business. The replacement of one or more of our executive officers or other key employees would likely involve significant time and costs and may significantly delay or prevent the achievement of our business objectives.

To continue to execute our business strategy, we also must attract and retain highly skilled personnel. We might not be successful in maintaining our unique culture and continuing to attract and retain qualified personnel. We have, from time to time, had difficulty hiring and retaining highly skilled personnel with appropriate qualifications, including as a result of the Reprioritization and related consequences for our reputation. We may experience such difficulties in the future, and any further restructuring or related reduction in force could exacerbate such difficulties. The pool of qualified personnel with experience working within the biopharmaceutical and biotechnology market is limited overall. In addition, many of the companies with which we compete for experienced personnel have greater resources than we have.

Furthermore, prior workforce reductions and any future similar cost-saving initiatives may make it difficult for us to maintain valuable aspects of our culture, retain institutional knowledge and expertise, to prevent a negative effect on employee morale or attrition beyond our planned reduction in headcount, and to attract competent personnel who are willing to embrace our culture in the future. Our executive officers and other employees are at-will employees, which means they may terminate their employment relationship with us at any time, and their knowledge of our business and industry would be extremely difficult to replace. We may not be able to retain the services of any members of our senior management or other key employees. If we do not succeed in retaining and motivating existing employees or attracting well-qualified employees in the future, our business, financial condition and results of operations could be materially and adversely affected.

In addition, in making employment decisions, particularly in the biotechnology and high-technology industries, job candidates often consider the value of the stock options or other equity instruments they are to receive in connection with their employment. Volatility in the price of our stock might, therefore, adversely affect our ability to attract or retain highly skilled personnel. Furthermore, the requirement to expense the fair value of stock options and other equity instruments might discourage us from granting the size or type of stock option or equity awards that job candidates require to join our Company. If we fail to attract new personnel or fail to retain and motivate our current personnel, our business and future growth prospects could be severely harmed.

We may acquire other companies or technologies, which could divert our management’s attention, result in dilution to our stockholders and otherwise disrupt our operations and adversely affect our operating results.

We may in the future seek to acquire or invest in businesses, applications and services or technologies that we believe could complement or expand our services, enhance our technical capabilities or otherwise offer growth opportunities. The pursuit of potential acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable acquisitions, whether or not they are consummated.

In addition, we do not have any experience in acquiring other businesses. If we acquire additional businesses, we may not be able to integrate the acquired personnel, operations and technologies successfully, or effectively manage the combined business following the acquisition. We also may not achieve the anticipated benefits from the acquired business due to a number of factors, including:

- inability to integrate or benefit from acquired technologies or services in a profitable manner;
- unanticipated costs or liabilities associated with the acquisition;

- difficulty integrating the accounting systems, operations and personnel of the acquired business;
- difficulties and additional expenses associated with supporting legacy products and hosting infrastructure of the acquired business;
- difficulty converting the customers of the acquired business onto our platform and contract terms, including disparities in the revenue, licensing, support or professional services model of the acquired company;
- diversion of management's attention from other business concerns;
- adverse effects to our existing business relationships with business partners and customers as a result of the acquisition;
- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process, which could adversely affect our results of operations.

Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial position may suffer.

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with any regulations applicable to us, to provide accurate information to regulatory authorities, to comply with manufacturing standards we have established, to comply with federal and state health care fraud and abuse laws and regulations, or to report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the health care industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained during clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a Code of Business Conduct and Ethics, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risk.

Business interruptions could adversely affect future operations, revenues, and financial conditions, and may increase our costs and expenses.

Our operations, and those of our directors, advisors, contractors, consultants, CROs, and collaborators, could be adversely affected by earthquakes, floods, hurricanes, typhoons, extreme weather conditions, fires, water shortages, power failures, business systems failures, medical epidemics, and other natural and man-made disaster or business interruptions. Our phones, electronic devices and computer systems and those of our directors, advisors, contractors, consultants, CROs, and collaborators are vulnerable to damages, theft and accidental loss, negligence, unauthorized access, terrorism, war, electronic and telecommunications failures, and other natural and man-made disasters. Several of our employees conduct business outside of our headquarters and leased or owned facilities. These locations may be subject to additional security and other risk factors due to the limited control of our employees. If such an event as

described above were to occur in the future, it may cause interruptions in our operations, delay research and development programs, clinical trials, regulatory activities, manufacturing and quality assurance activities, sales and marketing activities, hiring, training of employees and persons within associated third parties, and other business activities. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data.

Likewise, we will rely on third parties, including ARx, to manufacture IGALMITM and our product candidates and to conduct clinical trials, and similar events as those described in the prior paragraph relating to their business systems, equipment and facilities could also have a material adverse effect on our business. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidate could be delayed or altogether terminated.

Data breaches or cyber-attacks could disrupt our business operations and information technology systems or those of third parties on which we rely, adversely impact our financial results, or result in the loss or exposure of confidential or sensitive product candidate, clinical trial, employee, or Company information.

We collect and maintain information in digital form that is necessary to conduct our business, and we are increasingly dependent on information technology systems and infrastructure to operate our business, including our mobile and web-based applications, our e-commerce platform and our enterprise software. In the ordinary course of our business, we collect, store and transmit large amounts of confidential information, including intellectual property, proprietary business information, clinical trial data, and personal information (collectively, “Confidential Information”) of customers and our employees and contractors. It is critical that we do so in a secure manner to maintain the confidentiality and integrity of such Confidential Information.

Our information technology systems and those of third parties on which we rely have been and may in the future be attacked or breached by individuals or organizations intending to obtain our Confidential Information; harm or disrupt our business operations; or otherwise misappropriate information or Company funds. A security compromise of our information technology systems or business operations, or those of third parties on which we rely, could occur through a variety of methods such as from cyber-attacks and cyber-intrusions over the Internet, misconfigurations, “bugs” or other vulnerabilities, malware, computer viruses, email spoofing, attachments to e-mails, persons inside or outside our organization or persons with access to systems inside our organization. The risk of such intrusions, threats to data and information technology systems and breaches has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased.

While we maintain some of our own critical information technology systems, we also depend on third parties to provide important information technology services relating to several key business functions. Our measures to prevent, detect and mitigate these threats, including password protection, firewalls, backup servers, threat monitoring and periodic penetration testing, may not be successful in preventing a data breach or limiting the effects of a breach. Because the techniques used to obtain unauthorized access to, or to sabotage, systems change frequently and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period. Even if identified, we may be unable to adequately investigate or remediate incidents or breaches due to attackers increasingly using tools and techniques that are designed to circumvent controls, to avoid detection, and to remove or obfuscate forensic evidence.

Furthermore, the security measures employed by third-party service providers may prove to be ineffective at preventing breaches of their systems. Any attack that results in disruptions to our operations, or the unauthorized release or loss of Confidential Information, could have a material adverse effect on our business reputation, increase our costs and expose us to material legal claims and liability (such as class actions) and result in regulatory investigations and enforcement actions, fines and penalties, negative reputational impacts that cause us to lose existing or future customers, and/or significant incident response, system restoration or remediation and future compliance costs. If the unauthorized release or loss of Confidential Information were to occur, our operations and financial results and our share price could be adversely affected. Although we maintain insurance for our business, the coverage under our policies may not be adequate to compensate us for all losses that may occur.

Actual or perceived failures to comply with applicable data protection, privacy and security laws, regulations, standards and other requirements could adversely affect our business, results of operations, and financial condition.

The global data protection landscape is rapidly evolving, and we are or may become subject to numerous state, federal and foreign laws, requirements and regulations governing the collection, use, disclosure, retention, and security of personal data, such as information that we may collect in connection with clinical trials in the U.S. and abroad. Additionally, our use of AI and machine learning may be subject to laws and evolving regulations regarding the use of AI or machine learning, controlling for data bias, and anti-discrimination, and we may not always be able to anticipate how to respond to these laws or regulations. Further, there is an increase in litigation in a number of jurisdictions, including the United States, relating to the use of AI, particularly generative AI. New laws regulating AI are at an advanced stage of the legislative process in the EU, and it is possible that new laws and regulations will be adopted in the United States and in other non-U.S. jurisdictions, or that existing laws and regulations may be interpreted in ways that would affect the operation of our learning platforms, online testing business and data analytics and the way in which we use AI and machine learning technology.

In Europe, on December 8, 2023, the European Union legislators reached a political agreement on the EU Artificial Intelligence Act (“EU AI Act”) which establishes a comprehensive, risk-based governance framework for artificial intelligence in the EU market. The EU AI Act is expected to enter into force in 2024, and the majority of the substantive requirements will apply two years later. The EU AI Act will apply to companies that develop, use and/ or provide artificial intelligence in the EU and includes requirements around transparency, conformity assessments and monitoring, risk assessments, human oversight, security, accuracy, general purpose artificial intelligence and foundation models, and proposes fines for breach of up to 7% of worldwide annual turnover. In addition, on September 28, 2022, the European Commission proposed two Directives seeking to establish a harmonized civil liability regime for AI in the EU. Once fully applicable, this regulatory framework is expected to have a material impact on the way AI is regulated in the EU, and together with developing guidance and/ or decisions in this area, may affect our use of AI and our ability to provide, improve or commercialize our services, require additional compliance measures and changes to our operations and processes, result in increased compliance costs and potential increases in civil claims against us, and could adversely affect our business, operations and financial condition. Implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future, and we cannot yet determine the impact future laws, regulations, standards, or perception of their requirements may have on our business. This evolution may create uncertainty in our business, affect our ability to operate in certain jurisdictions or to collect, store, transfer use and share personal information, necessitate the acceptance of more onerous obligations in our contracts, result in liability or impose additional costs on us. The cost of compliance with these laws, regulations and standards is high and is likely to increase in the future. Any failure or perceived failure by us to comply with federal, state or foreign laws or regulation, our internal policies and procedures or our contracts governing our processing of personal information could result in negative publicity, government investigations and enforcement actions, claims by third parties and damage to our reputation, any of which could have a material adverse effect on our operations, financial performance and business.

As our operations and business grow, we may become subject to or affected by new or additional data protection laws and regulations and face increased scrutiny or attention from regulatory authorities. In the U.S., HIPAA imposes, among other things, certain standards relating to the privacy, security, transmission, and breach reporting of individually identifiable health information. Most healthcare providers, including research institutions from which we obtain patient health information, are subject to privacy and security regulations promulgated under HIPAA. If we are determined to act as a covered entity or business associate under HIPAA and be directly regulated under HIPAA, any person acting on our behalf may be prosecuted under HIPAA’s criminal provisions either directly or under aiding-and-abetting or conspiracy principles. Consequently, depending on the facts and circumstances, we could face substantial criminal penalties if we knowingly receive individually identifiable health information from a HIPAA-covered healthcare provider or research institution that has not satisfied HIPAA’s requirements for disclosure of individually identifiable health information.

Certain states have also adopted comparable privacy and security laws and regulations, some of which may be more stringent than HIPAA. Such laws and regulations will be subject to interpretation by various courts and other governmental authorities, thus creating potentially complex compliance issues for us and our future customers and strategic partners. For example, the California Consumer Privacy Act, as amended by the California Privacy Rights Act (collectively, the “CCPA”), requires covered businesses that process the personal information of California residents to,

among other things: provide certain disclosures to California residents regarding the business's collection, use, and disclosure of their personal information; receive and respond to requests from California residents to access, delete, and correct their personal information, or to opt out of certain disclosures of their personal information, and enter into specific contractual provisions with service providers that process California resident personal information on the business's behalf. If we are subject to or affected by HIPAA, the CCPA, or other domestic privacy and data protection laws, any liability from failure to comply with the requirements of these laws could adversely affect our financial condition.

In Europe, the General Data Protection Regulation ("GDPR") went into effect in May 2018 and imposes strict requirements for processing the personal data of individuals within the EEA. Companies that must comply with the GDPR face increased compliance obligations and risk, including more robust regulatory enforcement of data protection requirements and potential fines for noncompliance of up to €20 million or 4% of the annual global revenues of the noncompliant company, whichever is greater. Among other requirements, the GDPR regulates transfers of personal data subject to the GDPR to third countries that have not been found to provide adequate protection to such personal data, including the U.S., and the efficacy and longevity of current transfer mechanisms between the EEA, and the United States remains uncertain. On July 10, 2023, the European Commission adopted its Adequacy Decision in relation to the new EU-US Data Privacy Framework ("DPF"), rendering the DPF effective as a GDPR transfer mechanism to U.S. entities self-certified under the DPF. We expect the existing legal complexity and uncertainty regarding international personal data transfers to continue. In particular, we expect the DPF Adequacy Decision to be challenged and international transfers to the United States and to other jurisdictions more generally to continue to be subject to enhanced scrutiny by regulators. As supervisory authorities issue further guidance on personal data export mechanisms, including circumstances where the standard contractual clauses cannot be used, and/or start taking enforcement action, we could suffer additional costs, complaints and/or regulatory investigations or fines, and/or if we are otherwise unable to transfer personal data between and among countries and regions in which we operate, it could affect the manner in which we provide our services, the geographical location or segregation of our relevant systems and operations, and could adversely affect our financial results.

Further, since January 1, 2021, companies have had to comply with the GDPR and also the UK GDPR, which, together with the amended UK Data Protection Act 2018, retains the GDPR in UK national law. The UK GDPR mirrors the fines under the GDPR (i.e., fines up to the greater of £17.5 million or 4% of global turnover). On October 12, 2023, the UK Extension to the DPF came into effect (as approved by the UK Government), as a data transfer mechanism from the UK to U.S. entities self-certified under the DPF.

Although we work to comply with applicable laws, regulations and standards, our contractual obligations and other legal obligations, these requirements are evolving and may be modified, interpreted and applied in an inconsistent manner from one jurisdiction to another, and may conflict with one another or other legal obligations with which we must comply. Any failure or perceived failure by us or our employees, representatives, contractors, consultants, collaborators, or other third parties to comply with such requirements or adequately address privacy and security concerns, even if unfounded, could result in additional cost and liability to us, damage our reputation, and adversely affect our business and results of operations.

Increased scrutiny of and evolving expectations for environmental, social and governance ("ESG") initiatives may impose additional costs or otherwise adversely impact our business.

There has been an increased focus from investors, capital providers, shareholder advocacy groups, other market participants, customers, and other stakeholder groups regarding companies' ESG initiatives. While we may at times engage in voluntary initiatives (such as voluntary disclosures, certifications, or goals, among others) or commitments to improve the ESG profile of our Company and/or offerings, such initiatives or achievements of such commitments may be costly and may not have the desired effect. Additionally, some investors may use third-party or proprietary ESG ratings to guide their investment strategies and, in some cases, may choose not to invest in us if they believe our ESG practices are inadequate. The criteria by which companies' ESG practices are assessed are evolving, which could result in greater expectations of us and cause us to undertake costly initiatives to satisfy such new criteria. Alternatively, if we

elect not to or are unable to satisfy new criteria or do not meet the criteria, some investors may conclude that our policies with respect to ESG are inadequate and choose not to invest in us.

If our ESG practices do not meet evolving investor or other stakeholder expectations and our standards, reputation, ability to attract or retain employees and desirability as an investment or business partner could be negatively impacted. Similarly, our failure or perceived failure to adequately pursue or fulfill any ESG goals and objectives or to satisfy various reporting standards, if any, could expose us to additional regulatory, social or other scrutiny, the imposition of unexpected costs, or damage to our reputation, which in turn could have a material adverse effect on our business and could cause the market value of our common stock to decline.

Our failure to successfully acquire, develop and market additional product candidates or approved drug products could impair our ability to grow.

As part of our growth strategy, we may evaluate, acquire, license, develop and/or market third-party products or product candidates and technologies. Our internal research capabilities are limited and we may be dependent upon pharmaceutical and biotechnology companies, academic scientists and other researchers to sell or license products or technology to us. The success of this strategy depends partly upon our ability to identify, select and acquire promising pharmaceutical product candidates and products. The process of proposing, negotiating and implementing a license or acquisition of a product candidate or approved product is lengthy and complex. Other companies, including some with substantially greater financial, marketing and sales resources, may compete with us for the license or acquisition of product candidates and approved products. We have limited resources to identify and execute the acquisition or in-licensing of third-party products, businesses and technologies and integrate them into our current infrastructure. Moreover, we may devote resources to potential acquisitions or in-licensing opportunities that are never completed, or we may fail to realize the anticipated benefits of such efforts. We may not be able to acquire the rights to additional product candidates on terms that we find acceptable, or at all.

In addition, future acquisitions may entail numerous operational and financial risks, including:

- exposure to unknown liabilities;
- disruption of our business and diversion of our management's and technical personnel's time and attention to develop acquired products or technologies;
- incurrence of substantial debt or dilutive issuances of securities to pay for acquisitions;
- higher than expected acquisition and integration costs;
- increased amortization expenses;
- difficulty and cost in combining the operations and personnel of any acquired businesses with our operations and personnel;
- impairment of relationships with key suppliers or customers of any acquired businesses due to changes in management and ownership; and
- inability to retain key employees of any acquired businesses.

Any product candidate that we acquire may require additional development efforts prior to commercial sale, including extensive clinical testing and approval by the FDA and applicable foreign regulatory authorities. All product candidates are prone to risks of failure typical of pharmaceutical product development, including the possibility that a product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities. In addition, we cannot provide assurance that any products that we develop or approved products that we acquire will be manufactured profitably or achieve market acceptance.

Our ability to use our net operating losses and tax credits to offset future taxable income and income tax liabilities may be limited.

As of December 31, 2023, the Company had federal net operating loss carryforwards (“NOLs”) of approximately \$351.3 million and state NOLs of approximately \$360.1 million. If not utilized, the federal and state NOLs, which are subject to expiration, will begin to expire in 2037. Federal NOLs generated in taxable years beginning after December 31, 2017 may be carried forward indefinitely but may only be used to offset 80% of our taxable income in future taxable years beginning after December 31, 2020. As of December 31, 2023, we also had approximately \$14.3 million of federal orphan drug credits and research and development credits and \$1.2 million of state research and development credits, which will begin to expire in 2037 if not utilized. The utilization of such NOLs and tax credits and realization of tax benefits in future years depends upon our having taxable income and income tax liabilities.

In addition, in general, under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, a corporation that undergoes an “ownership change” is subject to limitations on its ability to utilize its pre-ownership change NOLs and tax credits to offset future taxable income or income tax liabilities. For these purposes, an ownership change generally occurs where the aggregate change in stock ownership, of one or more stockholders or groups of stockholders owning at least 5% of a corporation's stock, exceeds 50 percentage points over a rolling three-year period. We may have experienced ownership changes in the past, and future changes in our stock ownership, many of which are outside of our control, could result in ownership changes in the future. Our state NOLs or tax credits may also be impaired under state law. Accordingly, even if we attain profitability, we may not be able to utilize a material portion of our NOLs or tax credits. We have recorded a full valuation allowance related to our NOLs and other deferred tax assets due to the uncertainty of the ultimate realization of the future benefits of those assets.

Risks Related to Our Intellectual Property

It is difficult and costly to protect our proprietary rights, and we may not be able to ensure their protection. If our patent position does not adequately protect our product candidates, others could compete against us more directly, which would harm our business, possibly materially.

Our commercial success will depend in part on obtaining, maintaining enforcing and defending our patents, trademarks, trade secrets and other intellectual property rights and proprietary technology for our current and future approved products and product candidates, the processes used to manufacture them and the methods for using them, as well as successfully defending these patents against third-party challenges. We are the owner of record of certain patents and patent applications pending in the U.S. and in certain foreign jurisdictions. Patents issued from non-provisional applications, which are typically filed from provisional patent applications or from PCT applications that enter the national phase. Neither provisional patent applications nor PCT applications issue directly as patents. We own PCT patent applications relating to our platform technologies covering methods of use and applications of the platform technologies.

We cannot be certain that any future patents will issue with claims that cover our product candidates. Our ability to stop third parties from making, using, selling, offering to sell or importing our product candidates is dependent upon the extent to which we have rights under valid and enforceable patents, trademarks, trade secrets and other intellectual property rights and proprietary technology that cover these activities.

The patent positions of biotechnology and pharmaceutical companies can be highly uncertain and involve complex legal and factual questions that have been the subject of much litigation in recent years and for which important legal principles remain unresolved. Therefore, the scope of any patent claims that we have or may obtain cannot be predicted with certainty. No consistent policy regarding the breadth of claims allowed in pharmaceutical patents has emerged to date in the U.S. or in foreign jurisdictions outside of the U.S. Changes in either the patent laws or interpretations of patent laws in the U.S. and other countries may diminish the value of our intellectual property. Accordingly, we cannot predict which of our patent applications will issue, the breadth of claims that may be enforced in the patents that may be issued from the applications we currently, or may in the future, own or license from third parties, whether any of the issued patents will be found to be infringed, invalid or unenforceable or will be threatened or challenged by third parties, that any of our issued patents have, or that any of our currently pending or future patent applications that mature into issued patents will include, claims with a scope sufficient to protect our products and services. Further, if any patents we

obtain or license are deemed invalid and unenforceable, our ability to commercialize or license our technology could be adversely affected.

Others have filed, and in the future are likely to file, patent applications covering products and technologies that are similar, identical or competitive to ours or important to our business. We cannot be certain that any patent application owned by a third-party will not have priority over patent applications filed or in-licensed by us, or that we or our licensors will not be involved in interference, opposition, reexamination, review, reissue, post grant review or invalidity proceedings before U.S. or non-U.S. patent offices.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to independently develop, make and commercialize compounds that are similar to, or are alternatives or duplicates of any of our product candidates, but that are not covered by the claims of our patents or are not infringing, misappropriating, or otherwise violating our other intellectual property rights;
- we might not have been the first to make the inventions covered by our issued patents or pending patent applications that we license or may own in the future;
- we, or our future collaborators, might not have been the first to file patent applications covering certain of our or their inventions;
- our pending patent applications or those that we may own in the future may not result in issued patents;
- the claims of our issued patents or patent applications when issued may not cover our products or product candidates;
- any patents that we obtain may not provide us with any competitive advantages;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop, manufacture and commercialize competitive products or product candidates for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable;
- we may choose not to seek patent protection for some of our proprietary technology or product candidates to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such trade secrets or know-how;
- any granted patents may be held invalid or unenforceable as a result of legal challenges by third parties; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations and prospects.

Obtaining and maintaining patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance, renewal and annuity fees and various other government fees on any issued patent and pending patent application must be paid to the USPTO and foreign patent agencies in several stages or annually over the lifetime of our owned and in-licensed patents and patent applications. In addition, the USPTO and various foreign governmental patent agencies require compliance with various procedural, document submission, fee payment and other requirements during the patent application process. While an inadvertent lapse can in many cases be cured by payment

of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, potential competitors might be able to enter the market with similar or identical products or technology. If we or our licensors fail to maintain the patents and patent applications covering our product candidates, it would have a material adverse effect on our business, financial condition, results of operations, and prospects.

If we fail to comply with our obligations in the agreements under which we may license intellectual property rights from third parties or otherwise experience disruptions to our business relationships with our licensors, we could lose rights that are important to our business.

We may be required to enter into intellectual property license agreements that are important to our business. These license agreements may impose various diligence, payment, and other obligations on us. For example, we may enter into exclusive license agreements with universities, research institutions, or peer industry third parties pursuant to which we may be required to use commercially reasonable efforts to engage in various development and commercialization activities with respect to licensed products and may need to satisfy specified milestone and royalty payment obligations. If we fail to comply with any obligations under our agreements with any of these licensors, we may be subject to termination of the license agreement in whole or in part; increased financial obligations to our licensors or loss of exclusivity in a particular field or territory, in which case our ability to develop or commercialize products covered by the license agreement will be impaired.

In addition, disputes may arise regarding intellectual property subject to a license agreement, including:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our diligence obligations under the license agreement and what activities satisfy those obligations;
- if a third-party expresses interest in an area under a license that we are not pursuing, under the terms of certain of our license agreements, we may be required to sublicense rights in that area to a third-party, and that sublicense could harm our business; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us.

If disputes over intellectual property that we have licensed prevent or impair our ability to maintain our current licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected approved products or product candidates.

We may need to obtain licenses from third parties to advance our research or allow commercialization of our product candidates. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize one or more of our product candidates, which could harm our business significantly.

We may be subject to claims challenging the inventorship or ownership of our patents and other intellectual property.

We or our licensors may be subject to claims that third parties have an interest in our patents, trade secrets, or other intellectual property that we regard as our own or our licensor's, based on claims that the relevant agreements with employees or consultants obligating them to assign their intellectual property rights to us or our licensor are ineffective or in conflict with prior or competing contractual obligations to assign inventions and intellectual property rights to another employer, to a former employer, or to another person or entity. We may also be subject to claims that our former employees, contractors or collaborators, or other third parties have an ownership interest in our current or future patents,

patent applications, or other intellectual property rights, including as an inventor or co-inventor. For example, we or our licensors may have inventorship disputes arise from conflicting obligations of employees, consultants or others who are involved in developing our product candidates. Although it is our policy to require our employees, consultants and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property rights that we regard as our own, and we cannot be certain that our agreements with such parties will be upheld in the face of a potential challenge, or that they will not be breached, for which we may not have an adequate remedy.

We are not aware of any threatened or pending claims related to these matters, but in the future litigation may be necessary to defend against these and other claims challenging inventorship or our or our licensors' ownership of our owned or in-licensed patents, trade secrets, or other intellectual property, and it may be necessary or we may desire to obtain a license to a third party's intellectual property rights to settle any such claim; however, there can be no assurance that we would be able to obtain such license on commercially reasonable terms, if at all. If we or our licensors fail in defending any such claims, in addition to paying monetary damages or a settlement payment, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, intellectual property that is important to our product candidates. A court could prohibit us from using technologies, features or other intellectual property rights that are essential to our products or technologies, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of another person or entity, including another or former employers. An inability to incorporate technologies, features or other intellectual property rights that are important or essential to our products or product candidates could have a material adverse effect on our business, financial condition, results of operations, and competitive position, and may prevent us from developing, manufacturing and/or commercializing our products or technologies. In addition, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees. Any litigation or the threat thereof may adversely affect our ability to hire employees or contract with independent sales representatives. A loss of key personnel or their work product could hamper or prevent our ability to develop, manufacture and/or commercialize our products or services, which could materially and adversely affect our business, financial condition and results of operations. Any of the foregoing could have a material adverse effect on our business, financial condition, results of operations and prospects.

An NDA submitted under Section 505(b)(2) subjects us to the risk that we may be subject to a patent infringement lawsuit that would delay or prevent the review or approval of our product candidate.

Our product candidates have been or will be submitted to the FDA for approval under Section 505(b)(2) of the FDCA. Section 505(b)(2) permits the submission of an NDA where at least some of the information required for approval comes from studies that were not conducted by, or for, the applicant and on which the applicant has not obtained a right of reference. The 505(b)(2) application would enable us to reference published literature and/or the FDA's previous findings of safety and effectiveness for a branded reference drug with the same active ingredient. For NDAs submitted under Section 505(b)(2) of the FDCA, the patent certification and related provisions of the Hatch-Waxman Act apply. In accordance with the Hatch-Waxman Act, such NDAs may be required to include paragraph IV certifications, that certify that any patents listed in the FDA's Orange Book, with respect to any product referenced in the 505(b)(2) application, are invalid, unenforceable or will not be infringed by the manufacture, use or sale of the product that is the subject of the 505(b)(2) NDA.

Under the Hatch-Waxman Act, the holder of patents that the 505(b)(2) application references may file a patent infringement lawsuit after receiving notice of the paragraph IV certification. Filing of a patent infringement lawsuit against the filer of the 505(b)(2) applicant within 45 days of the patent owner's receipt of notice triggers a one-time, automatic, 30-month stay of the FDA's ability to approve the 505(b)(2) NDA, unless patent litigation is resolved in the favor of the paragraph IV certification filer, or the patent expires before that time. Accordingly, we may invest a significant amount of time and expense in the development of one or more product candidates only to be subject to significant delay and patent litigation before such product candidates may be commercialized, if at all. In addition, a 505(b)(2) application will not be approved until any non-patent exclusivity, such as exclusivity for obtaining approval of a new chemical entity, listed in the Orange Book for the branded reference drug product has expired. The FDA may also require us to perform one or more additional clinical studies or measurements to support the change from the branded reference drug, which could be time consuming and could substantially delay our achievement of regulatory approvals

for such product candidates. The FDA may also reject our future 505(b)(2) submissions and require us to file such submissions under Section 505(b)(1) of the FDCA, which would require us to provide extensive data to establish safety and effectiveness of the drug product for the proposed use and could cause delay and be considerably more expensive and time consuming. These factors, among others, may limit our ability to successfully commercialize our product candidates.

If our intellectual property related to IGALMI™ BXCL501, BXCL502, BXCL701, BXCL702 or any future product candidates is not adequate or if we are not able to successfully enforce our intellectual property rights, the commercial value of our products or product candidates may be adversely affected and we may not be able to compete effectively in our market.

Third parties, including our competitors, may currently, or in the future, infringe, misappropriate or otherwise violate our issued patents or other intellectual property rights, and we may file lawsuits or initiate other proceedings to protect or enforce our patents or other intellectual property rights, which could be expensive, time-consuming and unsuccessful. We regularly monitor for unauthorized use of our intellectual property rights and, from time to time, analyze whether to seek enforce our rights against potential infringement, misappropriation or violation of our intellectual property rights. However, the steps we have taken, and are taking, to protect our proprietary rights may not be adequate to enforce our rights as against such infringement, misappropriation or violation of our intellectual property rights. In certain circumstances it may not be practicable or cost-effective for us to enforce our intellectual property rights fully, particularly in certain developing countries or where the initiation of a claim might harm our business relationships. We may also be hindered or prevented from enforcing our rights with respect to a government entity or instrumentality because of the doctrine of sovereign immunity. Our ability to enforce our patent or other intellectual property rights depends on our ability to detect infringement. It may be difficult to detect infringers who do not advertise the components or methods that are used in connection with their products or technologies. Moreover, it may be difficult or impossible to obtain evidence of infringement in a competitor's or potential competitor's product or technologies. Thus, we may not be able to detect unauthorized use of, or take appropriate steps to enforce, our intellectual property rights. Any inability to meaningfully enforce our intellectual property rights could harm our ability to compete and reduce demand for our products and product candidates.

Even where laws provide protection, costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and the outcome of such litigation would be uncertain. If we choose to commence a proceeding or litigation to prevent another party from infringing our patents, that party could counterclaim that our patents are invalid or should not be enforced against them. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, including lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to validity, for example, we cannot be certain that there is no invalidating prior art, of which we and the patent examiner were unaware during prosecution. There is a risk that the examiner or court will decide that our patents are invalid or unenforceable, in whole or in part, and that we do not have the right to stop the other party from using the related inventions. There is also the risk that, even if the validity of our patents is upheld, the examiner or court may construe the patent's claims or other intellectual property narrowly or refuse to stop the other party from using the technology at issue on the grounds that such other party's activities do not infringe our rights to such patents. In addition, the U.S. Supreme Court has recently modified some tests used by the USPTO in granting patents over the past 20 years, which may decrease the likelihood that we will be able to obtain patents and increase the likelihood of challenge to any patents we obtain or license. Any proceedings or litigation to enforce our intellectual property rights or defend ourselves against claims of infringement of third-party intellectual property rights could be costly and divert the attention of managerial and scientific personnel, regardless of whether such litigation is ultimately resolved in our favor. We may not have sufficient resources to bring these actions to a successful conclusion. If a defendant were to prevail on its legal assertion of invalidity and/or unenforceability against our intellectual property related to a product or a product candidate, we could lose at least part, and perhaps all, of the patent protection on such product or product candidate. Such a loss of patent protection would have a material adverse impact on our business. Moreover, our competitors could counterclaim that we infringe their intellectual property, and some of our competitors have substantially greater intellectual property portfolios than we do. An adverse result in any litigation or administrative proceeding could put one or more of our patents or other intellectual

property rights at risk of being invalidated or interpreted narrowly, which could adversely affect our competitive business position, financial condition and results of operations. Moreover, if we are unable to successfully defend against claims that we have infringed the intellectual property rights of others, we may be prevented from using certain intellectual property and may be liable for damages, which in turn could materially adversely affect our business, financial condition or results of operations. Even if we are successful in any litigation, we may incur significant expense in connection with such proceedings, and the amount of any monetary damages may be inadequate to compensate us for damage as a result of the infringement and the proceedings. Further, a court may decide not to grant an injunction against further infringing activity and instead award only monetary damages, which may not be an adequate remedy. Furthermore, the monetary cost of such litigation and the diversion of the attention of our management could outweigh any benefit we receive as a result of the proceedings. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our business. Any of the foregoing may cause us to incur substantial costs, and could place a significant strain on our financial resources, divert the attention of management from our core business and harm our reputation.

Further, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during litigation. There could also be public announcements of the results of hearing, motions, or other interim developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of shares of our common stock.

Third parties may initiate legal proceedings alleging that we are infringing, misappropriating or otherwise violating their intellectual property rights, and/or third party claims seeking to invalidate our patents, which would be costly, time consuming and, if successfully asserted against us, may prevent or delay our product development efforts and stop us from commercializing or increase the costs of commercializing our product candidates.

Our commercial success will depend in part on our ability to develop, manufacture or commercialize our products and product candidates without infringing, misappropriating or otherwise violating the intellectual property rights of third parties. There is considerable patent and other intellectual property litigation in the pharmaceutical and biotechnology industries, and companies in the industry have used intellectual property litigation to gain a competitive advantage. We may become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our products, or the manufacture or use of our product candidates. In addition to infringement claims against us, third parties may also raise similar claims before administrative bodies in the United States or abroad. Such mechanisms include interference proceedings, post grant review, inter partes review, and derivation proceedings before the USPTO and similar proceedings in foreign jurisdictions. If third parties prepare and file patent applications in the United States that also claim technology similar or identical to ours, we may have to participate in interference or derivation proceedings in the USPTO to determine which party is entitled to a patent on the disputed invention. We may also become involved in similar opposition proceedings in the European Patent Office or similar offices in other jurisdictions regarding our intellectual property rights with respect to our products and technology. Since patent applications are confidential for a period of time after filing, we cannot be certain that we were the first to file any patent application related to our product candidates. Such administrative proceedings could result in revocation of or amendment to our patents in such a way that they no longer cover our products or product candidates. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel, and the patent examiner were unaware during prosecution. If a third party were to prevail on a legal assertion of invalidity and/or unenforceability, we may lose at least part, and perhaps all, of the patent protection on our products or technologies. Such a loss of patent protection would have a material adverse impact on our business, financial condition, results of operations, and prospects.

The legal threshold for initiating litigation or contested proceedings is low, so that even lawsuits or proceedings with a low probability of success might be initiated and require significant resources to defend. The costs of these lawsuits could affect our results of operations and divert the attention of managerial and scientific personnel. Some of these third parties may be better capitalized and have more resources than us. There is a risk that a court would decide that we are infringing the third-party's patents and would order us to stop the activities covered by the patents. In that event, we may not have a viable way around the patent and may need to halt commercialization of the relevant product candidate. In addition, there is a risk that a court will order us to pay the other party damages for having violated the other party's patents. We also could be ordered to pay substantial damages, including treble damages and attorney's fees if we are

found to be willfully infringing a third party's patents or other intellectual property rights. In addition, we may be obligated to indemnify our licensors and collaborators against certain intellectual property infringement claims brought by third parties, which could require us to expend additional resources. The pharmaceutical and biotechnology industries have produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. Even if we believe such claims are without merit, a court of competent jurisdiction could hold that these third party patents are valid and enforceable, and infringed by the use of our products and/or technologies, which could have a negative impact on the commercial success of our current and any future products or technologies.

If we are sued for patent infringement, we would need to demonstrate that our products or methods either do not infringe the patent claims of the relevant patent or that the patent claims are invalid, and we may not be able to do this. Proving invalidity is difficult. For example, in the U.S., proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Even if we are successful in these proceedings, we may incur substantial costs and divert management's time and attention in pursuing these proceedings, which could have a material adverse effect on us. If we are unable to avoid infringing the patent rights of others, we may be required to seek a license, which may not be available, defend an infringement action or challenge the validity of the patents in court. Patent litigation is costly and time consuming. We may not have sufficient resources to bring these actions to a successful conclusion. In addition, if we do not obtain a license, develop or obtain non-infringing technology, fail to defend an infringement action successfully or have infringed patents declared invalid, we may incur substantial monetary damages, encounter significant delays in bringing our product candidates to market and be precluded from manufacturing or selling our product candidates.

We cannot be certain that others have not filed patent applications for technology covered by our pending applications, or that we were the first to invent the technology, because:

- some patent applications in the U.S. may be maintained in secrecy until the patents are issued;
- patent applications in the U.S. are typically not published until 18 months after the priority date; and
- publications in the scientific literature often lag behind actual discoveries.

Our competitors may have filed, and may in the future file, patent applications covering technology similar to ours. Any such patent application may have priority over our patent applications, which could further require us to obtain rights to issued patents covering such technologies. If another party has filed U.S. patent applications on inventions similar to ours that claim priority to any applications filed prior to the priority dates of our applications, we may have to participate in an interference proceeding declared by the USPTO to determine priority of invention in the U.S. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful if, unbeknownst to us, the other party had independently arrived at the same or similar inventions prior to our own inventions, resulting in a loss of our U.S. patent position with respect to such inventions. Other countries have similar laws that permit secrecy of patent applications and may be entitled to priority over our applications in such jurisdictions.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations.

If we do not obtain patent term extension in the United States under the Hatch-Waxman Act and in foreign countries under similar legislation, thereby potentially extending the term of marketing exclusivity for IGALMI™, or our product candidates, our business may be materially harmed.

Following the approval by the FDA for our NDA to market IGALMI™, we became eligible to seek and sought patent term restoration under the Hatch-Waxman Act for one of the U.S. patents covering our approved product or the use thereof. The Hatch-Waxman Act allows a maximum of one patent to be extended per FDA approved product. Patent term extension also may be available in certain foreign countries upon regulatory approval of our product candidates.

Despite seeking patent term extension for our product candidates, we may not be granted patent term extension either in the United States or in any foreign country because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the term of extension, as well as the scope of patent protection during any such extension, afforded by the governmental authority could be less than we request.

We may not be able to enforce our intellectual property rights throughout the world.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property protection, especially those relating to life sciences. This could make it difficult for us to stop the infringement of our patents or the misappropriation of our other intellectual property rights. For example, many foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties.

Proceedings to enforce our patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business. Furthermore, while we intend to protect our intellectual property rights in our expected significant markets, we cannot ensure that we will be able to initiate or maintain similar efforts in all jurisdictions in which we may wish to market our products. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate. In addition, changes in the law and legal decisions by courts in the United States and foreign countries may affect our ability to obtain and enforce adequate intellectual property protection for our technology.

Finally, a Unitary Patent and Unified Patent Court (“UPC”) system was implemented in Europe on June 1, 2023. This new regime may present uncertainties for our ability to protect and enforce our patent rights against competitors in Europe. Under the UPC, all European patents, including those issued prior to ratification of the European Patent Package, by default automatically fall under the jurisdiction of the UPC. The UPC provides our competitors with a new forum to centrally revoke our European patents, and allows for the possibility of a competitor to obtain pan-European injunctions. It will be several years before we will understand the scope of patent rights that will be recognized and the strength of patent remedies that will be provided by the UPC. Under the EU Patent Package, we will have the right to opt our patents out of the UPC over the first seven years of the court’s existence, but doing so may preclude us from realizing the benefits of the new unified court.

If our trademarks and trade names are not adequately protected, we may not be able to build name recognition in our markets of interest and our competitive position may be harmed.

Our trademarks could be challenged, invalidated, infringed, and circumvented by third parties, and our trademarks could also be diluted, declared generic or found to be infringing on other marks. If any of the foregoing occurs, we could be forced to re-brand our products or technologies, resulting in loss of brand recognition and requiring us to devote resources to advertising and marketing new brands, and suffer other competitive harm. Third parties may also adopt trademarks similar to ours, which could harm our brand identity and lead to market confusion. Further, there can be no assurance that competitors will not infringe on our trademarks or that we will have adequate resources to enforce our trademarks. At times, competitors may adopt trade names or trademarks similar to ours, thereby impeding our ability to build brand identity and possibly leading to market confusion. Certain of our current or future trademarks may become so well known by the public that their use becomes generic and they lose trademark protection. Over the long term, if we are unable to establish name recognition based on our trademarks and trade names, then we may not be able to compete effectively. Any of the foregoing could have a material adverse effect on our competitive position, business, financial condition, operating results and prospects.

We rely on our trademarks, trade names and brand names, such as “IGALMI™” and our logo, to distinguish our company and our products from our competitors and the products of our competitors, and have registered or applied to register many of these trademarks in the United States and certain countries outside the United States, however, we have not yet registered all of our trademarks in all of our current and potential markets. There can be no assurance that our trademark applications will be approved for registration. During trademark registration proceedings, we may receive

rejections. Although we are given an opportunity to respond to those rejections, we may be unable to overcome such rejections. In addition, in proceedings before the USPTO and comparable agencies in many foreign jurisdictions, third parties may also oppose our trademark applications and may seek to cancel trademark registrations or otherwise challenge our use of the trademarks. Opposition or cancellation proceedings may be filed against our trademark filings in these agencies, and such filings may not survive such proceedings. While we may be able to continue the use of our trademarks in the event registration is not available, particularly in the United States, where trademark rights are acquired based on use and not registration, third parties may be able to enjoin the continued use of our trademarks if such parties are able to successfully claim infringement in court. In addition, opposition or cancellation proceedings may be filed against our trademark applications and registrations and our trademarks may not survive such proceedings. If we do not secure registrations for our trademarks, we may encounter more difficulty in enforcing them against third parties than we otherwise would. Our trademarks or trade names may be infringed, circumvented, declared generic or determined to be violating or infringing on other marks.

If we are not able to adequately prevent disclosure of trade secrets and other proprietary information, the value of our technology and products could be significantly diminished.

In addition to patent protection, we also rely on other intellectual property rights, including protection of copyright, trade secrets, know-how and/or other proprietary information to protect our proprietary technologies, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect, and some courts are less willing or unwilling to protect trade secrets. To maintain the confidentiality of our trade secrets and proprietary information, we rely in part on confidentiality agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to protect our trade secrets and other proprietary information. However, we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our trade secrets or proprietary technology and processes and we may not enter into such agreements with all employees, consultants and third parties who have been involved in the development of our intellectual property rights. Although we generally require all of our employees, consultants, advisors and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements, we cannot provide any assurances that all such agreements have been duly executed. In addition, despite the protections we do place on our intellectual property or other proprietary rights, monitoring unauthorized use and disclosure of our intellectual property rights by employees, consultants and other third parties who have access to such intellectual property or other proprietary rights is difficult, and we do not know whether the steps we have taken to protect our intellectual property or other proprietary rights will be adequate. Therefore, we may not be able to prevent the unauthorized disclosure or use of our technical knowledge or other trade secrets by such employees, consultants, advisors or third parties, despite the existence generally of these confidentiality restrictions. These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. There can be no assurances that such employees, consultants, advisors or third parties will not breach their agreements with us, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known or independently developed by third parties, including our competitors. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed. The exposure of our trade secrets and other proprietary information would impair our competitive advantages and could have a material adverse effect on our business, financial condition and results of operations. In particular, a failure to protect our proprietary rights may allow competitors to copy our technology, which could adversely affect our pricing and market share.

In addition to contractual measures, we try to protect the confidential nature of our proprietary information by maintaining physical security of our premises and electronic security of our information technology systems. Such security measures may not, for example, in the case of misappropriation of a trade secret by an employee, consultant or other third party with authorized access, provide adequate protection for our proprietary information. Our security measures may not prevent an employee, consultant or other third party from misappropriating our trade secrets and providing them to a competitor, and recourse we take against such misconduct may not provide an adequate remedy to protect our interests fully. Unauthorized parties may also attempt to copy or reverse engineer certain aspects of our products or services that we consider proprietary. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret can be difficult, expensive and time-consuming, and the outcome is unpredictable. Further, we may not be

able to obtain adequate remedies for any breach. While we use commonly accepted security measures, trade secret violations are often a matter of state law in the United States, and the criteria for protection of trade secrets can vary among different jurisdictions. If the steps we have taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret. In addition, trade secrets may be independently developed by others in a manner that could prevent legal recourse by us. If any of our intellectual property rights or confidential or proprietary information, such as our trade secrets, were to be disclosed or misappropriated, or if any such information was independently developed by a competitor, it could have a material adverse effect on our competitive position, business, financial condition, results of operations and prospects.

Furthermore, any license agreements we enter into in the future may require us to notify, and in some cases license back to the licensor, certain additional proprietary information or intellectual property that we developed using the rights licensed to us under these agreements. Any such licenses back to the licensor could allow our licensors to use that proprietary information or intellectual property in a manner that could harm our business. In addition, others may independently discover our trade secrets and proprietary information. For example, the FDA, as part of its transparency initiative, is currently considering whether to make additional information publicly available on a routine basis, including information that we may consider to be trade secrets or other proprietary information, and it is not clear at the present time how the FDA's disclosure policies may change in the future, if at all. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position. Further, it is possible that others will independently develop the same or similar technology, products or services or otherwise obtain access to our unpatented technology, and in such cases, we could not assert any trade secret rights against such parties. If we fail to obtain or maintain trade secret protection, or if our competitors obtain our trade secrets or independently develop technology or products similar to ours, our competitive market position could be materially and adversely affected. In addition, some courts are less willing or unwilling to protect trade secrets and agreement terms that address non-competition are difficult to enforce in many jurisdictions and might not be enforceable in certain cases.

We may be subject to claims that our employees, consultants or independent contractors have misappropriated the intellectual property rights, including know-how or trade secrets of a third party.

We may be subject to claims that our employees or consultants have wrongfully used for our benefit or disclosed to us confidential information of third parties. As is common in the biotechnology and pharmaceutical industries, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Some of these employees, consultants and contractors may have executed proprietary rights, non-disclosure and non-competition agreements in connection with such previous employment or engagement. Although we try to ensure that our employees, consultants and independent contractors do not use the intellectual property rights, proprietary information, know-how, or trade secrets of others in their work for us, and do not perform work for us that is in conflict with their obligations to another employer or any other entity, we may be subject to claims that we or our employees, consultants or independent contractors have, inadvertently or otherwise misappropriated the intellectual property, including know-how, trade secrets or other proprietary information of their former employers or clients. To the extent that our employees, consultants or contractors use intellectual property rights or proprietary information owned by others in their work for us, disputes may arise as to the rights in any related or resulting know-how and inventions. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we could lose valuable intellectual property rights or personnel, which could adversely impact our business. There is no guarantee of success in defending these claims, and even if we are successful, litigation could result in substantial costs and be a distraction to management.

Our intellectual property may not be sufficient to protect our products from competition, which may negatively affect our business as well as limit our partnership or acquisition appeal.

We may be subject to competition despite the existence of intellectual property we license or own. We can give no assurances that our intellectual property claims will be sufficient to prevent third parties from designing around patents we own or license and developing and commercializing competitive products. The existence of competitive products that avoid our intellectual property could materially adversely affect our operating results and financial condition.

Furthermore, limitations, or perceived limitations, in our intellectual property may limit the interest of third parties to partner, collaborate or otherwise transact with us, if third parties perceive a higher than acceptable risk to commercialization of our products or future products.

Our drug re-innovation approach involves the filing of patent applications covering new methods of use and/or new formulations of previously known, studied and/or marketed drugs. Although the protection afforded by our patent and patent applications may be significant with respect to BXCL501, BXCL502, BXCL701 and BXCL702, when looking at our patents' ability to block competition, the protection offered by our patents may be, to some extent, more limited than the protection provided by patents claiming the composition of matter of entirely new chemical structures previously unknown. If a competitor were able to successfully design around any method of use and formulation patents we may have in the future, our business and competitive advantage could be adversely affected.

We may elect to sue a third party, or otherwise make a claim, alleging infringement or other violation of patents, trademarks, trade dress, copyrights, trade secrets, domain names or other intellectual property rights that we either own or license from BioXcel LLC. If we do not prevail in enforcing our intellectual property rights in this type of litigation, we may be subject to:

- paying monetary damages related to the legal expenses of the third party;
- facing additional competition that may have a significant adverse effect on our product pricing, market share, business operations, financial condition, and the commercial viability of our products; and
- restructuring our company or delaying or terminating select business opportunities, including, but not limited to, research and development, clinical trial, and commercialization activities, due to a potential deterioration of our financial condition or market competitiveness.

A third-party may also challenge the validity, enforceability or scope of the intellectual property rights that we license or own; and the result of these challenges may narrow the scope or claims of or invalidate patents that are integral to our product candidates in the future. There can be no assurance that we will be able to successfully defend patents we own in an action against third parties due to the unpredictability of litigation and the high costs associated with intellectual property litigation, amongst other factors.

Intellectual property rights and enforcement may be less extensive in jurisdictions outside of the U.S.; thus, we may not be able to protect our intellectual property and third parties may be able to market competitive products that may use some or all of our intellectual property.

Changes to patent law, including the Leahy-Smith America Invents Act of 2011 and the Patent Reform Act of 2009 and other future article of legislation, may substantially change the regulations and procedures surrounding patent applications, issuance of patents, and prosecution of patents. We can give no assurances that our patents and those of our licensor, BioXcel LLC, can be defended or will protect us against future intellectual property challenges, particularly as they pertain to changes in patent law and future patent law interpretations.

In addition, enforcing and maintaining our intellectual property protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by the USPTO, courts and foreign government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Risks Related to Owning our Common Stock

The price of our common stock may fluctuate substantially.

You should consider an investment in our common stock to be risky, and you should invest in our common stock only if you can withstand a significant loss and wide fluctuations in the market value of your investment. Some factors that may cause the market price of our common stock to fluctuate, in addition to the other risks mentioned in this "Risk Factors" section, are:

- sale of our common stock by our stockholders, executives, and directors;
- volatility and limitations in trading volumes of our shares of common stock;
- speculative trading in and short sales of our stock, as well as trading phenomena such as the “short squeeze” and “short and distort” schemes;
- our ability to obtain financings to conduct and complete research and development activities including, but not limited to, our clinical trials, and other business activities;
- possible delays in the expected recognition of revenue due to lengthy and sometimes unpredictable sales timelines;
- the timing and success of introductions of new applications and services by us or our competitors or any other change in the competitive dynamics of our industry, including consolidation among competitors, customers or strategic partners;
- network outages or security breaches;
- our ability to attract new customers;
- customer renewal rates and the timing and terms of customer renewals;
- our ability to secure resources and the necessary personnel to conduct clinical trials on our desired schedule;
- commencement, enrollment or results of our clinical trials for our product candidates or any future clinical trials we may conduct;
- changes in the development status of our product candidates;
- any delays or adverse developments or perceived adverse developments with respect to the FDA’s review of our preclinical and clinical trials;
- any delay in our submission for studies or product approvals or adverse regulatory decisions, including failure to receive regulatory approval for our product candidates;
- unanticipated safety concerns related to the use of our product candidates;
- failures to meet external expectations or management guidance;
- changes in our capital structure or dividend policy, future issuances of securities, sales of large blocks of common stock by our stockholders;
- our cash position;
- announcements and events surrounding financing efforts, including debt and equity securities;
- our inability to enter into new markets or develop new products;
- reputational issues;
- competition from existing technologies and products or new technologies and products that may emerge;
- announcements of acquisitions, partnerships, collaborations, joint ventures, new products, capital commitments, or other events by us or our competitors;

- changes in general economic, political and market conditions in or any of the regions in which we conduct our business;
- changes in industry conditions or perceptions;
- changes in valuations of similar companies or groups of companies;
- analyst research reports, recommendation and changes in recommendations, price targets, and withdrawals of coverage;
- departures and additions of key personnel;
- disputes and litigations related to intellectual properties, proprietary rights, and contractual obligations;
- changes in applicable laws, rules, regulations, or accounting practices and other dynamics; and
- other events or factors, many of which may be out of our control.

In addition, if the market for stocks in our industry or industries related to our industry, or the stock market in general, experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition and results of operations. If any of the foregoing occurs, it could cause our stock price to fall and may expose us to lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

Because certain of our stockholders control a significant number of shares of our common stock, they may have significant influence over actions requiring stockholder approval.

As of December 31, 2023, our directors, executive officers and BioXcel LLC, and their respective affiliates, beneficially owned approximately 35% of our outstanding shares of common stock. As a result, these stockholders, acting together, would have significant control over the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation or sale of all or substantially all of our assets. In addition, these stockholders, acting together, would have significant control over the management and affairs of our Company. Accordingly, this concentration of ownership might harm the market price of our common stock by:

- delaying, deferring or preventing a change in corporate control;
- impeding a merger, consolidation, takeover or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

We do not intend to pay cash dividends on our shares of common stock so any returns will be limited to the value of our shares.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the increase, if any, of our share price.

If we were deemed to be an investment company under the Investment Company Act of 1940, as amended (the “1940 Act”), applicable restrictions could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business, financial condition and results of operations.

Under Sections 3(a)(1)(A) and (C) of the 1940 Act, a company generally will be deemed to be an “investment company” for purposes of the 1940 Act if (1) it is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting or trading in securities or (2) it engages, or proposes to engage, in the business of investing, reinvesting, owning, holding or trading in securities and it owns or proposes to acquire investment securities having a value exceeding 40% of the value of its total assets (exclusive of U.S. government securities and cash

items) on an unconsolidated basis. We do not believe that we are an “investment company,” as such term is defined in the 1940 Act.

Notwithstanding Sections 3(a)(1)(A) and (C) of the 1940 Act, we are a research and development company and comply with the safe harbor requirements of Rule 3a-8 of the 1940 Act. We intend to conduct our operations so that we will not be deemed an investment company. However, if we were to be deemed an investment company, restrictions imposed by the 1940 Act, including limitations on our capital structure and our ability to transact with affiliates, could make it impractical for us to continue our business as contemplated and could have a material adverse effect on our business, financial condition and results of operations.

We are a “smaller reporting company” and are able to avail ourselves of reduced disclosure requirements applicable to smaller reporting companies, which could make our common stock less attractive to investors.

We are a smaller reporting company, and we will remain a smaller reporting company until we determine that either (1) our annual revenues are at least \$100 million and our voting and non-voting common stock held by non-affiliates is at least \$250 million measured on the last business day of our most recent second fiscal quarter, or (2) our voting and non-voting common stock held by non-affiliates is at least \$700 million measured on the last business day of our most recent second fiscal quarter. Smaller reporting companies are able to provide simplified executive compensation disclosure, and have certain other reduced disclosure obligations, including, among other things, being required to provide only two years of audited financial statements and not being required to provide selected financial data, supplemental financial information or risk factors. In addition, as a non-accelerated filer, we are exempt from the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act.

We have elected to take advantage of certain of the reduced reporting obligations. We cannot predict whether investors will find our common stock less attractive if we rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be reduced or more volatile.

We are and may in the future be subject to legal proceedings, claims and investigations in or outside the ordinary course of business. Such proceedings, claims and investigations could be costly and time-consuming to defend and could result in unfavorable outcomes, which may have a material adverse effect on our business, operating results and financial condition, and negatively affect the price of our common stock.

We are, and may in the future become, subject to various legal proceedings, claims and investigations that arise in or outside the ordinary course of business. For example, on July 7, 2023, plaintiff Katelyn Martin filed a class action complaint against the Company and certain executives in the United States District Court for the District of Connecticut, captioned *Martin v. BioXcel Therapeutics, et al.*, 3:23-cv-00915 (D. Conn). On October 4, 2023, pursuant to the Private Securities Litigation Reform Act, the court appointed two co-Lead Plaintiffs. The co-Lead Plaintiffs filed an amended complaint on December 5, 2023, alleging violations of Sections 10(b) and 20A of the Securities and Exchange Act of 1934 (the “Exchange Act”) and SEC Rule 10b-5 promulgated thereunder. The amended complaint alleges that defendants made false or misleading statements regarding the TRANQUILITY II trial and the development of BXCL501 for an expanded indication related to the treatment of certain Alzheimer’s-related agitation. Defendants filed a motion to dismiss on February 6, 2024, which has not been decided.

On November 28, 2023, Plaintiffs Pratheesan Panancherry and Jeffrey Bastress filed a stockholder derivative complaint in the United States District Court for the District of Connecticut purportedly on behalf of the Company and against Vimal Mehta, Richard I. Steinhart, Peter Mueller, June Bray, Sandeep Laumas, Michael Miller, Michal Votruba, and Krishnan Nandabalan as Defendants, and the Company as Nominal Defendant under the caption *Panancherry et al v. Mehta et al*, 3:23-cv-1554. Following the initial action, Plaintiffs Maria Vomvolakis (3:24-cv-3) and Kelly Fowler (3:24-cv-203) each filed separate stockholder derivative complaints in the District of Connecticut raising similar claims as Panancherry and Bastress, including business torts and violations of the Securities Exchange Act of 1934. The cases have been consolidated under the caption *In re BioXcel Therapeutics, Inc. Stockholder Derivative Litigation*, 3:23-cv-1554 (D. Conn.). The above-captioned consolidated action is currently stayed.

On January 11, 2024, Plaintiff Jeremy Smith filed a stockholder derivative complaint in the United States District Court for the United States District Court for the District of Delaware purportedly on behalf of the Company and against Vimal Mehta, Peter Mueller, June Bray, Sandeep Laumas, Michael Miller, Michal Votruba, Richard I. Steinhart, Robert Risinger, and Krishnan Nandabalan as Defendants, and the Company as Nominal Defendant under the caption Smith v. Mehta et al, 1:24-cv-00041. Following the initial action, Plaintiff Janice Korff filed a stockholder derivative complaint in the District of Delaware raising similar claims as Smith (1:24-cv-130), including business torts and violations of the Securities Exchange Act of 1934. The cases have been consolidated under the caption In re BioXcel Therapeutics, Inc. Derivative Litigation, 1:24-cv-00041 (D. Del.). The Company expects to seek a stay in the above-captioned consolidated action.

The Company is also cooperating with an investigation by the SEC. The above-captioned proceedings, as well as any investigation or proceeding that may be instituted by the SEC may result in substantial costs or liabilities, as well as a diversion of management's attention and resources, which could harm our business, result in a decline in the market price of our common stock and impact our financing efforts.

The potential costs and liabilities associated with legal proceedings, claims and investigations involving us or members of our leadership team is uncertain, and the results of such legal proceedings, claims and investigations cannot be predicted with certainty. Lawsuits and other administrative or legal proceedings that may arise can involve substantial costs, including the costs associated with investigation, litigation and possible settlement, judgment, penalty or fine. In addition, lawsuits and other legal proceedings may be time consuming to defend or prosecute and may require a commitment of management and personnel resources that will be diverted from our normal business operations. Also, our insurance coverage may be insufficient, our assets may be insufficient to cover any amounts that exceed our insurance coverage, and we may have to pay damage awards or otherwise may enter into settlement arrangements in connection with such claims. Moreover, we may be unable to continue to maintain our existing insurance at a reasonable cost, if at all, or to secure additional coverage, which may result in costs associated with lawsuits and other legal proceedings being uninsured. Any such payments or settlement arrangements in current or future litigation could have a material adverse effect on our business, operating results or financial condition. Even if the plaintiffs' claims are not successful, current or future litigation could result in substantial costs and significantly and adversely impact our reputation and divert management's attention and resources, which could have a material adverse effect on our business, operating results and financial condition, and negatively affect the price of our common stock. In addition, such lawsuits may make it more difficult to finance our operations.

Biotechnology and pharmaceutical companies with publicly traded stock or who obtain funding through the stock market often experience significant stock price volatility, based on events beyond their control, including outcomes of clinical trials, actions of regulators and product approvals. Such further litigation, may result in substantial costs and a diversion of management's attention and resources, which could harm our business and result in a decline in the market price of our common stock.

Our certificate of incorporation, our bylaws, and Delaware law may have anti-takeover effects that could discourage, delay, or prevent a change in control, which may cause our stock price to decline.

Our amended and restated certificate of incorporation, our amended and restated bylaws and Delaware law could make it more difficult for a third party to acquire us, even if closing such a transaction would be beneficial to our stockholders. We are authorized to issue up to 10 million shares of preferred stock. This preferred stock may be issued in one or more series, the terms of which may be determined at the time of issuance by our board of directors without further action by stockholders. The terms of any series of preferred stock may include voting rights (including the right to vote as a series on particular matters), preferences as to dividend, liquidation, conversion and redemption rights and sinking fund provisions. No preferred stock is currently outstanding. The issuance of any preferred stock could materially adversely affect the rights of the holders of our common stock, and therefore, reduce the value of our common stock. In particular, specific rights granted to future holders of preferred stock could be used to restrict our ability to merge with, or sell our assets to, a third party and thereby preserve control by the present management.

Provisions of our amended and restated certificate of incorporation and our amended and restated bylaws and Delaware law also could have the effect of discouraging potential acquisition proposals or making a tender offer or delaying or preventing a change in control, including changes a stockholder might consider favorable. Such provisions

may also prevent or frustrate attempts by our stockholders to replace or remove our management. In particular, the certificate of incorporation and bylaws and Delaware law, as applicable, among other things:

- provide the board of directors with the ability to alter the bylaws without stockholder approval;
- place limitations on the removal of directors;
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings; and
- provide that vacancies on the board of directors may be filled by a majority of directors in office, although less than a quorum.

Financial reporting obligations of being a public company in the U.S. are expensive and time-consuming, and our management is required to devote substantial time to compliance matters.

As a publicly traded company we have incurred and will continue to incur significant legal, accounting and other expenses. The obligations of being a public company in the U.S. require significant expenditures and place significant demands on our management and other personnel, including costs resulting from public company reporting obligations under the Exchange Act and the rules and regulations regarding corporate governance practices, including those under the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and the listing requirements of the stock exchange on which our securities are listed. These rules require the establishment and maintenance of effective disclosure and financial controls and procedures, internal control over financial reporting and changes in corporate governance practices, among many other complex rules that are often difficult to implement, monitor and maintain compliance with. Moreover, despite reforms made possible by the JOBS Act, the reporting requirements, rules, and regulations will make some activities more time-consuming and costly, particularly as we are no longer an “emerging growth company.” In addition, we expect these and similar rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain such insurance. Our continued compliance with applicable requirements and to keep pace with new regulations requires management and other personnel to devote a substantial amount of their time, otherwise we may fall out of compliance and risk becoming subject to litigation or being delisted, among other potential problems.

General Risk Factors

If securities or industry analysts do not publish research or reports, or publish unfavorable research or reports about our business, our stock price and trading volume may decline.

The trading market for our common stock will rely in part on the research and reports that industry or financial analysts publish about us, our business, our markets and our competitors. We do not control these analysts. If securities analysts do not cover our common stock, the lack of research coverage may adversely affect the market price of our common stock. Furthermore, if one or more of the analysts who do cover us downgrade our stock or if those analysts issue other unfavorable commentary about us or our business, which has occurred in the past, our stock price would likely decline. If one or more of these analysts cease coverage of us or fails to regularly publish reports on us, we could lose visibility in the market and interest in our stock could decrease, which in turn could cause our stock price or trading volume to decline and may also impair our ability to expand our business with existing customers and attract new customers.

Future sales and issuances of our common stock could result in additional dilution of the percentage ownership of our stockholders and could cause our share price to fall.

We expect that significant additional capital will be needed in the future to continue our planned operations, including increased marketing, hiring new personnel, commercializing our products, and continuing activities as an operating public company. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. We may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible

securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

If we fail to comply with the rules under the Sarbanes-Oxley Act related to accounting controls and procedures in the future, or, if we discover material weaknesses and other deficiencies in our internal control and accounting procedures, our stock price could decline significantly and raising capital could be more difficult.

Section 404 of the Sarbanes-Oxley Act requires annual management assessments of the effectiveness of our internal control over financial reporting. If we fail to comply with the rules under the Sarbanes-Oxley Act related to disclosure controls and procedures in the future, or, if we discover material weaknesses and other deficiencies in our internal control and accounting procedures, our stock price could decline significantly and raising capital could be more difficult. We have discovered material weaknesses in the past. If future material weaknesses or significant deficiencies are discovered or if we otherwise fail to achieve and maintain the adequacy of our internal control, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act. Moreover, effective internal controls are necessary for us to produce reliable financial reports and are important to helping prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reported financial information, and the trading price of our common stock could drop significantly.

Comprehensive tax reform bills could adversely affect our business and financial condition.

In 2017, the U.S. government enacted comprehensive federal income tax legislation that includes significant changes to the taxation of business entities. These changes include, among others, a permanent reduction to the corporate income tax rate. Notwithstanding the reduction in the corporate income tax rate, the overall impact of this tax reform is uncertain, and our business and financial condition could be adversely affected. Future changes in corporate tax rates, the realization of net deferred tax assets relating to our operations, the taxation of any foreign earnings, and the deductibility of expenses under future reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges, and could increase our future U.S. tax expense.

Item 1B. Unresolved Staff Comments

None.

Item 1C. Cybersecurity

Cybersecurity Risk Management and Strategy

We have developed and implemented a cybersecurity risk management program intended to protect the confidentiality, integrity, and availability of our critical systems and information. Our cybersecurity risk management program includes a cybersecurity incident response plan.

We designed and assessed our program based on the National Institute of Standards and Technology Cybersecurity Framework. This does not imply that we meet any particular technical standards, specifications, or requirements, only that we used the National Institute of Standards and Technology Cybersecurity Framework as a guide to help us identify, assess, and manage cybersecurity risks relevant to our business.

Our cybersecurity risk management program is integrated into our overall enterprise risk management program, and shares common methodologies, reporting channels and governance processes that apply across the enterprise risk management program to other legal, compliance, strategic, operational, and financial risk areas.

Our cybersecurity risk management program includes:

- risk assessments designed to help identify material cybersecurity risks to our critical systems, information, products, services, and our broader enterprise information technology environment;
- a management team responsible for managing (1) our cybersecurity risk assessment processes, (2) our security controls, and (3) our response to cybersecurity incidents;
- the use of external service providers, where appropriate, to assess, test or otherwise assist with aspects of our security controls;
- cybersecurity awareness training of our employees, incident response personnel, and senior management;
- a cybersecurity incident response plan that includes procedures for responding to cybersecurity incidents; and
- a third-party risk management process for service providers, suppliers, and vendors.

There can be no assurance that our cybersecurity risk management program and processes, including our policies, controls or procedures, will be fully implemented, complied with or effective in protecting our systems and information.

We have not identified risks from known cybersecurity threats, including as a result of any prior cybersecurity incidents, that have materially affected or are reasonably likely to materially affect us, including our operations, business strategy, results of operations, or financial condition. For more information, see the section titled “Risk Factors— Business interruptions could adversely affect future operations, revenues, and financial conditions, and may increase our costs and expenses.”

Cybersecurity Governance

Our Board considers cybersecurity risk as part of its risk oversight function and has delegated to the Audit Committee (the “Committee”) oversight of cybersecurity and other information technology risks. The Committee oversees management’s implementation of our cybersecurity risk management program.

The Committee receives periodic reports from management on our cybersecurity risks. In addition, management updates the Committee, as necessary, regarding any material cybersecurity incidents, as well as any incidents with lesser impact potential.

The Committee reports to the full Board regarding its activities, including those related to cybersecurity. The full Board also receives briefings from management on our cyber risk management program. Board members receive presentations on cybersecurity topics from the internal Security Incident Management Team or external experts as part of the Board’s continuing education on topics that impact public companies.

Our Security Incident Management Team, which includes our Chief Financial Officer, the Executive Director of Information Technology, Chief Legal Officer and the Quality Assurance Director, has approximately 30 combined years of risk management experience and is responsible for assessing and managing our material risks from cybersecurity threats. The team has primary responsibility for our overall cybersecurity risk management program and supervises both our internal cybersecurity personnel and our retained external cybersecurity consultants. Our Security Incident Management Team’s experience includes prior work experience in cybersecurity; financial management and controls, data quality assurance and liability and risk management.

Our management team supervises efforts to prevent, detect, mitigate, and remediate cybersecurity risks and incidents through various means, which may include briefings from internal security personnel; threat intelligence and other information obtained from governmental, public or private sources, including external consultants engaged by us; and alerts and reports produced by security tools deployed in the information technology environment.

Item 2. Properties

Our corporate headquarters are located at 555 Long Wharf Drive in New Haven, Connecticut. The Company occupies 18,285 square feet of space. The leases for this space expire in February 2026 and we have a renewal option for one additional five-year term. We believe that our existing facilities are suitable and adequate to meet our current needs.

Item 3. Legal Proceedings

From time to time, we may be subject to litigation and claims arising in the ordinary course of business. For information about our legal proceedings, see Note 18 to our audited financial statements included elsewhere in this Annual Report on Form 10-K which is information is incorporation herein by reference.

In addition, on February 12, 2024, we became aware that the SEC has initiated an investigation involving the Company and is seeking the production of certain documents. We are fully cooperating with the SEC's investigation. We cannot predict or determine whether any proceeding may be instituted by the SEC in connection with its investigation or the outcome of any proceeding that may be instituted, or the effects any such proceeding could have on the Company's business or financing efforts.

Item 4. Mine Safety Disclosures

Not applicable.

Part II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information

Our common stock is traded on The Nasdaq Capital Market[®] under the symbol "BTAI."

Stockholders

As of March 21, 2024, there were 12 stockholders of record of our common stock. The actual number of holders of our common stock is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers or held by other nominees.

Dividend Policy

We have never paid or declared any cash dividends on our common stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We intend to retain all available funds and any future earnings to fund the development and expansion of our business. Any future determination to pay dividends will be at the discretion of our board of directors and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors that our board of directors deems relevant.

Equity Compensation Plans

The information required by Item 5 of Form 10-K regarding equity compensation plans is incorporated herein by reference to Item 11. of Part III of this Annual Report on Form 10-K.

Unregistered Sales of Securities

There were no unregistered sales of equity securities by the Company during the three months ended December 31, 2023 except as reported in the Company's Current Report on Form 8-K filed on December 6, 2023.

Issuer Purchases of Equity Securities

None.

Item 6. Reserved

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of our financial condition and results of operations together with our consolidated financial statements and the related notes appearing elsewhere in this report. In addition to historical information, this discussion and analysis contains forward-looking statements that involve risks, uncertainties and assumptions. Our actual results may differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section titled "Risk Factors" included elsewhere in this Annual Report on Form 10-K. All dollar amounts in the below Management's Discussion and Analysis of Financial Condition and Results of Operations are presented in U.S. dollars, and all dollar and share amounts are presented in thousands, unless otherwise noted or the context otherwise provides.

Overview

BioXcel Therapeutics, Inc. ("BTI" or the "Company") is a biopharmaceutical company utilizing artificial intelligence ("AI") to develop transformative medicines in neuroscience and, through the Company's wholly owned subsidiary, OnkosXcel Therapeutics LLC ("OnkosXcel"), immuno-oncology. We are focused on utilizing cutting-edge technology and innovative research to develop high-value therapeutics aimed at transforming patients' lives. We employ various AI platforms to reduce therapeutic development costs and potentially accelerate development timelines. Our approach leverages existing approved drugs and/or clinically evaluated product candidates together with big data and proprietary machine learning algorithms to identify new therapeutic indications. We believe this differentiated approach has the potential to reduce the expense and time associated with drug development in diseases with substantial unmet medical needs.

Our most advanced neuroscience candidate is BXCL501. In indications other than those approved by the United States ("U.S.") Food and Drug Administration ("FDA") as IGALMI™, BXCL501 is an investigational, proprietary, orally dissolving film formulation of dexmedetomidine (or "Dex") in development for the treatment of agitation associated with psychiatric and neurological disorders. Our most advanced immuno-oncology asset, BXCL701, is an investigational oral innate immune activator being developed by OnkosXcel Therapeutics as a potential therapy for the treatment of aggressive forms of prostate cancer, pancreatic cancer, and other solid and liquid tumors.

On April 6, 2022, we announced that the FDA approved IGALMI™ (dexmedetomidine) sublingual film for the acute treatment of agitation associated with schizophrenia or bipolar I or II disorder in adults. IGALMI™ is approved to be self-administered by patients under the supervision of a health care provider. On July 6, 2022, we announced that IGALMI™ was commercially available in doses of 120 and 180 microgram ("mcg).

We are continuing to develop BXCL501 for the acute treatment of agitation associated with bipolar disorders or schizophrenia in the at-home setting and for the acute treatment of agitation (non-daily) associated with dementia due to probable Alzheimer's disease in the at-home setting and in care facilities. As described further below, we have recently deprioritized the development of BXCL501 for certain indications, including development of BXCL501 as a potential adjunctive treatment for major depressive disorder ("MDD"), as well as our BXCL701 program except as noted in Part, Item 1, "Business" under the heading "Immuno-Oncology."

For our TRANQUILITY program, we have conducted clinical studies evaluating BXCL501 for the acute treatment of agitation associated with mild to moderate dementia in patients with probable Alzheimer's disease, who reside in assisted living facilities ("ALFs") and residential care settings and who required minimal assistance with activities of daily living. On June 29, 2023, we announced positive topline data from our TRANQUILITY II trial, as well as information regarding certain investigator misconduct and noncompliance at a clinical trial site. Since that time, we have taken steps to further investigate and evaluate the conduct of the TRANQUILITY II trial at this clinical site. Based on these steps to date, we believe that there have been no further instances of misconduct or fraud or other findings that adversely impact the data integrity or reliability of the eligibility, safety, and efficacy data obtained at the clinical trial site in question.

We had previously been conducting the TRANQUILITY III clinical trial, which was designed to evaluate the potential for BXCL501 to treat acute agitation in patients with moderate to severe dementia associated with probable Alzheimer's disease living in nursing homes and who require moderate to full assistance with activities of daily living.

We paused enrollment in TRANQUILITY III due to the much higher-than-expected background frequency of episodes of agitation experienced by the first several patients enrolled in the study.

We held Type B/Breakthrough Therapy Designation meetings with the FDA on October 11, 2023 and on February 20, 2024 to obtain additional feedback on our plans for further development of BXCL501 for the treatment of agitation associated with dementia in patients with probable Alzheimer’s disease. We are currently planning to generate additional Phase 3 efficacy and safety data, in a variety of relevant care-facility settings and across severity of dementia using the Positive and Negative Syndrome Scale-Excitatory Component (“PEC”) as the primary efficacy measure. In addition, we plan to discuss the details of the requirement for long-term safety data at a future meeting with the FDA.

In our SERENITY program, we are evaluating BXCL501 for use in the at-home setting for agitation associated with bipolar disorders or schizophrenia. We completed Part 1 of the SERENITY III trial and announced topline results on May 25, 2023.

We reviewed our SERENITY III program with the FDA in Type C meetings on November 8, 2023 and March 6, 2024. Based on the feedback received from the FDA to date, we plan to move forward to evaluate at-home use of the 120 mcg dose of BXCL501, with safety as the primary objective and efficacy measures as exploratory endpoints to support continued efficacy in the at-home setting as recommended by the FDA in the November 8, 2023 meeting, for the acute treatment of agitation in bipolar disorders or schizophrenia. We also plan to conduct a clinical study designed to enroll approximately 30 patients to evaluate the correlation between patient-reported or informant-reported efficacy with trained rater-reported efficacy using PEC measurements, which the FDA had previously recommended.

Strategic Reprioritization

On August 8, 2023, our Board of Directors approved a broad-based strategic reprioritization (the “Reprioritization”). We determined to take actions to reduce certain operational and workforce expenses no longer deemed core to ongoing operations to extend its cash runway and drive innovation and growth in high-potential clinical development and value-creating opportunities. These actions included a shift in commercial strategy for IGALMI™ in the institutional setting as described, a reduction of in-hospital commercialization expenses, a de-prioritization of programs no longer determined to be core to ongoing operations, and a prioritization on at-home treatment setting opportunities for BXCL501, all as described in Part I, Item 1, “Business”. As part of this strategy, our Board of Directors approved a reduction of approximately 60% of our workforce. Annualized operating expenses are expected to be reduced by approximately \$80,000. As of December 31, 2023, the Reprioritization was substantially completed.

As a result of the Reprioritization, the Company recorded restructuring costs of \$4,163 in the year ended December 31, 2023. These costs consisted of severance and benefit costs of \$4,063 and contract termination costs of \$100. The Company paid \$3,998 of severance and benefit costs and \$100 of contract termination costs during the year ended December 31, 2023. Any remaining costs are expected to be paid during the first quarter of 2024.

IGALMI™ Revised Commercialization Strategy

As part of the Company’s Reprioritization, the IGALMI™ commercial team shifted focus to a hospital/Integrated Delivery Network (“IDN”) contracting strategy with a Corporate Account Director (“CAD”) team. The goal of the realigned CAD team is to work with large IDNs and drive sales utilizing a top-down approach. Over time, the revised commercial effort is expected to allow the Company to continue to make inroads into the institutional market in a more cost-efficient manner.

Commercial efforts for the IGALMI™ launch were impacted significantly in the six months ended December 31, 2023, due to the reduction in force, which included the elimination of sales, marketing, and commercial operations staff. The realigned CAD team generated \$376 in net revenue for the three-month period ended December 31, 2023 through legacy sales and volume-based contracts, up from \$341 for the three-month period ended September 30, 2023. Net revenues from IGALMI™ product sales for the years ended December 31, 2023 and 2022 were \$1,380 and \$375, respectively.

On October 30, 2023, we announced that the Centers for Medicare & Medicaid Services (“CMS”) assigned a new J-Code for IGALMI™ (J1105). J-Codes are permanent codes used by healthcare providers, commercial insurance plans, and government payers to help standardize the reimbursement process. A J-Code can help simplify claims submission as compared to use of a miscellaneous or unlisted code, which in turn can streamline the billing and reimbursement process. The J-Code for IGALMI™ has been published online in the CMS HCPCS Application Summaries and Coding Recommendations, Third Quarter, 2023 HCPCS Coding Cycle. We believe this J-Code will facilitate access to IGALMI™ for patients with agitation associated with bipolar disorder or schizophrenia.

December 2023 Refinancing

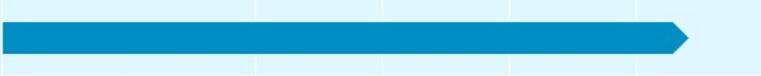
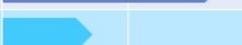
On December 5, 2023 (the “Second Amendment Effective Date”), we entered into the Second Amendment to Credit Agreement and Guaranty and Termination of Revenue Interest Financing Agreement (the “Second Amendment”), which amended the Credit Agreement and Guaranty, dated April 19, 2022, by and among us, as the borrower, certain subsidiaries of the Company from time to time party thereto as subsidiary guarantors, the lenders party thereto (the “Lenders”), and Oaktree Fund Administration LLC (“OFA”) as administrative agent (as amended, the “Credit Agreement”). Among other things, the Second Amendment deferred the effectiveness of the Credit Agreement’s Revenue Covenant (as defined below) to the fourth quarter of 2024 and reduced the required minimum revenue levels under the Revenue Covenant; modified the interest rate of loans under the Credit Agreement; provided for warrants to be issued to the Lenders to purchase 70 shares of our common stock; and lowered the strike price of warrants previously issued to the Lenders under the Credit Agreement to \$3.6452 per share. Also on the Second Amendment Effective Date, we terminated the Revenue Interest Financing Agreement (as amended, the “RIFA”) by and among the Company, the purchasers party thereto (the “Purchasers”) and OFA, as administrative agent. The \$30,000 in financing previously provided to us under the RIFA was converted to an outstanding loan under the Credit Agreement (the “Tranche A-2 Term Loan”) pursuant to the Second Amendment. All commitments for potential future funding under the RIFA were terminated. For additional information, see below under “Liquidity and Capital Resources—Sources of Liquidity—Financing Agreements.”

March 2024 Waiver

On March 20, 2024 (the “Effective Date”), we entered into a Fourth Amendment (the “Fourth Amendment”) to the Credit Agreement pursuant to which the Lenders waived the covenant that we not receive a report and opinion from our independent registered public accounting firm that contains a “going concern” or similar qualification with respect to our financial statements for the year ended December 31, 2023. Accordingly, while our independent registered public accounting firm’s report contained in this Annual Report on Form 10-K contains a “going concern” explanatory paragraph, it does not constitute an event of default under the Credit Agreement. The Fourth Amendment also includes a number of other changes to the Credit Agreement, as described below under “— Liquidity and Capital Resources—Sources of Liquidity—Financing Agreements.”

Our Clinical Programs

The following is a summary of the status of our major clinical development programs as of the date of this Annual Report on Form 10-K:

Compound	Indication/Proposed Indication	Preclinical	Phase 1	Phase 2	Phase 3	Registration	Marketed
 Igalmi (lacosamide)	APPROVED APRIL 5, 2022 Acute treatment of agitation associated with schizophrenia or bipolar I or II disorder in adults under healthcare provider supervision						
	TRANQUILITY PROGRAM Acute treatment of agitation associated with Alzheimer's dementia (at home)						
BXCL501	SERENITY PROGRAM Acute treatment of agitation associated with bipolar disorders/schizophrenia (at home)						
	Opioid Use Disorder (OUD)*						
	Post Traumatic Stress Disorder (PTSD)*						
BXCL502	Neuropsychiatric symptoms Chronic agitation in Alzheimer's dementia						
Candidate BXCL503	Apathy in dementia						
Candidate BXCL504	Aggression in dementia						

*Government-funded, investigator-sponsored trials
The safety and efficacy of investigational agents and/or investigational uses of approved products have not been established



For additional information regarding our pipeline candidates, see Part I, Item 1, “Business” in this Annual Report on Form 10-K.

Basis of Presentation

The Company’s consolidated financial statements are prepared in accordance with U.S. Generally Accepted Accounting Principles (“GAAP”).

Components of Our Results of Operations

Product Revenue, Net

Revenue relates to sales of IGALMI™ and reflect limited market access since commercial launch in July 2022. The revenues are net of rebates, chargebacks, discounts, and other adjustments. During the fourth quarter of 2022, we began contracting directly with intermediaries such as GPOs.

Operating Costs and Expenses

Cost of Goods Sold

Cost of goods sold primarily relates to the costs of producing, packaging, and delivering our product to customers as well as costs related to excess or obsolete inventory.

Research and Development

Our research and development expenses reflect costs associated with the identification of our preclinical and clinical product candidates. Expenditures primarily consist of salary, benefits and non-cash stock-based compensation for our research and development personnel, costs incurred under agreements with contract research organizations and sites that conduct our non-clinical studies and clinical trials, costs of outside consultants engaged in research and development activities, travel expenses, the cost of acquiring, developing and manufacturing preclinical and clinical trial materials and lab supplies, and depreciation and other expenses. Payments to BioXcel LLC are also included in research and

development expenses. Costs associated with third parties that provide non-clinical services such as toxicology, pharmacology, research and discovery, biomarker studies and similar services are included in the professional fees category of research and development expenses.

We expense research and development costs as incurred.

Our research and development costs by program for the years ended December 31, 2023 and 2022 were as follows:

	Year ended	
	December 31,	
	2023	2022
Direct external costs		
BXCL501	\$ 46,661	\$ 52,044
BXCL701	7,050	9,631
Other research and development programs	4,142	2,687
Total direct external costs	\$ 57,853	\$ 64,362
Internal personnel costs	22,675	22,831
Sub-total direct costs	\$ 80,528	\$ 87,193
Indirect costs and overhead	3,798	4,046
Total research and development expenses	<u>\$ 84,326</u>	<u>\$ 91,239</u>

Selling, General and Administrative

Selling, general and administrative expenses primarily consist of salaries, benefits and non-cash stock-based compensation for our sales, executive and administrative personnel. Selling, general and administrative expenses also include legal expenses to pursue patent protection of our intellectual property and other corporate matters, professional fees for audit and tax services and insurance charges. We may also incur increased costs to comply with corporate governance, internal controls, investor relations and disclosures and similar requirements applicable to public companies.

With our Reprioritization substantially completed as of December 31, 2023, we expect that our selling, general and administrative expenses will decline due to the restructured commercialization plan of IGALMI™ and reduced personnel costs. However, we may also experience increased selling, general and administrative expenses due to higher fees for outside consultants, attorneys, and accountants.

Restructuring Costs

On August 8, 2023, our Board of Directors approved the Reprioritization. We took actions to reduce certain operational and workforce expenses that were no longer deemed core to ongoing operations in order to extend our cash runway and drive innovation and growth in high potential clinical development and value creating opportunities. These actions included a shift in commercial strategy for IGALMI™ in the institutional setting, a reduction of in-hospital commercialization expenses, a suspension of programs no longer determined to be core to ongoing operations, and a prioritization of at-home treatment setting opportunities for BXCL501.

As part of this strategy, the Company's Board of Directors approved a reduction of approximately 60% of the Company's workforce. The Company notified impacted employees on August 14, 2023. Annual operating expenses are expected to be reduced by approximately \$80,000. Management believes that, after giving effect to the Reprioritization, the Company's cash and cash equivalents of \$65.2 million as of December 31, 2023 will allow the Company to fund its operations and meet its liquidity requirements into mid-2024.

As a result of the Reprioritization, the Company recorded restructuring costs of \$4,163 for the year ended December 31, 2023. These costs consisted of severance and benefit payments of \$4,063 and contract termination costs of \$100, which were paid in cash. The Company paid \$3,998 of severance and benefit costs and \$100 of contract termination

costs during the year ended December 31, 2023. As of December 31, 2023, the Reprioritization was substantially completed and any remaining costs are expected to be paid during the first quarter of 2024.

Other Expense (Income)

Other (income) expense primarily consists of interest costs associated with the Credit Agreement the Company entered into in April 2022, changes in fair value of derivative financial instruments, and interest income earned on cash and cash equivalents that were comprised primarily of money market funds. Interest expense may increase in the future as our loans provided under the Credit Agreement are subject to floating interest rates following our December 2023 amendment to the Credit Agreement and, if we meet required milestones, we may draw down additional funds under the Credit Agreement.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements is set forth in Note 3, Summary of Significant Accounting Policies to the consolidated financial statements included in this Annual Report on Form 10-K.

Results of Operations

Comparison of the Years Ended December 31, 2023 and 2022

Product Revenue, Net

Commercial sales of IGALMITM launched in July 2022. Product revenue, net for the years ended December 31, 2023 and 2022 was \$1,380 and \$375, respectively, comprised of sales of IGALMITM. As part of the Company's Reprioritization, the IGALMITM commercial team shifted focus to a hospital/contracting strategy with a CAD team. The goal of the realigned CAD team is to work with large Integrated Delivery Networks and drive sales utilizing a top-down approach. The realigned CAD team generated \$376 in net revenue for the three-month period ended December 31, 2023 through legacy sales and volume-based contracts. Commercial efforts for the IGALMITM launch were impacted significantly in the six months ended December 31, 2023, due to the reduction in force, which included the elimination of sales, marketing, and commercial operations staff. However, the revised commercial effort is expected to allow the Company to continue to make inroads into the institutional market in a more cost-efficient manner.

Cost of Goods Sold

Cost of goods sold for the years ended December 31, 2023 and 2022, were \$1,260 and \$20, respectively, which primarily related to the costs to produce, package and deliver IGALMITM to customers, as well as costs related to excess or obsolete inventory. We entered into a commercial supply agreement with ARx, LLC ("ARx") pursuant to which ARx has agreed to exclusively manufacture and supply us with all of our worldwide demand of film formulation of Dex to be used for the commercial supply of IGALMITM and for ongoing clinical trials of our product candidate BXCL501, subject to certain alternative supply provisions. The increase in Cost of goods sold for the year ended December 31, 2023 is primarily the result of increased sales and the increase in the reserve for excess and obsolete inventory.

Research and Development Expense

Research and development expenses for the years ended December 31, 2023 and 2022 were as follows:

	Year ended December 31,		Change	% Change
	2023	2022		
Personnel and related costs	\$ 16,351	\$ 18,272	\$ (1,921)	(11)%
Non-cash stock-based compensation	6,324	4,558	1,766	39 %
Professional fees	14,590	14,342	248	2 %
Clinical trials expense	35,094	40,630	(5,536)	(14)%
Chemical, manufacturing and controls cost	8,687	10,144	(1,457)	(14)%
Travel and other costs	3,280	3,293	(13)	(0)%
Total research and development expenses	\$ 84,326	\$ 91,239	\$ (6,913)	(8)%

The decrease of \$6,913 for the year ended December 31, 2023, compared to the year ended December 31, 2022 is primarily attributable to the following:

- A decrease in clinical trials expense as a result of reduced costs associated with the wind down of the SERENITY III study to evaluate BXCL501 for at home use for the acute treatment of agitation related to schizophrenia and bipolar disorders, as well as the TRANQUILITY II study of BXCL501 for the potential treatment of agitation in patients with Alzheimer’s disease.
- A decrease in personnel and related costs during the fourth quarter of 2023 as a result of the Company’s Reprioritization.
- A decrease in Chemical, manufacturing and controls (“CMC”) costs due to lower CMC costs related to decreased clinical trial activities.
- An increase in non-cash stock-based compensation due to higher award forfeitures in 2022.

Following IGALMI™’s approval by the FDA, we capitalize costs related to commercial production of IGALMI™ as inventory and expense those CMC costs related to clinical trials.

Selling, General and Administrative Expense

Selling, general and administrative expenses for the years ended December 31, 2023 and 2022 were as follows:

	Year ended December 31,		Change	% Change
	2023	2022		
Personnel and related costs	\$ 27,171	\$ 20,690	\$ 6,481	31 %
Non-cash stock-based compensation	12,290	12,779	(489)	(4)%
Professional fees	22,310	14,313	7,997	56 %
Commercial and marketing	12,485	13,006	(521)	(4)%
Insurance	1,743	2,370	(627)	(26)%
Travel and other costs	7,414	5,603	1,811	32 %
Total selling, general and administrative expenses	\$ 83,413	\$ 68,761	\$ 14,652	21 %

The increase of \$14,652 for the year ended December 31, 2023, relative to the year ended December 31, 2022 is primarily attributable to:

- Increased professional fees, primarily related to higher legal costs for the investigation of our TRANQUILITY II study, the write-off of previously deferred costs related to the initial public offering of OnkosXcel, and higher corporate operating support levels partially offset by reductions in consulting and recruiting fees.
- An increase in personnel costs due to our efforts to expand our functional teams, particularly in sales, to support commercialization of IGALMI™ in the U.S., prior to the Reprioritization.
- An increase in travel and other costs as a result of the commercial launch of IGALMI™.
- Decreased non-cash stock-based compensation costs due to increased award forfeitures in 2023 resulting from the Reprioritization and decreased insurance costs as a result of completed clinical activities.
- Decreased commercial and marketing costs due to higher spend levels in 2022 resulting from the commercial launch of IGALMI™.

Restructuring Costs

Restructuring costs were \$4,163 for the year ended December 31, 2023. See “Components of Our Results of Operations - Restructuring Costs” above for a discussion of the Company’s Reprioritization and restructuring activities. There were no restructuring costs for the year ended December 31, 2022.

Other (Income) Expense

Interest expense increased to \$13,314 for the year ended December 31, 2023 compared to \$8,213 for the year ended December 31, 2022, due to higher average debt balances during the year due to borrowings under the Credit Agreement and, prior to its termination, the RIFA that the Company put in place in April 2022. The expense was partially offset by interest income earned on cash and cash equivalents that were held primarily in short-term money market funds. Interest income increased to \$5,649 for the year ended December 31, 2023 compared to \$2,528 for the year ended December 31, 2022, due to higher average cash balances during the year. Other (income) expense, net is primarily associated with changes in fair value of derivative financial instruments for the period, which relate to instruments associated with the Credit Agreement.

Inflation

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation has had a material effect on our results of operations during the periods presented. For a discussion of inflationary risks to our future revenues under the Inflation Reduction Act, see “*Health care reform measures could hinder or prevent our product candidates’ commercial success.*” in Part I, Item 1A., “Risk Factors” elsewhere in this Annual Report on Form 10-K.

Liquidity and Capital Resources

As of December 31, 2023, we had cash and cash equivalents of \$65,221, working capital of \$44,876 and stockholders’ deficit of \$56,508. Net cash used in operating activities was \$155,006 and \$135,341 for the years ended December 31, 2023 and 2022, respectively. We incurred losses of approximately \$179,053 and \$165,757 for the years ended December 31, 2023 and 2022, respectively. We will need to generate significant product revenues to achieve profitability. Our history of significant losses, negative cash flows from operations, potential near-term increased covenant-driven amortization payments or full repayment obligations under our Credit Agreement, the regulatory event of default triggers under the Credit Agreement, other funding requirement covenants under the Credit Agreement, limited liquidity resources currently on hand, and dependence on our ability to obtain additional financing to fund our operations after the current resources are exhausted, about which there can be no certainty, have resulted in management’s assessment that there is substantial doubt about our ability to continue as a going concern for a period of at least 12 months from the issuance date of the financial statements included in this Annual Report on Form 10-K.

Successful completion of the Company's development programs and, ultimately, the attainment of profitable operations are dependent upon future events, including obtaining adequate financing to support the Company's cost structure and operating plan. Management's plans to improve the Company's liquidity and reduce its operating expenses and capital requirements include, among other things, pursuing one or more of the following steps to raise additional capital, none of which can be guaranteed or are entirely within the Company's control:

- raise funding through the sale of the Company's equity securities;
- raise funding through third-party investments in or other strategic options for OnkosXcel;
- raise funding through debt financing and/or restructuring of its existing Credit Agreement;
- establish collaborations with potential partners to advance the Company's product pipeline;
- establish collaborations with potential marketing partners;
- reduce overhead and headcount to focus on core priorities, and/or
- any combination of the foregoing.

To date, we have continued research and development activities while managing our cash position. However, we require additional funding to continue as a going concern. There are no assurances that we will be successful in obtaining an adequate level of financing as and when needed to finance our operations on terms acceptable to us or at all, particularly when there is market uncertainty or an economic downturn or if other events make investment in our securities less appealing. If we are unable to secure adequate additional funding as and when needed on acceptable or commercially reasonable terms, we may have to significantly delay, scale back or discontinue the development and commercialization of one or more product candidates. In addition, there are various macro-economic trends affecting the financing markets whose impact on our liquidity and future funding requirements are uncertain as of the filing date of this Annual Report on Form 10-K. We will need substantial additional funding, and if we are unable to raise capital when needed, we could be compelled to pursue alternative options, including, without limitation, implementing further workforce reductions, reducing or ceasing product development programs and advancement of our clinical trials and product candidates, selling our assets or seeking other strategic alternatives. See "Risks Related to Financial Position and Need for Additional Capital — *We will need substantial additional funding, and if we are unable to raise capital when needed, we could be forced to delay, reduce or eliminate our product development programs or commercialization efforts or otherwise seek strategic alternatives.*" in Part I. Item 1A., "Risk Factors" elsewhere in this Annual Report on Form 10-K.

Sources of Liquidity

We have primarily focused our efforts on raising capital and building the products in our pipeline, and, although we generate revenue from sales of IGALMI™, we do not expect to generate positive cash flows from operations in the near term. Since our inception, our operations have been financed primarily from proceeds from the sale of equity securities, including our initial public offering, private placements of our common stock, registered offerings of our common stock, an Open Market Sale Agreement (as amended, supplemented and/or restated from time to time, the "Sale Agreement") with Jefferies LLC ("Jefferies"), and borrowings under our Credit Agreement (as described below). We have not yet established an ongoing source of revenue sufficient to cover our operating costs and will need to do so in future periods.

Financing Agreements

On April 19, 2022, we entered into two financing agreements: the Credit Agreement and the RIFA. Pursuant to the Credit Agreement, the Lenders originally agreed to provide us up to \$135,000 in senior secured term loans to us. On April 28, 2022, we borrowed the first \$70,000 tranche of loans under the Credit Agreement. Pursuant to the RIFA, the Purchasers agreed to provide us with up to \$120,000 in financing for our near-term commercial activities of IGALMI™, development and commercialization of BXCL501 and other general corporate purposes. On July 8, 2022, we drew down the first tranche of \$30,000 under the RIFA. In connection with the Credit Agreement, we granted to the Lenders (i) warrants to purchase up to 278 shares of our common stock (the "Original Warrants"), (ii) rights to purchase up to

\$5,000 of our common stock and (iii) warrants to purchase up to 175 individual ownership units (i.e., not in thousands) in OnkosXcel (the “OnkosXcel Warrants”).

On November 13, 2023, we, the Lenders and OFA entered into a Waiver and First Amendment to Credit Agreement and Guaranty (the “First Amendment”) that provided for, among other things, a waiver and a modification to the covenant in the Credit Agreement regarding investments in OnkosXcel, pursuant to which we are permitted to invest up to a maximum of \$30,000 at any time outstanding in OnkosXcel, increased from the \$25,000 at any time outstanding. The First Amendment waived any defaults or events of default arising under the Credit Agreement due to a breach prior to the date of the First Amendment of the OnkosXcel investment covenant, or a breach of our obligation to notify OFA of such default, including our investment in an amount in excess of what was previously permitted under the OnkosXcel investment covenant. In connection with the First Amendment, we paid to the Lenders a fee of \$180 (representing 0.25% of the loans outstanding under the Credit Agreement on the date of the First Amendment) and agreed to pay to the Lenders an exit fee equal to 0.25% of the loans under the Credit Agreement repaid upon maturity or prepayment of the loans.

On December 5, 2023, we entered into the Second Amendment to Credit Agreement and Guaranty and Termination of Revenue Interest Financing Agreement (the “Second Amendment”) with the Lenders and OFA, as administrative agent. The Second Amendment terminated the RIFA and converted the financing previously provided to us thereunder to term loans under the Credit Agreement. In addition, the Second Amendment replaced the Credit Agreement’s existing “Tranche B” and “Tranche C” term loan opportunities with three new tranches aggregating up to \$100,000 in potential funding:

- A \$20,000 “Tranche B” term loan available upon satisfaction of the following conditions on or before December 31, 2024: (i) us raising an aggregate of at least \$40,000 after the date of the First Amendment from (a) equity proceeds or (b) a bona fide contract with a governmental authority to use BXCL501 for opioid withdrawal, (ii) initiation of a new clinical trial in the TRANQUILITY program based on our meeting with the FDA held on October 11, 2023, and (iii) the total pro forma indebtedness outstanding under the Credit Agreement as a percentage of our trailing 30-day market capitalization being less than 30%;
- A \$30,000 “Tranche C” term loan available upon satisfaction of the following conditions on or before December 31, 2025: (i) either (a) receipt of approval from the FDA of an sNDA in respect of the use of BXCL501 for the acute treatment of agitation associated with dementia or (b) the receipt of approval from the FDA of an sNDA in respect of the use of BXCL501 for (x) the acute treatment of agitation associated with schizophrenia in adults and (y) the acute treatment of agitation associated with bipolar I or II disorder in adults, in each case, in the community/at home setting without the requirement for administration under the supervision of a healthcare provider, and (ii) the total pro forma indebtedness outstanding under the Credit Agreement as a percentage of our trailing 30-day market capitalization being less than 30%; and
- A \$50,000 “Tranche D” term loan available upon satisfaction of the following conditions on or before December 31, 2025: (i) the conditions precedent to the borrowing of Tranche C (as described in the preceding bullet point) have been satisfied, and (ii) our total net revenue attributable to sales of BXCL501 (for the avoidance of doubt, including any revenues attributable to use of BXCL501 for opioid withdrawal) for the trailing twelve consecutive month period exceeding a specified amount.

The Second Amendment also modified the interest rate of the loans provided under the Credit Agreement to be a floating rate per annum equal to the secured overnight financing rate (“SOFR”) (subject to a SOFR floor of 2.5% and a cap of 5.5%) plus 7.5%.

Following the Second Amendment, we must also comply with certain covenants under the Credit Agreement, including a financial covenant that requires we maintain a minimum cash liquidity amount of \$15,000 (or higher upon certain events) and a modified minimum revenue requirement measured on a quarterly basis based on the revenue attributable to BXCL501 for the six consecutive month period ending on the last day of the relevant quarter (the “Revenue Covenant”), subject to cure payments of not less than \$1,000 if we fail to meet the minimum revenue requirement. The Revenue Covenant applies beginning with the six-month period ending on December 31, 2024. If we

fail to meet the minimum Revenue Covenant for the preceding six-month periods ending on December 31, 2024, March 31, 2025, June 30, 2025 and September 30, 2025, we could be required to make revenue cure payments of up to \$4,500, \$6,200, \$8,500, and \$8,500, respectively, plus aggregate prepayment fees of \$1,900. Under the Credit Agreement, these cure payments would be due on April 21, 2025, June 6, 2025, September 5, 2025 and December 8, 2025, respectively. We are only permitted to make cure payments for revenue shortfalls up to three times during the term of the Credit Agreement, after which we would default on the Credit Agreement if we are unable to satisfy the minimum revenue requirement for any subsequent fiscal quarter. As of December 31, 2023, we had aggregate principal indebtedness of \$102,680 outstanding under the Credit Agreement.

In connection with the closing of the Second Amendment, we amended and restated the Original Warrants granted to the Lenders on April 19, 2022 to purchase up to 278 shares of the Company's common stock at an exercise price of \$20.04 per share. Pursuant to the amendment and restatement of the Original Warrants, dated December 5, 2023 (the "Amended and Restated Original Warrants"), the exercise price of the Original Warrants has been reduced to \$3.6452 per share, which represents the arithmetic average of the volume-weighted average price of the Company's common stock on the Nasdaq Capital Market during the 30 trading days preceding the Second Amendment Effective Date. In addition, the Company granted new warrants to the Lenders to purchase up to 70 shares of the Company's common stock (the "2023 Warrant Shares") at an exercise price of \$3.6452 per share (the "2023 Warrants"). The Original Warrants and the 2023 Warrants will expire on April 19, 2029 and may be net exercised at the holder's election.

On the "Effective Date, we entered into the Fourth Amendment to the Credit Agreement ("the Fourth Amendment"), pursuant to which the Lenders waived the covenant that we not receive a report and opinion from our independent registered public accounting firm that contains a "going concern" or similar qualification with respect to our financial statements for the year ended December 31, 2023. Accordingly, while our independent registered public accounting firm's report contained in this Annual Report on Form 10-K contains a "going concern" explanatory paragraph, it does not constitute an event of default under the Credit Agreement.

The Fourth Amendment includes covenants that we will receive, (i) after the Effective Date and on or before April 15, 2024, at least \$25,000 in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or in non-refundable cash consideration from partnering transactions entered into after the Effective Date (so long as such partnering transactions would not require us or any of our subsidiaries to make any cash investments in connection with the partnering transactions and no such cash investments are made), and (ii) after the Effective Date and on or before November 30, 2024, at least \$50,000 (for the avoidance of doubt, inclusive of amounts previously counted toward the preceding clause (i)) in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent (as defined in the Credit Agreement) in its sole discretion) from partnering transactions entered into after the Effective Date. Failure to perform this covenant would constitute (A) a default under the Credit Agreement and (B) an event of default under the Credit Agreement, subject to a cure period, in the case of clause (i) of the preceding sentence, until May 15, 2024 (for the avoidance of doubt, failure to perform clause (ii) would constitute an immediate event of default under the Credit Agreement without any cure or grace period).

In addition, the Fourth Amendment provides that if we have not, after the Effective Date and on or before September 30, 2024, received at least \$40,000 in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the Effective Date, the "Minimum Liquidity Amount" (as defined in the Credit Agreement) that we are required to maintain at all times will increase to \$25,000 from \$15,000, unless and until we have received, after the Effective Date and on or before November 30, 2024, at least \$50,000 in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the Effective Date.

In connection with the Fourth Amendment, on the Effective Date, we granted new warrants to the Lenders to purchase up to 100 shares of our common stock (the "2024 Warrant Shares") at an exercise price of \$3.0723 per share (the "2024 Warrants"), which represents a 10% premium over the arithmetic average of the volume-weighted average

price of our common stock on the Nasdaq Capital Market during the 30 trading days preceding the Effective Date. The 2024 Warrants will expire on April 19, 2029 and may be net exercised at the holder's election.

In addition, pursuant to the Credit Agreement, the Lenders have the right to purchase shares of our common stock, so long as borrowings under the Credit Agreement are outstanding, for a purchase price of \$5,000 at a price per share equal to a 10% premium to the volume-weighted average price of the common stock over the 30 trading days prior to the Lenders' election to proceed with such equity investment (the "Equity Investment Right"). We entered into a registration rights agreement with the Lenders (as amended and restated in connection with the Second Amendment, the "Amended and Restated Registration Rights Agreement") and filed registration statements on Form S-3 to register the shares issuable upon exercise of the Original Warrants, 2023 Warrants and, if issued, the shares related to the Equity Investment Right, for resale. The maximum shares of our common stock issuable under the Original Warrants, the 2023 Warrants and the Lenders' Equity Investment Right is 5,852. On the Effective Date, we further amended and restated the Amended and Restated Registration Rights Agreement (the "Second Amended and Restated Registration Rights Agreement") with the Lenders. Pursuant to the Second Amended and Restated Registration Rights Agreement, we agreed to register the 2024 Warrant Shares for resale.

As part of entering into the Credit Agreement, OnkosXcel, a wholly owned subsidiary of BTI, granted the OnkosXcel Warrants to the Lenders to purchase 175 individual limited liability company units. The strike price of the OnkosXcel Warrants is formulaic based on the value of OnkosXcel at the time of exercise and can only be exercised upon occurrence of an equity related liquidity event for OnkosXcel of at least \$20,000. The exercise price per unit of the OnkosXcel Warrants will be set upon the earlier of the closing of the next sale (or series of related sales) by OnkosXcel of equity securities of OnkosXcel with aggregate proceeds of not less than \$20,000 to unrelated third parties (the "Next Equity Financing") at an exercise price per unit equal to a 10% premium over the price per unit of the equity securities sold by OnkosXcel in such Next Equity Financing or, in the event of a sale of OnkosXcel prior to the Next Equity Financing or an initial public offering constituting the Next Equity Financing, the lesser of (x) 75% of the fair value of the consideration to be paid for a unit upon the consummation of such transaction and (y) 150% of the valuation applicable to the initial profits units issued by OnkosXcel after the closing of the Credit Agreement. The OnkosXcel Warrants are transferable with approval from BTI, which cannot be unreasonably withheld, expire on April 19, 2029, and may be net exercised at the holder's election.

See Note 9, *Debt and Credit Facilities* and Note 19, *Subsequent Events* in the notes to consolidated financial statements included elsewhere in this Annual Report on Form 10-K for additional information relating to the Credit Agreement and RIFA, including applicable interest rates, payment obligations and certain restrictive and financial covenants thereunder. As of December 31, 2023, we were in compliance with all restrictive and financial covenants under the Credit Agreement, other than the "going concern" covenant described above as to which the Lenders have waived compliance.

ATM Program

In May 2021, we entered into the Sale Agreement with Jefferies pursuant to which we could offer and sell shares of our common stock, having an aggregate offering price of up to \$100,000, from time to time, through an "at the market offering" program under which Jefferies will act as sale agent. On November 1, 2023, we entered into an amendment to the Sale Agreement with Jefferies to increase the size of the "at the market offering" program; pursuant to the Sale Agreement, as amended, we can offer and sell shares of our common stock having an aggregate offering price of up to \$150,000 (excluding any shares of common stock already sold in the "at the market offering" program prior to the date of the amendment), from time to time, through an "at the market offering" program under which Jefferies will act as sale agent. During the year ended December 31, 2023, we sold 1,408 shares under the Sale Agreement for net proceeds of \$26,221. We did not sell any shares, and no proceeds were received under the Sale Agreement during the year ended December 31, 2022. From January 1, 2024 through March 19, 2024, we sold 647 shares under the Sale Agreement for gross proceeds of \$1,743 and received proceeds of \$1,691, net of issuance costs of \$52.

Cash Flows

	Year ended December 31,	
	2023	2022
Cash (used in) provided by:		
Operating activities	\$ (155,006)	\$ (135,341)
Investing activities	\$ (20)	\$ (139)
Financing activities	\$ 26,522	\$ 96,237

Operating Activities

Net cash used in operating activities for the year ended December 31, 2023 was \$155,006 and was primarily attributable to our net loss of \$179,053 and a \$3,219 decrease in accounts payable, accrued expenses, due to related parties, and other current liabilities, partially offset by a \$2,888 decrease in prepaid expenses, other current assets and other assets, \$18,614 in non-cash stock-based compensation, and a \$4,369 increase in accrued and payable in kind interest.

Net cash used in operating activities was \$135,341 for the year ended December 31, 2022, and was primarily attributable to our \$165,757 net loss, a \$1,985 increase in inventory of IGALMI™ and a \$3,905 increase in prepaid expenses, other current assets and other assets, partially offset by \$17,337 in non-cash stock-based compensation, a \$4,611 increase in accrued and payment in kind interest, and \$13,030 increase in accounts payable, accrued expenses, due to related parties and other current liabilities.

Investing Activities

Net cash used in investing activities for the year ended December 31, 2023, was \$20 and was primarily attributable to leasehold improvements.

Net cash used in investing activities was \$139 for the year ended December 31, 2022, and was primarily attributable to the purchase of equipment and leasehold improvements.

Financing Activities

Net cash provided by financing activities for the year ended December 31, 2023, was \$26,522 and was primarily attributable to net proceeds of \$26,221 from the sale of common stock under the Sale Agreement with Jefferies and net proceeds of \$508 from the exercise of stock options.

Net cash provided by financing activities for the year ended December 31, 2022, was \$96,237 and was primarily attributable to \$98,600 of proceeds received from the OFA Facilities, net of \$2,646 of debt issuance costs and proceeds of \$283 from the exercise of stock options.

Operating Capital and Capital Expenditure Requirements

We expect to continue to incur significant and increasing operating losses at least for the next several years as we commercialize IGALMI™ and as we expand our clinical trials of and seek marketing approval focused on BXCL501 while pursuing development of additional product candidates for BXCL502, BXCL701 and BXCL702. We expect to continue to incur net losses in the near term. Our net losses may fluctuate significantly from quarter-to-quarter and year-to-year, depending on the timing of our planned clinical trials and our expenditures on other research and development activities.

We have based our projections of operating capital requirements on assumptions that may prove to be incorrect, and we may use all of our available capital resources sooner than we expect. Because of the numerous risks and uncertainties associated with research, development, and commercialization of pharmaceutical products, we are unable to estimate the exact amount of our operating capital requirements. We anticipate that our expenses will increase substantially as we:

- continue our clinical development of our product candidates;

- conduct additional research and development with our product candidates;
- seek to identify, acquire, license, develop and commercialize product candidates;
- integrate acquired technologies into a comprehensive regulatory and product development strategy;
- maintain, expand and protect our intellectual property portfolio;
- hire scientific, clinical, quality control and administrative personnel and utilize professional services, including consultants, lawyers, and accountants;
- add operational, financial and management information systems and personnel, including personnel to support our drug development and commercial efforts;
- seek regulatory approvals for any product candidates that successfully complete clinical trials;
- fully develop a sales, marketing and distribution infrastructure and scale up external manufacturing capabilities to commercialize IGALMI™ and any product candidates for which we may obtain regulatory approval; and
- continue to operate as a public company.

We believe that our existing cash and cash equivalents as of December 31, 2023 will not be sufficient to enable us to fund operating expenses and capital expenditure requirements for at least the next 12 months from the date of the issuance of the consolidated financial statements included in this Annual Report on Form 10-K, including funding our ongoing research and development and commercialization efforts. In particular, after giving effect to the Reprioritization, we believe that our cash and cash equivalents of \$65.2 million as of December 31, 2023 will allow us to fund our operations and meet our liquidity requirements into mid-2024, assuming we are able to comply with the covenants under our Credit Agreement. We expect that we will need to obtain substantial additional funding to fund our ongoing operations. To the extent that we raise additional capital through the sale of common stock, convertible securities or other equity securities, the ownership interests of our existing stockholders may be materially diluted, and the terms of these securities could include liquidation or other preferences that could adversely affect the rights of our existing stockholders. In addition, debt financing, if available, would result in increased fixed payment obligations and may involve agreements that include restrictive covenants that limit our ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends, which could adversely impact our ability to conduct our business. Our failure to raise capital as and when needed would have a negative impact on our financial condition and our ability to pursue our business strategy. If we are unable to raise capital when needed or on attractive terms, we could be forced to significantly delay, scale back or discontinue the development or commercialization of our product candidates, seek collaborators at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available, and relinquish or license, potentially on unfavorable terms, our rights to our product candidates that we otherwise would seek to develop or commercialize ourselves. To date, we have continued research and development activities while managing our cash position. However, we can provide no assurance that will be successful in obtaining additional necessary resources and, if we are unable to fund our operations, including our clinical trials, we may need to focus on advancing fewer of our product candidates or otherwise consider strategic alternatives.

Contractual Obligations and Commitments

In April 2022, the Company signed a commercial supply agreement that requires minimum annual payments for the first three years of the agreement that in aggregate total \$10,000 for the three-year period and the minimum commitment for 2024 is \$5,000.

In February 2022, we signed a distribution agreement with a third party to distribute product related to BXCL501 in the U.S. The distributor will be paid defined fees for its services under the agreement, which can be terminated by either party for cause. The distribution agreement can also be terminated by us without cause, subject to payment of agreed termination fees.

BTI leases office space for its corporate headquarters at 555 Long Wharf Drive, New Haven, Connecticut (the “HQ Lease”). The HQ Lease expires in February 2026. The Company has an option to renew the HQ Lease for one additional five-year term. Payments under the HQ Lease are fixed. The Company has approximately \$837 of payments remaining under the HQ Lease. For additional details, see Note 13, *Leases* in the notes to consolidated financial statements included in this Annual Report on Form 10-K for additional information relating to the Company’s leases.

In addition, we are obligated to make quarterly interest payments under our Credit Agreement. For additional details, see Note 9, *Debt and Credit Facilities* in the notes to consolidated financial statements included in this Annual Report on Form 10-K for additional information relating to the Company’s debt payment obligations.

Critical Accounting Policies and Estimates

The preparation of our consolidated financial statements in conformity with U.S. GAAP requires management to exercise its judgment. We exercise considerable judgment with respect to establishing sound accounting policies and in making estimates and assumptions that affect the reported amounts of our assets and liabilities, our recognition of revenues and expenses, and disclosure of commitments and contingencies at the date of the consolidated financial statements.

On an ongoing basis, we evaluate our estimates and judgments. We base our estimates and judgments on a variety of factors including our historical experience, knowledge of our business and industry, current and expected economic conditions, the attributes of our products and the regulatory environment. We periodically re-evaluate our estimates and assumptions with respect to these judgments and modify our approach when circumstances indicate that modifications are necessary.

While we believe that the factors we evaluate provide us with a meaningful basis for establishing and applying sound accounting policies, we cannot guarantee that the results will always be accurate. Since the determination of these estimates requires the exercise of judgment, actual results could differ from such estimates.

We define critical accounting policies as those that are reflective of significant judgments and uncertainty and which may potentially result in materially different results under different assumptions and conditions. In applying these critical accounting policies, our management uses its judgment to determine the appropriate assumptions to be used in making certain estimates. These estimates are subject to an inherent degree of uncertainty. Our critical accounting policies are noted below.

Stock Compensation

The Company has granted stock options, restricted stock units and profit units to employees, directors, and consultants, as well as warrants to other third parties. For employee, director and consultant awards, the value of each grant is estimated on the date of grant using a Black-Scholes option-pricing model. The Black-Scholes pricing model incorporates the volatility of the price of BTI’s stock, the risk-free interest rate, the estimated life of the award, the closing market price of the Company’s stock and the exercise price of the award. Management bases the Company’s estimates of stock price volatility on the historical volatility of the Company’s common stock, as well as a peer group of comparable companies. However, these estimates are neither predictive nor indicative of the future performance of the Company’s stock. For purposes of the calculation, management assumed that no dividends would be paid during the life of the stock awards. The estimates utilized in the Black-Scholes calculation involve inherent uncertainties and the application of management judgment.

Research and Development Expenses

As part of the process of preparing the Company’s consolidated financial statements, BTI’s management is required to estimate prepaid and accrued expenses, including research and development expenses. This process involves reviewing open contracts, communicating with personnel to identify services that have been performed on behalf of the Company and estimating the level of service performed and the associated cost incurred for the service when BTI has not yet been invoiced or otherwise notified of the actual cost. The majority of the Company’s service providers invoice BTI monthly for services performed or when contractual milestones are met. BTI management makes estimates of prepaid and/or accrued expenses, including research and development expenses, as of each reporting date in the

Company's consolidated financial statements based on facts and circumstances known to management at that time. BTI periodically confirms the accuracy of its estimates with the service providers and makes adjustments, if necessary. Examples of estimated accrued research and development expenses include fees paid to contract research organizations ("CROs") in connection with clinical studies, amounts paid to contract manufacturing organizations, and fees paid to sites in connection with clinical trials.

The Company bases its expenses related to clinical studies on management's estimates of the services received and efforts expended pursuant to contracts with multiple CROs that conduct and manage clinical trial studies on our behalf. The financial terms of these agreements are subject to an initial negotiation, vary from contract to contract and may result in uneven payment flows. There may be instances in which payments made to vendors exceed the level of services provided and result in a prepayment of the clinical expense. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing certain service fees, BTI management estimates the time period over which services will be performed, enrollment of patients, number of sites activated and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from management's estimate, management will adjust the accrual or prepaid accordingly. Although the Company does not expect management's estimates to be materially different from amounts actually incurred, management's understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in BTI reporting amounts that are too high or too low in any particular period.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Foreign Exchange Risk

As of December 31, 2023, we had \$65,221 of cash and cash equivalents. Our cash and cash equivalents are primarily held in U.S. Government money market funds. We do not participate in any foreign currency hedging activities and have limited exposure to other derivative financial instruments, primarily resulting from the terms and conditions of the Credit Agreement. We did not recognize any significant exchange rate losses during the years ended December 31, 2023 and 2022, respectively.

We do not believe that our cash and cash equivalents have significant risk of default or illiquidity. While we believe our cash and cash equivalents do not contain material market risk, we cannot provide absolute assurance that in the future our investments will not be subject to adverse changes in market value. In addition, we maintain significant amounts of cash at one or more financial institutions that exceed federally insured limits. In the event of a failure of any of the financial institutions where we maintain our cash and cash equivalents, there can be no assurance that we will be able to access uninsured funds in a timely manner or at all.

Interest Rate Risk

The loans under the Credit Agreement bear interest at a variable annual rate of the Secured Overnight Financing Rate ("Term SOFR") (but not less than 2.5% or more than 5.5%) plus 7.5% payable quarterly. Consequently, we have material interest rate exposure due to our indebtedness, however this risk is hedged in part by the floor and ceiling on TERM SOFR rates.

Capital Market Risk

We currently do not have substantial product revenues and depend on funds raised through other sources. One source of funding includes future debt or equity offerings. Our ability to raise funds in this manner depends upon, among other things, capital market forces affecting our stock price, and on the state of the capital markets generally.

Item 8. Financial Statements and Supplementary Data

The financial statements required pursuant to this item and the related report of our independent auditor are included in Item 15 of this report beginning on page F-1 and are incorporated under this Item by reference. Our independent auditor for the years ended December 31, 2023 and 2022 was Ernst & Young LLP (PCAOB ID: 42), located in Stamford, Connecticut, USA.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer (our principal executive officer and principal financial officer, respectively), evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2023. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the rules and forms of the SEC. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company’s management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based on the evaluation of our disclosure controls and procedures as of December 31, 2023, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

Management’s Annual Report on Internal Controls Over Financial Reporting

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our management conducted an assessment of the effectiveness of our internal control over financial reporting based on the criteria set forth in “Internal Control-Integrated Framework (2013)” issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management concluded that, as of December 31, 2023, our internal control over financial reporting was effective.

Attestation Report of the Registered Public Accounting Firm

This Annual Report on Form 10-K does not include an attestation report of our independent registered public accounting firm on internal control over financial reporting as we are a “non-accelerated filer” as defined under SEC rules.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the three months ended December 31, 2023, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

(a) On March 20, 2024 (the “Effective Date”), we entered into a Fourth Amendment (the “Fourth Amendment”) to the Credit Agreement and Guaranty (as amended, the “Credit Agreement”) by and among the Company, as the borrower, certain subsidiaries of the Company from time to time party thereto as subsidiary guarantors, the lenders party thereto (the “Lenders”), and Oaktree Fund Administration LLC (“OFA”) as administrative agent (the “Administrative Agent”), pursuant to which the Lenders waived the covenant that we not receive a report and opinion from our independent registered public accounting firm that contains a “going concern” or similar qualification with respect to our financial statements for the year ended December 31, 2023. Accordingly, while our independent registered public accounting

firm's report contained in this Annual Report on Form 10-K contains a "going concern" explanatory paragraph, it does not constitute an event of default under the Credit Agreement.

The Fourth Amendment includes a covenant that we will receive, (i) after the Effective Date and on or before April 15, 2024, at least \$25,000,000 in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or in non-refundable cash consideration from partnering transactions entered into after the Effective Date (so long as such partnering transactions would not require us or any of our subsidiaries to make any cash investments in connection with the partnering transactions and no such cash investments are made), and (ii) after the Effective Date and on or before November 30, 2024, at least \$50,000,000 (for the avoidance of doubt, inclusive of amounts previously counted toward the preceding clause (i)) in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the Effective Date. Failure to perform this covenant would constitute (A) a default under the Credit Agreement and (B) an event of default under the Credit Agreement, subject to a cure period, solely in the case of clause (i) of the preceding sentence, until May 15, 2024 (for the avoidance of doubt, failure to perform clause (ii) of the preceding sentence would constitute an immediate event of default under the Credit Agreement without any cure or grace period).

In addition, the Fourth Amendment provides that if we have not, after the Effective Date and on or before September 30, 2024, received at least \$40,000,000 in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the Effective Date, the "Minimum Liquidity Amount" (as defined in the Credit Agreement) that we are required to maintain at all times will increase to \$25,000,000 from \$15,000,000, unless and until we have received, after the Effective Date and on or before November 30, 2024, at least \$50,000,000 in gross proceeds from the issuance of our common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the Effective Date.

In connection with the Fourth Amendment, on the Effective Date, we granted new warrants to the Lenders to purchase up to 100,000 shares of our common stock (the "2024 Warrant Shares") at an exercise price of \$3.0723 per share (the "2024 Warrants"), which represents a 10% premium over the arithmetic average of the volume-weighted average price of our common stock on the Nasdaq Capital Market during the 30 trading days preceding the Effective Date. The 2024 Warrants will expire on April 19, 2029 and may be net exercised at the holder's election. The 2024 Warrants were issued, and the 2024 Warrant Shares will be issued (if at all), in reliance upon an exemption from the registration requirements of the Securities Act of 1933, as amended (the "Securities Act"), contained in Section 4(a)(2) of the Securities Act. The Lenders have represented that they are acquiring the securities for investment only and not with a view towards, or for resale in connection with, the public sale or distribution thereof, and appropriate legends have been or will be affixed to the securities.

On the Effective Date, we amended and restated our Amended and Restated Registration Rights Agreement (the "Second Amended and Restated Registration Rights Agreement") with the Lenders, originally dated April 19, 2022. Pursuant to the Second Amended and Restated Registration Rights Agreement, we agreed to register the 2024 Warrant Shares for resale.

The foregoing summary of the Fourth Amendment, the 2024 Warrants and the Second Amended and Restated Registration Rights Agreement are qualified in their entirety by the complete text of such agreements, copies of which are filed hereto as Exhibit 10.22.4, 4.5 and 4.6, respectively.

(b) On December 14, 2023, Vimal Mehta, Chief Executive Officer, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 34,938 shares of the Company's common stock to cover taxes due in connection with the vesting of restricted stock units until December 31, 2024.

On December 14, 2023, Richard Steinhart, Chief Executive Officer, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 25,000 shares of the Company's common stock to cover taxes due in connection with the vesting of restricted stock units until December 31, 2024.

On December 14, 2023, Javier Rodriguez, Senior Vice President, Chief Legal Officer, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 25,000 shares of the Company's common stock to cover taxes due in connection with the vesting of restricted stock units until December 31, 2024.

On December 14, 2023, Matthew Wiley, Chief Commercial Officer, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 25,000 shares of the Company's common stock to cover taxes due in connection with the vesting of restricted stock units until December 31, 2024.

On December 14, 2023, Frank Yocca, Chief Scientific Officer, adopted a Rule 10b5-1 trading arrangement that is intended to satisfy the affirmative defense of Rule 10b5-1(c) for the sale of up to 25,000 shares of the Company's common stock to cover taxes due in connection with the vesting of restricted stock units until December 31, 2024.

Item 9C. Disclosure Regarding Foreign Jurisdictions That Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers, and Corporate Governance.

INFORMATION ABOUT OUR DIRECTORS & EXECUTIVE OFFICERS

The following information with respect to our Board of Directors (the "Board") and executive officers is presented as of March 22, 2024:

<u>Name</u>	<u>Age</u>	<u>Position at BioXcel</u>	<u>Principal Employment</u>
Vimal Mehta, Ph.D.	63	Chief Executive Officer and President, and Director	Same
Richard Steinhart	66	Senior Vice President and Chief Financial Officer	Same
Matthew Wiley	52	Senior Vice President and Chief Commercial Officer	Same
Frank Yocca, Ph.D.	68	Senior Vice President and Chief Scientific Officer	Same
Vincent O'Neill, M.D.	54	Executive Vice President, Chief of Product Development and Medical Officer	Same
Javier Rodriguez	52	Senior Vice President, Chief Legal Officer and Corporate Secretary	Same
Peter Mueller, Ph.D.	67	Chairman of the Board	President at Mueller Health Foundation, a private foundation tackling globally lethal infectious diseases
June Bray	70	Director	Former Senior Vice President, Global Regulatory Affairs and Medical Writing at Allergan, Inc., a pharmaceutical company
Sandeep Laumas, M.D.	55	Director	Chief Business Officer and Chief Financial Officer at Instil Bio, Inc., a pharmaceutical company
Michael Miller	66	Director	Former Executive Vice President, U.S. Commercial at Jazz Pharmaceuticals, Inc., a pharmaceutical company
Michael Votruba, M.D.	58	Director	Director at the Gradus/RSJ Life Sciences Fund, a dedicated fund

The information required by this Item is incorporated herein by reference to the information that will be contained in our proxy statement related to our annual meeting of stockholders to be held in 2024 (the "2024 Annual Meeting of Stockholders"), which we intend to file with the SEC within 120 days of the year ended December 31, 2023.

Item 11. Executive Compensation

The information required by this Item is incorporated herein by reference to the information that will be contained in our proxy statement related to the 2024 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the year ended December 31, 2023.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is incorporated herein by reference to the information that will be contained in our proxy statement related to the 2024 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the year ended December 31, 2023.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is incorporated herein by reference to the information that will be contained in our proxy statement related to the 2024 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the year ended December 31, 2023.

Item 14. Principal Accounting Fees and Services

The information required by this Item is incorporated herein by reference to the information that will be contained in our proxy statement related to the 2024 Annual Meeting of Stockholders, which we intend to file with the SEC within 120 days of the year ended December 31, 2023.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) The following documents are filed as part of this report:

(1) Financial Statements:

Report of Independent Registered Public Accounting Firm (PCAOB ID: 00042)	F-2
Consolidated Balance Sheets as of December 31, 2023 and 2022	F-3
Consolidated Statements of Operations for the Years Ended December 31, 2023 and 2022	F-4
Consolidated Statements of Changes in Stockholders' Equity for the Years Ended December 31, 2023 and 2022	F-5
Consolidated Statements of Cash Flows for the Years Ended December 31, 2023 and 2022	F-6
Notes to Consolidated Financial Statements	F-7

(2) Financial Statement Schedules:

All financial statement schedules have been omitted because they are not applicable, not required or the information required is shown in the financial statements or the notes thereto.

(3) Exhibits.

<u>Exhibit Number</u>	<u>Description</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed/ Furnished Herewith</u>
3.1	Amended and Restated Certificate of Incorporation	10-Q	001-38410	3.1	08/10/2021	
3.2	Amended and Restated Bylaws	8-K	001-38410	3.2	03/13/2018	
4.1	Description of the Registrant's Securities Registered Under Section 12 of the Exchange Act					*
4.2	Specimen Stock Certificate evidencing the shares of common stock	S-1/A	333-222990	4.2	02/26/2018	

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<u>Exhibit Number</u>	<u>Description</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed/ Furnished Herewith</u>
4.3	Form of Amended and Restated Warrant Agreement, dated December 5, 2023	8-K	001-38410	4.1	12/06/2023	
4.4	Form of Warrant Agreement, dated December 5, 2023	8-K	001-38410	4.2	12/06/2023	
4.5	Form of Warrant Agreement, dated March 20, 2024					*
4.6	Second Amended and Restated Registration Rights Agreement, between the Company and the parties thereto, dated March 20, 2024.					*
10.1+	Second Amended and Restated Separation and Shared Services Agreement, dated March 6, 2020, by and between BioXcel Corporation and BioXcel Therapeutics, Inc.	10-K	001-38410	10.2	03/09/2020	
10.2#	First Amendment to Second Amended and Restated Separation and Shared Services Agreement, dated March 3, 2021, by and between BioXcel LLC and BioXcel Therapeutics Inc.	10-K	001-38410	10.3	03/12/2021	
10.3	Second Amendment to Second Amended and Restated Separation and Shared Services Agreement, dated March 3, 2021, by and between BioXcel LLC and BioXcel Therapeutics Inc.	10-Q	001-38410	10.2	05/09/2022	
10.4#	Amended and Restated Asset Contribution Agreement, effective November 7, 2017, by and between BioXcel LLC and BioXcel Therapeutics, Inc.	S-1/A	333-222990	10.2	02/12/2018	
10.5	Lease Agreement, dated as of August 20, 2018, by and between Fusco Harbour Associates, LLC, as Landlord, and BioXcel Therapeutics, Inc., as Tenant	8-K	001-38410	10.1	08/23/2018	
10.6	First Amendment, dated August 19, 2020, to Lease Agreement, dated as of August 20, 2018, by and between Fusco Harbour Associates, LLC, as Landlord, and BioXcel Therapeutics, Inc., as Tenant	10-Q	001-38410	10.1	11/12/2020	
10.7@	2017 Equity Incentive Plan	S-1/A	333-222990	10.3	02/12/2018	

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<u>Exhibit Number</u>	<u>Description</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed/ Furnished Herewith</u>
10.8@	Form of Incentive Stock Option Agreement under the 2017 Equity Incentive Plan	S-1/A	333-222990	10.4	02/12/2018	
10.9@	Form of Non-Statutory Stock Option Agreement under the 2017 Equity Incentive Plan	S-1/A	333-222990	10.5	02/12/2018	
10.10@	BioXcel Therapeutics, Inc. 2020 Incentive Award Plan and forms of award agreements thereunder	10-Q	001-38410	10.1	08/14/2020	
10.11@	BioXcel Therapeutics, Inc. 2020 Employee Stock Purchase Plan	10-Q	001-38410	10.2	08/14/2020	
10.12@	Form of Indemnification Agreement with directors and executive officers	S-1/A	333-222990	10.6	02/12/2018	
10.13@	Employment Agreement, dated March 7, 2018 by and between BioXcel Therapeutics, Inc. and Vimal Mehta	8-K	001-38410	10.1	03/13/2018	
10.14@	Employment Agreement, dated February 12, 2018, by and between BioXcel Therapeutics, Inc. and Frank Yocca	S-1/A	333-222990	10.11	02/12/2018	
10.15@	Employment Agreement, effective October 2, 2017, by and between BioXcel Therapeutics, Inc. and Richard Steinhart	S-1/A	333-222990	10.12	02/12/2018	
10.16@	Employment Agreement, dated June 1, 2018, by and between BioXcel Therapeutics, Inc. and Dr. Vincent O'Neill, M.D.	8-K	001-38410	10.1	06/07/2018	
10.17@	Employment Agreement between Javier Rodriguez and BioXcel Therapeutics, Inc., dated February 15, 2021.	10-K	001-38410	10.19	03/12/2021	
10.18@	Employment Agreement between Matthew Wiley and BioXcel Therapeutics, Inc., dated January 12, 2022.	10-K	001-38410	10.20	03/11/2022	
10.19@	Employment Agreement BioXcel Therapeutics, Inc. and Vincent O'Neill, M.D. dated July 1, 2022	10-Q	001-38410	10.2	05/08/2023	
10.20@	Non-Employee Director Compensation Program	10-Q	001-38410	10.4	08/11/2022	
10.21	BioXcel Trademark License Agreement, between the Company and BioXcel LLC	10-Q	001-38410	10.1	05/09/2022	

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<u>Exhibit Number</u>	<u>Description</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed/ Furnished Herewith</u>
10.22+&	Credit Agreement and Guaranty, by and among BioXcel Therapeutic, Inc., Oaktree Fund Administration, LLC, the Subsidiary Guarantors from time to time party thereto and the Lenders from time to time party thereto, dated April 19, 2022	10-Q	001-38410	10.1	08/11/2022	
10.22.1+&	Waiver and First Amendment to Credit Agreement and Guaranty, by and between the Company, the lenders party thereto and Oaktree Fund Administration LLC dated November 13, 2023.	10-Q	001-38410	10.2	11/14/2023	
10.22.2&	Second Amendment to Credit Agreement and Guaranty and Termination of Revenue Interest Financing Agreement dated December 5, 2023, to the Credit Agreement and Guaranty, dated April 19, 2022, by and among the Company, as the borrower, certain subsidiaries of the Company from time to time party thereto as subsidiary guarantors, the lenders party thereto, and Oaktree Fund Administration LLC, as administrative agent (as amended)	8-K	001-38410	10.1	02/08/2024	
10.22.3&	Third Amendment to Credit Agreement and Guaranty dated February 12, 2024, to the Credit Agreement and Guaranty, dated April 19, 2022, by and among the Company, as the borrower, certain subsidiaries of the Company from time to time party thereto as subsidiary guarantors, the lenders party thereto, and Oaktree Fund Administration LLC, as administrative agent (as amended)	8-K	001-38410	10.1	02/12/2024	
10.22.4	Fourth Amendment to Credit Agreement and Guaranty, dated March 20, 2024, to the Credit Agreement and Guaranty, dated April 19, 2022, by and among the Company, as the borrower, certain subsidiaries of the Company from time to time party thereto as subsidiary guarantors, the lenders party thereto, and Oaktree Fund Administration LLC, as administrative agent (as amended)					*
10.23+&	Commercial Supply Agreement, between ARx, LLC and BioXcel Therapeutics, Inc., dated April 1, 2022	10-Q	001-38410	10.3	08/11/2022	

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<u>Exhibit Number</u>	<u>Description</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed/ Furnished Herewith</u>
10.24@	OnkosXcel Therapeutics, LLC and OnkosXcel Employee Holdings, LLC Management Incentive Plan	8-K	001-38410	10.1	08/19/2022	
10.25@	Form of Profits Interest Award Agreement under the Management Incentive Plan	8-K	001-38410	10.2	08/19/2022	
10.26@	Form of RSU Agreement pursuant to the OnkosXcel Therapeutics, LLC and OnkosXcel Employee Holdings, LLC Management Incentive Plan.	10-Q	001-38410	10.3	05/08/2023	
10.27+	Non-Compete Agreement, by and among the Company, Dr. Krishnan Nandabalan, InveniAI LLC, Invea Therapeutics, Inc. and the other parties thereto, dated September 19, 2023.	8-K	001-38410	10.1	09/25/2023	
21.1	Subsidiaries of BioXcel Therapeutics, Inc.					*
23.1	Consent of Ernst & Young LLP					*
31.1	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					*
31.2	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					*
32.1	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					**
32.2	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					**
97.1	Policy for Recovery of Erroneously Awarded Compensation					*
101.INS	Inline eXtensible Business Reporting Language (XBRL) Instance Document – the instance document does not appear in the Interactive Data File because its XBRL					*

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<u>Exhibit Number</u>	<u>Description</u>	<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>	<u>Filed/ Furnished Herewith</u>
	tags are embedded within the Inline XBRL document					
101.SCH	Inline XBRL Taxonomy Extension Schema Document					*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					*
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					*

@ Indicates a management contract or any compensatory plan, contract or arrangement.

+ Portions of this exhibit have been omitted pursuant to Item 601(b)(10)(iv) of Regulation S-K.

Confidential treatment has been granted for portions omitted from this exhibit and those portions have been separately filed with the Securities and Exchange Commission.

& Annexes, schedules, and certain exhibits have been omitted pursuant to Item 601(a)(5)(b)(2) of Regulation S-K. The Registrant hereby agrees to furnish supplementally a copy of any omitted annex, schedule or exhibit to the SEC upon request.

* Filed herewith.

** Furnished herewith.

Item 16. Form 10-K Summary

Not applicable

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

BioXcel Therapeutics, Inc.

Dated: March 22, 2024

By:
/s/ Vimal Mehta
Vimal Mehta, Ph.D.
Chief Executive Officer
(Principal Executive Officer)

Dated: March 22, 2024

By:
/s/ Richard Steinhart
Richard Steinhart
Chief Financial Officer
(Principal Financial Officer)

Signature	Title	Date
<u>/s/ Vimal Mehta</u> Vimal Mehta, Ph.D.	Chief Executive Officer and Director (Principal Executive Officer)	March 22, 2024
<u>/s/ Richard Steinhart</u> Richard Steinhart	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 22, 2024
<u>/s/ Peter Mueller</u> Peter Mueller, Ph.D.	Chairman of the Board of Directors	March 22, 2024
<u>/s/ June Bray</u> June Bray	Director	March 22, 2024
<u>/s/ Sandeep Laumas</u> Sandeep Laumas, M.D.	Director	March 22, 2024
<u>/s/ Michael Miller</u> Michael Miller	Director	March 22, 2024
<u>/s/ Michal Votruba</u> Michal Votruba	Director	March 22, 2024

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of BioXcel Therapeutics, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of BioXcel Therapeutics, Inc. (the Company) as of December 31, 2023 and 2022, the related consolidated statements of operations, changes in stockholders' (deficit) equity and cash flows for the years then ended, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2023 and 2022, and the results of its operations and its cash flows for the years then ended in conformity with U.S. generally accepted accounting principles.

The Company's Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has suffered recurring losses from operations, has used significant cash in operations and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the Audit Committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgment. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosure to which it relates.

Clinical trial expense and related accrued clinical trial expenses

*Description of
the Matter*

As discussed in Note 3 to the consolidated financial statements, at the end of the reporting period, the Company estimates the progress toward completion of the research or development objectives, and depending on the amount and timing of payments to the service providers may record net prepaid or accrued expense for associated research and development costs. As of December 31, 2023, research and development expenses and accrued research and development expenses includes clinical trial expenses and related accrued clinical trial expenses.

*How We
Addressed the
Matter in Our
Audit*

Auditing the Company's clinical trial expenses and related accrued clinical trial expenses was complex because the evidence is accumulated from multiple third-party service providers and in certain circumstances, the nature and amount of services that have been rendered during the reporting period does not correspond to the timing and pattern of vendor invoicing.

To test the clinical trial expenses and accrued clinical trial expenses, our audit procedures included, among others, evaluating the significant assumptions used by management to estimate the clinical trial expenses and testing the accuracy and completeness of the underlying data. To test the significant assumptions, we inspected the Company's contracts with third-party service providers, corroborated the progress of clinical trials and other research and development projects with the Company's internal personnel that oversee these activities, and obtained information directly from third-party service providers which included the third parties' estimates of clinical trial costs incurred to date. We also examined invoices received from vendors and cash disbursements made to third-party service providers subsequent to December 31, 2023 to assess the completeness of the recorded accruals.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2021.

Stamford, Connecticut
March 22, 2024

BIOXCEL THERAPEUTICS, INC.
CONSOLIDATED BALANCE SHEETS
(amounts in thousands, except per share amounts)

	December 31, 2023	December 31, 2022
ASSETS		
Current assets		
Cash and cash equivalents	\$ 65,221	\$ 193,725
Accounts receivable, net	71	248
Inventory	1,991	1,985
Prepaid expenses	2,782	3,067
Other current assets	2,078	3,843
Total current assets	\$ 72,143	\$ 202,868
Property and equipment, net	784	1,084
Operating lease right-of-use assets	688	976
Other assets	87	925
Total assets	\$ 73,702	\$ 205,853
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities		
Accounts payable	\$ 13,654	\$ 10,228
Accrued expenses	12,424	18,669
Due to related parties	107	422
Accrued interest	736	3,175
Other current liabilities	346	404
Total current liabilities	\$ 27,267	\$ 32,898
Long-term portion of operating lease liabilities	440	786
Derivative liabilities	1,905	2,343
Long-term debt	100,598	93,051
Total liabilities	\$ 130,210	\$ 129,078
Commitments and contingencies (Note 18)		
Stockholders' (deficit) equity		
Preferred stock, \$0.001 par value, 10,000 shares authorized; no shares issued and outstanding as of December 31, 2023 and December 31, 2022	\$ —	\$ —
Common stock, \$0.001 par value, 100,000 shares authorized as of December 31, 2023 and December 31, 2022; 29,930 and 28,147 shares issued and outstanding as of December 31, 2023 and December 31, 2022, respectively	30	28
Additional paid-in-capital	534,060	488,292
Accumulated deficit	(590,598)	(411,545)
Total stockholders' (deficit) equity	\$ (56,508)	\$ 76,775
Total liabilities and stockholders' (deficit) equity	\$ 73,702	\$ 205,853

The accompanying notes are an integral part of these consolidated financial statements.

BIOXCEL THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(amounts in thousands, except per share amounts)

	<u>Year ended December 31,</u>	
	<u>2023</u>	<u>2022</u>
Revenues		
Product revenue, net	\$ 1,380	\$ 375
Operating expenses		
Cost of goods sold	\$ 1,260	\$ 20
Research and development	84,326	91,239
Selling, general and administrative	83,413	68,761
Restructuring costs	4,163	—
Total operating expenses	\$ 173,162	\$ 160,020
Loss from operations	\$ (171,782)	\$ (159,645)
Other expense (income)		
Interest expense	13,314	8,213
Interest income	(5,649)	(2,528)
Other (income) expense, net	(394)	427
Net loss	\$ (179,053)	\$ (165,757)
Basic and diluted net loss per share attributable to common stockholders	\$ (6.15)	\$ (5.92)
Weighted average shares outstanding - basic and diluted	29,129	28,015

The accompanying notes are an integral part of these consolidated financial statements.

BIOXCEL THERAPEUTICS, INC.**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' (DEFICIT) EQUITY**

(amounts in thousands)

	Common Stock		Additional Paid in Capital	Accumulated Deficit	Total
	Shares	Amount			
Balance as of January 1, 2022	27,980	\$ 28	\$ 467,427	\$ (245,788)	\$ 221,667
Issuance of stock purchase warrants	—	—	3,245	—	3,245
Stock-based compensation	—	—	17,337	—	17,337
Exercise of stock options	167	—	283	—	283
Net loss	—	—	—	(165,757)	(165,757)
Balance as of December 31, 2022	28,147	\$ 28	\$ 488,292	\$ (411,545)	\$ 76,775
Issuance of common stock, net of offering costs	1,408	2	26,219	—	26,221
Stock-based compensation	—	—	18,614	—	18,614
Exercise of stock options	310	—	508	—	508
Repricing of stock purchase warrants	—	—	254	—	254
Issuance of stock purchase warrants	—	—	200	—	200
Vesting of restricted stock units, net of employee tax obligations	65	—	(27)	—	(27)
Net loss	—	—	—	(179,053)	(179,053)
Balance as of December 31, 2023	29,930	\$ 30	\$ 534,060	\$ (590,598)	\$ (56,508)

The accompanying notes are an integral part of these consolidated financial statements.

BIOXCEL THERAPEUTICS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

(amounts in thousands)

	Year ended December 31,	
	2023	2022
OPERATING CASH FLOW ACTIVITIES:		
Net loss	\$ (179,053)	\$ (165,757)
Reconciliation of net loss to net cash used in operating activities		
Depreciation	318	327
Accretion of debt discount and amortization of financing costs	1,373	860
Change in fair value of derivative liabilities	(438)	389
Stock-based compensation expense	18,614	17,337
Payable-in-kind interest on Credit Agreement	1,872	807
Loss on disposal of equipment	2	22
Operating lease right-of-use assets	288	271
Changes in operating assets and liabilities		
Accounts receivable	177	(248)
Inventory	(6)	(1,985)
Prepaid expenses, other current assets and other assets	2,888	(3,905)
Accounts payable, accrued expenses, due to related parties, and other current liabilities	(3,219)	13,030
Accrued interest	2,497	3,804
Operating lease liabilities	(319)	(293)
Net cash used in operating activities	<u>\$ (155,006)</u>	<u>\$ (135,341)</u>
INVESTING CASH FLOW ACTIVITIES:		
Purchases of equipment and leasehold improvements	\$ (20)	\$ (139)
Net cash used in investing activities	<u>\$ (20)</u>	<u>\$ (139)</u>
FINANCING CASH FLOW ACTIVITIES:		
Proceeds from long-term debt	\$ —	\$ 98,600
Debt issuance costs	(180)	(2,646)
Proceeds from issuance of common stock	27,032	—
Offering costs for common stock issuance	(811)	—
Payment of employee tax obligations related to vesting restricted stock units	(27)	—
Exercise of stock options	508	283
Net cash provided by financing activities	<u>\$ 26,522</u>	<u>\$ 96,237</u>
Net decrease in cash and cash equivalents	\$ (128,504)	\$ (39,243)
Cash and cash equivalents, beginning of the period	193,725	232,968
Cash and cash equivalents, end of the period	<u>\$ 65,221</u>	<u>\$ 193,725</u>
Supplemental cash flow information:		
Issuance of stock purchase warrants	\$ 200	\$ 3,245
Repricing of stock purchase warrants	\$ 254	\$ —
Interest paid	\$ 7,551	\$ 2,697
Conversion of accrued interest to long-term debt	\$ 767	\$ —

The accompanying notes are an integral part of these consolidated financial statements.

BIOXCEL THERAPEUTICS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(amounts in thousands, except per share amounts and where otherwise noted)

Note 1. Nature of the Business

BioXcel Therapeutics, Inc. (“BTI” or the “Company”) is a biopharmaceutical company utilizing artificial intelligence (“AI”) approaches to develop transformative medicines in neuroscience and immuno-oncology. The Company is focused on utilizing cutting-edge technology and innovative research to develop high-value therapeutics aimed at transforming patients’ lives. BTI employs a unique AI platform to reduce therapeutic development costs and potentially accelerate timelines. The Company’s approach leverages existing approved drugs and/or clinically evaluated product candidates together with big data and proprietary machine learning algorithms to identify new therapeutic indices. BTI management believes this differentiated approach has the potential to reduce the expense and time associated with drug development in diseases with substantial unmet medical needs.

As used in these consolidated financial statements, unless otherwise specified or the context otherwise requires, the terms “BioXcel LLC” refers to the Company’s former parent and current significant stockholder, BioXcel LLC and, its predecessor, BioXcel Corporation. “OnkosXcel” refers to BTI’s wholly owned subsidiary for its advanced immuno-oncology assets, OnkosXcel Therapeutics, LLC.

On April 6, 2022, BTI announced that the United States (“U.S.”) Food and Drug Administration (“FDA”) approved IGALMI™ (dexmedetomidine or “Dex”) sublingual film for the acute treatment of agitation associated with schizophrenia or bipolar I or II disorder in adults. IGALMI™ is approved to be self-administered by patients under the supervision of a health care provider. On July 6, 2022, BTI announced that IGALMI™, was commercially available in doses of 120 and 180 micrograms.

The Company’s most advanced clinical development program is BXCL501. In indications other than those approved by the FDA as IGALMI™, BXCL501 is an investigational proprietary, orally dissolving, film formulation of Dex for the treatment of agitation associated with psychiatric and neurological disorders.

The Company’s advanced immuno-oncology asset, BXCL701, is an investigational, orally administered systemic innate immune activator for the treatment of a rare form of prostate cancer and advanced solid tumors that are refractory or treatment naïve to checkpoint inhibitors.

BTI was incorporated under the laws of the State of Delaware on March 29, 2017. The Company’s principal office is in New Haven, Connecticut.

Note 2. Basis of Presentation

The accompanying consolidated financial statements include those of the Company and its subsidiaries after elimination of all intercompany accounts and transactions and have been prepared in conformity with United States (“U.S.”) Generally Accepted Accounting Principles (“GAAP”).

The accompanying consolidated financial statements include the accounts for the Company and all entities where BTI has a controlling financial interest after elimination of all intercompany accounts and transactions and have been prepared in conformity with U.S. GAAP.

As of December 31, 2023, the Company had cash and cash equivalents of \$65,221 and an accumulated deficit of \$590,598. BTI has incurred substantial net losses and negative cash flows from operating activities in nearly every fiscal period since inception and expects this trend to continue for the foreseeable future. The Company recognized net losses of \$179,053 and \$165,757 for the years ended December 31, 2023 and 2022, respectively, and had net cash used in operating activities of \$155,006 and \$135,341 for the years ended December 31, 2023 and 2022, respectively.

Management is required at each reporting period to evaluate whether there are conditions and events, considered in the aggregate, that raise substantial doubt about an entity's ability to continue as a going concern within one year after the date that the financial statements are issued.

The Company's history of significant losses, its negative cash flows from operations, potential near-term increased covenant-driven amortization payments under its Credit Agreement, its limited liquidity resources currently on hand, and its dependence on its ability to obtain additional financing to fund its operations after the current resources are exhausted, about which there can be no certainty, have resulted in management's assessment that there is substantial doubt about the Company's ability to continue as a going concern for a period of at least 12 months from the issuance date of the financial statements included in this Annual Report on Form 10-K.

This going concern evaluation takes into consideration the potential mitigating effect of management's Reprioritization (as defined in Note 4, Restructuring). When substantial doubt exists, management evaluates whether the mitigating effect of its plans sufficiently alleviates the substantial doubt about the Company's ability to continue as a going concern. The mitigating effect of management's plans, however, is only considered if both (i) it is probable that the plans will be effectively implemented within one year after the date that the financial statements are issued and (ii) it is probable that the plans, when implemented, will mitigate the relevant conditions or events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued. Generally, to be considered probable of being effectively implemented, the plans need to be approved by the Company's Board of Directors. The Company's Reprioritization was approved by the Board of Directors on August 8, 2023; however, such plans will not mitigate the entity's ability to continue as a going concern within one year after the date that the financial statements are issued.

The accompanying consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business and does not include any adjustments that may result from the outcome of this uncertainty. The going concern analysis does not consider possible future amendments to or restructuring of the Credit Agreement (as defined in Note 9, Debt and Credit Facilities) or other potential sources of debt or equity capital.

Successful completion of the Company's development programs and, ultimately, the attainment of profitable operations are dependent upon future events, including obtaining adequate financing to support the Company's cost structure and operating plan. Management's plans to improve the Company's liquidity and reduce its operating expenses and capital requirements include, among other things, pursuing one or more of the following steps to raise additional capital, none of which can be guaranteed or are entirely within the Company's control:

- raise funding through the sale of the Company's equity securities;
- raise funding through third-party investments in or other strategic options for OnkosXcel;
- raise funding through debt financing and/or restructuring of its existing OFA Facilities;
- establish collaborations with potential partners to advance the Company's product pipeline;
- establish collaborations with potential marketing partners;
- reduce overhead and headcount to focus on core priorities; and/or
- any combination of the foregoing.

If the Company is unable to raise capital when needed or on acceptable terms, or if it is unable to procure collaboration arrangements to advance its programs, the Company would be forced to discontinue some of its operations or develop and implement a plan, beyond its Reprioritization initiatives, to further extend payables, reduce overhead, scale back or cease some or all of its revised operating plan until sufficient additional capital is raised to support further operations.

Note 3. Summary of Significant Accounting Policies

Use of Estimates

The preparation of financial statements in accordance with U.S. GAAP requires management to make estimates and assumptions that affect amounts reported in the consolidated financial statements and notes thereto. Although these estimates are based on the Company's knowledge of current events and actions it may undertake in the future, actual results may ultimately materially differ from these estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less at the date of purchase to be cash equivalents. As of December 31, 2023 and 2022, cash equivalents were comprised primarily of money market funds. Cash and cash equivalents held at financial institutions may at times exceed federally insured amounts. BTI management believes it mitigates such risk by investing in or through major financial institutions.

Accounts Receivable, Net

Accounts receivable arise from sales of IGALMI™ and represent amounts due from distributors. Payment terms generally range from 30 to 75 days from the date of the sale transaction, and accordingly, do not involve a significant financing component. Receivables from product sales are recorded net of allowances which generally include distribution fees, prompt payment discounts, chargebacks, and credit losses. Allowances for distribution fees, prompt payment discounts and chargebacks are based on contractual terms. The Company estimated the current expected credit losses of its accounts receivable by assessing the risk of loss and available relevant information about collectability, existing contractual payment terms, actual payment patterns of its customers, individual customer circumstances, and reasonable and supportable forecast of economic conditions expected to exist throughout the contractual life of the receivable. Based on its assessment, as of December 31, 2023, the Company determined that an allowance for credit losses was not required.

Concentrations of Credit Risk

The Company sells IGALMI™ through a drop-ship program under which orders from hospitals and similar health care institutions are processed through wholesalers, but shipments of the product are sent directly to the individual hospitals and similar health care institutions. BTI also contracts directly with intermediaries such as group purchasing organizations ("GPOs"). All trade accounts receivables are due from the distributor that fulfills orders on behalf of the Company.

Inventory

Inventory is stated at the lower of cost or net realizable value. Cost of inventory is determined on a first-in, first-out basis.

BTI capitalizes inventory costs associated with the Company's products prior to regulatory approval, when, based on management's judgment, future commercialization is considered probable and the future economic benefit is expected to be realized; otherwise, such costs are expensed as research and development expense in the Consolidated Statements of Operations.

The Company performs an assessment of the recoverability of capitalized inventory during each reporting period and writes down any excess and obsolete inventories to their estimated realizable value in the period in which the impairment is first identified. Such impairment charges, should they occur, will be recorded within Cost of goods sold in the Consolidated Statements of Operations. The determination of whether inventory costs will be realizable requires estimates by management. If actual market conditions are less favorable than projected, write-downs of inventory may be required.

Deferred Initial Public Offering Costs

Deferred initial public offering costs of \$2,570, consisted of legal, accounting, and other costs that were directly related to the Company's proposed initial public offering of OnkosXcel. These costs were charged to the Consolidated Statements of Operations during the year ended December 31, 2023 as the initial public offering was delayed for an extended period of time. The costs were recorded as Selling, general and administrative expenses.

Property and Equipment

Property and equipment are recorded at cost and depreciated over the shorter of their remaining lease term or their estimated useful life on a straight-line basis as follows:

Equipment	3-5 years
Furniture	7 years
Leasehold improvements	Lesser of life of improvement or lease term

Expenditures for maintenance and repairs which do not improve or extend the useful lives of the respective assets are expensed as incurred. When assets are sold or retired, the related cost and accumulated depreciation are removed from their respective accounts and any resulting gain or loss is included within Selling, general and administrative expenses in the Consolidated Statements of Operations.

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to undiscounted future net cash flows expected to be generated from its use and disposition. Impairment charges are recognized at the amount by which the carrying amount of an asset exceeds the fair value of the asset. Assets to be disposed of are reported at the lower of the carrying amount or the fair value less costs to sell.

Leases

The Company determines if an arrangement is a lease at inception. Operating leases are included in operating lease right-of-use ("ROU") assets, other current liabilities, and the long-term portion of operating lease liabilities in the Consolidated Balance Sheets.

ROU assets represent BTI's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease ROU assets and lease liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The Company uses the implicit rate when readily determinable. As BTI's leases do not provide an implicit rate, it used an incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. The operating lease ROU asset also includes any prepaid lease payments made and excludes lease incentives. The Company's leases may include options to extend the lease; such options are included in determining the lease term when it is reasonably certain that BTI will exercise that option. Lease expense is recognized on a straight-line basis over the lease term.

Debt and Detachable Warrants

Detachable warrants are evaluated for classification as either equity instruments, derivative liabilities, or liabilities depending on the specific terms of the warrant agreement. In circumstances in which debt is issued with equity-classified warrants, the proceeds from the issuance of debt are first allocated to the debt and then the warrants at their estimated fair values. The portion of the proceeds allocated to the warrants are accounted for as paid-in capital and a debt discount. The remaining proceeds, as further reduced by discounts created by the bifurcation of any embedded derivatives, are allocated to the debt. Detachable warrants classified as derivative liabilities are accounted for as indicated under "*Derivative Assets and Liabilities*" section of this Note and as a debt discount. The Company accounts for debt as liabilities measured at amortized cost and amortizes the resulting debt discount from the allocation of proceeds to interest expense using the effective interest method over the expected term of the debt instrument. The Company considers

whether there are any embedded features in debt instruments that require bifurcation and separately accounts for them as derivative financial instruments.

The Company entered into financing arrangements, the terms of which involve significant assumptions and estimates, including future net product sales, in determining interest expense, amortization period of the debt discount, as well as the classification between current and long-term portions. In estimating future net product sales, the Company assesses prevailing market conditions using various external market data against the Company's anticipated sales and planned commercial activities. Consequently, the Company imputes interest on the carrying value of the debt and records interest expense using an imputed effective interest rate. The Company reassesses the expected payments during each reporting period and accounts for any changes through an adjustment to the effective interest rate on a prospective basis, with a corresponding impact to the classification of the Company's current and long-term portions of the debt.

Derivative Assets and Liabilities

Derivative assets and liabilities are recorded on the Company's Consolidated Balance Sheets at their fair value on the date of issuance and are revalued on each balance sheet date until such instruments are settled or expire, with changes in the fair value between reporting periods recorded as other income or expense within Other (income) expense, net in the Consolidated Statements of Operations.

The Company does not use derivative instruments for speculative purposes or to hedge exposures to cash-flow or market risks. Certain financing facilities entered into by the Company include freestanding financial instruments and/or embedded features that require separate accounting as derivative assets and/or liabilities.

In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible.

Revenue Recognition

The Company's revenues consist of product sales of IGALMI™.

BTI recognizes revenue when its customers obtain control of promised goods or services, in an amount that reflects the consideration that the Company expects to receive in exchange for those goods or services. To determine revenue recognition, BTI management performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price, including variable consideration, if any; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies a performance obligation. Arrangements that include rights to additional goods or services that are exercisable at a customer's discretion are generally considered options. The Company assesses if these options provide a material right to the customer and if so, they are considered performance obligations. The exercise of a material right may be accounted for as a contract modification or as a continuation of the contract for accounting purposes.

The Company assesses whether the goods or services promised within each contract are distinct to identify those that are performance obligations. This assessment involves subjective determinations and requires management to make judgments about the individual promised goods or services and whether such goods and services are separable from the other aspects of the contractual relationship. Promised goods and services are considered distinct provided that: (i) the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer and (ii) the Company's promise to transfer the good or service to the customer is separately identifiable from other promises in the contract.

The Company allocates the transaction price (the amount of consideration it expects to be entitled to from a customer in exchange for the promised goods or services) to each performance obligation and recognizes the associated revenue when (or as) each performance obligation is satisfied. The Company's estimate of the transaction price for each contract includes all variable consideration to which the Company expects to be entitled.

BTI distributes IGALMI™ in the U.S. through arrangements with a distributor, wholesalers, and GPOs. The distributor and wholesalers help process and fulfill orders from hospitals on the Company's behalf. The Company believes the hospitals are its customers.

The Company recognizes product revenues, net of consideration payable to customers, as well as variable consideration related to certain allowances and accruals that are determined using either the expected value or most likely amount method, depending on the type of the variable consideration, in its consolidated financial statements at the point in time when control transfers to the customer, which is typically when the product has been delivered to the customer's location. The amount included in the transaction price is constrained to the amount for which it is probable that a significant reversal of cumulative revenue recognized will not occur. The Company's only performance obligation identified for IGALMI™ is to deliver the quantity of product ordered to the location specified by the customer's order. The Company records shipping and handling costs associated with delivery of product to its customers within Selling, general and administrative expenses on its Consolidated Statements of Operations. Under the Company's current product sales arrangements, BTI does not have contract assets (unbilled receivables), as it generally invoices its customer at the time of revenue recognition.

BTI sells IGALMI™ at wholesale acquisition cost and calculates product revenue net of variable consideration and consideration payable to third parties associated with distribution of product. The Company records reserves, based on contractual terms, for the following components of consideration related to product sold during the reporting period. Calculating these amounts involves estimates and judgments, and the Company reviews these estimates quarterly and records any material adjustments in the period they are identified, which affects net product revenue and earnings in the period such variances occur.

Trade Discounts and Allowances

The Company provides the distributor and wholesalers with discounts for prompt payment and pays fees to the distributor, wholesalers and GPOs related to distribution of the product. BTI expects the relevant third parties to earn these discounts and fees, and therefore it deducts such amounts from gross product revenue and accounts receivable at the time it recognizes the related revenue.

Government Rebates

IGALMI™ is eligible for purchase by, or qualifies for reimbursement from, Medicaid and other U.S. government programs that are eligible for rebates on the price they pay for the product. To determine the appropriate amount to reserve for these rebates, BTI applies the applicable government discount to these sales, and estimates the portion of total rebates that it anticipates will be claimed. The Company deducts certain government rebates from gross product revenue and accounts receivable at the time it recognizes the related revenue; other government rebates are recognized as an accrued liability at the time BTI recognizes the related revenue.

Chargebacks

BTI provides product discounts to hospitals associated with certain GPOs. The Company estimates the chargebacks that it expects to be obligated to provide based upon the terms of the applicable arrangements. BTI deducts such amounts from gross product revenue and accounts receivable at the time it recognizes the related revenue.

Product Returns

The Company provides contractual return rights to its customers including the right to return product within six months of product expiration and up to 12 months after product expiration, as well as for incorrect shipments, and damaged or defective product, which the Company expects to be rare. Management expects product returns to be minimal, thus BTI recognizes a nominal allowance for product returns at the time of each sale. In the future, if any of these factors and/or the history of product returns changes, the Company will adjust the allowance for product returns.

BTI classifies all fees paid to the distributor, other than those discussed above and those related to warehouse operations, as Selling, general and administrative expenses on its Consolidated Statements of Operations. Fees paid to the distributor for warehouse operations are classified as Cost of goods sold on BTI's Consolidated Statements of Operations.

Cost of Goods Sold

Cost of goods sold includes the cost of producing and distributing inventories that are related to product revenues during the respective period. Cost of goods sold also includes costs related to excess or obsolete inventory adjustment charges, as well as costs related to warehouse operations paid to distributors.

Stock-Based Compensation

The Company measures and recognizes stock-based compensation expense based on estimated fair value for all share-based awards made to employees, non-employee service providers, and directors, including stock options, BTI restricted stock units (“BTI RSUs”), OnkosXcel profit sharing units (“PSUs”), OnkosXcel restricted stock units (“OnkosXcel RSUs”) and BTI performance stock units (“Performance Units”). The Company’s 2017 Equity Incentive Plan (the “2017 Plan”) became effective in August 2017. The Company’s 2020 Incentive Award Plan (the “2020 Plan”) became effective in May 2020. Following the effective date of the 2020 Plan, the Company ceased granting awards under the 2017 Plan; however, the terms and conditions of the 2017 Plan continue to govern any outstanding awards granted thereunder.

The Company’s stock-based awards are valued at fair value on the date of grant and that fair value is recognized as an expense in the Consolidated Statements of Operations over the requisite service period using the accelerated attribution method. The estimated value of the BTI RSUs and Performance Units is based on the Company’s closing stock price on the grant date. The estimated fair value of stock-options, OnkosXcel RSUs and PSUs was determined using the Black-Scholes pricing model on the date of grant. For awards subject to performance-based vesting conditions, the Company recognizes stock-based compensation expense when the achievement of the performance condition becomes probable.

The Black-Scholes pricing model is affected by the Company’s stock price, as well as assumptions regarding variables including, but not limited to, the strike price of the instrument, the risk-free rate, the expected stock price volatility over the term of the awards, and expected term of the award. The Company has elected to account for forfeitures as they occur, by reversing compensation cost when the award is forfeited.

Research and Development Costs

Research and development expenses include wages, benefits, non-cash stock-based compensation, facilities, supplies, external services, clinical study, manufacturing costs related to clinical trials and other expenses that are directly related to the Company’s research and development activities. At the end of the reporting period, the Company estimates the progress toward completion of the research or development objectives and, depending on the amount and timing of payments to the service providers may record net prepaid or accrued expense for associated research and development costs. Such estimates are subject to change as additional information becomes available. The Company expenses research and development costs as incurred.

Most of the Company’s service providers invoice BTI monthly in arrears for services performed. The Company estimates its accrued expenses as of each balance sheet date in the consolidated financial statements based on facts and circumstances known to management at that time. BTI management periodically confirms the accuracy of the Company’s estimates with the service providers and makes adjustments if necessary.

Although management does not expect its estimates to be materially different from amounts actually incurred, management’s understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in BTI reporting amounts that are too high or too low in any particular period.

Patent Costs

Costs related to filing and pursuing patent applications are recorded in Selling, general and administrative expenses in the Consolidated Statements of Operations and are expensed as incurred since recoverability of such expenditures is uncertain.

Fair Value of Financial Instruments

The Company measures certain financial assets and liabilities at fair value, which is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Company applies a fair value hierarchy that distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources, or observable inputs, and (2) an entity's own assumptions about market participant assumptions developed based on the best information available in the circumstances, or unobservable inputs. The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). Fair value measurements must be classified and disclosed in one of the following three categories:

- **Level 1:** Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.
- **Level 2:** Directly or indirectly observable inputs as of the reporting date through correlation with market data, including quoted prices for similar assets and liabilities in active markets and quoted prices in markets that are not active. Level 2 also includes assets and liabilities that are valued using models or other pricing methodologies that do not require significant judgment since the input assumptions used in the models, such as interest rates and volatility factors, are corroborated by readily observable data from actively quoted markets for substantially the full term of the financial instrument.
- **Level 3:** Unobservable inputs that are supported by little or no market activity and reflect the use of significant management judgment. These values are generally determined using pricing models for which the assumptions utilize management's estimates of market participant assumptions.

In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible, as well as considering counterparty credit risk in its assessment of fair value.

Income Taxes

BTI uses an asset and liability approach for financial accounting and reporting of income taxes. Deferred tax assets and liabilities are determined based on temporary differences between financial reporting and tax basis assets and liabilities and are measured by applying enacted rates and laws to taxable years in which differences are expected to be recovered or settled. Further, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that the rate changes. A valuation allowance is required when it is "more likely than not" that all or a portion of deferred tax assets will not be realized.

U.S. GAAP prescribes a comprehensive model for how a company should recognize, measure, present and disclose in its financial statements uncertain tax positions that the Company has taken or expects to take on a tax return, including a decision whether to file or not file a return in a particular jurisdiction. The Company's financial statements reflect expected future tax consequences of such positions presuming the taxing authorities' full knowledge of the position and all relevant facts.

The Company does not have any unrecognized tax benefits as of December 31, 2023 and 2022. BTI reviews all tax positions to ensure the tax treatment selected is sustainable based on its technical merits and that the position would be sustained if challenged.

Earnings (Loss) per Share

Earnings (loss) per share ("EPS") is calculated by dividing net income or loss attributable to common stockholders by the weighted average number of shares of common stock that were outstanding. Diluted EPS is calculated by adjusting the weighted average number of shares of common stock that were outstanding for the dilutive effect of common stock equivalents. In periods in which a net loss is recorded, no effect is given to potentially dilutive securities, since the effect would be antidilutive.

Segment Information

The Company operates in a single segment. Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker in making decisions regarding resource allocation and assessing performance. To date, the Company's chief operating decision maker has made such decisions and assessed performance at the Company level as one segment.

Recent Accounting Pronouncements

Recently adopted accounting pronouncements

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-13, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, and subsequent amendments to the initial guidance (collectively, "Topic 326"). Topic 326 requires measurement and recognition of expected credit losses for financial assets held. Topic 326 was to be effective for reporting periods beginning after December 15, 2019, with early adoption permitted. In November 2019, the FASB issued ASU No. 2019-10, Financial Instruments - Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842) - Effective Dates, which deferred the effective dates of Topic 326 for the Company, until fiscal year 2023. The Company adopted Topic 326 in 2023 and it did not have a material impact on its consolidated financial statements.

Accounting Pronouncements effective in future periods

In November 2023, the FASB issued ASU 2023-07, Segment reporting, which requires disclosure of incremental segment information on an annual and interim basis. The standard is effective for years beginning after December 15, 2023, and interim periods beginning after December 15, 2024 and early adoption is permitted. The Company is currently evaluating the effect of adopting this guidance on its consolidated financial statements.

In December 2023, the FASB issued ASU 2023-09, Improvements to income tax disclosures, which requires disclosure of disaggregated income taxes paid by jurisdiction, enhances disclosures in the effective tax rate reconciliation and modifies other income tax-related disclosures. The amendments are effective for annual periods beginning after December 15, 2024. The Company is currently evaluating the effect of adopting this guidance on its consolidated financial statements.

Note 4. Restructuring

On August 8, 2023, the Company's Board of Directors approved a broad-based strategic reprioritization (the "Reprioritization"). The Company took actions to reduce certain operational and workforce expenses that were no longer deemed core to ongoing operations in order to extend its cash runway and drive innovation and growth in high potential clinical development and value creating opportunities. These actions included a shift in commercial strategy for IGALMI™ in the institutional setting, a reduction of in-hospital commercialization expenses, a suspension of programs no longer determined to be core to ongoing operations, and a prioritization of at-home treatment setting opportunities for BXCL501.

As part of this strategy, the Company's Board of Directors approved a reduction of approximately 60% of the Company's workforce. The Company notified impacted employees on August 14, 2023 and recorded total restructuring costs of \$4,163 for the year ended December 31, 2023. These costs consisted of severance and benefit costs of \$4,063 and contract termination costs of \$100. The Company paid \$3,998 of severance and benefit costs and \$100 of contract termination costs in the year ended December 31, 2023. The Reprioritization is substantially complete as of December 31, 2023, and any remaining costs are expected to be paid during the first quarter of 2024.

Note 5. Inventory

Inventory consists of the following:

	<u>December 31,</u> <u>2023</u>	<u>December 31,</u> <u>2022</u>
Raw materials	\$ 935	\$ 682
Work-in-process	651	708
Finished goods	405	595
Total inventory	<u>\$ 1,991</u>	<u>\$ 1,985</u>

The Company recorded inventory write-downs of \$1,191 for the year ended December 31, 2023. No write-downs of inventory were recorded for the year ended December 31, 2022.

Note 6. Property and Equipment, net

Property and equipment, net consists of the following:

	<u>December 31,</u> <u>2023</u>	<u>December 31,</u> <u>2022</u>
Computers and equipment	\$ 202	\$ 213
Furniture	575	575
Leasehold improvements	1,200	1,181
Total property and equipment	<u>\$ 1,977</u>	<u>\$ 1,969</u>
Accumulated depreciation	(1,193)	(885)
Total property and equipment, net	<u>\$ 784</u>	<u>\$ 1,084</u>

Depreciation expense was \$318 and \$327 for the years ended December 31, 2023 and 2022, respectively.

Note 7. Accrued Expenses

Accrued expenses consist of the following:

	<u>December 31,</u> <u>2023</u>	<u>December 31,</u> <u>2022</u>
Accrued research and development expenses	\$ 6,406	\$ 8,659
Accrued compensation and benefits	163	6,370
Accrued professional fees	5,562	2,738
Accrued taxes	116	82
Other accrued expenses	177	820
Total accrued expenses	<u>\$ 12,424</u>	<u>\$ 18,669</u>

Note 8. Transactions with BioXcel LLC

The Company entered into a Separation and Shared Services Agreement with BioXcel LLC that took effect on June 30, 2017, as amended and restated thereafter (the "Services Agreement"), pursuant to which BioXcel LLC has agreed to provide the Company with certain intellectual property prosecution and management and research and development activities.

Under the Services Agreement, we have an option, exercisable until December 31, 2024, to enter into a separate collaborative services agreement with BioXcel LLC pursuant to which BioXcel LLC shall perform product identification and related services for us utilizing its EvolverAI. We agreed to pay BioXcel LLC \$18 per month from March 13, 2023, to December 31, 2024 in exchange for this option. We agreed to negotiate any such collaborative services agreement in

good faith and to incorporate reasonable market-based terms, including consideration for BioXcel LLC reflecting a low, single-digit royalty on net sales and reasonable development and commercialization milestone payments, provided that (i) development milestone payments shall not exceed \$10,000 in the aggregate and not be payable prior to proof of concept in humans and (ii) commercialization milestone payments shall be based on reaching annual net sales levels, be limited to 3% of the applicable net sales level, and not exceed \$30,000 in the aggregate.

Service charges recorded under the Services Agreement for the years December 31, 2023 and 2022 were as follows:

	<u>Year ended December 31,</u>	
	<u>2023</u>	<u>2022</u>
Research and development	\$ 1,075	\$ 1,151
Selling, general and administrative	211	250
Total	\$ 1,286	\$ 1,401

As of December 31, 2023 and 2022, \$0 and \$310, respectively, of these service charges are included in Due to related parties in the Company's Consolidated Balance Sheets.

Note 9. Debt and Credit Facilities

Debt, net of unamortized discounts and financing costs, consists of the following:

	<u>December 31, 2023</u>	<u>December 31, 2022</u>
Revenue Interest Financing Agreement ("RIFA")	\$ —	\$ 30,000
RIFA accrued interest	—	2,041
RIFA payments	—	(10)
RIFA debt liability	\$ —	\$ 32,031
Estimated Portion of RIFA debt liability to be paid within one-year	—	(1,401)
RIFA long-term debt liability	\$ —	\$ 30,630
Credit Agreement and Guaranty	102,319	70,000
Payable-in-kind ("PIK") interest	361	807
Total long-term debt liability	\$ 102,680	\$ 101,437
Unamortized debt premiums, discounts and issuance costs	(2,082)	(8,386)
Total long-term debt	\$ 100,598	\$ 93,051

On April 19, 2022, the Company entered into two strategic financing agreements: (i) a Credit Agreement and Guaranty (the "Credit Agreement") by and among the Company, as the borrower, certain subsidiaries of the Company from time to time party thereto as subsidiary guarantors, the lenders party thereto (the "Lenders"), and Oaktree Fund Administration LLC ("OFA") as administrative agent, and (ii) a Revenue Interest Financing Agreement (the "RIFA"; and together with the Credit Agreement, the "OFA Facilities") by and among the Company, the purchasers party thereto (the "Purchasers") and OFA as administrative agent. Under the OFA Facilities, the Lenders and the Purchasers agreed to, in the aggregate between the two OFA Facilities, provide up to \$260,000 in gross funding to support the Company's commercial activities of IGALMI™ sublingual film. In addition, the OFA Facilities are intended to support the expansion of clinical development efforts of BXCL501, which includes a Phase 3 program for the acute treatment of agitation in patients with Alzheimer's disease, and for general corporate purposes. The Lenders and Purchasers are comprised of affiliates of Oaktree Capital Management, L.P. and Qatar Investment Authority.

Waiver and First Amendment to Credit Agreement and Guaranty

On November 13, 2023, the Company, the lenders party to the Credit Agreement and OFA entered into a Waiver and First Amendment to Credit Agreement and Guaranty (the "First Amendment") that provided for (i) a waiver and a modification to the covenant in the Credit Agreement regarding investments in OnkosXcel and (ii) an agreement among

the parties to further revise key financial terms in the Credit Agreement and terminate the RIFA. Pursuant to the First Amendment, the Lenders agreed to permit the Company to invest up to a maximum of \$30,000 at any time outstanding in OnkosXcel, increased from \$25,000 at any time outstanding. The First Amendment also waived any defaults or events of default arising under the Credit Agreement due to a breach prior to the date of the First Amendment of the OnkosXcel investment covenant, or a breach of the Company's obligation to notify OFA of such default. In connection with the First Amendment, the Company paid the Lenders a fee of \$180 (representing 0.25% of the loans outstanding under the Credit Agreement on the date of the First Amendment) and agreed to pay to the Lenders an exit fee equal to 0.25% of the loans under the Credit Agreement repaid upon maturity or prepayment of the loans.

Second Amendment to Credit Agreement and Guaranty and Termination of the RIFA

On December 5, 2023, (the "Second Amendment Effective Date"), the Company entered into the Second Amendment to Credit Agreement and Guaranty and Termination of Revenue Interest Financing Agreement (the "Second Amendment"), which further amended the Credit Agreement. On the Second Amendment Effective Date, the Credit Agreement was amended to provide up to \$202,319 in senior secured term loans, including the initial Tranche A of \$70,000, which was funded on April 28, 2022, and related capitalized interest on Tranche A through the Second Amendment Effective Date in the amount of \$72,319. In addition, the \$30,000 in financing previously provided to the Company under the RIFA on July 8, 2022 was converted to a term loan under the Credit Agreement (the "Tranche A-2 Term Loan"). The RIFA and all commitments for potential future funding thereunder were terminated. In addition, pursuant to the Second Amendment, the Lenders agreed to permit the Company to invest up to a maximum of \$30,865 at any time outstanding in OnkosXcel, increased from \$30,000. In connection with the Second Amendment, the Company agreed to pay to the Lenders an exit fee equal to 0.25% of the loans under the Credit Agreement repaid upon maturity or prepayment of the loans (which exit fee is in addition to, and not in lieu of, the exit fee provided for by the First Amendment). As of December 31, 2023, \$100,000 in commitments under the Credit Agreement remains unfunded, and Oaktree has an Equity Investment Right (as defined below) to purchase up to \$5,000 of Common Stock from the Company. The blended effective interest rate on the Tranches A-1 and A-2 as of December 31, 2023 was approximately 13.5%.

The remaining tranches may be borrowed at the Company's option prior to December 31, 2024, subject to satisfaction of certain conditions, including regulatory and financial milestones. Tranche B of the Credit Agreement is \$20,000 and is available upon satisfaction of certain conditions and financial milestones. Tranche C of the Credit Agreement is \$30,000 and is available upon satisfaction of certain conditions, including receipt of certain regulatory and financial milestones. Tranche D of the Credit Agreement is \$50,000 and is available upon satisfaction of the Tranche C Term Loans conditions precedent to, and the funding of Tranche C Loans, including specified minimum net sales of the Company attributable to sales of BXCL501 for a trailing twelve consecutive month period, on or before December 31, 2025.

The loans under the Credit Agreement do not amortize and mature on April 19, 2027. The Company may, at its option, no earlier than September 21, 2026 and no later than October 21, 2026, request an extension of the maturity date to April, 19, 2028, provided that the Company satisfies certain conditions including receipt of certain regulatory and financial milestones. Borrowings under the Credit Agreement are issued at a 200-basis point original issue discount and bear interest at a variable annual rate of TERM SOFR (but not less than 2.5% or more than 5.5%) plus 7.5%, payable quarterly. The rate resets every three months based on the current Term SOFR rate. Of such interest, above 8% per annum is, at the Company's option, payable in kind by capitalizing and adding such interest to the outstanding principal amount of loans from the first payment date on which such interest is owed through March 31, 2025, unless, with respect to any payment date, the Company elects to pay all or a portion of such interest in cash. The Company is required to pay a ticking fee equal to 0.75% per annum on the undrawn amount of the commitments, payable quarterly commencing 120 days after April 22, 2022 through the termination of the commitments, which is expensed as incurred and recognized as interest expense in the Consolidated Statements of Operations. The Company may voluntarily prepay the Credit Agreement at any time subject to a prepayment fee.

The Company's obligations under the Credit Agreement are guaranteed by BTI's existing and subsequently acquired or organized subsidiaries, subject to certain exceptions. BTI's obligations under the Credit Agreement and the related guarantees thereunder are secured, subject to customary permitted liens and other agreed upon exceptions, by (i)

a pledge of all of the equity interests of all of the Company's existing and any future direct subsidiaries, and (ii) a perfected security interest in all of its and the guarantors' tangible and intangible assets (except that the guarantees provided by the BXCL701 Subsidiaries (as defined below) are unsecured).

The Credit Agreement contains customary representations and warranties and customary affirmative and negative covenants, including, among other things, restrictions on indebtedness, liens, investments, mergers, dispositions, prepayment of other indebtedness, and dividends and other distributions, subject to certain exceptions, including specific exceptions with respect to product commercialization and development activities. The Company must also comply with certain financial covenants, including (i) maintenance of cash or permitted cash equivalent investments in accounts controlled by OFA for the Lenders, of at least (a) initially, \$15,000, (b) from and after the funding of the Tranche B loans, \$20,000, and (c) from and after the Company's satisfaction of the funding conditions for the Tranche C loans, \$15,000, provided, that the liquidity covenant applicable at any time will be increased upon certain events related to a sale of OnkosXcel (up to a maximum amount equal to \$37,500), provided that the minimum liquidity amount will in no event exceed 50% of the aggregate amount of loans outstanding under the Credit Agreement at any time; and (ii) a minimum revenue test, measured quarterly beginning with the Company's fiscal quarter ending on December 31, 2024 (such six-month period the "Revenue Covenant Measurement Period"), that requires it and its subsidiaries' consolidated net revenue for the six consecutive month period ending on the last day of each such fiscal quarter to not be less than a minimum revenue amount specified in the Credit Agreement (such testing date, the "Revenue Covenant Measurement Testing Date" and the covenant described in this clause (ii) the "Revenue Covenant"). The Company's failure to comply with the financial covenants will result in an event of default, subject to certain cure rights with respect to the Revenue Covenant. If, as of a Revenue Covenant Measurement Testing Date, the Company's revenue for the applicable Revenue Covenant Measurement Period is less than the minimum revenue amount specified for the applicable period then required under the Revenue Covenant, the Company would have a right to cure such shortfall for a total of three fiscal periods by making a revenue cure payment (which would be treated as prepayments of the loans subject to a prepayment fee) to the Lenders in an amount equal to the difference between such minimum required revenue amount and the Company's actual revenues for such Revenue Covenant Measurement Period, such payment to not be less than \$1,000. If paid, the Company will be deemed to have complied with the Revenue Covenant as of such Revenue Covenant Measurement Testing Date. Any such payment will be applied to the prepayment of the loans under the Credit Agreement.

Notwithstanding the foregoing, the Credit Agreement permits OnkosXcel (together with OnkosXcel Employee Holdings, LLC ("Employee Holdings"), a subsidiary of BTI, and their respective subsidiaries, the "BXCL701 Subsidiaries") to receive third-party investment or transfer all or substantially all of their assets to an unaffiliated third party, in each case subject to terms and conditions set forth in the Credit Agreement, including the escrow of certain proceeds received by BTI and its subsidiaries (other than the BXCL701 Subsidiaries) in respect of these disposition events and, under circumstances set forth in the Credit Agreement, the mandatory prepayment of such escrowed amounts. The Company's equity interests in the BXCL701 Subsidiaries have been pledged in support of its obligations under the Credit Agreement, and the BXCL701 Subsidiaries have provided direct guarantees of BTI's obligations under the Credit Agreement on an unsecured basis. However, the pledge, guarantee and other obligations of the BXCL701 Subsidiaries under the Credit Agreement will be released upon certain agreed upon events ("Permitted BXCL701 Release Events"), including an initial public offering by the BXCL701 Subsidiaries or the ownership by unaffiliated third parties of at least 20% of the equity interests in the BXCL701 Subsidiaries.

The Credit Agreement contains events of default that are customary for financings of this type relating to, among other things, payment defaults, breach of covenants, breach of representations and warranties, cross default to material indebtedness, bankruptcy-related defaults, judgment defaults, breach of the financial covenants described above, and the occurrence of certain change of control events. In certain circumstances, events of default are subject to customary cure periods. The Credit Agreement also contains certain regulatory-related events of default, which do not have cure periods. Following an event of default and any applicable cure period, the Lenders will have the right upon notice to terminate any undrawn commitments and may accelerate all amounts outstanding under the Credit Agreement, in addition to other remedies available to them as the Company's secured creditors.

Revenue Interest Financing Agreement

As noted, the RIFA was terminated when the Company entered into the Second Amendment, which amended the Credit Agreement (as amended by the First Amendment). The \$30,000 Tranche A previously provided to the Company under the RIFA was converted to the Tranche A-2 Term Loan. Prior to termination, the RIFA provided up to \$120,000 in potential financing in exchange for a capped revenue interest on net sales of IGALMI™, and other future BXCL501 products, if any, that received regulatory approval for sale. The initial Tranche A of \$30,000 was funded on July 8, 2022. The effective interest rate on the RIFA as of December 31, 2022, was approximately 14%.

Under the terms of the RIFA, the Purchasers were to receive tiered revenue interest payments on U.S. net sales of IGALMI™, and other future BXCL501 products, if any, that receive regulatory approval for sale, equal to a royalty ranging from 0.375% to 7.750% of net sales of IGALMI™, and other future BXCL501 products, if any, approved for sale in the U.S., subject to a hard cap equal to 1.75x the total amount funded. The Company would also have been required to make certain additional payments to the Purchasers from time to time to ensure that the aggregate amount of payments received by the Purchasers under the RIFA were at least equal to certain agreed upon minimum levels as of certain specified dates, subject to terms and conditions set forth in the RIFA. Revenue interest payments due under the RIFA were payable quarterly based on net sales.

Warrants and Equity Investment Right

In connection with the closing of the Second Amendment, on the Second Amendment Effective Date, the Company amended and restated the warrants granted to the Lenders on April 19, 2022 to purchase up to 278 shares of the Company's common stock at an exercise price of \$20.04 per share (the "Original Warrants"). Pursuant to the amendment and restatement of the Original Warrants, dated December 5, 2023 (the "Amended and Restated Original Warrants"), the exercise price of the Original Warrants has been reduced to \$3.6452 per share. In addition, the Company granted new warrants to the Lenders to purchase up to 70 shares of the Company's common stock (the "2023 Warrant Shares") at an exercise price of \$3.6452 per share (the "2023 Warrants" and together with the Amended and Restated Original Warrants, the "Warrants"). The Amended and Restated Original Warrants and the 2023 Warrants will expire on April 19, 2029 and may be net exercised at the holder's election. In addition, pursuant to the Credit Agreement, the Lenders have the right to purchase shares of the Company's common stock after the Second Amendment Effective Date, so long as borrowings under the Credit Agreement are outstanding, for a purchase price of \$5,000 at a price per share equal to a 10% premium to the volume-weighted average price of the common stock over the 30 trading days prior to the Lenders' election to proceed with such equity investment (the "Equity Investment Right"). BTI entered into a registration rights agreement (the "Registration Rights Agreement") with the Lenders and filed a registration statement on Form S-3 to register the shares issuable upon exercise of the Warrants and, if issued, the shares related to the Equity Investment Right, for resale. The maximum shares of BTI common stock issuable under the Warrants (including the Original Warrants and the 2023 Warrants) and Lenders' Equity Investment Right was 5,852 as of December 31, 2023. On the Second Amendment Effective Date, Company amended and restated its Registration Rights Agreement (the "Amended and Restated Registration Rights Agreement") with the Lenders, dated April 19, 2022, pursuant to which the Company agreed to register the 2023 Warrant Shares for resale.

As part of the Credit Agreement, OnkosXcel, a wholly owned subsidiary of BTI, granted warrants to the Lenders to purchase 175 individual limited liability company units (which number of units is not in thousands; referred to herein as the "OnkosXcel Warrants"). The strike price of the OnkosXcel Warrants is formulaic based on the value of OnkosXcel at the time of exercise and can only be exercised upon occurrence of an equity related liquidity event for OnkosXcel of at least \$20,000. The exercise price per unit of the OnkosXcel Warrants will be set upon the earlier of the closing of the next sale (or series of related sales) by OnkosXcel of equity securities of OnkosXcel with aggregate proceeds of not less than \$20,000 to unrelated third parties (the "Next Equity Financing") at an exercise price per unit equal to a 10% premium over the price per unit of the equity securities sold by OnkosXcel in such Next Equity Financing or, in the event of a sale of OnkosXcel prior to the Next Equity Financing or an initial public offering constituting the Next Equity Financing, the lesser of (x) 75% of the fair value of the consideration to be paid for a unit upon the consummation of such transaction and (y) 150% of the valuation applicable to the initial profits units issued by OnkosXcel after the closing of the Credit Agreement. The OnkosXcel Warrants are transferable with approval from BTI, which cannot be unreasonably withheld, expire on April 19, 2029, and may be net exercised at the holder's election.

Maturities of long-term debt are expected to be as follows:

	<u>December 31, 2023</u>	
2024	\$	—
2025	\$	—
2026	\$	—
2027	\$	102,680
2028	\$	—
Thereafter	\$	—

Interest expense was as follows:

	<u>Year ended</u>	
	<u>December 31,</u>	
	<u>2023</u>	<u>2022</u>
Interest expense	\$ 11,941	\$ 7,353
Accretion of debt discount and amortization of financing costs	1,373	860
Total interest expense	<u>\$ 13,314</u>	<u>\$ 8,213</u>

Note 10. Derivative Financial Instruments

BTI identified certain freestanding financial instruments and/or embedded features that require separate accounting from the borrowings under the OFA Facilities. This includes the OnkosXcel Warrants and Equity Investment Right held by the Lenders, along with certain put/call options. The OnkosXcel Warrants and Equity Investment Right do not meet certain scope exceptions under U.S. GAAP, primarily because the exercise prices and number of shares of the Company's common stock issuable under the instruments are variable, and the instruments meet the definition of a derivative instrument. Therefore, these instruments are recorded as Derivative liabilities in the Consolidated Balance Sheets. The respective derivative liabilities are recorded at fair value on the date of issuance and are revalued on each balance sheet date until such instruments are settled or expire, with changes in the fair value between reporting periods recorded within Other (income) expense, net in the Company's Consolidated Statements of Operations.

Note 11. Common Stock Financing Activities

In May 2021, the Company entered into an Open Market Sale Agreement (as amended, supplemented and/or restated from time to time, the "Sale Agreement") with Jefferies LLC ("Jefferies") pursuant to which the Company could offer and sell shares of its common stock, having an aggregate offering price of up to \$100,000, from time to time, through an "at the market offering" program under which Jefferies will act as sale agent. In November 2023, the Company amended the Sale Agreement to increase the size of the "at the market offering" program to \$150,000. The Company sold 1,408 shares under the Sale Agreement in the year ended December 31, 2023 for net proceeds of \$26,221. For the year ended December 2023, the Company sold shares for the gross amount of \$27,032, and incurred issuance costs of \$811. The Company did not sell any shares, and thus did not receive any proceeds under this program, for the year ended December 31, 2022.

Note 12. Stock-Based Compensation

2017 Equity Incentive Plan

The Company's 2017 Plan became effective in August 2017. Following the effective date of the Company's 2020 Plan, the Company ceased granting awards under the 2017 Plan, however, the terms and conditions of the 2017 Plan continue to govern any outstanding awards granted thereunder.

2020 Incentive Award Plan

The Company's 2020 Plan was approved and became effective at the Company's 2020 annual meeting of stockholders on May 20, 2020, and unless earlier terminated by the Board of Directors, will remain in effect until March 26, 2030. The 2020 Plan originally authorized for issuance the sum of (i) 911 shares of the Company's common stock and (ii) 233 shares of the Company's common stock, which represents the number of shares that remained available for issuance under the 2017 Plan immediately prior to the approval of the 2020 Plan by the Company's stockholders. Any shares of common stock which, immediately prior to the approval of the 2020 Plan by the Company's stockholders, were subject to awards granted under the 2017 Plan that are forfeited or lapse unexercised and are not issued under the 2017 Plan will increase the number of shares of common stock available for grant under the 2020 Plan. In addition, the number of shares available for issuance under the 2020 Plan will increase on the first day of each calendar year, beginning January 1, 2021 and ending on and including January 1, 2030, by a number of shares equal to the lesser of (A) 4% of the aggregate number of shares of the Company's common stock outstanding on the final day of the immediately preceding calendar year and (B) such smaller number of shares of common stock as determined by the Board of Directors. The shares available for issuance under the 2020 Plan increased by 1,126 shares and 1,119 shares on January 1, 2023 and 2022, respectively.

Stock-based awards granted under the 2020 Plan have a term of ten years. The vesting schedule of all awards granted under the 2020 Plan is determined by the Board of Directors, which is generally four years. Stock-based awards granted under the 2020 Plan include stock options, BTI RSUs, and Performance Units.

As of December 31, 2023, there were 664 shares available to be granted under the 2020 Plan.

BTI Restricted stock units

The table below summarizes activity relating to BTI RSUs.

	<u>Number of shares</u>
Outstanding as of January 1, 2023	119
Granted	133
Vested	(67)
Outstanding as of December 31, 2023	<u>185</u>

In 2023, the Company granted 133 time-based BTI RSUs to certain employees. All of the BTI RSUs vest over four years, with 25% vesting at the one-year anniversary of the grant date and the balance vesting ratably over the remaining 12 quarters of the vesting period. The weighted average grant date fair value per share for the BTI RSUs was \$19.62. Unrecognized stock-based compensation expense related to these awards was \$1,417 as of December 31, 2023.

In 2022, the Company granted 122 (119, net of forfeitures) time-based BTI RSUs to certain employees and consultants. The majority of BTI RSUs granted to employees vest over four years, with 25% vesting at the one-year anniversary of the grant date and the balance vesting ratably over the remaining 12 quarters of the vesting period. There were 25 BTI RSUs granted to the employees in May 2022 which fully vested at the one-year anniversary of the grant date. BTI RSUs granted to a third-party consultant vest 50% each on the first and second anniversaries of the grant date. The weighted average grant date fair value per share for the BTI RSUs granted in 2022 was \$14.38. Unrecognized stock-based compensation expense related to these awards was \$298 as of December 31, 2023.

BTI Performance stock units

The table below summarizes activity relating to Performance Units related to BTI common stock.

	<u>Number of shares</u>
Outstanding as of January 1, 2023	—
Granted	543
Cancelled	<u>(16)</u>
Outstanding as of December 31, 2023	<u>527</u>

In October 2023, the Company granted 543 Performance Units to employees. 209 Performance Units vest on the one-year anniversary of the grant date, and the remaining 334 Performance Units are performance based and vest on the one-year anniversary of the grant date, provided certain performance criteria are met. The weighted average value of Performance Units granted and cancelled during 2023 was \$2.43. None of the Performance Units had vested as of December 31, 2023. Unrecognized stock-based compensation expense related to the awards expected to vest was \$515 as of December 31, 2023.

OnkosXcel Profit sharing units

The table below summarizes activity relating to the PSUs associated with OnkosXcel as described below.

	<u>Number of units</u>	<u>Weighted average price per unit (in whole dollars)</u>
Outstanding as of January 1, 2023	1,310	\$ 5,506
Granted	30	\$ 10,176
Cancelled	(100)	\$ 5,506
Forfeited	—	\$ —
Outstanding as of December 31, 2023	<u>1,240</u>	
Vested units as of December 31, 2023	<u>676</u>	\$ 5,533

During 2023, Employee Holdings, a management holding company used to facilitate the grant of equity interests to service providers of OnkosXcel granted 30 individual (not in thousands) time-based PSUs related to OnkosXcel to certain employees of the Company in consideration for services provided to OnkosXcel. In 2022, Employee Holdings granted 1,310 (not in thousands) PSUs to employees and a consultant of the Company for services provided to OnkosXcel. The PSUs represent indirect equity interests in OnkosXcel. All PSUs, other than those granted to certain

executive employees of the Company, vest ratably over 48 months. PSUs granted to certain executive employees of the Company, vested ratably over 24 months.

The fair values of the PSUs granted in 2023 and 2022 were \$8 per unit and \$4 per unit, respectively, and were estimated at the date of grant using a Black-Scholes option pricing model. The total fair value of the PSUs vested during the year ended December 31, 2023 was \$1,942.

2023 grant profit share unit valuation inputs	
Expected volatility	97.4 %
Risk-free rate of interest	3.6 %
Expected dividend yield	— %
Expected term	5.8 years

Unrecognized stock-based compensation expense related to the PSUs was \$971 and \$4,588 as of December 31, 2023 and 2022, respectively.

OnkosXcel restricted stock units

The table below summarizes activity relating to the OnkosXcel RSUs.

	Number of units
Outstanding as of January 1, 2023	—
Granted	225
Outstanding as of December 31, 2023	225

During the year ended December 31, 2023, the Company granted 225 individual (not in thousands) OnkosXcel RSUs to certain employees. 125 of the OnkosXcel RSUs vest upon the earlier to occur of (a) 180 days after an initial public offering of OnkosXcel, or (b) a change in control of OnkosXcel. The remaining OnkosXcel RSUs vest over four years, with 25% vesting at the one-year anniversary of the grant date and the balance vesting ratably over the remaining 12 quarters of the vesting period. The weighted average grant date fair value per unit for the OnkosXcel RSUs was approximately \$10. Unrecognized stock-based compensation expense related to the awards expected to vest was approximately \$552 as of December 31, 2023.

BTI Stock options

A summary of the Company’s stock option activity for the year ended December 31, 2023, is presented below.

	<u>Number of shares</u>	<u>Weighted average price per share</u>
Outstanding as of January 1, 2023	4,882	\$ 17.23
Granted	1,090	\$ 19.35
Forfeited	(651)	\$ 17.84
Cancelled	(36)	\$ 24.67
Exercised	(309)	\$ 1.65
Outstanding as of December 31, 2023	<u>4,976</u>	\$ 18.52
Options vested and exercisable as of December 31, 2023	3,479	\$ 17.32

As of December 31, 2023, the intrinsic value of options outstanding was \$3,149. The intrinsic value for stock options is calculated based on the difference between the exercise prices of the underlying awards and the quoted stock price of the Company’s common stock as of the reporting date.

The total intrinsic value of stock options exercised for the years ended December 31, 2023 and 2022 was \$5,928 and \$2,437, respectively. The total intrinsic value of stock options exercisable as of December 31, 2023 and 2022 was \$3,148 and \$40,255, respectively.

The weighted average grant date fair value of options granted during the years ended December 31, 2023 and 2022 was \$15.53 and \$11.62, respectively.

The weighted average grant date fair value of options vested as of December 31, 2023 was \$12.86.

The weighted average remaining contractual life is 5.5 years for options exercisable as of December 31, 2023. The weighted average remaining contractual life was 6.4 years for options outstanding as of December 31, 2023.

Unrecognized compensation expense related to unvested stock option awards as of December 31, 2023, was \$9,478 and will be recognized over the remaining vesting periods of the underlying awards. The weighted-average period over which such compensation is expected to be recognized is 1.1 years.

Stock-Based Compensation

The fair value of options granted during the years ended December 31, 2023 and 2022 was estimated using the Black-Scholes pricing model with the following assumptions:

	<u>Year ended December 31, 2023</u>			<u>Year ended December 31, 2022</u>		
Expected term	5.5 years	-	6.1 years	5.5 years	-	6.1 years
Expected stock price volatility	96.9 %	-	109.9 %	92.7 %	-	99.4 %
Risk-free rate of interest	3.5 %	-	4.7 %	1.5 %	-	4.4 %
Expected dividend yield	0.0 %	-	0.0 %	0.0 %	-	0.0 %

In 2023, the Company began using the historical volatility of its common stock to estimate volatility. Prior to 2023, volatility was estimated using a combination of the historical volatility of publicly traded peer companies and that of the Company’s common stock. The expected term of the awards is estimated based on the simplified method, which calculates the expected term based upon the midpoint of the term of the award and the vesting period. The Company uses the simplified method because it does not have sufficient option exercise data to provide a reasonable basis upon which to estimate the expected term. The expected dividend yield is zero percent as the Company has no history of

paying dividends nor does management expect to pay dividends over the contractual terms of these options. The risk-free interest rates are determined by reference to the U.S. Treasury yield curve in effect at the time of grant, with maturities approximating the expected term of the stock options. The fair value of the underlying common stock is generally determined as the closing price of the Company's common stock on The Nasdaq Capital Market on the grant date, with consideration of whether there is material nonpublic information that could impact that estimated fair value when it is released.

The Company recognized stock-based compensation expense related to awards issued under the 2017 Plan and the 2020 Plan, as well as the OnkosXcel PSUs and OnkosXcel RSU's, of \$18,614 and \$17,337 for the years ended December 31, 2023 and 2022, respectively, which were comprised as follows:

	Year ended December 31,	
	2023	2022
Research and development	\$ 6,324	\$ 4,558
Selling, general and administrative	12,290	12,779
Total	<u>\$ 18,614</u>	<u>\$ 17,337</u>

2020 Employee Stock Purchase Plan

The Company's 2020 Employee Stock Purchase Plan (the "ESPP") was also approved and became effective at the Company's 2020 annual meeting of stockholders on May 20, 2020. The ESPP is designed to assist eligible employees of the Company with the opportunity to purchase the Company's common stock at a discount through accumulated payroll deductions during successive offering periods. The aggregate number of shares that may be issued pursuant to rights granted under the ESPP is 100 shares of common stock. In addition, the number of shares available for issuance under the ESPP will increase on the first day of each calendar year, beginning on January 1, 2021 and ending on and including January 1, 2030, by a number of shares of common stock equal to the lesser of (a) 1% of the shares outstanding on the final day of the immediately preceding calendar year and (b) such smaller number of shares as determined by the Board of Directors. The number of shares that may be issued or transferred pursuant to rights granted under the component of the ESPP that is intended to qualify for favorable U.S. federal tax treatment under Section 423 of the Internal Revenue Code (the "Section 423 Component") shall not exceed 500 shares. The purchase price will be determined by the administrator of the ESPP and, for purposes of the Section 423 Component, shall not be less than 85% of the fair value of a share on the first trading day or on the last trading day of the applicable offering period, whichever is lower. The shares available for issuance under the ESPP increased by 281 shares and 280 shares on January 1, 2023 and 2022, respectively. To date, no shares have been sold under the ESPP. There were 905 shares available for issuance as of December 31, 2023.

Note 13. Leases

BTI leases office space for its corporate headquarters at 555 Long Wharf Drive, New Haven, Connecticut (the "HQ Lease") under an operating lease that expires in February 2026. The Company has an option to renew the HQ Lease for one additional five-year term. Payments under the HQ Lease are fixed.

The Company also leases equipment such as copiers and information technology equipment.

The future minimum annual lease payments under operating leases, as of December 31, 2023, were as follows:

Year ending December 31,	Amount
2024	381
2025	391
2026	65
2027	—
2028	—
Thereafter	—
Total lease payments	\$ 837
Imputed interest	(51)
Total lease liability	\$ 786
Less current portion of lease liability	(346)
Long-term portion of operating lease liability	\$ 440

The current portion of the Company’s operating lease liability of \$346, as of December 31, 2023, is included in Other current liabilities on the Consolidated Balance Sheets.

Lease expense was \$392 and \$410 for the years ended December 31, 2023 and 2022, respectively.

Lease renewal options are not included in the ROU asset or lease liability.

Note 14. Employee Benefit Plan

The Company maintains a defined contribution retirement plan for its employees that complies with Section 401(k) of the Internal Revenue Code (the “401(K) Plan”). Employees are eligible to participate in the 401(K) Plan and can contribute a portion of their pay into the 401(K) Plan, subject to annual limits established by the U.S. Internal Revenue Service. Participating employees receive an employer matching contribution equal to 50% of eligible employee contributions on the first 5% of eligible compensation contributed. Employer contributions to the 401(K) Plan were \$788 and \$568 for the years ended December 31, 2023 and 2022, respectively.

Note 15. Fair Value Measurements

The Company groups its assets and liabilities measured at fair value in three levels based on the nature of the inputs and assumptions used to determine fair value. Refer to Note 3, Summary of Significant Accounting Policies, for additional information on the accounting policies related to fair value.

The carrying amounts of Cash and cash equivalents, Accounts receivable, net and Accounts payable approximate fair value due to the short-term nature of these instruments. As of December 31, 2023 and 2022, the Company had \$64,860 and \$191,022, respectively, primarily in money market funds that hold U.S. government cash equivalent instruments (included in Cash and cash equivalents) which were valued based on Level 1 inputs. There were no transfers between levels within the hierarchy during the years ended December 31, 2023 and 2022.

Derivative liabilities measured at fair value on a recurring basis are summarized below.

	Year ended				Total
	December 31, 2023				
	Fair Value	Level 1	Level 2	Level 3	
Derivative liability - Equity Investment Right	\$ 1,193	\$ —	\$ —	\$ 1,193	\$ 1,193
Derivative liability - OnkosXcel Warrants	712	—	—	712	712
Total derivative liabilities	\$ 1,905	\$ —	\$ —	\$ 1,905	\$ 1,905

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Derivative liabilities are comprised of the OnkosXcel Warrants and Equity Investment Right held by the Lenders. The fair value of the derivative liabilities was determined using Monte Carlo simulation models for the Equity Investment Right, and Binomial Option Pricing and Distribution models for the OnkosXcel Warrants.

The following table presents changes in Level 3 liabilities measured at fair value for the year ended December 31, 2023. Both observable and unobservable inputs were used to determine the fair value of positions that the Company has classified within the Level 3 category.

	Year ended December 31,	
	2023	2022
Derivative liabilities, Balance - January 1	\$ 2,343	\$ 1,954
Change in fair value	(438)	389
Derivative liabilities, Balance - December 31	<u>\$ 1,905</u>	<u>\$ 2,343</u>

The derivative liabilities were reported at their fair values in the Consolidated Balance Sheets. The changes in the fair value of the derivative liabilities were reported in the Consolidated Statements of Operations as Other (income) expense, net, for the years ended December 31, 2023 and 2022.

Inputs used to calculate the estimated fair value of the Equity Investment Right were as follows:

	Equity Investment Right
Strike price relative to volume weighted 30-day average	110.0 %
Volatility (annual)	99.1 %
Probability of exercise	90.0 %
Time period	3.3 years
Estimated premium to 30-day average	24.0 %
Discount rate	4.4 %

In estimating the fair value of the derivative liability related to the OnkosXcel Warrants, inputs included third-party fair value estimates of OnkosXcel limited liability company units along with the volatility of those units (which was set at 100% based on the historical volatility of the Company's stock, along with a peer group of comparable publicly traded companies), and the timing and probability of the relevant capital transactions occurring.

The estimated fair value of the Credit Agreement as of December 31, 2023, was \$88,210. Both observable and unobservable inputs were used to determine the fair value of long-term debt, which was classified within the Level 3 category.

The fair value of the 2023 Warrants, which is a non-recurring fair value, was determined as of the date of issuance using a Black-Scholes pricing model and the fair value of \$200 was recorded as a component of stockholders' equity in Additional-paid-in-capital in the Consolidated Balance Sheets, with the offset recorded as a discount on the amounts funded under the Credit Agreement. This non-recurring measurement is classified as Level 3. The inputs used were a strike price of \$3.6452, the Company's stock price of \$3.71, volatility of 99%, term of 5.4 years and risk-free rate of 4.14%.

The fair value of the Original Warrants, which was a non-recurring fair value, was determined as of the date of issuance using a Black-Scholes pricing model and the fair value of \$3,245 was recorded as a component of stockholders' equity in Additional-paid-in-capital in the Consolidated Balance Sheets, with the offset recorded as a discount on the amounts funded under the OFA Facilities. This non-recurring measurement is classified as Level 3. The inputs used were a strike price of \$20.04, the Company's stock price of \$14.93, volatility of 95%, term of 7 years and risk-free rate of 2.95%. As discussed in Note 9, Debt and Credit Facilities, in connection with the closing of the Second Amendment of the Credit Agreement, on the Second Amendment Effective Date, the Company amended and restated the Original Warrants granted to the Lenders to have an exercise price of \$3.6452 per share.

Using a Black-Scholes pricing model, the Company determined that the Amended and Restated Original Warrants' fair values at the original strike price of \$20.04 and the amended strike price of \$3.6452 were \$548 and \$802, respectively, as of the Second Amendment Effective Date. The Amended and Restated Original Warrants' incremental increase in fair value for the repricing of \$254, was recorded as a component of stockholders' equity in Additional-paid-in-capital in the Consolidated Balance Sheets, with the offset recorded as a discount on the amounts refinanced under the Credit Agreement.

Note 16. Income Taxes

There is no provision for income taxes because the Company has historically incurred operating losses and maintains a full valuation allowance against its net deferred tax assets. The reported amount of income tax expense for the years differs from the amount that would result from applying domestic federal statutory tax rates to pretax losses primarily because of changes in valuation allowance.

For tax years beginning on or after January 1, 2022, the 2017 Tax Cuts and Jobs Act amended Section 174 of the U.S. Tax Code to eliminate current-year deductibility of research and development expenses and requires taxpayers to capitalize and amortize them over five years for research activities performed in the U.S. and fifteen years for research activities performed outside of the U.S. For the 2023 tax year, the Company capitalized \$78,002 of research and development expenses. This resulted in an increase in the deferred tax asset associated with capitalized research and development of \$20,985. In determining the realizability of the Company's net deferred tax asset, the Company considered numerous factors, including historical profitability, estimated future taxable income, and the industry in which it operates. Based on this information the Company has provided a valuation allowance for the full amount of its net deferred tax asset because the Company has determined that it is more likely than not that it will not be realized. The significant components of the Company's net deferred tax assets are as follows:

	December 31, 2023	December 31, 2022
Deferred tax assets:		
Federal net operating losses	\$ 73,770	\$ 46,695
State net operating losses	21,255	11,271
Stock options	13,915	10,705
Tax credits	15,048	10,689
Capitalized research & development	49,603	36,663
Accrued expense	—	2,171
Depreciation	73	42
Lease liability	212	290
Unrealized loss	—	103
Valuation allowance	(173,679)	(118,373)
Total deferred tax assets	<u>\$ 197</u>	<u>\$ 256</u>
Deferred tax liabilities:		
Unrealized gain	(12)	—
Right-of-use assets	\$ (185)	\$ (256)
Total deferred tax liabilities	<u>\$ (197)</u>	<u>\$ (256)</u>
Net deferred tax asset (liability)	<u>\$ —</u>	<u>\$ —</u>

The income tax benefit for the year ended December 31, 2023 differed from the amounts computed by applying the U.S. federal income tax rate of 21% to loss before tax benefit as a result of nondeductible expenses, tax credits generated and increases in the amount of the Company's valuation allowance.

A reconciliation between the Company's effective tax rate and the federal statutory rate are as follows:

	Year ended December 31,	
	2023	2022
Federal statutory rate	21.0 %	21.0 %
Stock based compensation	0.3 %	(0.4)%
Federal tax credits	2.3 %	2.1 %
State taxes	8.0 %	4.2 %
Other	(0.7)%	1.1 %
Valuation allowance	(30.9)%	(28.0)%
	<u>— %</u>	<u>— %</u>

As of December 31, 2023, the Company had approximately \$351,284 of gross federal and \$360,081 of gross state net operating loss ("NOL") carryforwards. If not utilized, the federal and state NOL carryforwards will begin to expire in 2037. The federal NOL of \$348,638 incurred after December 31, 2017, will be carried forward indefinitely. The utilization of such NOL carryforwards and realization of tax benefits in future years depends predominantly upon having taxable income. The Company has approximately \$14,345 of federal orphan drug and research development credits which will begin to expire in 2037 if not utilized. The Company also has approximately \$1,206 of state drug research development credits which will begin to expire in 2040 if not utilized.

Utilization of the NOL and research tax credit carryforwards may be subject to a substantial annual limitation due to ownership limitations that have occurred or that could occur in the future, as required by section 382 of the U.S. Tax Code, as well as similar state and foreign provisions. These ownership changes may limit the amount of the NOL and research credit carryforwards that can be utilized annually to offset future taxable income and tax, respectively. In general, an "ownership change," as defined by Section 382 of the U.S. Tax Code, results from a transaction or series of transactions over a three-year period resulting in an ownership change of more than 50 percentage points of the outstanding stock by certain stockholders or public groups.

Entities are also required to evaluate, measure, recognize and disclose any uncertain income tax positions taken on their income tax returns. The Company has analyzed its tax positions and has concluded that as of December 31, 2023, there were no uncertain positions. The Company's U.S. federal and state NOLs have occurred since its inception in 2017 and as such, tax years subject to potential tax examination could apply from that date because the utilization of NOLs from prior years opens the relevant year to audit by the U.S. Internal Revenue Service and/or state taxing authorities. BTI did not have any unrecognized tax benefits and has not accrued any interest or penalties for the years ended December 31, 2023 and 2022.

Note 17. Net Loss Per Share

Basic and diluted net loss per share are as follows:

	Year ended December 31,	
	2023	2022
Net loss (numerator)	\$ (179,053)	\$ (165,757)
Weighted average shares (denominator)	29,129	28,015
Basic and diluted net loss per share	\$ (6.15)	\$ (5.92)

Potentially dilutive securities outstanding consists of stock options, RSUs and performance units, and BTI warrants. The Company had common stock equivalents outstanding as of December 31, 2023 and 2022 of 6,036 and 5,280 shares, respectively.

Note 18. Commitments and Contingencies

From time to time, in the ordinary course of business, the Company may be subject to litigation and regulatory examinations as well as information gathering requests, inquiries and/or investigations. Other than the below, the Company is not currently subject to any matters where it believes there is a reasonable possibility that a material loss may be incurred.

On July 7, 2023, plaintiff Katelyn Martin filed a class action complaint against the Company and certain executives in the United States District Court for the District of Connecticut, captioned *Martin v. BioXcel Therapeutics, et al.*, 3:23-cv-00915 (D. Conn). On October 4, 2023, pursuant to the Private Securities Litigation Reform Act, the court appointed two co-Lead Plaintiffs. The co-Lead Plaintiffs filed an amended complaint on December 5, 2023, alleging violations of Sections 10(b) and 20A of the Securities and Exchange Act of 1934 (the “Exchange Act”) and SEC Rule 10b-5 promulgated thereunder. The amended complaint alleges that defendants made false or misleading statements regarding the TRANQUILITY II trial and the development of BXCL501 for an expanded indication related to the treatment of certain Alzheimer’s-related agitation. Defendants filed a motion to dismiss on February 6, 2024, which has not been decided.

On November 28, 2023, Plaintiffs Pratheesan Panancherry and Jeffrey Bastress filed a stockholder derivative complaint in the United States District Court for the District of Connecticut purportedly on behalf of the Company and against Vimal Mehta, Richard I. Steinhart, Peter Mueller, June Bray, Sandeep Laumas, Michael Miller, Michal Votruba, and Krishnan Nandabalan as Defendants, and the Company as Nominal Defendant under the caption *Panancherry et al v. Mehta et al*, 3:23-cv-1554. Following the initial action, Plaintiffs Maria Vomvolakis (3:24-cv-3) and Kelly Fowler (3:24-cv-203) each filed separate stockholder derivative complaints in the District of Connecticut raising similar claims as Panancherry and Bastress, including business torts and violations of the Securities Exchange Act of 1934. The cases have been consolidated under the caption *In re BioXcel Therapeutics, Inc. Stockholder Derivative Litigation*, 3:23-cv-1554 (D. Conn.). The above-captioned consolidated action is currently stayed.

On January 11, 2024, Plaintiff Jeremy Smith filed a stockholder derivative complaint in the United States District Court for the District of Delaware purportedly on behalf of the Company and against Vimal Mehta, Peter Mueller, June Bray, Sandeep Laumas, Michael Miller, Michal Votruba, Richard I. Steinhart, Robert Risinger, and Krishnan Nandabalan as Defendants, and the Company as Nominal Defendant under the caption *Smith v. Mehta et al*, 1:24-cv-00041. Following the initial action, Plaintiff Janice Korff filed a stockholder derivative complaint in the District of Delaware raising similar claims as Smith (1:24-cv-130), including business torts and violations of the Securities Exchange Act of 1934. The cases have been consolidated under the caption *In re BioXcel Therapeutics, Inc. Derivative Litigation*, 1:24-cv-00041 (D. Del.). The Company expects to seek a stay in the above-captioned consolidated action.

At this time, the Company does not believe the claims in the above-captioned matters have merit, and intends to vigorously defend against them; however, the potential costs and liabilities associated with this litigation are uncertain.

In April 2022, the Company signed a commercial supply agreement that requires minimum annual payments for the first three years of the agreement that in aggregate total \$10,000 for the three-year period.

Note 19. Subsequent Events

On February 12, 2024, the Company entered into the Third Amendment to Credit Agreement and Guaranty (the “Third Amendment”), which amended the Credit Agreement. Pursuant to the Third Amendment, the Lenders agreed to waive the covenant that the Company shall not receive a report and opinion from the Company’s independent auditors that contains a “going concern” or like qualification or exception or emphasis of matter of going concern footnote with respect to the Company’s financial statements for the fiscal year ended December 31, 2023 and, as a result, such event shall not be an event of default. As a condition to the effectiveness of the Third Amendment, among other things, the Company shall have received at least \$40,000 in gross proceeds from a registered public sale of the Company’s common stock, warrants and/or pre-funded warrants on or before February 20, 2024. The Company did not meet this condition and therefore the Third Amendment did not become effective.

On March 20, 2024 (the “Effective Date”), the Company entered into a Fourth Amendment (the “Fourth Amendment”) to the Credit Agreement and Guaranty (as amended from time to time, the “Credit Agreement”) by and among the Company, as the borrower, certain subsidiaries of the Company from time to time party thereto as subsidiary guarantors, the Lenders, and OFA as administrative agent, pursuant to which the Lenders waived the covenant that the Company not receive a report and opinion from the Company’s independent registered public accounting firm that contains a “going concern” or similar qualification with respect to the Company’s financial statements for the year ended December 31, 2023. Accordingly, while the Company’s independent registered public accounting firm’s report contained in this Annual Report on Form 10-K contains a “going concern” explanatory paragraph, it does not constitute an event of default under the Credit Agreement.

The Fourth Amendment includes a covenant that the Company will receive, (i) after the Effective Date and on or before April 15, 2024, at least \$25,000 in gross proceeds from the issuance of its common stock, warrants and/or pre-funded warrants, and/or in non-refundable cash consideration from partnering transactions entered into after the Effective Date (so long as such partnering transactions would not require the Company or any of its subsidiaries to make any cash investments in connection with the partnering transactions and no such cash investments are made) and (ii) after the Effective Date and on or before November 30, 2024, at least \$50,000 (for the avoidance of doubt, inclusive of amounts previously counted toward the preceding clause (i)) in gross proceeds from the issuance of its common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent (as defined in the Credit Agreement) in its sole discretion) from partnering transactions entered into after the Effective Date. Failure to perform this covenant would constitute (A) a default under the Credit Agreement and (B) an event of default under the Credit Agreement, subject to a cure period, solely in the case of clause (i) of the preceding sentence, until May 15, 2024. For the avoidance of doubt, failure to perform clause (ii) of the preceding sentence would constitute an immediate event of default under the Credit Agreement without any cure or grace period.

In addition, the Fourth Amendment provides that if the Company has not, after the Effective Date and on or before September 30, 2024, received at least \$40,000 in gross proceeds from the issuance of its common stock, warrants and/or pre-funded warrants, and/or cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the Effective Date, the “Minimum Liquidity Amount” (as defined in the Credit Agreement) that the Company is required to maintain at all times will increase to \$25,000 from \$15,000, unless and until we have received, after the Effective Date and on or before November 30, 2024, at least \$50,000 in gross proceeds from the issuance of the Company’s common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the Effective Date.

In connection with the Fourth Amendment, on the Effective Date, the Company granted new warrants to the Lenders to purchase up to 100 shares of its common stock (the “2024 Warrant Shares”) at an exercise price of \$3.0723 per share (the “2024 Warrants”), which represents a 10% premium over the arithmetic average of the volume-weighted average price of the Company’s common stock on the Nasdaq Capital Market during the 30 trading days preceding the Effective Date. The 2024 Warrants will expire on April 19, 2029 and may be net exercised at the holder’s election. On the Effective Date, the Company amended and restated its Amended and Restated Registration Rights Agreement (the “Second Amended and Restated Registration Rights Agreement”) with the Lenders, originally dated April 19, 2022. Pursuant to the Second Amended and Restated Registration Rights Agreement, the Company agreed to register the 2024 Warrant Shares for resale.

As discussed in Note 11, Common Stock Financings Activities, the Company has previously entered into an Open Market Sale Agreement (the “Sale Agreement”) with Jefferies LLC (“Jefferies”), as amended, pursuant to which the Company could offer and sell shares of its common stock, having an aggregate offering price of up to \$150,000, from time to time, through an “at the market offering” program under which Jefferies will act as sale agent. From January 1, 2024 through March 19, 2024, the Company sold 647 shares under the Sale Agreement for gross proceeds of \$1,743 and received proceeds of \$1,691, net of issuance costs of \$52.

**DESCRIPTION OF THE REGISTRANT'S SECURITIES
REGISTERED UNDER SECTION 12 OF THE EXCHANGE ACT**

General

BioXcel Therapeutics, Inc. has one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). References herein to "we," "us," "our" and the "Company" refer to BioXcel Therapeutics, Inc. and not to any of its subsidiaries.

The following description of our common stock and certain provisions of our amended and restated certificate of incorporation (as amended and/or restated from time to time, our "charter") and amended and restated bylaws (as amended and/or restated from time to time, our "bylaws") are summaries and are qualified in their entirety by reference to the full text of our amended and restated certificate of incorporation and our amended and restated bylaws, each of which have been publicly filed with the Securities and Exchange Commission (the "SEC"). We encourage you to read our amended and restated certificate of incorporation and our amended and restated bylaws and the applicable provisions of the Delaware General Corporation Law (the "DGCL") for additional information.

Common Stock

We are authorized to issue up to a total of 100,000,000 shares of common stock, par value \$0.001 per share. Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of our stockholders. Holders of our common stock have no cumulative voting rights. Further, holders of our common stock have no preemptive or conversion rights or other subscription rights.

Upon our liquidation, dissolution or winding-up, holders of our common stock are entitled to share in all assets remaining after payment of all liabilities and the liquidation preferences of any of our outstanding shares of preferred stock. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of our common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of our assets which are legally available. Such dividends, if any, are payable in cash, in property or in shares of capital stock.

The holders of one-third of the voting power of our issued and outstanding capital stock, represented in person or by proxy, are necessary to constitute a quorum for the transaction of business at any meeting. If a quorum is present, an action by stockholders entitled to vote on a matter is approved if the number of votes cast in favor of the action exceeds the number of votes cast in opposition to the action unless a different vote is required by law, the charter, the by-laws or, with respect to a class or series of preferred stock, the terms of any resolution or resolutions adopted by the board of directors. Pursuant to our charter, the election of directors requires a plurality of the votes cast by the stockholders present in person or represented by proxy at the meeting and entitled to vote thereon.

Preferred Stock

Our board of directors has the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the designations, powers, preferences, privileges, and relative participating, optional, or special rights as well as the qualifications, limitations, or restrictions of the preferred stock, including dividend rights, conversion rights, voting rights, terms of redemption, and liquidation preferences, any or all of which may be greater than the rights of the common stock. Our board of directors, without stockholder approval, can issue convertible preferred stock with voting, conversion, or other rights that could adversely affect the voting power and other rights of the holders of common stock. Preferred stock could be issued quickly with terms calculated to delay or prevent a change of control or make removal of management more difficult. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of our common stock, and may adversely affect the voting and other rights of the holders of common stock.

Anti-Takeover Effects of Certain Provisions of our Charter and Bylaws and the DGCL

Delaware Law

We are governed by the provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly traded Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A business combination includes mergers, asset sales or other transactions resulting in a financial benefit to the stockholder. An interested stockholder is a person who, together with affiliates and associates, owns (or within three years, did own) 15% or more of the corporation's voting stock, subject to certain exceptions. The statute could have the effect of delaying, deferring or preventing a change in control of our company.

Classified Board of Directors

Our charter provides that our Board is divided into three classes, with the classes as nearly equal in number as possible and each class serving three-year staggered terms. Directors may only be removed from our board of directors for cause and only by the affirmative vote of holders of a majority of the voting power of all then-outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class. These provisions may have the effect of deferring, delaying or discouraging hostile takeovers, or changes in control of us or our management.

Board of Directors Vacancies

Our charter and bylaws authorize only our board of directors to fill vacant directorships. In addition, the number of directors constituting our board of directors may be set only by resolution of the majority of the incumbent directors.

Stockholder Action; Special Meeting of Stockholders

Our charter and bylaws provide that our stockholders may not take action by written consent. Our charter and bylaws further provide that special meetings of our stockholders may be called by a majority of the board of directors, the Chief Executive Officer, or the Chairman of the board of directors.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our bylaws provide that stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at our annual meeting of stockholders, must provide timely notice of their intent in writing. To be timely, a stockholder's notice must be delivered to the secretary at our principal executive offices not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the first anniversary of the preceding year's annual meeting; provided, however, that in the event the date of the annual meeting is more than 30 days before or more than 60 days after such anniversary date, or if no annual meeting was held in the preceding year, notice by the stockholder to be timely must be so delivered not earlier than the close of business on the 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the 10th day following the day on which a public announcement of the date of such meeting is first made by us. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval and may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized

but unissued and unreserved common stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Limitations on Liability, Indemnification of Officers and Directors and Insurance

The DGCL authorizes corporations to limit or eliminate the personal liability of directors to corporations and their stockholders for monetary damages for breaches of directors' fiduciary duties as directors and our charter includes such an exculpation provision. Our charter and bylaws include provisions that indemnify, to the fullest extent allowable under the DGCL, the personal liability of directors or officers for monetary damages for actions taken as a director or officer of us, or for serving at our request as a director or officer or another position at another corporation or enterprise, as the case may be. Our charter and bylaws also provide that we must indemnify and advance reasonable expenses to our directors and officers, subject to our receipt of an undertaking from the indemnified party as may be required under the DGCL. Our bylaws expressly authorize us to carry directors' and officers' insurance to protect us, our directors, officers and certain employees for some liabilities. The limitation of liability and indemnification provisions in our charter and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against our directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. However, these provisions do not limit or eliminate our rights, or those of any stockholder, to seek non-monetary relief such as injunction or rescission in the event of a breach of a director's duty of care. These provisions will not alter the liability of directors under federal securities laws.

[FORM OF] BIOXCEL THERAPEUTICS, INC. COMMON STOCK WARRANT

NEITHER THIS WARRANT NOR THE SECURITIES ISSUABLE UPON ITS EXERCISE OR CONVERSION HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY APPLICABLE STATE SECURITIES LAW AND MAY NOT BE TRANSFERRED EXCEPT (I) IN ACCORDANCE WITH THE SECURITIES ACT OR SUCH APPLICABLE STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM, OR (II) WHERE, IN THE OPINION OF COUNSEL, REGISTRATION UNDER THE SECURITIES ACTS OR SUCH APPLICABLE STATE SECURITIES LAWS IS NOT REQUIRED IN CONNECTION WITH SUCH PROPOSED TRANSFER.

[# of shares] Shares of Company Common Stock No. [warrant #] WARRANT

This WARRANT (this “**Warrant**”) is issued as of March 20, 2024 (the “**Initial Issuance Date**”), by BIOXCEL THERAPEUTICS, INC., a Delaware corporation (the “**Company**”), to [name of purchaser], a [jurisdiction of organization] [entity type] (“**Purchaser**” and, together with any assignee(s) or transferee(s), “**Holder**” or “**Holder**s”).

WHEREAS, the Company, certain subsidiaries of the Company as guarantors, the Purchaser as lender and the other lenders party thereto are parties to that certain Credit Agreement and Guaranty, dated as of April 19, 2022, and amended as of November 13, 2023, December 5, 2023, February 12, 2024 and March 20, 2024 (as amended, restated, supplemented or otherwise modified from time to time, the “**Credit Agreement**”), pursuant to which the Company may borrow from Purchaser and the other lenders party thereto (collectively, the “**Lenders**”), and the Lenders may loan to the Company, up to \$202,319,447 from the date of the Credit Agreement through the Maturity Date; and

WHEREAS, the Company is issuing this Warrant to Purchaser as a condition precedent to the effectiveness of that Fourth Amendment to Credit Agreement and Guaranty, dated as of March 20, 2024, by and among the Company, Purchaser and the other parties thereto.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and Purchaser agree as follows:

Section 1. **Definitions**. Unless otherwise defined herein, capitalized terms have the meanings set forth in the Credit Agreement (as in effect on the date hereof), however, the following terms when used herein have the following meanings:

“**Aggregate Exercise Price**” means, in connection with any Exercise of this Warrant pursuant to **Section 4** (whether in whole or in part), an amount equal to the product of (i) the number of Underlying Shares in respect of which this Warrant is then being exercised pursuant to such **Section 4**, multiplied by (ii) the Exercise Price.

“**Fair Market Value**” means, with respect to any security or other property, the fair market value of such security or other property as determined by the independent members of the Board of Directors of the Company, acting in good faith. If the Holder objects in writing to the Board of Directors’ calculation of Fair Market Value within ten (10) days of receipt of written notice thereof and the Holder and the Company are unable to agree on Fair Market Value during the five (5) day period following the delivery of the Holder’s objection, the valuation dispute resolution procedure set forth in **Section 20** hereof shall be invoked to determine Fair Market Value.

“**Market Price**” means, with respect to a particular security, on any given day, the last reported sale price, regular way, or, in case no such reported sale takes place on such day, the average of the closing bid and asked prices, regular way, in either case on the principal national securities exchange on which the applicable securities are listed or admitted to trading, or if not listed or admitted to trading on any national securities exchange, the last quoted bid price in the over-the-counter market as reported by Pink Sheets LLC or similar organization. “Market Price” shall be determined without reference to after hours or extended hours trading. If such security is not listed and traded in a manner that the quotations referred to above are available for the period required hereunder, the Market Price per share of Company Common Stock shall be deemed to be the fair market value per share of such security as determined in good faith by the independent members of the Board of Directors in reliance upon an opinion of an accounting firm of nationally recognized standing retained by the Company for this purpose and reasonably acceptable to the Holder (or if there is more than one Holder, a majority in interest of Holders excluding any Holder that is an Affiliate of the Company). For the purposes of determining the Market Price of the Company Common Stock on the Trading Day preceding, on or following the occurrence of an event, (i) that Trading Day shall be deemed to commence immediately after the regular scheduled closing time of trading on the Trading Market on which the Company Common Stock is listed or, if trading is closed at an earlier time, such earlier time and (ii) that Trading Day shall end at the next regular scheduled closing time, or if trading is closed at an earlier time, such earlier time (for the avoidance of doubt, and as an example, if the Market Price is to be determined as of the last Trading Day preceding a specified event and the closing time of trading on a particular day is 4:00 p.m. and the specified event occurs at 5:00 p.m. on that day, the Market Price would be determined by reference to such 4:00 p.m. closing price).

“**Trading Day**” means a day on which the Company Common Stock is traded on a Trading Market or, if the Company Common Stock is not traded on a Trading Market, then on the principal securities exchange or securities market on which the Company Common Stock is then traded.

“**Trading Market**” means any market or exchange of The Nasdaq Stock Market LLC or the New York Stock Exchange.

“**VWAP**” means, for any date, the price determined by the first of the following clauses that applies: (i) if the Company Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Company Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Company Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:00 p.m. (New York City time)), (ii) if the Company Common Stock

is not then listed on a Trading Market or quoted for trading on the OTC Bulletin Board and if prices for the Company Common Stock are then reported in the “Pink Sheets” published by OTC Markets Group Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Company Common Stock so reported or (iii) in all other cases, the fair market value of a share of Company Common Stock as determined by an independent nationally recognized investment banking, accounting or valuation firm selected in good faith by the Company and reasonably acceptable to the Holder, the fees and expenses of which shall be paid by the Company.

Section 2. **Issuance of Warrant; Term.** For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company hereby grants to Holder the right to purchase from the Company [# of shares] fully paid and nonassessable shares of the Company’s voting common stock having a par value \$0.001 per share (the “**Company Common Stock**”). The shares of Company Common Stock issuable upon exercise of this Warrant are hereinafter referred to as the “**Underlying Shares.**” This Warrant shall be exercisable at any time and from time to time, in whole or in part, during the period commencing on the date hereof and ending on April 19, 2029 (the “**Expiration Date**”).

Section 3. **Exercise Price.** The exercise price per share of Company Common Stock for which each Underlying Share may be purchased pursuant to this Warrant shall be \$3.0723, subject to adjustment pursuant to **Section 7** (the “**Exercise Price**”).

Section 4. **Exercise.**

(a) This Warrant may be exercised by the Holder hereof as to all or any portion of the Underlying Shares, upon delivery of written notice to the Company, together with this original Warrant and (x) payment to the Company of the Aggregate Exercise Price or (y) instruction to the Company to withhold a number of the Underlying Shares then issuable upon exercise of this Warrant with an aggregate value (determined on the basis of the average Market Price per share for the Company Common Stock on the last five Trading Days for such stock ended immediately prior to the applicable Exercise Date, as defined below) equal to such Aggregate Exercise Price (collectively, the “**Exercise**”, with the date of an Exercise being an “**Exercise Date**”). The Exercise Price (if paid pursuant to clause (x) above) shall be payable by delivery by the Holder of a certified or official bank check payable to the order of the Company or wire transfer of immediately available funds to an account designated by the Company. This Warrant shall be deemed to have been so exercised as of the applicable Exercise Date, and the Holder shall be entitled to receive the Underlying Shares issuable upon such Exercise and be treated for all purposes as the holder of record of the Underlying Shares as of such date. Upon the Exercise of this Warrant, the Company shall, within two (2) Business Days of the applicable Exercise Date (the “**Underlying Share Delivery Date**”), execute and deliver to the Holder of this Warrant (a) a statement confirming the total number of Underlying Shares for which this Warrant is being exercised, and (b) (i) if the Underlying Shares are issued in certificate form, a certificate or certificates for the number of Underlying Shares issuable upon such Exercise, or (ii) if the Underlying Shares are issued in uncertificated form, a written confirmation evidencing the book-entry registration of such Underlying Shares in the Holder’s name; provided that if the Company fails to deliver to Holder such certificate or certificates (in the case of Underlying Shares issued in certificate form) or written confirmation (in the case of Underlying Shares issued in uncertificated

form) by the Underlying Share Delivery Date, the Holder will have the right to rescind such Exercise. Any rescission by the Holder pursuant to this **Section 4(a)** shall not affect any other remedies available to the Holder under applicable law or equity or pursuant to **Section 14** hereof as a result of the Company's failure to timely deliver the Underlying Shares. If this Warrant shall be exercised with respect to less than all of the Underlying Shares, the Company shall deliver a new Warrant covering the number of Underlying Shares in respect of which this Warrant shall not have been exercised, which new Warrant shall in all other respects be identical to this Warrant. The Company covenants and agrees that it will pay when due any and all state and federal issue taxes which may be payable in respect of the issuance of this Warrant or the issuance of any Underlying Shares upon exercise.

(b) In the event of any withholding of shares of Underlying Shares pursuant to **Section 4(a)(y)** above where the number of the Underlying Shares then issuable upon exercise of this Warrant with an aggregate value equal to the Aggregate Exercise Price is not a whole number, the number of the Underlying Shares withheld by the Company shall be rounded up to the nearest whole share, and the Company shall make a cash payment to the Holder (by delivery of a certified or official bank check or by wire transfer of immediately available funds) based on the incremental fraction of Underlying Shares being so withheld by the Company in an amount equal to the product of (x) such incremental fraction of Underlying Shares being so withheld or surrendered multiplied by (y) the value per share of Underlying Shares (determined on the basis of the average Market Price per share for the Company Common Stock on the last five Trading Days for such stock ended immediately prior to the applicable Exercise Date).

(c) The Company shall not knowingly effect the exercise of this Warrant, and the Holder shall not have the right to exercise this Warrant to the extent that, after giving effect to such exercise, the Holder (together with such Person's Affiliates) would beneficially own in excess of 9.99% (the "**Maximum Percentage**") of the Company Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Company Common Stock beneficially owned by such Person and its Affiliates shall include the number of shares of Company Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude shares of Company Common Stock which would be issuable upon (i) exercise of the remaining, unexercised portion of this Warrant beneficially owned by such Person and its Affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Person and its Affiliates (including, without limitation, any convertible notes or convertible shares or warrants) subject to a limitation on conversion or exercise analogous to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this paragraph, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act. For purposes of this Warrant, in determining the number of outstanding shares of Company Common Stock, a Holder of this Warrant may rely on the number of outstanding shares of Company Common Stock as reflected in the most recent of (1) the Company's Form 10-K, Form 10-Q or other public filing with the Securities and Exchange Commission, as the case may be, (2) a more recent public announcement by the Company or (3) any other notice by the Company or its transfer agent setting forth the number of shares of Company Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall, within five (5) Business Days, confirm to such Holder the number of shares of its Company Common Stock then outstanding. Furthermore, upon the written request of the

Company, a Holder shall confirm to the Company its then current beneficial ownership with respect to the Company's Company Common Stock.

Section 5. **No Fractional Shares.** No fractional shares may be issued upon any exercise of this Warrant or as a consequence of any adjustment pursuant to **Section 7**, and any fractions shall be rounded upwards to the nearest whole number of shares. If upon any exercise or adjustment of this Warrant a fraction of a share results, the Company will pay to the Holder the cash value of any such fractional share, calculated on the basis of the Exercise Price.

Section 6. **Securities Laws.**

(a) Holder acknowledges that the Underlying Shares are being offered and sold by the Company in accordance with Regulation D under the Securities Act and that the Underlying Shares will constitute "restricted securities" as defined in Rule 144 under the Securities Act. Neither this Warrant nor the Underlying Shares have been registered under the Securities Act, or any state securities laws ("**Blue Sky Laws**"). This Warrant has been acquired for the Holder's own account for investment purposes and not with a current view to distribution or resale and may not be sold or otherwise transferred (i) without an effective registration statement for such Warrant under the Securities Act and such applicable Blue Sky Laws, or (ii) unless Holder shall have delivered to the Company an opinion of counsel to the effect that the Warrant or such portion of the Warrant to be sold or transferred may be sold or transferred under an exemption from such registration; provided, that the foregoing conditions shall not apply to any transfer of this Warrant from Purchaser to (i) any Affiliate, managed fund or account of Oaktree Capital Management, L.P. or (ii) an Affiliate of Qatar Investment Authority.

(b) The Company covenants and agrees that all Underlying Shares will, upon issuance and payment therefor, be legally and validly issued and outstanding, free from all taxes, liens, charges and preemptive or similar rights, if any, with respect thereto or to the issuance thereof. The Company will take all such action as may be reasonably necessary or appropriate to assure that the Underlying Shares may be issued as provided herein without violating any applicable law or regulation, or any requirements of the Trading Market upon which the Company Common Stock may be listed.

(c) The certificates representing the Underlying Shares will bear the following or similar legend, unless the Company determines otherwise in compliance with applicable law:

"THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "**ACT**"), OR UNDER THE SECURITIES LAWS OF ANY STATE. THESE SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF THIS INVESTMENT FOR AN INDEFINITE PERIOD OF TIME. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL IN FORM AND SUBSTANCE

SATISFACTORY TO THE ISSUER TO THE EFFECT THAT ANY PROPOSED TRANSFER OR RESALE IS IN COMPLIANCE WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.”

Section 7. **Anti-Dilution Adjustments.**

(a) If the Company shall at any time prior to the expiration of this Warrant (i) pay a stock dividend or otherwise make a distribution or distributions on shares of Company Common Stock or any other equity or equity securities, (ii) subdivide the Company Common Stock (by stock split, recapitalization, or any other similar event) into a larger number of shares, (iii) combine the Company Common Stock (by stock split or reverse stock split, recapitalization, combination of shares, or any other similar event) or (iv) issue by reclassification of shares of Company Common Stock any shares of capital stock of the Company (with the exception of any reclassification that constitutes a Fundamental Change, as hereinafter defined), then in each such case the Exercise Price shall be adjusted by multiplying the Exercise Price in effect immediately prior to (x) the record date for the determination of stockholders entitled to receive such dividend or distribution or (y) the effective date in the case of a subdivision, combination or re-classification by a fraction, the numerator of which shall be the number of shares of Company Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Company Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the Aggregate Exercise Price shall remain unchanged. Before taking any action which would result in an adjustment in the number of Underlying Shares for which this Warrant is exercisable or to the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(b) If the Company shall at any time prior to the expiration of this Warrant (in each case, occurring after the date hereof) be a party to any merger, consolidation, exchange of shares of Company Common Stock, sale of a majority of the Company Common Stock, sale of all or substantially all of the assets of the Company, separation, reorganization, recapitalization, winding up or liquidation of the Company, or other similar event or transaction (each, a “**Fundamental Change**”), as a result of which shares of Company Common Stock shall be changed into the same or a different number or class or classes of securities of the Company or another entity, or the holders of shares of Company Common Stock are entitled to receive cash or other property, then, upon the Exercise of this Warrant by the Holder, such Holder shall receive, for the Aggregate Exercise Price as in effect immediately prior to such Fundamental Change (subject to all other adjustments under this Warrant), the aggregate number of shares or such other securities, cash or other property which such Holder would have received if this Warrant had been exercised immediately prior to such Fundamental Change (collectively, the “**Fundamental Change Receivable**”), which, upon the Holder’s election, may be received net of the Aggregate Exercise Price (for the avoidance of doubt, without payment by the Holder of any cash in an amount equal to the then Exercise Price). In the case of any Fundamental Change, the successor or purchasing party of such merger, consolidation, exchange of shares of Company Common Stock, sale of all or substantially all of the assets of the Company or reorganization (if other than the Company) shall duly execute and deliver to the Holder a supplement to this Warrant acknowledging the Company and such party’s obligations under this **Section 7(b)**. The terms of

this Warrant shall be applicable to the Fundamental Change Receivable due to the Holder upon the consummation of any such Fundamental Change.

(c) If the Company, at any time while this Warrant is outstanding, shall otherwise distribute to all holders of Company Common Stock (and not to the Holder or Holders) evidences of its indebtedness or assets (including cash and cash dividends) or rights or warrants to subscribe for or purchase any security (for the avoidance of doubt, excluding in each such case any Fundamental Change Receivable), then in each such case the Exercise Price shall be adjusted by multiplying the Exercise Price in effect immediately prior to the record date fixed for determination of stockholders entitled to receive such distribution by a fraction, the numerator of which shall be such VWAP on such record date less the then Fair Market Value at such record date of the portion of such assets or evidence of indebtedness so distributed applicable to one outstanding share of Company Common Stock, and the denominator of which shall be the VWAP determined as of the record date mentioned above. Such adjustment shall be made whenever any such distribution is made and shall become effective immediately after the record date mentioned above.

(d) Not less than five (5) days prior to the record date or effective date, as the case may be, of any event which requires or might require an adjustment or readjustment pursuant to **Section 7(a)** or **Section 7(c)** (each, an “**Adjustment Event**”), and not less than ten (10) days prior to the record date or effective date, as the case may be, of any Fundamental Change, the Company shall give written notice of such Adjustment Event or Fundamental Change (as applicable) to the Holder or Holders, describing such Adjustment Event or Fundamental Change in reasonable detail and specifying the record date or effective date, as the case may be. Such notice shall additionally include the Company’s certification of the following computations, as applicable, each of which shall have been made by the Company in good faith: (i) in the case of an Adjustment Event, if determinable, the required adjustment and the computation thereof or, if the required adjustment is not determinable at the time of such notice, the Company shall give notice to the Holder or Holders of such adjustment and computation promptly after such adjustment becomes determinable, and (ii) in the case of a Fundamental Change, the number of shares or such other securities, cash or other property which is payable to the Holder or Holders upon the Fundamental Change, the computation thereof, and the computation of the then applicable Exercise Price. Except as otherwise prohibited by applicable laws, to the extent that any notice provided pursuant to this **Section 7(d)** contains material, non-public information regarding the Company, the Company shall disclose such information regarding the Company in a Current Report on Form 8-K and file such Current Report on Form 8-K with the SEC no later than the second Trading Day following the date such notice is delivered to the Holder.

(e) Notwithstanding any other provision hereof, if an exercise of all or any portion of this Warrant is to be made in connection with a Fundamental Change or a public offering, such exercise may, at the election of the Holder, be conditioned upon the consummation of such transaction, in which case such exercise shall not be deemed to be effective until immediately prior to the consummation of such transaction.

(f) At all times on and prior to the Expiration Date, the Company shall at all times reserve and keep available out of its authorized but unissued Company Common Stock (or other equity interests then constituting Underlying Shares), solely for the purpose of issuance upon

the exercise of this Warrant, the maximum number of Underlying Shares issuable upon the exercise of this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates or effectuating the book entry of uncertificated shares to execute and issue, or enter, the necessary certificates or book entries (as applicable) for the Underlying Shares upon the exercise of the purchase rights under this Warrant. The Company shall not increase the par value of any Underlying Shares receivable upon the exercise of this Warrant above the Exercise Price then in effect, and shall take all such actions within its power as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable Underlying Shares upon the exercise of this Warrant.

Section 8. **Transfer of Warrant**. Subject to compliance with applicable federal and state securities laws, the Holder may, from time to time, transfer this Warrant or the Underlying Shares, in each case, in whole or in part, by giving the Company a written notice of the portion of the Warrant or the shares of the Underlying Shares being transferred, such notice to set forth the name, address and taxpayer identification number of the transferee, the anticipated date of such transfer, and surrendering this Warrant or the certificates or book-entry records representing shares of the Underlying Shares, as applicable, to the Company for reissuance to the transferee(s). Upon surrender of this Warrant by a Holder to the Company for transfer, in whole or in part, the Company shall issue a new warrant to such Holder in such denomination as shall be requested by such Holder covering the number of Underlying Shares, if any, in respect of which this Warrant shall not have been transferred. Such new warrant shall be identical in all other respects to this Warrant. This Warrant may be divided or combined with other Warrants upon presentation hereof at the office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with this **Section 8** as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated as of the Initial Issuance Date and shall be identical to this Warrant except as to the number of Underlying Shares issuable pursuant thereto.

Section 9. **No Impairment**. The Company may not, including, without limitation, by amendment of its certificate of incorporation or bylaws, or through a Fundamental Change or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and the Company shall at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Holder or Holders against impairment. Without limiting the generality of the foregoing, the Company shall take (a) all such action as may be necessary or appropriate in order that the Company may duly and validly issue fully paid and non-assessable Underlying Shares, free from any taxes, liens, charges and preemptive rights, upon the exercise of this Warrant, and (b) use its best efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be necessary to enable the Company to perform its obligations under this Warrant.

Section 10. **No Rights or Liabilities as a Stockholder**. This Warrant shall not entitle the Holder or Holders hereof to any voting rights or other rights as a stockholder of the

Company with respect to the Underlying Shares prior to the exercise of the Warrant. No provision of this Warrant, in the absence of affirmative action by the Holder or Holders to purchase the Underlying Shares, and no mere enumeration herein of the rights or privileges of the Holder or Holders, shall give rise to any liability of such Holder or Holders for the Exercise Price or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

Section 11. **Representations and Warranties of the Company.** The Company hereby represents and warrants:

(a) As of the Initial Issuance Date, the Company (A) is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, (B) has all requisite power and authority to own and operate its properties, to carry on its business as now conducted and as currently proposed to be conducted, to issue and enter into the Warrant and to carry out the transactions contemplated thereby, and (C) except where the failure to do so, individually or in the aggregate, has not had, and could not be reasonably expected to have, a material adverse effect on the business, assets, financial condition or operations of the Company, is qualified to do business and, where applicable is in good standing, in every jurisdiction where such qualification is required.

(b) This Warrant is, and any Warrant issued in substitution for or replacement of this Warrant (including pursuant to **Section 15**) shall be, upon issuance, duly authorized and validly issued. This Warrant constitutes, and any Warrant issued in substitution for or replacement of this Warrant shall be, upon issuance, a legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency or other similar laws affecting the enforcement of creditors' rights generally and by general principles of equity.

(c) As of the Initial Issuance Date, the execution, delivery and performance by the Company of the Warrant does not and will not (A) violate any material provision of applicable law or the organizational documents of the Company, (B) conflict with, result in a breach of, or constitute (with the giving of any notice, the passage of time, or both) a default under any material agreement of the Company or (C) result in or require the creation or imposition of any lien upon any assets of the Company.

Section 12. **Successors.** All the covenants and provisions of this Warrant by or for the benefit of the Company or the Holder or Holders shall bind and inure to the benefit of their respective successors and assigns.

Section 13. **Survival.** The rights of the Holder or Holders under this Warrant, and the covenants and agreements of the Company set forth in this Warrant for the benefit of the Holder or Holders, shall survive exercise of all or any portion of this Warrant and shall inure to the Holder or Holders of any Underlying Shares.

Section 14. **Remedies.** If the Company violates, breaches or defaults under this Warrant, the Holder may proceed to protect and enforce its rights by any action at law, suit in equity or other appropriate proceeding, whether for specific performance of any agreement contained in this Warrant, or for an injunction against a violation of any of the terms hereof, or in

and of the exercise of any power granted hereby or by law, in each case without providing any bond or other security in connection with such action, suit or other proceeding. In case of any violation, breach or default under this Warrant, the Company shall pay to the Holder on demand all reasonable costs and expenses of enforcing the Holder's rights under this Warrant, including, without limitation, reasonable attorneys' fees and legal expenses.

Section 15. **Loss, Theft, Destruction or Mutilation of Warrant**. The Company covenants that upon its receipt of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Underlying Shares (and, in the case of mutilation, the surrender and cancellation of this Warrant or such stock certificate), the Company shall make and deliver to the Holder a new Warrant or stock certificate that is identical to this Warrant or to such stock certificate (as applicable).

Section 16. **Article and Section Headings**. Numbered and titled article and section headings are for convenience only and shall not be construed as amplifying or limiting any of the provisions of this Warrant.

Section 17. **Notice**. Any and all notices, elections or demands permitted or required to be made under this Warrant shall be in writing, signed by the party giving such notice, election or demand and shall be delivered in accordance with the notice provisions in the Credit Agreement.

Section 18. **Severability**. If any provisions(s) of this Warrant or the application thereof to any person or circumstances shall be invalid or unenforceable to any extent, the remainder of this Warrant and the application of such provisions to other persons or circumstances shall not be affected thereby and shall be enforced to the greatest extent permitted by law.

Section 19. **Entire Agreement**. This Warrant and between the Company and the Holder represents the entire agreement between the parties concerning the subject matter hereof, and all oral discussions and prior agreement are merged herein.

Section 20. **Valuation Dispute Resolution**. In the case of any dispute as to the determination of any amount or valuation hereunder or in connection with the amount or value of any Company Common Stock or Underlying Shares to be issued, withheld or otherwise determined, the calculation of the Aggregate Exercise Price or any other computation or valuation required to be made hereunder or in connection herewith, in the event the Holder, on the one hand, and the Company, on the other hand, are unable to settle such dispute within five (5) Business Days, then either party may elect to submit the disputed matter(s) for resolution by an accounting firm of nationally recognized standing as may be mutually agreed upon by the Holder and the Company. Such firm's determination of such disputed matter(s) shall be binding upon all parties absent demonstrable error, and the Company and the Holder shall each pay one half of the fees and costs of such firm.

Section 21. **Governing Law**. This Warrant and the rights and obligations of the parties hereunder, and any claims, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Warrant and the transactions contemplated hereby shall be governed by, and construed in accordance with, the law of the State of New York.

Section 22. **Jurisdiction; Waiver of Venue; Service of Process.**

(a) Each party hereto irrevocably and unconditionally agrees that it will not commence any action, litigation or proceeding of any kind or description, whether in law or equity, whether in contract or in tort or otherwise, against any other party hereto in any way relating to this Warrant or the transactions relating hereto, in any forum other than the courts of the State of New York sitting in New York County, and of the United States District Court of the Southern District of New York, and any appellate court from any thereof; and each of the parties hereto irrevocably and unconditionally submits to the jurisdiction of such courts and agrees that all claims in respect of any such action, litigation or proceeding may be heard and determined in such New York State court or, to the fullest extent permitted by applicable law, in such federal court. Each of the parties hereto agrees that a final judgment in any such action, litigation or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

(b) Each party hereto irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any objection that it may now or hereafter have to the laying of venue of any action or proceeding arising out of or relating to this Agreement in any court referred to in paragraph (a) of this **Section 22**. Each of the parties hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court.

(c) Each party hereto irrevocably consents to service of process in the manner provided for notices in **Section 17**.

Section 23. **Amendment.** No amendment or modification hereof shall be effective except in a writing executed by the Company and the Holder.

Section 24. **Counterparts.** This Warrant may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same Warrant.

Section 25. **Waiver of Jury Trial.** EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS WARRANT OR THE TRANSACTIONS CONTEMPLATED HEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PERSON HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PERSON WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS WARRANT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS **SECTION 25**.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have set their hands as of the date first above written.

COMPANY:

BIOXCEL THERAPEUTICS, INC.

By: _____

Name:

Title:

[Signature Page to Warrant]

BIOXCEL THERAPEUTICS, INC.
SECOND AMENDED AND RESTATED REGISTRATION RIGHTS AGREEMENT

This **SECOND AMENDED AND RESTATED REGISTRATION RIGHTS AGREEMENT** (this “*Agreement*”) is made as of March 20, 2024, by and among BioXcel Therapeutics, Inc., a Delaware corporation (the “*Company*”), the purchasers identified on **Schedule A** hereto (each, a “*Purchaser*”) and such other Persons, if any, from time to time, that become a party hereto as holders of Registrable Securities (as defined below).

RECITALS

WHEREAS, pursuant to the Credit Agreement (as defined below), on the Closing Date, the Company issued to each Purchaser a warrant to purchase such number of shares of Common Stock (as defined below) as is set forth opposite such Purchaser’s name on **Schedule A** hereto as the Shares Issuable Upon Exercise of Closing Date Warrants (as such number may be adjusted pursuant to the terms of such warrant) (each, a “*Closing Date Warrant*” and collectively, the “*Closing Date Warrants*”);

WHEREAS, pursuant to the Credit Agreement (as defined below), on the Second Amendment Effective Date, the Company issued to each Purchaser a warrant to purchase such number of shares of Common Stock (as defined below) as is set forth opposite such Purchaser’s name on **Schedule A** hereto as the Shares Issuable Upon Exercise of Second Amendment Warrants (as such number may be adjusted pursuant to the terms of such warrant) (each, a “*Second Amendment Warrant*”, collectively, the “*Second Amendment Warrants*”);

WHEREAS, pursuant to the Credit Agreement (as defined below), on March 20, 2024 (the “*Fourth Amendment Effective Date*”), the Company will issue to each Purchaser a warrant to purchase such number of shares of Common Stock (as defined below) as is set forth opposite such Purchaser’s name on **Schedule A** hereto as the Shares Issuable Upon Exercise of Fourth Amendment Warrants (as such number may be adjusted pursuant to the terms of such warrant) (each, a “*Fourth Amendment Warrant*”, collectively, the “*Fourth Amendment Warrants*” and together with the Closing Date Warrants and the Second Amendment Warrants, the “*Warrants*”);

WHEREAS, the Warrants will be exercisable for shares of Common Stock from time to time on or after the Closing Date, the Second Amendment Effective Date or the Fourth Amendment Effective Date, as applicable, and on or prior to the close of business on April 19, 2029, in accordance with the terms thereof;

WHEREAS, in connection with the execution and delivery of the Credit Agreement and the issuance of the Warrants and the consummation of the transactions contemplated thereby the Company has agreed to grant the Holders (as defined below) certain registration rights as set forth below; and

NOW, THEREFORE, in consideration of the mutual promises and covenants herein contained, and other consideration, the receipt and adequacy of which is hereby acknowledged, the parties hereto agree as follows:

ARTICLE I
Definitions

1.1 **Definitions.** Unless otherwise defined herein, capitalized terms used in this Agreement have the meanings ascribed to them in the Credit Agreement. As used in this Agreement, the following terms shall have the meanings set forth below:

(a) “***Additional Shares***” means any shares of Common Stock issued to the Purchasers pursuant to a stock split, stock dividend or other distribution with respect to, or in exchange or in replacement of, the Underlying Shares, or in connection with a combination of shares, distribution, recapitalization, merger, consolidation, other reorganization or other similar event.

(b) “***Agreement***” has the meaning set forth in the Preamble.

(c) “***Business Day***” means any day, excluding Saturday, Sunday and any day which is a legal holiday in the City of New York or is a day on which banking institutions located in the City of New York are authorized or required by law or other governmental action to remain closed.

(d) “***Change of Control***” means an event or series of events (i) as a result of which any “person” or “group” (as such terms are used in Sections 13(d) and 14(d) of the Securities Act, but excluding any of such person or its Subsidiaries, and any Person acting in its capacity as trustee, agent or other fiduciary or administrator of any such Plan and excluding any Permitted Holder becomes the “beneficial owner”, directly or indirectly, of thirty-five percent (35%) or more of the Equity Interests of the Company entitled to vote for members of the Board of the Company on a fully-diluted basis (and taking into account all such Equity Interests that such person or group has the right to acquire pursuant to any Option Right); (ii) as a result of which any Permitted Holder or “group” (as such terms are used in Sections 13(d) and 14(d) of the Securities Act) including any Permitted Holder becomes the “beneficial owner”, directly or indirectly, of forty-five percent (45%) or more of the Equity Interests of the Company entitled to vote for members of the Board of the Company on a fully-diluted basis (and taking into account all such Equity Interests that such Permitted Holder or group has the right to acquire pursuant to any Option Right); (iii) that results in the sale of all or substantially all of the assets or businesses of the Company and its Subsidiaries, taken as a whole, or (iv) that results in the Company’s failure to own, directly or indirectly, beneficially and of record, one-hundred percent (100%) of all issued and outstanding Equity Interests of each Subsidiary Guarantor (other than, in the case of this clause (iv), as a result of any Asset Sale permitted by Section 9.09 of the Credit Agreement, liquidation or dissolution permitted by Section 9.03(b) of the Credit Agreement, the issuance of any Equity Interests in BXCL 701 Subsidiaries pursuant to Section 9.09(o) of the Credit Agreement or a Permitted BXCL 701 Disposition Event, or any interest in or exercise of any 701 Warrant). For purposes of this definition, “beneficial owner” is as defined in Rules 13d-3 and 13d-5 under the Exchange Act, except that a person or group shall be deemed to have “beneficial ownership” of all Equity Interests that such person or group has the right to acquire, whether such right is exercisable immediately or only after the passage of time (such right, an “***Option Right***”).

- (e) “**Closing Date Warrant**” has the meaning set forth in the Recitals.
- (f) “**Closing Date Warrants Shelf Effectiveness Deadline**” has the meaning set forth in Section 2.1(a)(ii).
- (g) “**Closing Date Warrants Shelf Registration**” has the meaning set forth in Section 2.1(a)(i).
- (h) “**Closing Date Warrants Shelf Registration Statement**” has the meaning set forth in Section 2.1(a)(i).
- (i) “**Closing Date Warrants Subsequent Shelf Effectiveness Deadline**” has the meaning set forth in Section 2.1(a)(ii).
- (j) “**Closing Date Warrants Subsequent Shelf Registration Statement**” has the meaning set forth in Section 2.1(a)(ii).
- (k) “**Closing Date Warrants Termination Date**” has the meaning set forth in Section 2.1(a)(ii).
- (l) “**Common Stock**” means shares of the common stock of the Company, par value \$0.001 per share.
- (m) “**Company**” has the meaning set forth in the Preamble.
- (n) “**Company Indemnified Party**” has the meaning set forth in Section 2.4(b).
- (o) “**Controlling Person**” has the meaning set forth in Section 2.4(a).
- (p) “**Credit Agreement**” means that certain Credit Agreement and Guaranty (as may be amended or restated from time to time), dated as of April 19, 2022, and amended as of November 13, 2023, December 5, 2023, February 12, 2024 and March 20, 2024 by and among the Company, the subsidiaries of the Company party thereto as Guarantors, the lenders party thereto and Oaktree Fund Administration, LLC, as administrative agent.
- (q) “**Default**” has the meaning set forth in Section 2.1(c).
- (r) “**Effectiveness Deadline**” means the Shelf Effectiveness Deadline and the Subsequent Shelf Effectiveness Deadline.
- (s) “**End of Suspension Notice**” has the meaning set forth in Section 2.2(c).
- (t) “**Fourth Amendment Effective Date**” has the meaning set forth in the Recitals.
- (u) “**Fourth Amendment Warrant**” has the meaning set forth in the Recitals.

- (v) “**Fourth Amendment Warrants Shelf Effectiveness Deadline**” has the meaning set forth in Section 2.1(c)(ii).
- (w) “**Fourth Amendment Warrants Shelf Registration**” has the meaning set forth in Section 2.1(c)(i).
- (x) “**Fourth Amendment Warrants Shelf Registration Statement**” has the meaning set forth in Section 2.1(c)(i).
- (y) “**Fourth Amendment Warrants Subsequent Shelf Effectiveness Date**” has the meaning set forth in Section 2.1(c)(ii).
- (z) “**Fourth Amendment Warrants Subsequent Shelf Registration Statement**” has the meaning set forth in Section 2.1(c)(ii).
- (aa) “**Fourth Amendment Warrants Termination Date**” has the meaning set forth in Section 2.1(c)(ii).
- (bb) “**Holder**” (collectively, “**Holders**”) means any Purchaser and any transferee permitted under Section 3.1, in each case, to the extent holding or beneficially owning Registrable Securities or Warrants exercisable for Registrable Securities.
- (cc) “**Holder Indemnified Parties**” has the meaning set forth in Section 2.4(a).
- (dd) “**Indemnified Party**” has the meaning set forth in Section 2.4(c).
- (ee) “**Liquidated Damages**” has the meaning set forth in Section 2.1(c).
- (ff) “**Option Right**” has the meaning set forth in the definition of “Change of Control”.
- (gg) “**Person**” means any person, individual, corporation, limited liability company, partnership, trust or other nongovernmental entity or any governmental agency, court, authority or other body (whether foreign, federal, state, local or otherwise).
- (hh) “**Prospectus**” means the prospectus or prospectuses (whether preliminary or final) included in any Registration Statement and relating to Registrable Securities, as amended or supplemented and including all material incorporated by reference in such prospectus or prospectuses.
- (ii) “**Purchaser**” has the meaning set forth in the Preamble.
- (jj) “**register**,” “**registered**” and “**registration**” refer to a registration effected by filing with the SEC a registration statement in compliance with the Securities Act, and the declaration or ordering by the SEC of the effectiveness of such registration statement.
- (kk) “**Registrable Securities**” means (i) the Underlying Shares, and (ii) any Additional Shares; *provided, however*, that Underlying Shares or Additional Shares shall cease to

be treated as Registrable Securities on the earliest to occur of, (A) the date such security has been disposed of pursuant to an effective registration statement, (B) the date on which such security is sold pursuant to Rule 144 or (C) the date on which the Holder thereof, together with its Affiliates, is able to dispose of all of its Registrable Securities without restriction or limitation pursuant to Rule 144 and without the requirement for the Company to be in compliance with Rule 144 (or any successor rule).

(ll) “**Registration Expenses**” means any and all expenses incident to the Company’s performance of or compliance with this Agreement, including without limitation: (i) all SEC registration and filing fees, (ii) all fees and expenses associated with filings to be made with, or the listing of any Registrable Securities on, any securities exchange or over-the-counter trading market on which the Registrable Securities are to be listed or quoted, (iii) all fees and expenses with respect to filings required to be made with an exchange or any securities industry self-regulatory body, (iv) all fees and expenses of compliance with securities or “blue sky” laws (including fees and disbursements of counsel for the Company in connection therewith), (v) all transfer agent’s and registrar’s fees, (vi) all fees and disbursements of counsel for the Company and customary fees and expenses for independent certified public accountants retained by the Company, (vii) securities acts liability insurance, if the Company so desires, (viii) all internal expenses of the Company (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), (ix) the expense of any annual audit, and (x) the fees and expenses of any Person, including special experts, retained by the Company. “**Registration Expenses**” shall not include underwriting discounts or commissions attributable to the sale of the Registrable Securities or any legal fees and expenses of counsel to the Holders.

(mm) “**Registration Statement**” means any registration statement of the Company under the Securities Act which covers any of the Registrable Securities pursuant to the provisions of this Agreement, including the Prospectus, all amendments and supplements to such Registration Statement, including post-effective amendments, all exhibits and all documents incorporated by reference in such Registration Statement.

(nn) “**Rule 144**” means Rule 144 under the Securities Act.

(oo) “**SEC**” means the U.S. Securities and Exchange Commission.

(pp) “**Second Amendment Warrant**” has the meaning set forth in the Recitals.

(qq) “**Second Amendment Warrants Shelf Effectiveness Deadline**” has the meaning set forth in [Section 2.1\(b\)\(ii\)](#).

(rr) “**Second Amendment Warrants Shelf Registration**” has the meaning set forth in [Section 2.1\(b\)\(i\)](#).

(ss) “**Second Amendment Warrants Shelf Registration Statement**” has the meaning set forth in [Section 2.1\(b\)\(i\)](#).

(tt) “**Second Amendment Warrants Subsequent Shelf Effectiveness Date**” has the meaning set forth in [Section 2.1\(b\)\(ii\)](#).

- (uu) “*Second Amendment Warrants Subsequent Shelf Registration Statement*” has the meaning set forth in Section 2.1(b)(ii).
- (vv) “*Second Amendment Warrants Termination Date*” has the meaning set forth in Section 2.1(b)(ii).
- (ww) “*Securities Act*” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder, as the same may be amended from time to time.
- (xx) “*Shelf Effectiveness Deadline*” has the meaning set forth in Section 2.1(c)(ii).
- (yy) “*Shelf Registration Statement*” has the meaning set forth in Section 2.1(c)(i).
- (zz) “*Subsequent Shelf Effectiveness Deadline*” has the meaning set forth in Section 2.1(c)(ii).
- (aaa) “*Subsequent Shelf Registration Statement*” has the meaning set forth in Section 2.1(c)(ii).
- (bbb) “*Suspension Event*” has the meaning set forth in Section 2.2(b).
- (ccc) “*Suspension Notice*” has the meaning set forth in Section 2.2(c).
- (ddd) “*Trading Day*” means a day on which the Common Stock is traded on a Trading Market or, if the Common Stock is not traded on a Trading Market, then on the principal securities exchange or securities market on which the Common Stock is then traded.
- (eee) “*Trading Market*” means any market or exchange of The Nasdaq Stock Market LLC or the New York Stock Exchange.
- (fff) “*Underlying Shares*” means any and all shares of Common Stock issuable upon exercise of the Warrants.
- (ggg) “*Warrant*” has the meaning set forth in the Recitals.

ARTICLE II

Registration Rights

2.1 Shelf Registration.

(a) Closing Date Warrants Shelf Registration.

(i) Filing. Within 45 days following the Closing Date, the Company shall file with the SEC a Registration Statement on Form S-3 (unless the Company is ineligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form) or the then appropriate form for an offering to be made on a delayed or continuous basis pursuant to Rule 415 under the Securities Act or

any successor rule thereto (a “**Closing Date Warrants Shelf Registration Statement**”) pursuant to which all of the Registrable Securities associated with the Closing Date Warrants shall be included (on the initial filing or by supplement or amendment thereto) to enable the public resale of such Registrable Securities on a delayed or continuous basis pursuant to Rule 415 under the Securities Act or any successor rule thereto (a “**Closing Date Warrants Shelf Registration**”). If permitted under the Securities Act, such Closing Date Warrants Shelf Registration Statement shall be an “automatic shelf registration statement” as defined in Rule 405 under the Securities Act.

(ii) **Effectiveness.** The Company shall use its reasonable best efforts to (A) cause the Closing Date Warrants Shelf Registration Statement filed pursuant to Section 2.1(a)(i) to be declared effective by the SEC as soon as reasonably practicable, and in any event by the date that is the earlier of (1) 120 days following the Closing Date and (2) five Trading Days after the date the Company receives written notification from the SEC that the Closing Date Warrants Shelf Registration will not be reviewed (the “**Closing Date Warrants Shelf Effectiveness Deadline**”) and (B) maintain the effectiveness of such Closing Date Warrants Shelf Registration Statement, including by filing any necessary post-effective amendments and Prospectus supplements and by filing one or more replacement or renewal Closing Date Warrants Shelf Registration Statements (each, a “**Closing Date Warrants Subsequent Shelf Registration Statement**”) upon the expiration of such Closing Date Warrants Shelf Registration Statement, if required by Rule 415 under the Securities Act, continuously until the earliest to occur of (1) the 30-month anniversary of the Closing Date, (2) a Change of Control and (3) such time as there are no Registrable Securities remaining or issuable upon exercise of the Closing Date Warrants (the “**Closing Date Warrants Termination Date**”). If a Closing Date Warrants Subsequent Shelf Registration Statement is filed, the Company shall use its reasonable best efforts to (x) cause such Closing Date Warrants Subsequent Shelf Registration Statement to be declared effective by the SEC as soon as reasonably practicable after such filing, but in any event by the date that is fifty (50) days after such Closing Date Warrants Subsequent Shelf Registration Statement is filed (the “**Closing Date Warrants Subsequent Shelf Effectiveness Deadline**”), and (y) keep such Closing Date Warrants Subsequent Shelf Registration Statement (or another Closing Date Warrants Subsequent Shelf Registration Statement) continuously effective until the Closing Date Warrants Termination Date. Any Closing Date Warrants Subsequent Shelf Registration Statement shall be a Closing Date Warrants Shelf Registration Statement.

(b) **Second Amendment Warrants Shelf Registration.**

(i) **Filing.** Within 45 days following the Second Amendment Effective Date, the Company shall file with the SEC a new Registration Statement or an amendment to an effective Registration Statement on Form S-3 (unless the Company is ineligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form) or the then appropriate form for an offering to be made on a delayed or continuous basis pursuant to Rule 415 under the Securities Act or any successor rule thereto (a “**Second Amendment Warrants Shelf Registration Statement**”) pursuant to which all of the Registrable Securities associated with the Second Amendment Warrants shall be included (on the initial filing or by supplement or

amendment thereto) to enable the public resale of such Registrable Securities on a delayed or continuous basis pursuant to Rule 415 under the Securities Act or any successor rule thereto (a “**Second Amendment Warrants Shelf Registration**”). If permitted under the Securities Act, such Second Amendment Warrants Shelf Registration Statement shall be an “automatic shelf registration statement” as defined in Rule 405 under the Securities Act.

(ii) **Effectiveness.** The Company shall use its reasonable best efforts to (A) cause the Second Amendment Warrants Shelf Registration Statement filed pursuant to Section 2.1(b)(i) to be declared effective by the SEC as soon as reasonably practicable, and in any event by the date that is the earlier of (1) 120 days following the Second Amendment and (2) five Trading Days after the date the Company receives written notification from the SEC that the Second Amendment Warrants Shelf Registration will not be reviewed (the “**Second Amendment Warrants Shelf Effectiveness Deadline**”) and (B) maintain the effectiveness of such Second Amendment Warrants Shelf Registration Statement, including by filing any necessary post-effective amendments and Prospectus supplements and by filing one or more replacement or renewal Second Amendment Warrants Shelf Registration Statements (each, a “**Second Amendment Warrants Subsequent Shelf Registration Statement**”) upon the expiration of such Second Amendment Warrants Shelf Registration Statement, if required by Rule 415 under the Securities Act, continuously until the earliest to occur of (1) the 30-month anniversary of the Second Amendment Effective Date, (2) a Change of Control and (3) such time as there are no Registrable Securities remaining or issuable upon exercise of the Second Amendment Warrants (the “**Second Amendment Warrants Termination Date**”). If a Second Amendment Warrants Subsequent Shelf Registration Statement is filed, the Company shall use its reasonable best efforts to (x) cause such Second Amendment Warrants Subsequent Shelf Registration Statement to be declared effective by the SEC as soon as reasonably practicable after such filing, but in any event by the date that is fifty (50) days after such Second Amendment Warrants Subsequent Shelf Registration Statement is filed (the “**Second Amendment Warrants Subsequent Shelf Effectiveness Deadline**”), and (y) keep such Second Amendment Warrants Subsequent Shelf Registration Statement (or another Second Amendment Warrants Subsequent Shelf Registration Statement) continuously effective until the Second Amendment Warrants Termination Date. Any Second Amendment Warrants Subsequent Shelf Registration Statement shall be a Second Amendment Warrants Shelf Registration Statement.

(c) **Fourth Amendment Warrants Shelf Registration.**

(i) **Filing.** Within 45 days following the Fourth Amendment Effective Date, the Company shall file with the SEC a new Registration Statement or an amendment to an effective Registration Statement on Form S-3 (unless the Company is ineligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form) or the then appropriate form for an offering to be made on a delayed or continuous basis pursuant to Rule 415 under the Securities Act or any successor rule thereto (a “**Fourth Amendment Warrants Shelf Registration Statement**”) and together with the Closing Date Warrants Shelf Registration Statements and the Second Amendment Warrants Shelf Registration Statement, a “**Shelf**”

Registration Statement) pursuant to which all of the Registrable Securities associated with the Fourth Amendment Warrants shall be included (on the initial filing or by supplement or amendment thereto) to enable the public resale of such Registrable Securities on a delayed or continuous basis pursuant to Rule 415 under the Securities Act or any successor rule thereto (a **“Fourth Amendment Warrants Shelf Registration”**). If permitted under the Securities Act, such Fourth Amendment Warrants Shelf Registration Statement shall be an “automatic shelf registration statement” as defined in Rule 405 under the Securities Act.

(ii) **Effectiveness.** The Company shall use its reasonable best efforts to (A) cause the Fourth Amendment Warrants Shelf Registration Statement filed pursuant to Section 2.1(c)(i) to be declared effective by the SEC as soon as reasonably practicable, and in any event by the date that is the earlier of (1) 120 days following the Fourth Amendment Effective Date and (2) five Trading Days after the date the Company receives written notification from the SEC that the Fourth Amendment Warrants Shelf Registration will not be reviewed (the **“Fourth Amendment Warrants Shelf Effectiveness Deadline”** and together with the Closing Date Warrants Shelf Effectiveness Deadline and the Second Amendment Warrants Shelf Effectiveness Deadline, the **“Shelf Effectiveness Deadline”**) and (B) maintain the effectiveness of such Fourth Amendment Warrants Shelf Registration Statement, including by filing any necessary post-effective amendments and Prospectus supplements and by filing one or more replacement or renewal Fourth Amendment Warrants Shelf Registration Statements (each, a **“Fourth Amendment Warrants Subsequent Shelf Registration Statement”** and together with the Closing Date Warrants Subsequent Shelf Registration Statements and the Second Amendment Warrants Subsequent Shelf Registration Statements, a **“Subsequent Shelf Registration Statement”**) upon the expiration of such Fourth Amendment Warrants Shelf Registration Statement, if required by Rule 415 under the Securities Act, continuously until the earliest to occur of (1) the 30-month anniversary of the Fourth Amendment Effective Date, (2) a Change of Control and (3) such time as there are no Registrable Securities remaining or issuable upon exercise of the Fourth Amendment Warrants (the **“Fourth Amendment Warrants Termination Date”**). If a Fourth Amendment Warrants Subsequent Shelf Registration Statement is filed, the Company shall use its reasonable best efforts to (x) cause such Fourth Amendment Warrants Subsequent Shelf Registration Statement to be declared effective by the SEC as soon as reasonably practicable after such filing, but in any event by the date that is fifty (50) days after such Fourth Amendment Warrants Subsequent Shelf Registration Statement is filed (the **“Fourth Amendment Warrants Subsequent Shelf Effectiveness Deadline”** and together with the Closing Date Warrants Subsequent Shelf Effectiveness Deadline and the Second Amendment Warrants Subsequent Shelf Effectiveness Deadline, the **“Subsequent Shelf Effectiveness Deadline”**), and (y) keep such Fourth Amendment Warrants Subsequent Shelf Registration Statement (or another Fourth Amendment Warrants Subsequent Shelf Registration Statement) continuously effective until the Fourth Amendment Warrants Termination Date. Any Fourth Amendment Warrants Subsequent Shelf Registration Statement shall be a Fourth Amendment Warrants Shelf Registration Statement.

(d) **Default.** In the event that (i) the Shelf Registration Statement filed pursuant to Section 2.1(a)(i), Section 2.1(b)(i) or Section 2.1(c)(i) is not declared effective by the

SEC by the applicable Shelf Effectiveness Deadline, (ii) a Subsequent Shelf Registration Statement (if required to be filed pursuant to Section 2.1(a)(ii), Section 2.1(b)(ii) or Section 2.1(c)(ii)) is not filed by the applicable Subsequent Shelf Effectiveness Deadline, or (iii) after a Shelf Registration Statement has been declared effective, sales cannot be made continuously pursuant to such Shelf Registration Statement for any reason (including without limitation by reason of a stop order, or the Company's failure to update the Shelf Registration Statement), other than, in each case, during the time period(s) permitted by Section 2.2(b) (each such event, a "**Default**"), then, in addition to any other rights a Holder may have hereunder or under applicable law, on the first day of the occurrence of the Default, and on the same day of each succeeding month (if the applicable Default shall not have been cured by such date) until the applicable Default is cured, the Company shall pay to each Holder an amount in cash, as liquidated damages and not as a penalty (the "**Liquidated Damages**"), on the date of the Default and the same day each succeeding month, equal to 1% of the aggregate purchase price paid for the applicable Registrable Securities held by such Holder. The parties agree that in no event shall the aggregate amount of Liquidated Damages payable to any Holder exceed, in the aggregate, twenty-five percent (25%) of the aggregate purchase price paid for the applicable Registrable Securities held by such Holder. If the Company fails to pay any Liquidated Damages pursuant to this Section 2.1(d) in full within five (5) Business Days after the date payable, the Company will pay interest thereon at a rate of 1.5% per month (or such lesser maximum amount that is permitted to be paid by applicable law) to each Holder, accruing daily from the date such Liquidated Damages are due until such amounts, plus all such interest thereon, are paid in full. The Liquidated Damages pursuant to the terms hereof shall apply on a daily pro-rata basis for any portion of a month prior to the cure of a Default, except in the case of the first occurrence of the Default. The applicable Effectiveness Deadline shall be extended without Default or Liquidated Damages hereunder in the event that the Company's failure to obtain the effectiveness of such Shelf Registration Statement or Subsequent Shelf Registration Statement on a timely basis results from the failure of any Holder to timely provide the Company with information requested by the Company and necessary to complete the Shelf Registration Statement or Subsequent Shelf Registration Statement in accordance with the requirements of the Securities Act (in which case the applicable Effectiveness Deadline would be extended with respect to the applicable Registrable Securities held by such Holder).

(e) Additional Selling Stockholders. At any time and from time to time that a Shelf Registration Statement is effective, if a Holder of Registrable Securities requests that such Holder be added as a selling stockholder in such Shelf Registration Statement, the Company shall as promptly as practicable amend or supplement the Shelf Registration Statement to cover such Holder.

2.2 Provisions Relating to Registration

(a) If and whenever the Company is required to effect the registration of any Registrable Securities pursuant to this Agreement, the Company shall use its reasonable best efforts to effect and facilitate the registration of such Registrable Securities as promptly as is practicable and, pursuant thereto, the Company shall as expeditiously as possible and as applicable:

(i) prepare and file with the SEC a Registration Statement with respect to such Registrable Securities, make all required filings required in connection therewith and (if the Registration Statement is not automatically effective upon filing) use its reasonable best efforts to cause such Registration Statement to become effective as promptly as practicable; *provided* that before filing a Registration Statement or any amendments or supplements thereto, the Company shall furnish to counsel to the Holders for such registration copies of all documents proposed to be filed, which documents shall be subject to review by counsel to the Holders at the Holders' expense, and give the Holders participating in such registration an opportunity to comment on such documents and keep such Holders reasonably informed as to the registration process;

(ii) furnish to each Holder participating in the registration, without charge, such number of copies of the Prospectus included in such Registration Statement (including each preliminary Prospectus) and any supplement thereto (in each case including all exhibits thereto and all documents incorporated by reference therein) and such other documents as such Holder may reasonably request, including in order to facilitate the disposition of the Registrable Securities owned by such Holder;

(iii) use its reasonable best efforts to register or qualify such Registrable Securities under such other securities or blue sky laws of such U.S. jurisdiction(s) or such U.S. self-regulatory bodies as any Holder participating in the registration reasonably requests and do any and all other acts and things that may be necessary or reasonably advisable to enable such Holder to consummate the disposition of such Holder's Registrable Securities in such jurisdiction(s); *provided*, that the Company shall not be required to qualify generally to do business, subject itself to taxation or consent to general service of process in any jurisdiction where it would not otherwise be required to do so but for its obligations pursuant to this Section 2.2(a)(iii);

(iv) notwithstanding any other provisions of this Agreement to the contrary, cause (A) any Registration Statement (as of the effective date of the Registration Statement), any amendment thereof (as of the effective date thereof) or supplement thereto (as of its date), (1) to comply in all material respects with the applicable requirements of the Securities Act and the rules and regulations of the SEC and (2) not to contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading and (B) any related Prospectus, preliminary Prospectus and any amendment thereof or supplement thereto (as of its date), (1) to comply in all material respects with the applicable requirements of the Securities Act and the rules and regulations of the SEC, and (2) not to contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; *provided, however*, the Company shall have no such obligations or liabilities with respect to any written information pertaining to a Holder and furnished to the Company by or on behalf of such Holder specifically for inclusion therein; *provided further*, that each Holder of Registrable Securities, upon receipt of any notice from the Company of any noncompliance event or material misstatement or omission of the kind described in this Section 2.2(a)(iv), shall forthwith discontinue disposition of Registrable Securities

pursuant to the Registration Statement covering such Registrable Securities until such Holder is advised in writing by the Company that the use of the Prospectus may be resumed and, if appropriate, is furnished with a supplemented or amended Prospectus as contemplated by this Section 2.2(a)(iv);

(v) as promptly as practicable (and in any event, within twenty-four (24) hours), notify the Holders: (A) when the Registration Statement, any pre-effective amendment thereto, the Prospectus or any Prospectus supplement or any post-effective amendment thereto has been filed with the SEC and when the Registration Statement or any post-effective amendment thereto has become effective, (B) of any oral or written comments by the SEC or of any request by the SEC for amendments or supplements to the Registration Statement or the Prospectus included therein or for any additional information regarding such Holder, (C) of the issuance by the SEC of any stop order suspending the effectiveness of such Registration Statement or the initiation or threatening of any proceedings for that purpose and of any other action, event or failure to act that would cause the Registration Statement not to remain effective, and (D) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any Registrable Securities for sale under the applicable securities or blue sky laws of any jurisdiction or the initiation of any proceeding for such purpose;

(vi) in the event of the issuance of any stop order suspending the effectiveness of a Registration Statement, any order suspending or preventing the use of any related Prospectus or any suspension of the qualification or exemption from qualification of any Registrable Securities for sale in any jurisdiction, use its reasonable best efforts to promptly obtain the withdrawal or lifting of any such order or suspension, and each Holder of Registrable Securities, upon receipt of any notice from the Company of any event of the kind described in this Section 2.2(a)(vi), shall forthwith discontinue disposition of Registrable Securities pursuant to the Registration Statement covering such Registrable Securities until such Holder is advised in writing by the Company that the use of the Prospectus may be resumed and is furnished with a supplemented or amended Prospectus, if applicable;

(vii) not file or make any amendment to any Registration Statement with respect to any Registrable Securities, or any amendment of or supplement to the Prospectus used in connection therewith, that refers to any Holder covered thereby by name or otherwise identifies such Holder as the holder of any securities of the Company without the consent of such Holder (which consent shall not be unreasonably withheld, conditioned or delayed), unless and to the extent such disclosure is required by law; *provided*, that (A) each Holder shall furnish to the Company in writing such information regarding itself and the distribution proposed by it as the Company may reasonably request for use in connection with a Registration Statement or Prospectus and (B) each Holder agrees to notify the Company as promptly as practicable of any inaccuracy or change in information previously furnished to the Company by such Holder or of the occurrence of any event that would cause the Prospectus included in such Registration Statement to contain an untrue statement of a material fact regarding such Holder or the distribution of such Registrable Securities or to omit to state any material fact regarding

such Holder or the distribution of such Registrable Securities required to be stated therein or necessary to make the statements made therein not misleading in light of the circumstances under which they were made and to furnish to the Company, as promptly as practicable, any additional information required to correct and update the information previously furnished by such Holder such that such Prospectus shall not contain any untrue statement of a material fact regarding such Holder or the distribution of such Registrable Securities or omit to state a material fact regarding such Holder or the distribution of such Registrable Securities necessary to make the statements therein not misleading in light of the circumstances under which they were made;

(viii) cause such Registrable Securities to be listed on each securities exchange on which the Common Stock is then listed or, if the Common Stock is not then listed on any securities exchange, use its reasonable best efforts to cause such Registrable Securities to be listed on a national securities exchange selected by the Company after consultation with the Holders participating in such registration;

(ix) provide a transfer agent and registrar (which may be the same Person) for all such Registrable Securities not later than the effective date of such Registration Statement and, within a reasonable time prior to any proposed sale of Registrable Securities pursuant to a Registration Statement, provide the transfer agent if reasonably required by the transfer agent, an opinion of counsel as to the effectiveness of the Registration Statement, together with any other authorizations, certificates and directions required by the transfer agent which authorize and direct the transfer agent to issue such Registrable Securities without legend upon sale by the Holder of such Registrable Securities under the Registration Statement, subject to the provisions of Section 3.1;

(x) otherwise use its reasonable best efforts to comply with all applicable rules and regulations of the SEC, and make available to its stockholders, as soon as reasonably practicable, an earnings statement (in a form that satisfies the provisions of Section 11(a) of the Securities Act and Rule 158 under the Securities Act or any successor rule thereto) covering the period of at least 12 months beginning with the first day of the Company's first full fiscal quarter after the effective date of the applicable Registration Statement, which requirement shall be deemed satisfied if the Company timely files complete and accurate information on Forms 10-K, 10-Q and 8-K under the Exchange Act and otherwise complies with Rule 158 under the Securities Act or any successor rule thereto;

(xi) (A) furnish to each Holder all legal opinions of outside counsel to the Company required to be included in the Registration Statement, which provision shall be satisfied by filing with the SEC any such opinion as an exhibit to the Registration Statement and (B) obtain all consents of independent public accountants required to be included in the Registration Statement;

(xii) cooperate with the Holders of the Registrable Securities to facilitate the timely preparation and delivery of certificates representing the Registrable Securities to be sold pursuant to such Registration Statement free of any restrictive legends and representing such number of shares of Common Stock and registered in such names as

the Holders of the Registrable Securities may reasonably request a reasonable period of time prior to sales of Registrable Securities pursuant to such Registration Statement; *provided*, that the Company may satisfy its obligations hereunder without issuing physical stock certificates through the use of The Depository Trust Company's Direct Registration System; and

(xiii) otherwise use its reasonable best efforts to take or cause to be taken all other actions necessary or reasonably advisable to effect the registration of such Registrable Securities contemplated by this Agreement.

(b) As promptly as practicable after becoming aware of such event, the Company shall notify the Holders of the happening of any event (a "*Suspension Event*"), of which the Company has knowledge, as a result of which the Prospectus included in a Registration Statement as then in effect includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances under which they were made, and as promptly as practicable, the Company shall prepare and file with the SEC a supplement or amendment to the Registration Statement to correct such untrue statement or omission, and deliver such number of copies of such supplement or amendment to the Holders as the Holders may reasonably request so that, as thereafter delivered to the purchasers of such Registrable Securities, such Prospectus will not contain any untrue statement of a material fact or omit to state any fact necessary to make the statements therein not misleading in the light of the circumstances under which they were made; *provided, however*, that, for not more than forty-five (45) consecutive days (or a total of not more than one hundred and twenty (120) Trading Days in any 12-month period), the Company may delay or suspend the filing, effectiveness or use of a Registration Statement or Prospectus, to the extent permitted by and in a manner not in violation of applicable securities laws, if the board of directors of the Company determines in good faith, based on the advice of counsel, that (i) proceeding with the filing, effectiveness or use of such Registration Statement or Prospectus would reasonably be expected to require the Company to disclose any information the disclosure of which would have a material adverse effect on the Company and that the Company would not otherwise be required to disclose at such time or (ii) the registration or offering proposed to be delayed or suspended would reasonably be expected to, if not delayed or suspended, have a material adverse effect on any pending negotiation or plan of the Company to effect a merger, acquisition, disposition, financing, reorganization, recapitalization or similar transaction, in each case that, if consummated, would be material to the Company.

(c) Upon a Suspension Event, the Company shall promptly give written notice (a "*Suspension Notice*") to the Holders to suspend sales of the affected Registrable Securities, and such notice shall state that such suspension shall continue only for so long as the Suspension Event or its effect is continuing and the Company is pursuing with reasonable diligence the completion of the matter giving rise to the Suspension Event or otherwise taking all reasonable steps to terminate suspension of the effectiveness or use of the Registration Statement. In no event shall the Company, without the prior written consent of the Holders, disclose to the Holders any of the facts or circumstances giving rise to the Suspension Event. The Holders shall not effect any sales of the Registrable Securities pursuant to the Registration Statement (or such filings), at any time after they have received a Suspension Notice and prior to receipt of an End of Suspension Notice. The Holders may resume effecting sales of the Registrable Securities

under the Registration Statement (or such filings), following further notice to such effect (an “*End of Suspension Notice*”) from the Company. This End of Suspension Notice shall be given by the Company to the Holders in the manner described above promptly following the conclusion of any Suspension Event and its effect. For the avoidance of doubt, a Suspension Notice shall not affect or otherwise limit sales of affected Registrable Securities under Rule 144 or otherwise outside of the Registration Statement;

(d) Notwithstanding any provision herein to the contrary, if the Company gives a Suspension Notice pursuant to Section 2.2(c) with respect to any Registration Statement, the Company shall extend the period during which the Registration Statement shall be maintained effective under this Agreement by the number of days during the period from the date of the giving of the Suspension Notice to and including the date when the Holders shall have received the End of Suspension Notice and copies of the supplemented or amended Prospectus necessary to resume sales.

(e) Notwithstanding anything to the contrary contained in this Agreement, the Company shall not be required to include Registrable Securities in any Registration Statement unless the Holder owning the Registrable Securities to be registered on the Registration Statement, following reasonable advance written request by the Company, furnishes to the Company, at least ten Business Days prior to the scheduled filing date of the Registration Statement, an executed stockholder questionnaire in the form attached hereto as **Exhibit A**.

2.3 Registration Expenses

(a) The Company shall bear all Registration Expenses.

(b) The obligation of the Company to bear and pay the Registration Expenses shall apply irrespective of whether a registration becomes effective or is withdrawn or suspended; *provided*, that the Registration Expenses for any Registration Statement withdrawn solely at the request of one or more Holder(s) (unless withdrawn following commencement of a Suspension Event) shall be borne by such Holder(s).

2.4 Indemnification

(a) The Company shall, to the fullest extent permitted by law, indemnify and hold harmless each Holder and any Person who is or might be deemed to be a “controlling person” of such Holder (within the meaning of the Securities Act or the Exchange Act) (each such Person, a “*Controlling Person*”), as well as their respective direct and indirect general and limited partners, advisory board members, directors, officers, trustees, managers, members, employees, agents, Affiliates and shareholders, and each other Person, if any, who acts on behalf of or controls any such Holder or Controlling Person (collectively, the “*Holder Indemnified Parties*”) from and against any losses, claims, damages, liabilities or expenses, joint or several, or any actions in respect thereof to which each Holder Indemnified Party may become subject under the Securities Act, the Exchange Act, any state blue sky securities laws, insofar as such losses, claims, damages, liabilities, expenses or actions arise out of or are based upon (i) any untrue statement or alleged untrue statement of a material fact contained in or incorporated by reference in any Registration Statement or in any amendment thereof, in each case at the time

such became effective under the Securities Act, (ii) the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading or (iii) any violation or alleged violation by the Company of the Securities Act or any other similar federal or state securities laws or any rule or regulation promulgated thereunder applicable to the Company and relating to any action or inaction required of the Company in connection with any registration of securities, and the Company shall reimburse, as incurred, the Holder Indemnified Parties for any reasonable and documented legal or other expenses reasonably incurred by them in connection with investigating, defending or settling any such loss, claim, damage, liability, expense or action in respect thereof; *provided, however*, that the Company shall not be liable in any such case to the extent that such loss, claim, damage, liability, expense or action arises out of or is based upon any untrue statement or omission made or incorporated by reference in any such Registration Statement, any Prospectus or in any amendment thereof or supplement thereto in reliance upon and in conformity with written information pertaining to a Holder and furnished to the Company by or on behalf of such Holder Indemnified Party specifically for inclusion therein; and *provided further, however*, that this indemnity agreement will be in addition to any liability that the Company may otherwise have to such Holder Indemnified Party. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of any Holder Indemnified Parties and shall survive the transfer of the Registrable Securities by any Holder.

(b) In connection with any registration in which a Holder of Registrable Securities is participating, each such Holder shall furnish to the Company in writing such information as the Company reasonably requests for use in connection with any such Registration Statement or Prospectus and shall, severally and not jointly, to the fullest extent permitted by law, indemnify and hold harmless the Company, its directors and officers, employees, agents and any Person who is or might be deemed to be a Controlling Person (a “*Company Indemnified Party*”) from and against any losses, claims, damages, liabilities or expenses or any actions in respect thereof, to which a Company Indemnified Party may become subject under the Securities Act, the Exchange Act, any state blue sky securities laws, any equivalent non-U.S. securities laws or otherwise, insofar as such losses, claims, damages, liabilities or actions arise out of or are based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or in any amendment thereof, in each case at the time such became effective under the Securities Act, or in any Prospectus or in any amendment thereof or supplement thereto, or (ii) the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, in the light of the circumstances under which they were made) not misleading, but in each of clauses (i) and (ii), only to the extent that the untrue statement or omission or alleged untrue statement or omission was made in reliance upon and in conformity with written information pertaining to such Holder and furnished to the Company by or on behalf of such Holder specifically for inclusion therein, and, subject to the limitation immediately preceding this clause, shall reimburse, as incurred, the Company Indemnified Parties for any legal or other expenses reasonably incurred by them in connection with investigating, defending or settling any such loss, claim, damage, liability, expense or action in respect thereof. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such Holder, or any such director, officer, employees, Affiliates and agents and shall survive the transfer of such Registrable Securities by such Holder, and such Holder shall reimburse the Company, and each such director, officer, employees, Affiliates and agents for any

legal or other expenses reasonably incurred by them in connection with investigating, defending, or settling any such loss, claim, damage, liability, action, or proceeding; *provided, however*, that the indemnity amount contained in this Section 2.4(b) shall in no event exceed the net proceeds actually received by such Holder in the sale of Registrable Securities to which such Registration Statement or Prospectus relates. Such indemnity shall remain in full force and effect, regardless of any investigation made by or on behalf of the Company or any such director, officer, employees, Affiliates and agents and shall survive the transfer by a Holder of such Registrable Securities.

(c) Promptly after receipt by a Holder Indemnified Party or a Company Indemnified Party (each, an “**Indemnified Party**”) of notice of the commencement of any action or proceeding (including a governmental investigation), such Indemnified Party will, if a claim in respect thereof is to be made against the indemnifying party under this Section 2.4, notify the indemnifying party of the commencement thereof; *provided*, that the omission to so notify the indemnifying party will not relieve the indemnifying party from liability under Sections 2.4(a) or 2.4(b) unless and to the extent it did not otherwise learn of such action and the indemnifying party has been materially prejudiced by such failure. In case any such action is brought against any Indemnified Party, and it notifies the indemnifying party of the commencement thereof, the indemnifying party will be entitled to participate therein and, to the extent that it may wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof at the indemnifying party’s expense, with counsel reasonably satisfactory to such Indemnified Party (who shall not, except with the consent of the Indemnified Party, be counsel to the indemnifying party); *provided*, that any Indemnified Party shall continue to be entitled to participate in the defense of such claim or action, with counsel of its own choice, but the indemnifying party shall not be obligated to reimburse such Indemnified Party for any fees, costs and expenses subsequently incurred by the Indemnified Party in connection with such defense unless (i) the indemnifying party has agreed in writing to pay such fees, costs and expenses, (ii) the indemnifying party has failed to assume the defense of such claim or action within a reasonable time after receipt of notice of such claim or action, (iii) having assumed the defense of such claim or action, the indemnifying party fails to employ counsel reasonably acceptable to the Indemnified Party or to pursue the defense of such claim or action in a reasonably vigorous manner, (iv) the use of counsel chosen by the indemnifying party to represent the Indemnified Party would present such counsel with a conflict of interest or (v) the Indemnified Party has reasonably concluded that there may be one or more legal or equitable defenses available to it and/or other any other Indemnified Party which are different from or additional to those available to the indemnifying party. In no event shall the indemnifying party be liable for the fees and expenses of more than one counsel (together with appropriate local counsel) at any time for any Indemnified Party in connection with any one action or separate but substantially similar or related actions arising in the same jurisdiction out of the same general allegations or circumstances. No indemnifying party shall, without the prior written consent of the Indemnified Party (which consent shall not be unreasonably withheld, conditioned or delayed), effect any settlement of any pending or threatened action in respect of which any Indemnified Party is or could have been a party and indemnity could have been sought hereunder by such Indemnified Party unless such settlement (i) includes an unconditional release of such Indemnified Party from all liability on any claims that are the subject matter of such action, in form and substance reasonably satisfactory to such Indemnified Party, and (ii) does not include a

statement as to or an admission of fault, culpability or a failure to act by or on behalf of any Indemnified Party.

(d) If the indemnification provided for in this Section 2.4 is unavailable or insufficient to hold harmless an Indemnified Party under Sections 2.4(a) or 2.4(b), then each indemnifying party shall contribute to the amount paid or payable by such Indemnified Party as a result of the losses, claims, damages or liabilities (or actions in respect thereof) referred to in Sections 2.4(a) or 2.4(b) in such proportion as is appropriate to reflect the relative fault of the indemnifying party or parties on the one hand and the Indemnified Party on the other in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities (or actions in respect thereof) as well as any other relevant equitable considerations. The relative fault of the parties shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or a Holder or Holder Indemnified Party, as the case may be, on the other, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The amount paid by an Indemnified Party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this Section 2.4 shall be deemed to include any legal or other expenses reasonably incurred by such Indemnified Party in connection with investigating or defending any action or claim that is the subject of this Section 2.4(d). The parties agree that it would not be just and equitable if contributions were determined by *pro rata* allocation (even if a Holder was treated as one Person for such purpose) or any other method of allocation that does not take account of the equitable considerations referred to above. Notwithstanding any other provision of this Section 2.4(d), no Holder shall be required to contribute any amount in excess of the amount by which the net proceeds received by such Holder from the sale of the Registrable Securities pursuant to the Registration Statement exceeds the amount of damages that such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(e) The agreements contained in this Section 2.4 shall survive the sale of the Registrable Securities pursuant to the Registration Statement and shall remain in full force and effect, regardless of any termination or cancellation of this Agreement or any investigation made by or on behalf of any Indemnified Party.

ARTICLE III **Transfer Restrictions**

3.1 Transfer Restrictions. Each Holder acknowledges and agrees that the following legend shall be imprinted on any certificate or book-entry security entitlement evidencing any of the Registrable Securities to the extent that at the time of issuance such Registrable Securities are not covered by an effective Registration Statement:

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "**ACT**"), OR UNDER THE SECURITIES LAWS OF

ANY STATE. THESE SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF THIS INVESTMENT FOR AN INDEFINITE PERIOD OF TIME. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER TO THE EFFECT THAT ANY PROPOSED TRANSFER OR RESALE IS IN COMPLIANCE WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.

This legend shall be removed by the Company from any certificate or book-entry security entitlement evidencing the Registrable Securities upon delivery by the holder thereof to the Company of a written request to that effect if at the time of such written request (a) a registration statement under the Securities Act is at that time in effect with respect to the legended security, or (b) the legended security can be transferred in a transaction in compliance with Rule 144, and, in the case of (b), upon the request and in the reasonable discretion of the Company's transfer agent, the holder of such Registrable Securities executes and delivers a representation letter that includes customary representations regarding the holding requirements and whether such holder is an "affiliate" for purposes of Rule 144. The Company represents and warrants to the Purchasers that the Company is not currently a shell company (as defined in Rule 405 promulgated under the Securities Act).

3.2 Rule 144 Compliance. With a view to making available to the Holders of Registrable Securities the benefits of Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration until such date on which the Holders no longer hold any Registrable Securities, the Company shall:

- (a) make and keep public information available, as those terms are understood and defined in Rule 144;
- (b) use reasonable best efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act; and
- (c) furnish to any Holder of Registrable Securities, promptly upon request, a written statement by the Company as to its compliance with the reporting requirements of Rule 144 and of the Securities Act and the Exchange Act.

ARTICLE IV
Miscellaneous.

4.1 **Remedies; Specific Performance.** In the event of a breach or a threatened breach by any party to this Agreement of its obligations under this Agreement, any party injured or to be injured by such breach shall be entitled to specific performance of its rights under this Agreement or to injunctive relief, in addition to being entitled to exercise all rights provided in this Agreement and granted by law, it being agreed by the parties that the remedy at law, including monetary damages, for breach of any such provision will be inadequate compensation for any loss and that any defense or objection in any action for specific performance or injunctive relief for which a remedy at law would be adequate is hereby waived.

4.2 **No Waivers.** No failure or delay by any party in exercising any right, power or privilege hereunder shall operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege.

4.3 **Further Assurances.** Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as any other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

4.4 **Notices.** All notices and other communications provided for herein shall be in writing and shall be delivered by hand or overnight courier service, mailed by certified or registered mail or sent by facsimile or e-mail as follows:

If to the Company:

BioXcel Therapeutics, Inc.
555 Long Wharf Drive
New Haven, CT
Attn: Chief Financial Officer
Email: RSteinhart@bioxcелtherapeutics.com

With a copy (which shall not constitute notice) to:

Cooley LLP
3 Embarcadero Center
20th Floor
San Francisco, CA 94111-4004
Attention: Mischi a Marca
Email: gmamarca@cooley.com

If to a Purchaser: To the address set forth opposite such Purchaser's name on **Schedule A** hereto, or to such other address and/or e-mail address and/or to the attention of such other person as the recipient party has specified by written notice given to each other party at least five days prior to the effectiveness of such change.

With a copy (which shall not constitute notice) to:

Sullivan & Cromwell LLP
125 Broad Street
New York, NY 10004
E-mail: blauta@sullcrom.com
Attn: Ari Blaut

Notices or communications sent by hand or overnight courier service, or mailed by certified or registered mail, shall be deemed to have been given when received, notices or communications sent by facsimile shall be deemed to have been given when sent (except that, if not given during normal business hours for the recipient, such notice or communication shall be deemed to have been sent at the opening of business on the next Business Day for the recipient) and notices or communications sent by e-mail shall be deemed received upon the sender's receipt of an acknowledgement from the intended recipient (such as by the "return receipt requested" function, as available, return e-mail or other written acknowledgement) (except that, if not given during the normal business hours of the recipient, such notice or communication shall be deemed to have been sent at the opening of business on the next Business Day for the recipient).

4.5 Headings. Section headings herein are included for convenience of reference only and shall not constitute a part hereof for any other purpose or be given any substantive effect.

4.6 Counterparts. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page of this Agreement by facsimile or in electronic (i.e., "pdf" or "tif") format shall be effective as delivery of a manually executed counterpart of this Agreement.

4.7 Governing Law; Disputes.

(a) Governing Law. This Agreement and any claims, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Agreement and the transactions contemplated hereby shall be governed by, and construed in accordance with, the law of the State of New York.

(b) Jurisdiction. Each party hereto hereby irrevocably and unconditionally agrees that it will not commence any action, litigation or proceeding of any kind or description, whether in law or equity, whether in contract or tort or otherwise, against such other party in any way relating to this Agreement or the transactions relating hereto or thereto, in any forum other than the courts of the State of New York sitting in New York County, and of the United States District Court of the Southern District of New York, and any appellate court from any thereof, and each of the parties hereto irrevocably and unconditionally submits to the jurisdiction of such courts and agrees that all claims in respect of any such action, litigation or proceeding may be heard and determined in such New York State court or, to the fullest extent permitted by applicable Law, in such federal court. Each of the parties hereto agrees that a final judgment in any such action, litigation or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

(c) Waiver of Venue. Each party hereto irrevocably waives to the fullest extent permitted by law any objection that it may now or hereafter have to the laying of the venue of any suit, action or proceeding arising out of or relating to this Agreement and hereby further irrevocably waives to the fullest extent permitted by law any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. A final judgment (in respect of which time for all appeals has elapsed) in any such suit, action or proceeding shall be conclusive and may be enforced in any court to the jurisdiction of which such party is or may be subject, by suit upon judgment.

(d) Waiver of Jury Trial. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN ANY LEGAL PROCEEDING DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PERSON HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PERSON WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 4.7.

(e) Service of Process. Each party hereto irrevocably consents to service of process in the manner provided for notices in Section 4.4.

4.8 Successors and Assigns. This Agreement and the rights and obligations evidenced hereby shall be binding upon and inure to the benefit of the parties hereto and their respective the successors and permitted assigns. Neither this Agreement nor any right, benefit, remedy, obligation or liability arising hereunder may be assigned by any party without the prior written consent of the other parties, and any attempted assignment without such consent shall be null and void and of no effect; *provided that* that, (a) the rights (and related obligations and liabilities) offered a Holder pursuant to this Agreement shall be assignable (in whole or in part) by such Holder to any transferee of such Holder's Registrable Securities or Warrants exercisable for Registrable Securities and (b) any such assignment shall be effected hereunder only by giving written notice thereof from both the transferor and the transferee to the Company and the transferee's execution and delivery to the Company of an executed counterpart to this Agreement.

4.9 Amendments. No provision of this Agreement may be amended, waived or modified other than by an instrument in writing signed by the Company and Holders representing at least fifty percent (50%) (by number) of the Registrable Securities then held by the Holders.

4.10 Severability. Any provision of this Agreement held to be invalid, illegal or unenforceable in any jurisdiction shall, as to such jurisdiction, be ineffective to the extent of such invalidity, illegality or unenforceability without affecting the validity, legality and

enforceability of the remaining provisions hereof, and the invalidity of a particular provision in a particular jurisdiction shall not invalidate such provision in any other jurisdiction.

4.11 Termination. This Agreement shall terminate with respect to any Holder upon such time as such Holder ceases to hold or beneficially own any remaining Registrable Securities or upon the dissolution, liquidation or winding up of the Company or a Change of Control; *provided that* Section 2.3, Section 2.4 of this Agreement and this Article IV shall survive such termination.

4.12 No Third Party Beneficiaries. This Agreement is intended for the sole benefit of the parties hereto and their respective permitted successors and assigns and transferees, and is not for the benefit of, nor may any provision hereof be enforced by, any other person; *provided, however*, that the parties hereto hereby acknowledge that the Persons set forth in Section 2.4 shall be express third-party beneficiaries of the obligations of the parties hereto set forth in Section 2.4.

4.13 Language; Currency. This Agreement has been prepared in the English language and the English language shall control its interpretation. In addition, all notices required or permitted to be given hereunder, and all written, electronic, oral or other communications between the parties regarding this Agreement, shall be in the English language. All references to "\$" contained in this Agreement shall refer to United States Dollars unless otherwise stated.

[The remainder of this page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the date first written above.

THE COMPANY:

BIOXCEL THERAPEUTICS, INC.

a Delaware corporation

By: /s/ Vimal Mehta

Name: Vimal Mehta

Title: Chief Executive Officer

Exhibit A-2

PURCHASERS:

OAKTREE-TCDRS STRATEGIC CREDIT, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-3

OAKTREE-FORREST MULTI-STRATEGY, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-4

OAKTREE-TBMR STRATEGIC CREDIT FUND C, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-5

OAKTREE-TBMR STRATEGIC CREDIT FUND F, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-6

OAKTREE-TBMR STRATEGIC CREDIT FUND G, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-7

OAKTREE-TSE 16 STRATEGIC CREDIT, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-8

INPRS STRATEGIC CREDIT HOLDINGS, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-9

OAKTREE SPECIALTY LENDING CORPORATION

By: Oaktree Fund Advisors, LLC
Its: Investment Adviser

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-10

OAKTREE STRATEGIC CREDIT FUND

By: Oaktree Fund Advisors, LLC
Its: Investment Adviser

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-11

OAKTREE GCP FUND DELAWARE HOLDINGS, L.P.

By: Oaktree Global Credit Plus Fund GP, L.P.
Its: General Partner

By: Oaktree Global Credit Plus Fund GP Ltd.
Its: General Partner

By: Oaktree Capital Management, L.P.
Its: Director

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-12

OAKTREE DIVERSIFIED INCOME FUND INC.

By: Oaktree Fund Advisors, LLC
Its: Investment Adviser

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-13

OAKTREE AZ STRATEGIC LENDING FUND, L.P.

By: Oaktree AZ Strategic Lending Fund GP, L.P.
Its: General Partner

By: Oaktree Fund GP IIA, LLC
Its: General Partner

By: Oaktree Fund GP II, L.P.
Its: Managing Member

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Exhibit A-14

OAKTREE LSL FUND HOLDINGS EURRC S.À R.L.
26A, boulevard Royal L-2449
Luxembourg, Grand Duchy of Luxembourg
R.C.S Luxembourg Number: B269245

By: /s/ Martin Eckel

Name: Martin Eckel
Title: Manager

By: /s/ Flora Verrecchia

Name: Flora Verrecchia
Title: Manager

Exhibit A-15

OAKTREE LSL FUND DELAWARE HOLDINGS EURRC, L.P.

By: Oaktree Life Sciences Lending Fund GP, L.P.
Its: General Partner

By: Oaktree Life Sciences Lending Fund GP Ltd.
Its: General Partner

By: Oaktree Capital Management, L.P.
Its: Director

By: /s/ Matthew Stewart _____
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly _____
Name: Mary Gallagly
Title: Managing Director

Exhibit A-16

Q BOOST HOLDING LLC

By: /s/ Ahmed Nasser Al-Abdulghani

Name: Ahmed Nasser Al-Abdulghani

Title: Director

Exhibit A-17

**Schedule A
Purchasers**

Exhibit A-18

Exhibit A
Form of Selling Stockholder Questionnaire
BIOXCEL THERAPEUTICS, INC.

Exhibit A-19

Annex I

Plan of Distribution

Exhibit A-20

FOURTH AMENDMENT TO CREDIT AGREEMENT AND GUARANTY

This Fourth Amendment to Credit Agreement and Guaranty (this "*Amendment*") is made as of March 20, 2024, by and among BIOXCEL THERAPEUTICS, INC., a Delaware corporation (the "*Borrower*"), the lenders party hereto (collectively, the "*Lenders*" and individually, a "*Lender*"), and OAKTREE FUND ADMINISTRATION, LLC, as administrative agent on behalf of the Lenders (in such capacity, together with its successors and assigns, the "*Administrative Agent*").

WHEREAS, the Borrower, the Administrative Agent and the Lenders previously entered into that certain Credit Agreement and Guaranty, dated as of April 19, 2022 (including the exhibits and other attachments thereto, as amended by that certain Waiver and First Amendment to Credit Agreement and Guaranty, dated as of November 13, 2023, that certain Second Amendment to Credit Agreement and Guaranty and Termination of Revenue Interest Financing, dated as of December 5, 2023, and that certain Third Amendment to Credit Agreement, dated as of February 12, 2024, the "*Existing Credit Agreement*", and as further amended by this Amendment, the "*Credit Agreement*");

WHEREAS, the Borrower, the Administrative Agent and the Lenders have agreed to amend the Existing Credit Agreement on the terms and subject to the conditions set forth herein.

NOW, THEREFORE, for and in consideration of the above premises and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by the parties hereto, each of the Borrower, the Administrative Agent and the Lenders party hereto hereby covenant and agree as follows:

1. Definitions. Capitalized terms used herein and not otherwise defined herein shall have the meanings assigned to such terms in the Existing Credit Agreement.
2. Amendments. Subject to the satisfaction of the conditions precedent specified in Section 4 hereof, the Existing Credit Agreement shall be amended as follows:
 - (a) Section 8.01(b) of the Existing Credit Agreement shall be deleted in its entirety and replaced as follows:

“(b) as soon as available and in any event within ninety (90) days after the end of each fiscal year (i) the consolidated balance sheets of the Borrower and its Subsidiaries as of the end of such fiscal year and (ii) the related consolidated statements of income, stockholders’ equity and cash flows of the Borrower and its Subsidiaries for such fiscal year, in each case prepared in all material respects in accordance with GAAP consistently applied, all in reasonable detail and setting forth in comparative form the figures for the previous fiscal year, accompanied by a report and opinion thereon of Ernst & Young U.S. LLP or another firm of independent certified public accountants of recognized national standing reasonably acceptable to the Administrative Agent, which report and opinion shall be prepared in accordance with generally accepted auditing standards and such report and opinion shall not be subject to (x) except with respect to the report and

opinion delivered for the fiscal year ending on December 31, 2023, any “going concern” or like qualification or exception or emphasis of matter of going concern footnote or (y) any qualification or exception as to the scope of such audit, and in the case of such consolidated financial statements, certified by a Responsible Officer of the Borrower; provided that documents required to be furnished pursuant to this Section 8.01(b) shall be deemed furnished on the date that such documents are publicly available on “EDGAR”.”

- (b) The definition of “Company Warrants” in Section 1.01 of the Existing Credit Agreement shall be deleted in its entirety and replaced as follows:

“*Company Warrants*” means (i) those certain warrants, dated as of the Closing Date and delivered pursuant to Section 6.01(h), evidenced by an instrument substantially the form of Exhibit J-1 hereto, as amended on the Second Amendment Effective Date and as further amended, replaced or otherwise modified pursuant to the terms thereof, (ii) those certain warrants, dated as of the Second Amendment Effective Date, evidenced by an instrument substantially the form of **Exhibit J-1** hereto, as amended, replaced or otherwise modified pursuant to the terms thereof, and (iii) those certain warrants, dated March 20, 2024, evidenced by an instrument substantially the form of **Exhibit A** to the Fourth Amendment to Credit Agreement and Guaranty, dated March 20, 2024, by and among the Borrower, the Lenders and the Administrative Agent.

- (c) The definition of “Registration Rights Agreement” in Section 1.01 of the Existing Credit Agreement shall be deleted in its entirety and replaced as follows:

“*Registration Rights Agreement*” means that certain Second Amended and Restated Registration Rights Agreement, dated March 20, 2024, by and among the Borrower and the purchasers identified therein.

3. Reaffirmation of Loan Documents. Except as otherwise expressly provided herein, the parties hereto agree that all terms and conditions of the Existing Credit Agreement and the other Loan Documents remain in full force and effect. The Borrower hereby confirms that the Security Documents and all of the Collateral described therein do, and shall continue to, secure the payment in full and performance of all of the Obligations.
4. Conditions Precedent to Effectiveness. The effectiveness of this Amendment shall be subject to the following conditions precedent:
- (a) This Amendment shall have been duly executed and delivered to the Administrative Agent by the Borrower and the Lenders, which constitute the “Majority Lenders” as defined in the Existing Credit Agreement;
- (b) Each of the representations and warranties in Section 6 of this Amendment, Section 7 of the Credit Agreement and in the other Loan Documents shall be true, accurate and complete in all material respects (unless such representations are already qualified by reference to materiality, Material Adverse Effect or similar language, in which case such representations and warranties shall be true and correct in all
-

respects) on and as of the date hereof with the same effect as though made on and as of such date, except to the extent such representations and warranties expressly relate to an earlier date, in which case such representations and warranties shall have been true and correct in all respects on and as of such earlier date; and

- (c) At the time of and after giving effect to this Amendment, no fact or condition exists that constitutes, or with the passage of time, the giving of notice, or both, would constitute, a Default or Event of Default.

5. Condition Subsequent and Post-Closing Covenant.

- (a) In addition to the conditions precedent set forth in the preceding Section 4, the effectiveness of this Amendment shall be subject to the following:
 - (i) Within two calendar days of the date hereof, the Borrower shall have issued and delivered to the Lenders warrants, evidenced by an instrument substantially in the form of **Exhibit A** hereto, dated as of the date of issuance, exercisable at \$3.0723 per share and for an aggregate number of shares of common stock of the Borrower set forth in **Exhibit B** hereto;
 - (ii) Within two calendar days of the date hereof, the second amended and restated Registration Rights Agreement in form and substance reasonably satisfactory to the Administrative Agent shall have been duly executed and delivered to the Administrative Agent by the Borrower; and
 - (iii) Within two calendar days of the date hereof, the Borrower shall have paid all costs, fees and expenses of the Administrative Agent and the Lenders, including, without limitation, the fees and expenses of Sullivan & Cromwell LLP, as outside counsel to Administrative Agent and the Oaktree Lenders and the fees and expenses of Shearman & Sterling LLP, as outside counsel to Q Boost Holding LLC, incurred prior to the date hereof, to the extent invoiced on or prior to the date hereof.
 - (b) The Borrower shall receive, (i) after the date hereof and on or before April 15, 2024, at least \$25,000,000 in gross proceeds from the issuance of Borrower's common stock, warrants and/or pre-funded warrants, and/or in non-refundable cash consideration from partnering transactions entered into after the date hereof (so long as such partnering transactions would not require the Borrower or any of its Subsidiaries to make any cash investments in connection with the partnering transactions and no such cash investments are made), and (ii) after the date hereof and on or before November 30, 2024, at least \$50,000,000 (for the avoidance of doubt, inclusive of amounts previously counted toward the preceding clause (i)) in gross proceeds from the issuance of Borrower's common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the date hereof. Failure to perform this covenant shall constitute (A) a Default under the Credit Agreement and (B) an
-

Event of Default under the Credit Agreement, subject to a cure period, solely in the case of clause (i) of the preceding sentence, until May 15, 2024 (provided, for the avoidance of doubt, that failure to perform clause (ii) of the preceding sentence shall constitute an immediate Event of Default under the Credit Agreement without any cure or grace period).

In addition, if the Borrower has not, after the date hereof and on or before September 30, 2024, received at least \$40,000,000 in gross proceeds from the issuance of Borrower's common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after the date hereof, the definition of "Minimum Liquidity Amount" in Section 1.01 of the Existing Credit Agreement shall be deleted in its entirety and replaced as follows effective as of September 30, 2024:

"Minimum Liquidity Amount" means (i) from the Closing Date until the date on which the Tranche B Term Loans are funded (the **"Step-Up Date"**), \$25,000,000; *provided*, that if the Borrower has received at least \$50,000,000 in gross proceeds from the issuance of Borrower's common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after March 20, 2024 and on or before November 30, 2024, the Minimum Liquidity Amount shall be \$15,000,000; *provided, further*, that upon and following the occurrence of a Permitted BXCL 701 Release Event, the Minimum Liquidity Amount shall be \$27,500,000; *provided, further*, that upon and following the occurrence of a Permitted BXCL 701 Control Event, the Minimum Liquidity Amount shall be \$32,500,000; (ii) from and after the Step-Up Date, \$20,000,000; *provided*, that upon and following the occurrence of a Permitted BXCL 701 Release Event, the Minimum Liquidity Amount shall be \$32,500,000; *provided, further*, that upon and following the occurrence of a Permitted BXCL 701 Control Event, the Minimum Liquidity Amount shall be \$37,500,000; and (iii) from and after the Applicable Funding Condition for Tranche C Term Loans is satisfied (as evidenced by an officer's certificate delivered by the Borrower to the Administrative Agent) (the **"Step-Down Date"**), \$25,000,000; *provided*, that if the Borrower has received at least \$50,000,000 in gross proceeds from the issuance of Borrower's common stock, warrants and/or pre-funded warrants, and/or in cash and/or non-cash consideration (measured at fair market value, as determined by the Administrative Agent in its sole discretion) from partnering transactions entered into after March 20, 2024 and on or before November 30, 2024, the Minimum Liquidity Amount shall be \$15,000,000; *provided, further*, that upon and following the occurrence of a Permitted BXCL 701 Release Event, the Minimum Liquidity Amount shall be \$27,500,000; *provided, further*, that upon and following the occurrence of a Permitted BXCL 701 Control Event, the Minimum Liquidity Amount shall be \$32,500,000. For the avoidance of

doubt, the Minimum Liquidity Amount shall be the highest applicable amount at any time. Notwithstanding the foregoing or anything to the contrary herein, the Minimum Liquidity Amount shall in no event exceed 50% of the aggregate amount of Loans outstanding at any time.

6. Representations and Warranties. The Borrower hereby represents and warrants:

- (a) None of the execution, delivery and performance by the Borrower of this Amendment and the documents, instruments and agreements executed in connection herewith (collectively, the "**Amendment Documents**") or performance under the Amendment Documents (i) requires any Governmental Approval of, registration or filing with, or any other action by, any Governmental Authority or any other Person, except for (x) such as have been obtained or made and are in full force and effect and (y) filings and recordings in respect of perfecting or recording the Liens created pursuant to the Security Documents, (ii) will violate (1) any Law, (2) any Organic Document of the Borrower or any of its Subsidiaries or (3) any order of any Governmental Authority, that in the case of clause (ii)(1) or clause (ii)(3), individually or in the aggregate, would reasonably be expected to result in a Material Adverse Effect, (iii) will violate or result in a default under any Material Agreement binding upon the Borrower or any of its Subsidiaries that, individually or in the aggregate, would reasonably be expected to result in a Material Adverse Effect or (iv) will result in the creation or imposition of any Lien (other than Permitted Liens) on any asset of the Borrower or any of its Subsidiaries.
- (b) This Amendment and the other Amendment Documents have been duly authorized by all necessary corporate or other organizational action including, if required, approval by all necessary holders of Equity Interests, and duly executed and delivered by the Borrower and constitutes, and each of the Amendment Documents when executed and delivered by the Borrower will constitute, a legal, valid and binding obligation of the Borrower, enforceable against the Borrower in accordance with its terms, except as such enforceability may be limited by (i) bankruptcy, insolvency, reorganization, moratorium or similar laws of general applicability affecting the enforcement of creditors' rights and (ii) the application of general principles of equity (regardless of whether such enforceability is considered in a proceeding in equity or at law).

7. Release.

- (a) In consideration of this Amendment and agreements of the Administrative Agent and the Lenders contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Borrower (the "**Releasing Party**"), on behalf of itself and its successors, assigns and other legal representatives hereby absolutely, unconditionally and irrevocably releases, remises and forever discharges the Administrative Agent and the Lenders and their respective present and former shareholders, affiliates, subsidiaries, divisions, predecessors, directors, officers, attorneys, employees, agents and other representatives, in each case solely in their capacities relative to the Lenders and
-

not in any other capacity such party may have relative to the Releasing Party (the Administrative Agent, each Lender and all such other Persons being hereinafter referred to collectively as the “**Releasees**” and individually as a “**Releasee**”), of and from all demands, actions, causes of action, suits, covenants, contracts, controversies, agreements, promises, sums of money, accounts, bills, reckonings, damages and any and all other claims, counterclaims, defenses, rights of set-off, demands and liabilities whatsoever of every name and nature, known or unknown, suspected or unsuspected, both at law and in equity, which the Borrower or any of its successors, assigns or other legal representatives may now or hereafter own, hold, have or claim to have against the Releasees or any of them for, upon, or by reason of any circumstance, action, cause or thing whatsoever which arises at any time on or prior to the date hereof, for or on account of, or in relation to, or in any way in connection with the Credit Agreement or any of the other Loan Documents or transactions thereunder (any of the foregoing, a “**Claim**” and collectively, the “**Claims**”).

The Releasing Party expressly acknowledges and agrees, with respect to the Claims, that it waives, to the fullest extent permitted by applicable law, any and all provisions, rights and benefits conferred by any applicable U.S. federal or state law, or any principle of U.S. common law, that would otherwise limit a release or discharge of any unknown Claims pursuant to this Section 7. Furthermore, the Releasing Party hereby absolutely, unconditionally and irrevocably covenants and agrees with and in favor of each Releasee that it will not sue (at law, in equity, in any regulatory proceeding or otherwise) any Releasee on the basis of any Claim released and/or discharged by the Releasing Parties pursuant to this Section 7. The foregoing release, covenant and waivers of this Section 7 shall survive and remain in full force and effect regardless of the consummation of the transactions contemplated hereby, the repayment or prepayment of any of the Loans, or the termination of the Credit Agreement, this Amendment, any other Loan Document or any provision hereof or thereof.

- (b) Each Releasing Party understands, acknowledges and agrees that its release set forth above may be pleaded as a full and complete defense and may be used as a basis for an injunction against any action, suit or other proceeding which may be instituted, prosecuted or attempted in breach of the provisions of such release.
- (c) Each Releasing Party agrees that no fact, event, circumstance, evidence or transaction which could now be asserted or which may hereafter be discovered shall affect in any manner the final, absolute and unconditional nature of the release set forth above.

8. Fees and Expenses. The Borrower agrees to pay on demand (a) all out-of-pocket fees, costs and expenses of the Administrative Agent and the Lenders accrued prior to the date hereof and (b) all out-of-pocket fees, costs and expenses of the Administrative Agent and the Lenders incurred in connection with the preparation, execution and delivery of (i) this Amendment, (ii) any Amendment Documents, other Loan Documents or other post-closing amendments, agreements, arrangements or documentation, (iii) any other instruments and documents to be delivered hereunder or thereunder, in each case of clauses (a) and (b), including the fees and expenses of Sullivan & Cromwell LLP, as outside counsel to
-

Administrative Agent and the Oaktree Lenders, and Shearman & Sterling LLP, as outside counsel to Q Boost Holding LLC, with respect thereto.

9. Miscellaneous.

- (a) Except as otherwise expressly provided herein, (i) all provisions of the Credit Agreement and the other Loan Documents remain in full force and effect and (ii) the execution, delivery and effectiveness of this Amendment shall not operate as a waiver of any right, power or remedy of the Administrative Agent or the Lenders, nor constitute a waiver of any provision of the Existing Credit Agreement or any of the Loan Documents. None of the Administrative Agent or any Lender is under any obligation to enter into this Amendment. The entering into of this Amendment by such parties shall not be deemed to limit or hinder any rights of any such party under the Loan Documents, nor shall it be deemed to create or infer a course of dealing between any such party, on the one hand, and the Borrower, on the other hand, with regard to any provision of the Loan Documents. This Amendment shall constitute a Loan Document.
- (b) This Amendment may be executed in several counterparts and by each party on a separate counterpart, each of which when so executed and delivered shall be an original, and all of which together shall constitute one instrument. An executed facsimile or electronic copy of this Amendment shall be effective for all purposes as an original hereof.
- (c) This Amendment expresses the entire understanding of the parties with respect to the amendments contemplated hereby. No prior negotiations or discussions shall limit, modify, or otherwise affect the provisions hereof.
- (d) This Amendment and its contents shall be subject to the governing law, indemnification, venue, service of process, waivers of jury trial and severability provisions of the Existing Credit Agreement, mutatis mutandis.

[SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered as of the day and year first above written.

BORROWER:

BIOXCEL THERAPEUTICS, INC.

By: /s/ Vimal Mehta

Name: Vimal Mehta

Title: Chief Executive Officer

Address for Notices:

555 Long Wharf Drive, 12th Floor New Haven, CT
06511

With a copy to (which shall not constitute notice):

Cooley LLP

3 Embarcadero Center 20th Floor

San Francisco, CA 94111-4004

Attn: Mischi a Marca

Email: gmamarca@cooley.com

[Signature Page to Fourth Amendment to Credit Agreement and Guaranty]

ADMINISTRATIVE AGENT:

OAKTREE FUND ADMINISTRATION, LLC

By: Oaktree Capital Management, L.P.
Its: Managing Member

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Address for Notices:
Oaktree Fund Administration, LLC
333 S. Grand Avenue, 28th Fl.
Los Angeles, CA 90071
Attn: Oaktree Agency
Email: Oaktreeagency@alterdomus.com

With a copy to:
Oaktree Capital Management, L.P.
333 S. Grand Avenue, 28th Fl.
Los Angeles, CA 90071
Attn: Aman Kumar
Email: AmKumar@oaktreecapital.com

With a copy to:
Sullivan & Cromwell LLP
125 Broad Street
New York, NY 10004
Attn: Ari B. Blaut
Email: blauta@sullcrom.com

[Signature Page to Fourth Amendment to Credit Agreement and Guaranty]

LENDERS:

OAKTREE-TCDRS STRATEGIC CREDIT, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

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333 S. Grand Avenue, 28th Fl.
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Email: Oaktreeagency@alterdomus.com

With a copy to:
Oaktree Capital Management, L.P.
333 S. Grand Avenue, 28th Fl.
Los Angeles, CA 90071
Attn: Aman Kumar
Email: AmKumar@oaktrecapital.com

With a copy to:
Sullivan & Cromwell LLP
125 Broad Street
New York, NY 10004
Attn: Ari B. Blaut
Email: blauta@sullcrom.com

[Signature Page to Fourth Amendment to Credit Agreement and Guaranty]

OAKTREE-FORREST MULTI-STRATEGY, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

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Attn: Aman Kumar
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125 Broad Street
New York, NY 10004
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Email: blauta@sullcrom.com

[Signature Page to Fourth Amendment to Credit Agreement and Guaranty]

OAKTREE-TBMR STRATEGIC CREDIT FUND C, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
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By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

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By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
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Email: blauta@sullcrom.com

[Signature Page to Fourth Amendment to Credit Agreement and Guaranty]

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Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
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By: /s/ Mary Gallagly
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Attn: Ari B. Blaut
Email: blauta@sullcrom.com

[Signature Page to Fourth Amendment to Credit Agreement and Guaranty]

INPRS STRATEGIC CREDIT HOLDINGS, LLC

By: Oaktree Capital Management, L.P.
Its: Manager

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Matthew Stewart
Title: Managing Director

Address for Notices:
Oaktree Fund Administration, LLC
333 S. Grand Avenue, 28th Fl.
Los Angeles, CA 90071
Attn: Oaktree Agency
Email: Oaktreeagency@alterdomus.com

With a copy to:
Oaktree Capital Management, L.P.
333 S. Grand Avenue, 28th Fl.
Los Angeles, CA 90071
Attn: Aman Kumar
Email: AmKumar@oaktreecapital.com

With a copy to:
Sullivan & Cromwell LLP
125 Broad Street
New York, NY 10004
Attn: Ari B. Blaut
Email: blauta@sullcrom.com

[Signature Page to Fourth Amendment to Credit Agreement and Guaranty]

OAKTREE SPECIALTY LENDING CORPORATION

By: Oaktree Fund Advisors, LLC
Its: Investment Adviser

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

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Email: blauta@sullcrom.com

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OAKTREE STRATEGIC CREDIT FUND

By: Oaktree Fund Advisors, LLC
Its: Investment Adviser

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

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OAKTREE GCP FUND DELAWARE HOLDINGS, L.P.

By: Oaktree Global Credit Plus Fund GP, L.P.
Its: General Partner

By: Oaktree Global Credit Plus Fund GP Ltd.
Its: General Partner

By: Oaktree Capital Management, L.P.
Its: Director

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Address for Notices:
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Email: Oaktreeagency@alterdomus.com

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New York, NY 10004
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Email: blauta@sullcrom.com

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OAKTREE DIVERSIFIED INCOME FUND INC.

By: Oaktree Fund Advisors, LLC
Its: Investment Adviser

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Address for Notices:
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333 S. Grand Avenue, 28th Fl.
Los Angeles, CA 90071
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Email: Oaktreeagency@alterdomus.com

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New York, NY 10004
Attn: Ari B. Blaut
Email: blauta@sullcrom.com

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OAKTREE AZ STRATEGIC LENDING FUND, L.P.

By: Oaktree AZ Strategic Lending Fund GP, L.P.
Its: General Partner

By: Oaktree Fund GP IIA, LLC
Its: General Partner

By: Oaktree Fund GP II, L.P.
Its: Managing Member

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

Address for Notices:
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333 S. Grand Avenue, 28th Fl.
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OAKTREE LSL FUND HOLDINGS EURRC S.À R.L.

26A, boulevard Royal L-2449
Luxembourg, Grand Duchy of Luxembourg
R.C.S Luxembourg Number: B269245

By: /s/ Martin Eckel

Name: Martin Eckel

Title: Manager

By: /s/ Flora Verrecchia

Name: Flora Verrecchia

Title: Manager

Address for Notices:

Oaktree Fund Administration, LLC

333 S. Grand Avenue, 28th Fl.

Los Angeles, CA 90071

Attn: Oaktree Agency

Email: Oaktreeagency@alterdomus.com

With a copy to:

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Attn: Ari B. Blaut

Email: blauta@sullcrom.com

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**OAKTREE LSL FUND DELAWARE HOLDINGS EURRC,
L.P.**

By: Oaktree Life Sciences Lending Fund GP, L.P.
Its: General Partner

By: Oaktree Life Sciences Lending Fund GP Ltd.
Its: General Partner

By: Oaktree Capital Management, L.P.
Its: Director

By: /s/ Matthew Stewart
Name: Matthew Stewart
Title: Managing Director

By: /s/ Mary Gallagly
Name: Mary Gallagly
Title: Managing Director

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Q BOOST HOLDING LLC

By: /s/ Ahmed Nasser Al-Abdulghani

Name: Ahmed Nasser Al-Abdulghani

Title: Director

Address for Notices:

c/o Qatar Investment Authority

Ooredoo Tower (Building 14)

Al Dafna Street (Street 801)

Al Dafna (Zone 61) Doha, Qatar

A copy (which shall not constitute notice) shall also be sent to:

General Counsel

Qatar Investment Authority

Ooredoo Tower (Building 14)

Al Dafna Street (Street 801)

Al Dafna (Zone 61)

Doha, Qatar

Email: notices.legal@qia.qa

A copy (which shall not constitute notice) shall also be sent to:

Shearman & Sterling LLP

535 Mission Street, 25th Floor

San Francisco, CA 94105

Attn: Michael S. Dorf

Tomasz Kulawik

Email: mdorf@shearman.com

tomasz.kulawik@shearman.com

[Signature Page to Fourth Amendment to Credit Agreement and Guaranty]

EXHIBIT A

[FORM OF] BIOXCEL THERAPEUTICS, INC. COMMON STOCK WARRANT

NEITHER THIS WARRANT NOR THE SECURITIES ISSUABLE UPON ITS EXERCISE OR CONVERSION HAVE BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY APPLICABLE STATE SECURITIES LAW AND MAY NOT BE TRANSFERRED EXCEPT (I) IN ACCORDANCE WITH THE SECURITIES ACT OR SUCH APPLICABLE STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM, OR (II) WHERE, IN THE OPINION OF COUNSEL, REGISTRATION UNDER THE SECURITIES ACTS OR SUCH APPLICABLE STATE SECURITIES LAWS IS NOT REQUIRED IN CONNECTION WITH SUCH PROPOSED TRANSFER.

[# of shares] Shares of Company Common Stock No. [warrant #] WARRANT

This WARRANT (this “**Warrant**”) is issued as of March 20, 2024 (the “**Initial Issuance Date**”), by BIOXCEL THERAPEUTICS, INC., a Delaware corporation (the “**Company**”), to [name of purchaser], a [jurisdiction of organization] [entity type] (“**Purchaser**” and, together with any assignee(s) or transferee(s), “**Holder**” or “**Holders**”).

WHEREAS, the Company, certain subsidiaries of the Company as guarantors, the Purchaser as lender and the other lenders party thereto are parties to that certain Credit Agreement and Guaranty, dated as of April 19, 2022, and amended as of November 13, 2023, December 5, 2023, February 12, 2024 and March 20, 2024 (as amended, restated, supplemented or otherwise modified from time to time, the “**Credit Agreement**”), pursuant to which the Company may borrow from Purchaser and the other lenders party thereto (collectively, the “**Lenders**”), and the Lenders may loan to the Company, up to \$202,319,447 from the date of the Credit Agreement through the Maturity Date; and

WHEREAS, the Company is issuing this Warrant to Purchaser as a condition precedent to the effectiveness of that Fourth Amendment to Credit Agreement and Guaranty, dated as of March 20, 2024, by and among the Company, Purchaser and the other parties thereto.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and Purchaser agree as follows:

Section 1. **Definitions**. Unless otherwise defined herein, capitalized terms have the meanings set forth in the Credit Agreement (as in effect on the date hereof), however, the following terms when used herein have the following meanings:

“**Aggregate Exercise Price**” means, in connection with any Exercise of this Warrant pursuant to **Section 4** (whether in whole or in part), an amount equal to the product of (i) the number of Underlying Shares in respect of which this Warrant is then being exercised pursuant to such **Section 4**, multiplied by (ii) the Exercise Price.

“**Fair Market Value**” means, with respect to any security or other property, the fair market value of such security or other property as determined by the independent members

of the Board of Directors of the Company, acting in good faith. If the Holder objects in writing to the Board of Directors' calculation of Fair Market Value within ten (10) days of receipt of written notice thereof and the Holder and the Company are unable to agree on Fair Market Value during the five (5) day period following the delivery of the Holder's objection, the valuation dispute resolution procedure set forth in **Section 20** hereof shall be invoked to determine Fair Market Value.

"Market Price" means, with respect to a particular security, on any given day, the last reported sale price, regular way, or, in case no such reported sale takes place on such day, the average of the closing bid and asked prices, regular way, in either case on the principal national securities exchange on which the applicable securities are listed or admitted to trading, or if not listed or admitted to trading on any national securities exchange, the last quoted bid price in the over-the-counter market as reported by Pink Sheets LLC or similar organization. "Market Price" shall be determined without reference to after hours or extended hours trading. If such security is not listed and traded in a manner that the quotations referred to above are available for the period required hereunder, the Market Price per share of Company Common Stock shall be deemed to be the fair market value per share of such security as determined in good faith by the independent members of the Board of Directors in reliance upon an opinion of an accounting firm of nationally recognized standing retained by the Company for this purpose and reasonably acceptable to the Holder (or if there is more than one Holder, a majority in interest of Holders excluding any Holder that is an Affiliate of the Company). For the purposes of determining the Market Price of the Company Common Stock on the Trading Day preceding, on or following the occurrence of an event, (i) that Trading Day shall be deemed to commence immediately after the regular scheduled closing time of trading on the Trading Market on which the Company Common Stock is listed or, if trading is closed at an earlier time, such earlier time and (ii) that Trading Day shall end at the next regular scheduled closing time, or if trading is closed at an earlier time, such earlier time (for the avoidance of doubt, and as an example, if the Market Price is to be determined as of the last Trading Day preceding a specified event and the closing time of trading on a particular day is 4:00 p.m. and the specified event occurs at 5:00 p.m. on that day, the Market Price would be determined by reference to such 4:00 p.m. closing price).

"Trading Day" means a day on which the Company Common Stock is traded on a Trading Market or, if the Company Common Stock is not traded on a Trading Market, then on the principal securities exchange or securities market on which the Company Common Stock is then traded.

"Trading Market" means any market or exchange of The Nasdaq Stock Market LLC or the New York Stock Exchange.

"VWAP" means, for any date, the price determined by the first of the following clauses that applies: (i) if the Company Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Company Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Company Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:00 p.m. (New York City time)), (ii) if the Company Common Stock is not then listed on a Trading Market or quoted for trading on the OTC Bulletin Board and if prices for the Company Common Stock are then reported in the "Pink Sheets" published by

OTC Markets Group Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Company Common Stock so reported or (iii) in all other cases, the fair market value of a share of Company Common Stock as determined by an independent nationally recognized investment banking, accounting or valuation firm selected in good faith by the Company and reasonably acceptable to the Holder, the fees and expenses of which shall be paid by the Company.

Section 2. **Issuance of Warrant; Term.** For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company hereby grants to Holder the right to purchase from the Company [# of shares] fully paid and nonassessable shares of the Company's voting common stock having a par value \$0.001 per share (the "**Company Common Stock**"). The shares of Company Common Stock issuable upon exercise of this Warrant are hereinafter referred to as the "**Underlying Shares**." This Warrant shall be exercisable at any time and from time to time, in whole or in part, during the period commencing on the date hereof and ending on April 19, 2029 (the "**Expiration Date**").

Section 3. **Exercise Price.** The exercise price per share of Company Common Stock for which each Underlying Share may be purchased pursuant to this Warrant shall be \$3.0723, subject to adjustment pursuant to **Section 7** (the "**Exercise Price**").

Section 4. **Exercise.**

(a) This Warrant may be exercised by the Holder hereof as to all or any portion of the Underlying Shares, upon delivery of written notice to the Company, together with this original Warrant and (x) payment to the Company of the Aggregate Exercise Price or (y) instruction to the Company to withhold a number of the Underlying Shares then issuable upon exercise of this Warrant with an aggregate value (determined on the basis of the average Market Price per share for the Company Common Stock on the last five Trading Days for such stock ended immediately prior to the applicable Exercise Date, as defined below) equal to such Aggregate Exercise Price (collectively, the "**Exercise**", with the date of an Exercise being an "**Exercise Date**"). The Exercise Price (if paid pursuant to clause (x) above) shall be payable by delivery by the Holder of a certified or official bank check payable to the order of the Company or wire transfer of immediately available funds to an account designated by the Company. This Warrant shall be deemed to have been so exercised as of the applicable Exercise Date, and the Holder shall be entitled to receive the Underlying Shares issuable upon such Exercise and be treated for all purposes as the holder of record of the Underlying Shares as of such date. Upon the Exercise of this Warrant, the Company shall, within two (2) Business Days of the applicable Exercise Date (the "**Underlying Share Delivery Date**"), execute and deliver to the Holder of this Warrant (a) a statement confirming the total number of Underlying Shares for which this Warrant is being exercised, and (b) (i) if the Underlying Shares are issued in certificate form, a certificate or certificates for the number of Underlying Shares issuable upon such Exercise, or (ii) if the Underlying Shares are issued in uncertificated form, a written confirmation evidencing the book-entry registration of such Underlying Shares in the Holder's name; provided that if the Company fails to deliver to Holder such certificate or certificates (in the case of Underlying Shares issued in certificate form) or written confirmation (in the case of Underlying Shares issued in uncertificated form) by the Underlying Share Delivery Date, the Holder will have the right to rescind such Exercise. Any rescission by the Holder pursuant to this **Section 4(a)** shall not affect any other

remedies available to the Holder under applicable law or equity or pursuant to **Section 14** hereof as a result of the Company's failure to timely deliver the Underlying Shares. If this Warrant shall be exercised with respect to less than all of the Underlying Shares, the Company shall deliver a new Warrant covering the number of Underlying Shares in respect of which this Warrant shall not have been exercised, which new Warrant shall in all other respects be identical to this Warrant. The Company covenants and agrees that it will pay when due any and all state and federal issue taxes which may be payable in respect of the issuance of this Warrant or the issuance of any Underlying Shares upon exercise.

(b) In the event of any withholding of shares of Underlying Shares pursuant to **Section 4(a)(y)** above where the number of the Underlying Shares then issuable upon exercise of this Warrant with an aggregate value equal to the Aggregate Exercise Price is not a whole number, the number of the Underlying Shares withheld by the Company shall be rounded up to the nearest whole share, and the Company shall make a cash payment to the Holder (by delivery of a certified or official bank check or by wire transfer of immediately available funds) based on the incremental fraction of Underlying Shares being so withheld by the Company in an amount equal to the product of (x) such incremental fraction of Underlying Shares being so withheld or surrendered multiplied by (y) the value per share of Underlying Shares (determined on the basis of the average Market Price per share for the Company Common Stock on the last five Trading Days for such stock ended immediately prior to the applicable Exercise Date).

(c) The Company shall not knowingly effect the exercise of this Warrant, and the Holder shall not have the right to exercise this Warrant to the extent that, after giving effect to such exercise, the Holder (together with such Person's Affiliates) would beneficially own in excess of 9.99% (the "**Maximum Percentage**") of the Company Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Company Common Stock beneficially owned by such Person and its Affiliates shall include the number of shares of Company Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude shares of Company Common Stock which would be issuable upon (i) exercise of the remaining, unexercised portion of this Warrant beneficially owned by such Person and its Affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Person and its Affiliates (including, without limitation, any convertible notes or convertible shares or warrants) subject to a limitation on conversion or exercise analogous to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this paragraph, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act. For purposes of this Warrant, in determining the number of outstanding shares of Company Common Stock, a Holder of this Warrant may rely on the number of outstanding shares of Company Common Stock as reflected in the most recent of (1) the Company's Form 10-K, Form 10-Q or other public filing with the Securities and Exchange Commission, as the case may be, (2) a more recent public announcement by the Company or (3) any other notice by the Company or its transfer agent setting forth the number of shares of Company Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall, within five (5) Business Days, confirm to such Holder the number of shares of its Company Common Stock then outstanding. Furthermore, upon the written request of the Company, a Holder shall confirm to the Company its then current beneficial ownership with respect to the Company's Company Common Stock.

Section 5. **No Fractional Shares.** No fractional shares may be issued upon any exercise of this Warrant or as a consequence of any adjustment pursuant to **Section 7**, and any fractions shall be rounded upwards to the nearest whole number of shares. If upon any exercise or adjustment of this Warrant a fraction of a share results, the Company will pay to the Holder the cash value of any such fractional share, calculated on the basis of the Exercise Price.

Section 6. **Securities Laws.**

(a) Holder acknowledges that the Underlying Shares are being offered and sold by the Company in accordance with Regulation D under the Securities Act and that the Underlying Shares will constitute “restricted securities” as defined in Rule 144 under the Securities Act. Neither this Warrant nor the Underlying Shares have been registered under the Securities Act, or any state securities laws (“**Blue Sky Laws**”). This Warrant has been acquired for the Holder’s own account for investment purposes and not with a current view to distribution or resale and may not be sold or otherwise transferred (i) without an effective registration statement for such Warrant under the Securities Act and such applicable Blue Sky Laws, or (ii) unless Holder shall have delivered to the Company an opinion of counsel to the effect that the Warrant or such portion of the Warrant to be sold or transferred may be sold or transferred under an exemption from such registration; provided, that the foregoing conditions shall not apply to any transfer of this Warrant from Purchaser to (i) any Affiliate, managed fund or account of Oaktree Capital Management, L.P. or (ii) an Affiliate of Qatar Investment Authority.

(b) The Company covenants and agrees that all Underlying Shares will, upon issuance and payment therefor, be legally and validly issued and outstanding, free from all taxes, liens, charges and preemptive or similar rights, if any, with respect thereto or to the issuance thereof. The Company will take all such action as may be reasonably necessary or appropriate to assure that the Underlying Shares may be issued as provided herein without violating any applicable law or regulation, or any requirements of the Trading Market upon which the Company Common Stock may be listed.

(c) The certificates representing the Underlying Shares will bear the following or similar legend, unless the Company determines otherwise in compliance with applicable law:

“THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “**ACT**”), OR UNDER THE SECURITIES LAWS OF ANY STATE. THESE SECURITIES ARE SUBJECT TO RESTRICTIONS ON TRANSFERABILITY AND RESALE AND MAY NOT BE TRANSFERRED OR RESOLD EXCEPT AS PERMITTED UNDER THE ACT AND APPLICABLE STATE SECURITIES LAWS, PURSUANT TO REGISTRATION OR EXEMPTION THEREFROM. INVESTORS SHOULD BE AWARE THAT THEY MAY BE REQUIRED TO BEAR THE FINANCIAL RISKS OF THIS INVESTMENT FOR AN INDEFINITE PERIOD OF TIME. THE ISSUER OF THESE SECURITIES MAY REQUIRE AN OPINION OF COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER TO THE EFFECT THAT ANY PROPOSED TRANSFER OR RESALE IS IN COMPLIANCE WITH THE ACT AND ANY APPLICABLE STATE SECURITIES LAWS.”

Section 7. **Anti-Dilution Adjustments.**

(a) If the Company shall at any time prior to the expiration of this Warrant (i) pay a stock dividend or otherwise make a distribution or distributions on shares of Company Common Stock or any other equity or equity securities, (ii) subdivide the Company Common Stock (by stock split, recapitalization, or any other similar event) into a larger number of shares, (iii) combine the Company Common Stock (by stock split or reverse stock split, recapitalization, combination of shares, or any other similar event) or (iv) issue by reclassification of shares of Company Common Stock any shares of capital stock of the Company (with the exception of any reclassification that constitutes a Fundamental Change, as hereinafter defined), then in each such case the Exercise Price shall be adjusted by multiplying the Exercise Price in effect immediately prior to (x) the record date for the determination of stockholders entitled to receive such dividend or distribution or (y) the effective date in the case of a subdivision, combination or re-classification by a fraction, the numerator of which shall be the number of shares of Company Common Stock outstanding immediately before such event and the denominator of which shall be the number of shares of Company Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the Aggregate Exercise Price shall remain unchanged. Before taking any action which would result in an adjustment in the number of Underlying Shares for which this Warrant is exercisable or to the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(b) If the Company shall at any time prior to the expiration of this Warrant (in each case, occurring after the date hereof) be a party to any merger, consolidation, exchange of shares of Company Common Stock, sale of a majority of the Company Common Stock, sale of all or substantially all of the assets of the Company, separation, reorganization, recapitalization, winding up or liquidation of the Company, or other similar event or transaction (each, a “**Fundamental Change**”), as a result of which shares of Company Common Stock shall be changed into the same or a different number or class or classes of securities of the Company or another entity, or the holders of shares of Company Common Stock are entitled to receive cash or other property, then, upon the Exercise of this Warrant by the Holder, such Holder shall receive, for the Aggregate Exercise Price as in effect immediately prior to such Fundamental Change (subject to all other adjustments under this Warrant), the aggregate number of shares or such other securities, cash or other property which such Holder would have received if this Warrant had been exercised immediately prior to such Fundamental Change (collectively, the “**Fundamental Change Receivable**”), which, upon the Holder’s election, may be received net of the Aggregate Exercise Price (for the avoidance of doubt, without payment by the Holder of any cash in an amount equal to the then Exercise Price). In the case of any Fundamental Change, the successor or purchasing party of such merger, consolidation, exchange of shares of Company Common Stock, sale of all or substantially all of the assets of the Company or reorganization (if other than the Company) shall duly execute and deliver to the Holder a supplement to this Warrant acknowledging the Company and such party’s obligations under this **Section 7(b)**. The terms of this Warrant shall be applicable to the Fundamental Change Receivable due to the Holder upon the consummation of any such Fundamental Change.

(c) If the Company, at any time while this Warrant is outstanding, shall otherwise distribute to all holders of Company Common Stock (and not to the Holder or Holders)

evidences of its indebtedness or assets (including cash and cash dividends) or rights or warrants to subscribe for or purchase any security (for the avoidance of doubt, excluding in each such case any Fundamental Change Receivable), then in each such case the Exercise Price shall be adjusted by multiplying the Exercise Price in effect immediately prior to the record date fixed for determination of stockholders entitled to receive such distribution by a fraction, the numerator of which shall be such VWAP on such record date less the then Fair Market Value at such record date of the portion of such assets or evidence of indebtedness so distributed applicable to one outstanding share of Company Common Stock, and the denominator of which shall be the VWAP determined as of the record date mentioned above. Such adjustment shall be made whenever any such distribution is made and shall become effective immediately after the record date mentioned above.

(d) Not less than five (5) days prior to the record date or effective date, as the case may be, of any event which requires or might require an adjustment or readjustment pursuant to **Section 7(a)** or **Section 7(c)** (each, an “**Adjustment Event**”), and not less than ten (10) days prior to the record date or effective date, as the case may be, of any Fundamental Change, the Company shall give written notice of such Adjustment Event or Fundamental Change (as applicable) to the Holder or Holders, describing such Adjustment Event or Fundamental Change in reasonable detail and specifying the record date or effective date, as the case may be. Such notice shall additionally include the Company’s certification of the following computations, as applicable, each of which shall have been made by the Company in good faith: (i) in the case of an Adjustment Event, if determinable, the required adjustment and the computation thereof or, if the required adjustment is not determinable at the time of such notice, the Company shall give notice to the Holder or Holders of such adjustment and computation promptly after such adjustment becomes determinable, and (ii) in the case of a Fundamental Change, the number of shares or such other securities, cash or other property which is payable to the Holder or Holders upon the Fundamental Change, the computation thereof, and the computation of the then applicable Exercise Price. Except as otherwise prohibited by applicable laws, to the extent that any notice provided pursuant to this **Section 7(d)** contains material, non-public information regarding the Company, the Company shall disclose such information regarding the Company in a Current Report on Form 8-K and file such Current Report on Form 8-K with the SEC no later than the second Trading Day following the date such notice is delivered to the Holder.

(e) Notwithstanding any other provision hereof, if an exercise of all or any portion of this Warrant is to be made in connection with a Fundamental Change or a public offering, such exercise may, at the election of the Holder, be conditioned upon the consummation of such transaction, in which case such exercise shall not be deemed to be effective until immediately prior to the consummation of such transaction.

(f) At all times on and prior to the Expiration Date, the Company shall at all times reserve and keep available out of its authorized but unissued Company Common Stock (or other equity interests then constituting Underlying Shares), solely for the purpose of issuance upon the exercise of this Warrant, the maximum number of Underlying Shares issuable upon the exercise of this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates or effectuating the book entry of uncertificated shares to execute and issue, or enter, the necessary certificates or book entries (as applicable) for the Underlying Shares upon the exercise of the

purchase rights under this Warrant. The Company shall not increase the par value of any Underlying Shares receivable upon the exercise of this Warrant above the Exercise Price then in effect, and shall take all such actions within its power as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable Underlying Shares upon the exercise of this Warrant.

Section 8. **Transfer of Warrant.** Subject to compliance with applicable federal and state securities laws, the Holder may, from time to time, transfer this Warrant or the Underlying Shares, in each case, in whole or in part, by giving the Company a written notice of the portion of the Warrant or the shares of the Underlying Shares being transferred, such notice to set forth the name, address and taxpayer identification number of the transferee, the anticipated date of such transfer, and surrendering this Warrant or the certificates or book-entry records representing shares of the Underlying Shares, as applicable, to the Company for reissuance to the transferee(s). Upon surrender of this Warrant by a Holder to the Company for transfer, in whole or in part, the Company shall issue a new warrant to such Holder in such denomination as shall be requested by such Holder covering the number of Underlying Shares, if any, in respect of which this Warrant shall not have been transferred. Such new warrant shall be identical in all other respects to this Warrant. This Warrant may be divided or combined with other Warrants upon presentation hereof at the office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with this **Section 8** as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated as of the Initial Issuance Date and shall be identical to this Warrant except as to the number of Underlying Shares issuable pursuant thereto.

Section 9. **No Impairment.** The Company may not, including, without limitation, by amendment of its certificate of incorporation or bylaws, or through a Fundamental Change or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and the Company shall at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Holder or Holders against impairment. Without limiting the generality of the foregoing, the Company shall take (a) all such action as may be necessary or appropriate in order that the Company may duly and validly issue fully paid and non-assessable Underlying Shares, free from any taxes, liens, charges and preemptive rights, upon the exercise of this Warrant, and (b) use its best efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be necessary to enable the Company to perform its obligations under this Warrant.

Section 10. **No Rights or Liabilities as a Stockholder.** This Warrant shall not entitle the Holder or Holders hereof to any voting rights or other rights as a stockholder of the Company with respect to the Underlying Shares prior to the exercise of the Warrant. No provision of this Warrant, in the absence of affirmative action by the Holder or Holders to purchase the Underlying Shares, and no mere enumeration herein of the rights or privileges of the Holder or Holders, shall give rise to any liability of such Holder or Holders for the Exercise Price or as a

stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

Section 11. **Representations and Warranties of the Company.** The Company hereby represents and warrants:

(a) As of the Initial Issuance Date, the Company (A) is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, (B) has all requisite power and authority to own and operate its properties, to carry on its business as now conducted and as currently proposed to be conducted, to issue and enter into the Warrant and to carry out the transactions contemplated thereby, and (C) except where the failure to do so, individually or in the aggregate, has not had, and could not be reasonably expected to have, a material adverse effect on the business, assets, financial condition or operations of the Company, is qualified to do business and, where applicable is in good standing, in every jurisdiction where such qualification is required.

(b) This Warrant is, and any Warrant issued in substitution for or replacement of this Warrant (including pursuant to **Section 15**) shall be, upon issuance, duly authorized and validly issued. This Warrant constitutes, and any Warrant issued in substitution for or replacement of this Warrant shall be, upon issuance, a legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency or other similar laws affecting the enforcement of creditors' rights generally and by general principles of equity.

(c) As of the Initial Issuance Date, the execution, delivery and performance by the Company of the Warrant does not and will not (A) violate any material provision of applicable law or the organizational documents of the Company, (B) conflict with, result in a breach of, or constitute (with the giving of any notice, the passage of time, or both) a default under any material agreement of the Company or (C) result in or require the creation or imposition of any lien upon any assets of the Company.

Section 12. **Successors.** All the covenants and provisions of this Warrant by or for the benefit of the Company or the Holder or Holders shall bind and inure to the benefit of their respective successors and assigns.

Section 13. **Survival.** The rights of the Holder or Holders under this Warrant, and the covenants and agreements of the Company set forth in this Warrant for the benefit of the Holder or Holders, shall survive exercise of all or any portion of this Warrant and shall inure to the Holder or Holders of any Underlying Shares.

Section 14. **Remedies.** If the Company violates, breaches or defaults under this Warrant, the Holder may proceed to protect and enforce its rights by any action at law, suit in equity or other appropriate proceeding, whether for specific performance of any agreement contained in this Warrant, or for an injunction against a violation of any of the terms hereof, or in and of the exercise of any power granted hereby or by law, in each case without providing any bond or other security in connection with such action, suit or other proceeding. In case of any violation, breach or default under this Warrant, the Company shall pay to the Holder on demand

all reasonable costs and expenses of enforcing the Holder's rights under this Warrant, including, without limitation, reasonable attorneys' fees and legal expenses.

Section 15. **Loss, Theft, Destruction or Mutilation of Warrant.** The Company covenants that upon its receipt of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Underlying Shares (and, in the case of mutilation, the surrender and cancellation of this Warrant or such stock certificate), the Company shall make and deliver to the Holder a new Warrant or stock certificate that is identical to this Warrant or to such stock certificate (as applicable).

Section 16. **Article and Section Headings.** Numbered and titled article and section headings are for convenience only and shall not be construed as amplifying or limiting any of the provisions of this Warrant.

Section 17. **Notice.** Any and all notices, elections or demands permitted or required to be made under this Warrant shall be in writing, signed by the party giving such notice, election or demand and shall be delivered in accordance with the notice provisions in the Credit Agreement.

Section 18. **Severability.** If any provisions(s) of this Warrant or the application thereof to any person or circumstances shall be invalid or unenforceable to any extent, the remainder of this Warrant and the application of such provisions to other persons or circumstances shall not be affected thereby and shall be enforced to the greatest extent permitted by law.

Section 19. **Entire Agreement.** This Warrant and between the Company and the Holder represents the entire agreement between the parties concerning the subject matter hereof, and all oral discussions and prior agreement are merged herein.

Section 20. **Valuation Dispute Resolution.** In the case of any dispute as to the determination of any amount or valuation hereunder or in connection with the amount or value of any Company Common Stock or Underlying Shares to be issued, withheld or otherwise determined, the calculation of the Aggregate Exercise Price or any other computation or valuation required to be made hereunder or in connection herewith, in the event the Holder, on the one hand, and the Company, on the other hand, are unable to settle such dispute within five (5) Business Days, then either party may elect to submit the disputed matter(s) for resolution by an accounting firm of nationally recognized standing as may be mutually agreed upon by the Holder and the Company. Such firm's determination of such disputed matter(s) shall be binding upon all parties absent demonstrable error, and the Company and the Holder shall each pay one half of the fees and costs of such firm.

Section 21. **Governing Law.** This Warrant and the rights and obligations of the parties hereunder, and any claims, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Warrant and the transactions contemplated hereby shall be governed by, and construed in accordance with, the law of the State of New York.

Section 22. **Jurisdiction; Waiver of Venue; Service of Process.**

(a) Each party hereto irrevocably and unconditionally agrees that it will not commence any action, litigation or proceeding of any kind or description, whether in law or equity, whether in contract or in tort or otherwise, against any other party hereto in any way relating to this Warrant or the transactions relating hereto, in any forum other than the courts of the State of New York sitting in New York County, and of the United States District Court of the Southern District of New York, and any appellate court from any thereof; and each of the parties hereto irrevocably and unconditionally submits to the jurisdiction of such courts and agrees that all claims in respect of any such action, litigation or proceeding may be heard and determined in such New York State court or, to the fullest extent permitted by applicable law, in such federal court. Each of the parties hereto agrees that a final judgment in any such action, litigation or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.

(b) Each party hereto irrevocably and unconditionally waives, to the fullest extent permitted by applicable law, any objection that it may now or hereafter have to the laying of venue of any action or proceeding arising out of or relating to this Agreement in any court referred to in paragraph (a) of this **Section 22**. Each of the parties hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court.

(c) Each party hereto irrevocably consents to service of process in the manner provided for notices in **Section 17**.

Section 23. **Amendment.** No amendment or modification hereof shall be effective except in a writing executed by the Company and the Holder.

Section 24. **Counterparts.** This Warrant may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same Warrant.

Section 25. **Waiver of Jury Trial.** EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY SUIT, ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS WARRANT OR THE TRANSACTIONS CONTEMPLATED HEREBY (WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY). EACH PARTY HERETO (A) CERTIFIES THAT NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PERSON HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PERSON WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER AND (B) ACKNOWLEDGES THAT IT AND THE OTHER PARTIES HERETO HAVE BEEN INDUCED TO ENTER INTO THIS WARRANT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS **SECTION 25**.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have set their hands as of the date first above written.

COMPANY:

BIOXCEL THERAPEUTICS, INC.

By: _____
Name:
Title:

Exhibit A - 1

Subsidiaries

OnkosXcel Therapeutics, LLC (Delaware)

OnkosXcel Employee Holdings, LLC (Delaware)

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statements (Form S-3 Nos. 333-265277, 333-275261 and 333-276488) of BioXcel Therapeutics, Inc., and
- (2) Registration Statements (Form S-8 Nos. 333-235282, 333-238580, 333-266922 and 333-270652) pertaining to the 2017 Equity Incentive Plan and the 2020 Incentive Award Plan and 2020 Employee Stock Purchase Plan of BioXcel Therapeutics, Inc.

of our report dated March 22, 2024, with respect to the consolidated financial statements of BioXcel Therapeutics, Inc. included in this Annual Report (Form 10-K) of BioXcel Therapeutics, Inc. for the year ended December 31, 2023.

/s/ Ernst & Young, LLP

Stamford, Connecticut

March 22, 2024

CERTIFICATIONS

I, Vimal Mehta, Ph.D., certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2023, of BioXcel Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 22, 2024

By: /s/ Vimal Mehta

Vimal Mehta, Ph.D.
President and Chief Executive Officer
(Principal Executive Officer)

CERTIFICATIONS

I, Richard Steinhart, certify that:

1. I have reviewed this Annual Report on Form 10-K for the fiscal year ended December 31, 2023, of BioXcel Therapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 22, 2024

By: /s/ Richard Steinhart
Richard Steinhart
Chief Financial Officer
(Principal Financial Officer)



**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of BioXcel Therapeutics, Inc. (the “Company”) for the fiscal year ended December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 22, 2024

By: /s/ Vimal Mehta

Vimal Mehta, Ph.D.

President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report on Form 10-K of BioXcel Therapeutics, Inc. (the “Company”) for the fiscal year ended December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), the undersigned hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of his knowledge:

- (1) the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 22, 2024

By: /s/ Richard Steinhart

Richard Steinhart
Chief Financial Officer
(Principal Financial Officer)

BIOXCEL THERAPEUTICS, INC.

POLICY FOR RECOVERY OF ERRONEOUSLY AWARDED COMPENSATION

BioXcel Therapeutics, Inc. (the “*Company*”) has adopted this Policy for Recovery of Erroneously Awarded Compensation (the “*Policy*”), effective as of October 2, 2023 (the “*Effective Date*”). Capitalized terms used in this Policy but not otherwise defined herein are defined in Section 11.

1. Persons Subject to Policy

This Policy shall apply to current and former Officers of the Company. Each Officer shall be required to sign an acknowledgment agreement pursuant to which such Officer will agree to be bound by the terms of, and comply with, this Policy; however, any Officer’s failure to sign any such acknowledgment agreement shall not negate the application of this Policy to the Officer.

2. Compensation Subject to Policy

This Policy shall apply to Incentive-Based Compensation received on or after the Effective Date. For purposes of this Policy, the date on which Incentive-Based Compensation is “received” shall be determined under the Applicable Rules, which generally provide that Incentive-Based Compensation is “received” in the Company’s fiscal period during which the relevant Financial Reporting Measure is attained or satisfied, without regard to whether the grant, vesting or payment of the Incentive-Based Compensation occurs after the end of that period.

3. Recovery of Compensation

In the event that the Company is required to prepare a Restatement, the Company shall recover, reasonably promptly, the portion of any Incentive-Based Compensation that is Erroneously Awarded Compensation, unless the Committee has determined that recovery would be Impracticable. Recovery shall be required in accordance with the preceding sentence regardless of whether the applicable Officer engaged in misconduct or otherwise caused or contributed to the requirement for the Restatement and regardless of whether or when restated financial statements are filed by the Company. For clarity, the recovery of Erroneously Awarded Compensation under this Policy will not give rise to any person’s right to voluntarily terminate employment for “good reason,” or due to a “constructive termination” (or any similar term of like effect) under any plan, program or policy of or agreement with the Company or any of its affiliates.

4. Manner of Recovery; Limitation on Duplicative Recovery

The Committee shall, in its sole discretion, determine the manner of recovery of any Erroneously Awarded Compensation, which may include, without limitation, reduction or cancellation by the Company or an affiliate of the Company of Incentive-Based Compensation or Erroneously Awarded Compensation, reimbursement or repayment by any person subject to this

Policy of the Erroneously Awarded Compensation, and, to the extent permitted by law, an offset of the Erroneously Awarded Compensation against other compensation payable by the Company or an affiliate of the Company to such person. Notwithstanding the foregoing, unless otherwise prohibited by the Applicable Rules, to the extent this Policy provides for recovery of Erroneously Awarded Compensation already recovered by the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 or Other Recovery Arrangements, the amount of Erroneously Awarded Compensation already recovered by the Company from the recipient of such Erroneously Awarded Compensation may be credited to the amount of Erroneously Awarded Compensation required to be recovered pursuant to this Policy from such person.

5. Administration

This Policy shall be administered, interpreted and construed by the Committee, which is authorized to make all determinations necessary, appropriate or advisable for such purpose. The Board of Directors of the Company (the “**Board**”) may re-vest in itself the authority to administer, interpret and construe this Policy in accordance with applicable law, and in such event references herein to the “Committee” shall be deemed to be references to the Board. Subject to any permitted review by the applicable national securities exchange or association pursuant to the Applicable Rules, all determinations and decisions made by the Committee pursuant to the provisions of this Policy shall be final, conclusive and binding on all persons, including the Company and its affiliates, equityholders and employees. The Committee may delegate administrative duties with respect to this Policy to one or more directors or employees of the Company, as permitted under applicable law, including any Applicable Rules.

6. Interpretation

This Policy will be interpreted and applied in a manner that is consistent with the requirements of the Applicable Rules, and to the extent this Policy is inconsistent with such Applicable Rules, it shall be deemed amended to the minimum extent necessary to ensure compliance therewith.

7. No Indemnification; No Liability

The Company shall not indemnify or insure any person against the loss of any Erroneously Awarded Compensation pursuant to this Policy, nor shall the Company directly or indirectly pay or reimburse any person for any premiums for third-party insurance policies that such person may elect to purchase to fund such person’s potential obligations under this Policy. None of the Company, an affiliate of the Company or any member of the Committee or the Board shall have any liability to any person as a result of actions taken under this Policy.

8. Application; Enforceability

Except as otherwise determined by the Committee or the Board, the adoption of this Policy does not limit, and is intended to apply in addition to, any other clawback, recoupment, forfeiture or similar policies or provisions of the Company or its affiliates, including any such policies or provisions of such effect contained in any employment agreement, bonus plan, incentive plan,

equity-based plan or award agreement thereunder or similar plan, program or agreement of the Company or an affiliate or required under applicable law (the “*Other Recovery Arrangements*”). The remedy specified in this Policy shall not be exclusive and shall be in addition to every other right or remedy at law or in equity that may be available to the Company or an affiliate of the Company.

9. Severability

The provisions in this Policy are intended to be applied to the fullest extent of the law; provided, however, to the extent that any provision of this Policy is found to be unenforceable or invalid under any applicable law, such provision will be applied to the maximum extent permitted, and shall automatically be deemed amended in a manner consistent with its objectives to the extent necessary to conform to any limitations required under applicable law.

10. Amendment and Termination

The Board or the Committee may amend, modify or terminate this Policy in whole or in part at any time and from time to time in its sole discretion. This Policy will terminate automatically when the Company does not have a class of securities listed on a national securities exchange or association.

11. Definitions

“*Applicable Rules*” means Section 10D of the Exchange Act, Rule 10D-1 promulgated thereunder, the listing rules of the national securities exchange or association on which the Company’s securities are listed, and any applicable rules, standards or other guidance adopted by the Securities and Exchange Commission or any national securities exchange or association on which the Company’s securities are listed.

“*Committee*” means the Compensation Committee of the Board, provided that, for purposes of determining whether recovery of Incentive-Based Compensation that is Erroneously Awarded Compensation would be Impracticable, “Committee” shall mean the committee of the Board responsible for executive compensation decisions comprised solely of independent directors (as determined under the Applicable Rules), or in the absence of such a committee, a majority of the independent directors serving on the Board.

“*Erroneously Awarded Compensation*” means the amount of Incentive-Based Compensation received by a current or former Officer that exceeds the amount of Incentive-Based Compensation that would have been received by such current or former Officer based on a restated Financial Reporting Measure, as determined on a pre-tax basis in accordance with the Applicable Rules.

“*Exchange Act*” means the Securities Exchange Act of 1934, as amended.

“*Financial Reporting Measure*” means any measure determined and presented in accordance with the accounting principles used in preparing the Company’s financial statements,

and any measures derived wholly or in part from such measures, including GAAP, IFRS and non-GAAP/IFRS financial measures, as well as stock or share price and total equityholder return.

“**GAAP**” means United States generally accepted accounting principles.

“**IFRS**” means international financial reporting standards as adopted by the International Accounting Standards Board.

“**Impracticable**” means (a) the direct expenses paid to third parties to assist in enforcing recovery would exceed the Erroneously Awarded Compensation; provided that the Company has (i) made reasonable attempts to recover the Erroneously Awarded Compensation, (ii) documented such attempt(s), and (iii) provided such documentation to the relevant listing exchange or association, (b) to the extent permitted by the Applicable Rules, the recovery would violate the Company’s home country laws pursuant to an opinion of home country counsel; provided that the Company has (i) obtained an opinion of home country counsel, acceptable to the relevant listing exchange or association, that recovery would result in such violation, and (ii) provided such opinion to the relevant listing exchange or association, or (c) recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and the regulations thereunder.

“**Incentive-Based Compensation**” means, with respect to a Restatement, any compensation that is granted, earned, or vested based wholly or in part upon the attainment of one or more Financial Reporting Measures and received by a person: (a) after such person began service as an Officer; (b) who served as an Officer at any time during the performance period for that compensation; (c) while the Company has a class of its securities listed on a national securities exchange or association; and (d) during the applicable Three-Year Period.

“**Officer**” means each person who serves as an executive officer of the Company, as defined in Rule 10D-1(d) under the Exchange Act.

“**Restatement**” means an accounting restatement to correct the Company’s material noncompliance with any financial reporting requirement under securities laws, including restatements that correct an error in previously issued financial statements (a) that is material to the previously issued financial statements or (b) that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period.

“**Three-Year Period**” means, with respect to a Restatement, the three completed fiscal years immediately preceding the date that the Board, a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare such Restatement, or, if earlier, the date on which a court, regulator or other legally authorized body directs the Company to prepare such Restatement. The “Three-Year Period” also includes any transition period (that results from a change in the Company’s fiscal year) within or immediately following the three completed fiscal years identified in the preceding sentence. However, a transition period between

the last day of the Company's previous fiscal year end and the first day of its new fiscal year that comprises a period of nine to 12 months shall be deemed a completed fiscal year.

**ACKNOWLEDGMENT AND CONSENT TO
POLICY FOR RECOVERY OF ERRONEOUSLY AWARDED COMPENSATION**

The undersigned has received a copy of the Policy for Recovery of Erroneously Awarded Compensation (the "Policy") adopted by BioXcel Therapeutics, Inc. (the "Company").

For good and valuable consideration, the receipt of which is acknowledged, the undersigned agrees to the terms of the Policy and agrees that compensation received by the undersigned may be subject to reduction, cancellation, forfeiture and/or recoupment to the extent necessary to comply with the Policy, notwithstanding any other agreement to the contrary. The undersigned further acknowledges and agrees that the undersigned is not entitled to indemnification in connection with any enforcement of the Policy and expressly waives any rights to such indemnification under the Company's organizational documents or otherwise.

Date

Signature

Name

Title