UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported) **June 29, 2023**

BioXcel Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**001-38410**	**82-1386754**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

555 Long Wharf Drive
New Haven, CT 06511
(Address of principal executive offices, including Zip Code)

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

N/A
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

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

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

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. ☒

Item 8.01 Other Information.

On June 29, 2023, BioXcel Therapeutics, Inc. ("BTAI" or the "Company") provided the following updates:

TRANQUILITY II Phase 3 Trial

The Company has announced positive topline results for TRANQUILITY II, a Phase 3 trial of BXCL501, the Company's proprietary, orally dissolving film formulation of dexmedetomidine under investigation for the acute treatment of Alzheimer's disease-related 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 a number of secondary measures, including CGI-I and ACES. 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) 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.

BXCL501 continued to show a PEC reduction over repeated dosing. A total of 443 episodes were dosed over the 12-week trial period, including 294 episodes occurring after the first treatment across all dose groups. Dosing with 60 mcg showed a reduction in PEC total score from pre-dose versus placebo at 1 hour (p=0.011) and 2 hours (p=0.0044) for all episodes of agitation.

BXCL501 was well tolerated, with a side effect profile substantially consistent with prior trials of BXCL501 and the current label for IGALMI™. The 60 mcg dose had previously been evaluated in different patient populations and in healthy volunteers. Data from TRANQUILITY II add to this safety database and show that the majority of safety events occurring within 24 hours of dosing in this population were mild or moderate in severity and consistent with the current IGALMI™ label. In addition, dosing for subsequent episodes did not result in a meaningful increase in the number of adverse events and no treatment-related serious adverse events were observed over the 12-week study period.

For all 443 episodes over the 12-week period, there were no syncope or falls related to trial drug. All falls except one with placebo were outside the 24-hour treatment window (5 falls in the 40 mcg arm, 7 falls in the 60 mcg arm, and 5 falls in the placebo arm).

The Company plans to develop a path to potential sNDA submission for the acute treatment of agitation associated with Alzheimer's disease in the second half of 2023, subject to further discussions with the U.S. Food and Drug Administration ("FDA").

TRANQUILITY II Topline Results

Efficacy Results at 2 Hours (Primary Endpoint)

	BXCL501 60 mcg n=50	**BXCL501 40 mcg n=48**	**Placebo n=51**
Reduction in PEC Total Score from Baseline LSM (SE)	7.5 (0.6)	5.7 (0.6)	5.4 (0.6)
p-value (vs. placebo)	0.0112*	0.7648	

*Statistical significance achieved at 0.025

Adverse Events of Special Interest Reported Within 24 Hours of First Dose**

Adverse Event	Severity	BXCL501 60 mcg n=50 (%)	BXCL501 40 mcg n=48 (%)	Placebo n=51 (%)
Somnolence*	Mild Moderate	8 (16.0) 1 (2.0)	6 (12.5) 2 (4.2)	2 (3.9) 0
Lethargy	Mild Moderate	2 (4.0) 1 (2.0)	1 (2.1) 1 (2.1)	1 (2.0) 0
Hypotension	Mild Moderate	7 (14.0) 1 (2.0)	4 (8.3) 0	2 (3.9) 0
Bradycardia	Mild Moderate	3 (6.0) 1 (2.0)	0 1 (2.1)	0 0
Orthostatic Hypotension	Mild Moderate	2 (4.0) 2 (4.0)	2 (4.2) 1 (2.1)	1 (2.0) 0

*Verbatim; drowsy or feeling sleepy

** The adverse events of special interest (AESI) are defined as those related to mechanism of action of the drug. Those that are listed were observed within 24 hours after the first dose and occur with a frequency of at least 2% and greater than with placebo. Subjects are counted once at highest severity for each preferred term

Important Information Regarding TRANQUILITY II Phase 3 Clinical Trial

In December 2022, the U.S. Food and Drug Administration ("FDA") conducted an inspection of one of the clinical trial sites in the Phase 3 TRANQUILITY II clinical trial, where the principal investigator enrolled approximately 40% of the subjects participating in the 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 a serious adverse event ("SAE") for one of the subjects, which report was made to the Company's 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 the Company's attention that this same principal investigator in the TRANQUILITY II clinical trial may have fabricated email correspondence purporting to demonstrate that the investigator timely submitted to the Company's 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, the Company promptly initiated an investigation and recently received confirmation that the principal investigator fabricated the email correspondence related to the timing of the reporting of this SAE to the Company's pharmacovigilance vendor to make it appear as though this SAE had been timely reported to the pharmacovigilance vendor as required by the clinical trial protocol. The Company also confirmed that this SAE had been timely entered into the electronic data capture system, even though the SAE had not been separately reported to the Company's pharmacovigilance safety vendor within the 24 hour timeframe required under the protocol.

In connection with this ongoing investigation, the Company was made aware that the fabricated email correspondence was provided to the FDA by the principal investigator's employer during the on-site inspection in December 2022. After unblinding of the data, the Company determined that the SAE that was the subject of this fabricated correspondence between the principal investigator and the Company's pharmacovigilance vendor occurred in a subject in the placebo arm. This principal investigator has not participated in any other clinical trial sponsored or conducted by the Company. Moreover, the study was designed such that trained study staff other than principal investigators were to conduct assessments of the primary efficacy measure.

The Company is currently in the process of conducting an investigation into protocol adherence and data integrity at the principal investigator's trial site and is in the process of retaining an independent third party to audit the data collected at the site. The Company's ongoing investigation and/or the planned independent audit may uncover new findings regarding the integrity of the trial data from this principal investigator's site, the accuracy of safety or efficacy findings, or the usability of the data in connection with a marketing application. The Company plans to complete its investigation as soon as possible, although the Company can provide no assurance regarding the timing of the completion of its own investigation or the timing of the completion of the planned independent audit of the trial site. Further, the Company has notified the FDA of these findings and the steps it intends to take to validate the integrity of the data generated by this investigator for the TRANQUILITY II trial.

In connection with the foregoing, the Company is providing the below supplemental risk factor:

Developments relating to the Company's TRANQUILITY II Phase 3 trial may impact the timing of the Company's development plans for, and prospects for regulatory approval of, BXCL501 for the acute treatment of agitation associated with dementia in patients with probable Alzheimer's disease.

The timing of the Company's marketing application and prospects for regulatory approval of BXCL501 for the acute treatment of agitation associated with dementia in patients with probable Alzheimer's disease may be adversely impacted by these developments. For example, even if the Company's investigation and the independent audit conclude that data from the TRANQUILITY II trial have not been affected or compromised by the principal investigator's actions or other deficiencies at the trial site, the FDA may not accept or agree with the Company's conclusions or analyses, or may interpret or weigh their importance differently. Further, if the Company or the FDA determines that there are issues with data integrity and/or compliance with good clinical practice requirements at the trial site, the Company may be unable to use some or all of the subject data generated at this clinical site to support a marketing application. If all or a substantial portion of such data were discarded, the TRANQUILITY II trial may no longer be adequately powered for statistical significance and the Company may need to conduct a new clinical trial. If the Company conducts a new Phase 3 trial, such trial may have different safety or efficacy results from the topline data the Company is announcing today. Topline data from the TRANQUILITY II trial, including results from subjects at this principal investigator's site, may not be predictive of the results in any new trial. Further, any investigation, disqualification or debarment of, or proceeding or action against the principal investigator, or any investigation, proceeding or action against the Company, could further delay development and approval of BXCL501 for this indication, and otherwise have a material adverse effect on the Company, its financial condition, results of operations and prospects.

Forward-Looking Statements

This Current Report on Form 8-K ("Form 8-K") includes "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"). All statements contained in this Form 8-K other than statements of historical fact should be considered forward-looking statements, including, without limitation, statements regarding the Company's expected timing of, trial design and data results from, future clinical trials and future regulatory approvals of BXCL501, in particular for treatment of dementia, potential safety and tolerability features of BXCL501, the potential addressable market for BXCL501 and the potential benefits from treatment with BXCL501. When used herein, words including "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. In addition, any statements or information that refer to expectations, beliefs, plans, projections, objectives, performance or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking. All forward-looking statements are based upon the Company's current expectations and various assumptions. The Company believes there is a reasonable basis for its expectations and beliefs, but they are inherently uncertain. The Company may not realize its expectations, and its beliefs may not prove correct. Actual results could differ materially from those described or implied by such forward-looking statements as a result of various important factors, including, without limitation, its ability to receive regulatory approval for its product candidates and the possibility that the FDA does not conclude that its product candidates satisfy the regulatory requirements for approval; dependence on third-party clinical investigators who may not comply with good clinical practice or other regulatory requirements; the outcomes of its internal and third-party investigations into one of the principal investigators on the TRANQUILITY II trial; its limited operating history; its incurrence of significant losses; its need for substantial additional funding and ability to raise capital when needed; its limited experience in drug discovery and drug development; its dependence on the success and commercialization of IGALMI™, BXCL501, BXCL502 and BXCL701 and other product candidates; its lack of experience in marketing and selling drug products; the failure of preliminary data from its clinical studies to predict final study results; failure of its early clinical studies or preclinical studies to predict future clinical studies; its ability to enroll patients in its clinical trials; undesirable side effects caused by the Company's product candidates; and the other important factors discussed under the caption "Risk Factors" in its Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023, as such factors may be updated from time to time in its other filings with the SEC, which are accessible on the SEC's website at www.sec.gov. These and other important factors could cause actual results to differ materially from those indicated by the forward-looking statements made in this Form 8-K. Any such forward-looking statements represent management's estimates as of the date of this Form 8-K. While the Company may elect to update such forward-looking statements at some point in the future, except as required by law, it disclaims any obligation to do so, even if subsequent events cause our views to change. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this Form 8-K.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: June 29, 2023

BIOXCEL THERAPEUTICS, INC.

/s/ Richard Steinhart

By: Richard Steinhart

Title: Chief Financial Officer