

**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): August 6, 2025

BioXcel Therapeutics, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation)

001-38410
(Commission File Number)

82-1386754
(I.R.S. 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 Events.

On August 6, 2025, BioXcel Therapeutics, Inc. announced the publication of a study in the peer-reviewed journal *Frontiers in Pharmacology*, entitled “Dexmedetomidine potently and reversibly regulates stress-mediated behaviors.” The study evaluated the effects of Dexmedetomidine (the active ingredient in BXCL-501) on stress-mediated behaviors in non-clinical studies and demonstrated a significant effect in translatable behavioral models related to psychiatric disorders, suggesting potential applications of BXCL501 in chronic conditions in addition to treatment of acute agitation.

Key findings from the non-clinical studies include:

- Dexmedetomidine exhibited higher in vitro potency and activity than other alpha2-adrenergic receptor agonists (clonidine, lofexidine or guanfacine).
- Dexmedetomidine significantly mitigated responses to both acute and repeated stress after both acute and repeated dosing.
- Effects of dexmedetomidine were consistent across multiple models of stress.
- Dexmedetomidine exhibited favorable attributes for potential daily administration, including no loss of effect after repeat doses, and no withdrawal effects after stopping dosing.
- Dexmedetomidine at efficacious doses did not affect motor function or cognition compared with diazepam or scopolamine, respectively.
- Dexmedetomidine had a favorable effect on sleep patterns.

The published results provide further support for BXCL501’s mechanism of action and potential suitability for broadly addressing stress-related disorders in addition to agitation.

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: August 6, 2025

BIOXCEL THERAPEUTICS, INC.

/s/ Richard Steinhart
By: Richard Steinhart
Title: Chief Financial Officer
