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

May 5, 2022

Date of Report (Date of earliest event reported)

Bicycle Therapeutics plc

(Exact name of registrant as specified in its charter)

001-38916 **England and Wales** Not applicable (State or other jurisdiction (Commission (IRS Employer File Number) Identification No.) of incorporation) B900, Babraham Research Campus Cambridge CB22 3AT Not Applicable **United Kingdom** (Address of principal executive offices) (Zip Code) Registrant's telephone number, including area code: +44 1223 261503 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 Name of each exchange on which registered Trading Symbol(s) Ordinary shares, nominal value £0.01 per share The Nasdag Stock Market LLC* n/a

BCYC

American Depositary Shares, each representing one ordinary

share, nominal value £0.01 per share

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).

The Nasdaq Stock Market LLC

Emerging growth company	
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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. \Box

^{*} Not for trading, but only in connection with the listing of the American Depositary Shares on The Nasdaq Stock Market LLC.

Item 2.02 Results of Operations and Financial Condition

On May 5, 2022, Bicycle Therapeutics plc (the "Company") issued a press release announcing financial results for the fiscal quarter ended March 31, 2022 and other business highlights. A copy of the press release is being furnished as Exhibit 99.1 to this Current Report on Form 8-K.

The information contained in Item 2.02 in this Current Report on Form 8-K (including Exhibit 99.1) shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 8.01 Other Events

Also on May 5, 2022, the Company posted an updated corporate presentation on the Company's website. To access the presentation, investors should visit the "Investor Events and Presentations" section of the Company's website at investors.bicycletherapeutics.com.

The information furnished under this Item 7.01 shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or subject to the liabilities of that section. The information shall not be deemed incorporated by reference into any other filing with the Securities and Exchange Commission made by the Company, regardless of any general incorporation language in such filing.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit No.

Description

Press Release issued May 5, 2022

The cover page of this Current Report on Form 8-K, formatted in Inline XBRL.

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: May 5, 2022 BICYCLE THERAPEUTICS PLC

By: /s/ Lee Kalowski
Name: Lee Kalowski

Title: Chief Financial Officer



Bicycle Therapeutics Reports First Quarter 2022 Financial Results and Provides Corporate Update

- Continued clinical progress across pipeline, including interim BT8009 Phase I clinical data
 - Cash and cash equivalents of \$407.4 million as of March 31, 2022 expected to provide financial runway through 2024

CAMBRIDGE, England, & BOSTON, May 5, 2022 – Bicycle Therapeutics plc (NASDAQ: BCYC), a biotechnology company pioneering a new and differentiated class of therapeutics based on its proprietary bicyclic peptide (*Bicycle*®) technology, today reported financial results for the first quarter ended March 31, 2022 and provided recent corporate updates.

"We have made significant progress recently across our oncology pipeline," said Kevin Lee, Ph.D., Chief Executive Officer of Bicycle Therapeutics. "We reported interim data for the Phase I portion of the Phase I/II trial in BT8009, showing an overall response rate, or ORR, of 50% in the 5mg/m² weekly cohort in patients with urothelial cancer and an encouraging tolerability profile. We believe BT8009 has the potential to offer clinically meaningful differentiation compared to currently available therapies and we look forward to advancing the program once the dose escalation phase is complete. We also look forward to initiating the BT5528 Phase II expansion cohorts soon."

Dr. Lee continued: "Beyond our *Bicycle* Toxin Conjugates®, or BTCs, we continue to be encouraged as we progress our Bicycle TICATM programs forward, including BT7480, which is advancing in the dose escalation portion of the Phase I clinical trial. Underscoring our efforts is a strong balance sheet and we anticipate our cash and cash equivalents will provide financial runway through 2024."

First Quarter 2022 and Recent Highlights

• Announced Interim BT8009 Phase I Clinical Trial Results at the 2022 American Association for Cancer Research (AACR) Annual Meeting. In April 2022, Bicycle announced interim Phase I results from the Phase I/II trial of BT8009, a second-generation BTCTM targeting Nectin-4. As of March 7, 2022, thirty-seven patients have been dosed in the Phase I/II trial of BT8009. A total of twelve response evaluable urothelial cancer (UC) patients have been dosed in monotherapy cohorts of 2.5mg/m² and 5.0mg/m² weekly in the ongoing trial. Four response evaluable UC patients were dosed at 2.5mg/m² weekly, with one patient observed to have tumor reductions constituting a confirmed partial response (PR) and two patients observed to have stable disease (SD). Eight response evaluable UC patients were dosed at 5.0mg/m² weekly, with four patients observed to have a confirmed complete response (CR) or PR, including one patient with a CR and three patients with a PR, and two patients with SD, reflecting a 50% ORR and 75% disease control rate. The median duration of response has not yet been reached in either the 2.5 mg/m² or 5.0mg/m² cohort, with four of the five responders in these cohorts still on therapy after at least 24 weeks, and a tolerability profile that remains consistent with earlier results from this trial.

Exploration of additional doses and frequencies continues, and Bicycle intends to provide further updates this year.

• Announced Updated Preclinical Data on SARS-CoV-2 Antivirals at the 2022 Microbiology Society Annual Meeting. Bicycle created a wide range of <10kDa molecules with high binding affinity to the SARS-CoV-2 spike protein and then tested them in partnership with researchers at the Medical Research Council Laboratory of Molecular Biology. They were shown to be highly active *in vitro* at preventing SARS-CoV-2 infection of human cells. These compounds were further tested in partnership with experts at the University of Liverpool and shown to be highly potent when administered *in vivo* to rodent models of SARS-CoV-2 infection. These molecules have also been shown to be active *in vitro* across many of the SARS-CoV-2 variant strains, including Alpha, Beta, Delta and Omicron.

Financial Results

- Cash and cash equivalents were \$407.4 million as of March 31, 2022, compared to \$438.7 million as of December 31, 2021. The decrease in cash is primarily due to cash used in operating activities.
- Research and development expenses were \$14.3 million for the three months ended March 31, 2022, compared to \$9.7 million for the three months ended March 31, 2021. The increase in expense of \$4.6 million was primarily due to increased discovery and platform-related expenses, as well as increased personnel-related expenses, including \$1.2 million of incremental non-cash share-based compensation expense.
- General and administrative expenses were \$17.0 million for the three months ended March 31, 2022, compared to \$8.1 million for the three months ended March 31, 2021. The increase of \$8.9 million for the three months ended March 31, 2022 as compared to the same period in the prior year was primarily due to \$5.2 million incremental non-cash share-based compensation expense, personnel-related costs and increased professional and consulting costs.
- Net loss was \$27.6 million, or \$(0.93) basic and diluted net loss per share, for the three months ended March 31, 2022, compared to net loss of \$16.2 million, or \$(0.73) basic and diluted net loss per share, for three months ended March 31, 2021.

About Bicycle Therapeutics

Bicycle Therapeutics (NASDAQ: BCYC) is a clinical-stage biopharmaceutical company developing a novel class of medicines, referred to as *Bicycles*, for diseases that are underserved by existing therapeutics. *Bicycles* are fully synthetic short peptides constrained with small molecule scaffolds to form two loops that stabilize their structural geometry. This constraint facilitates target binding with high affinity and selectivity, making *Bicycles* attractive candidates for drug development. Bicycle is evaluating BT5528, a second-generation *Bicycle* Toxin Conjugate (BTCTM) targeting EphA2; BT8009, a second-generation BTC targeting Nectin-4, a well-validated tumor antigen; and BT7480, a *Bicycle* TICATM targeting Nectin-4 and agonizing CD137, in company-sponsored Phase I/II trials. In addition, BT1718, a BTC that targets MT1-MMP, is being investigated in an ongoing Phase I/IIa clinical trial sponsored by the Cancer Research UK Centre for Drug Development. Bicycle is headquartered in Cambridge, UK, with many key functions and members of its leadership team located in Lexington, Massachusetts. For more information, visit bicycletherapeutics.com.

Forward Looking Statements

This press release may contain forward-looking statements made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. These statements may be identified by words such as "aims," "anticipates," "believes," "could," "estimates," "expects," "forecasts," "goal," "intends," "may," "plans," "possible," "potential," "seeks," "will" and variations of these words or similar expressions that are intended to identify forwardlooking statements, although not all forward-looking statements contain these words. Forward-looking statements in this press release include, but are not limited to, statements regarding Bicycle's anticipated advancement of its product candidates, including BT8009, BT5528 and BT7480; the anticipated design of, initiation of expansion cohorts in, dosing in and progression of Bicycle's clinical trials; the availability of data from clinical trials; the therapeutic potential for Bicycles in oncology and other applications; and Bicycle's expected cash runway. Bicycle may not actually achieve the plans, intentions or expectations disclosed in these forward-looking statements, and you should not place undue reliance on these forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various factors, including: risks to clinical trial site initiation, patient enrollment and follow-up, and Bicycle's ability to meet other anticipated deadlines and milestones presented by the ongoing COVID-19 pandemic; uncertainties inherent in the initiation and completion of clinical trials and clinical development of Bicycle's product candidates such as availability and timing of results from clinical trials, whether the outcomes of preclinical studies will be predictive of clinical trial results, whether initial or interim results from a clinical trial will be predictive of the final results of the trial or the results of future trials, the risk that trials may not have satisfactory outcomes, and potential adverse effects arising from the testing or use of Bicycle's product candidates; the risk that Bicycle may not realize the intended benefits of its technology; the risk that Bicycle's projections regarding its expected financial runway are inaccurate or that its conduct of its business requires more cash than anticipated; and other important factors, any of which could cause Bicycle's actual results to differ from those contained in the forward-looking statements, and which are described in greater detail in the section entitled "Risk Factors" in Bicycle's Annual Report on Form 10-K filed with the Securities and Exchange Commission (SEC) on March 1, 2022, as well as in other filings Bicycle may make with the SEC in the future. Any forward-looking statements contained in this press release speak only as of the date hereof, and Bicycle expressly disclaims any obligation to update any forward-looking statements contained herein, whether because of any new information, future events, changed circumstances or otherwise, except as otherwise required by law.

Bicycle Therapeutics plc Condensed Consolidated Statements of Operations and Comprehensive Loss (In thousands, except share and per share data) (Unaudited)

		Three Months Ended March 31,		
	2	022	2021	
Collaboration revenues	\$	3,860 \$	1,808	
Operating expenses:				
Research and development		14,284	9,693	
General and administrative		16,959	8,139	
Total operating expenses		31,243	17,832	
Loss from operations		(27,383)	(16,024)	
Other income (expense):				
Interest income		218	15	
Interest expense		(818)	(522)	
Total other income (expense), net		(600)	(507)	
Net loss before income tax provision		(27,983)	(16,531)	
Benefit from income taxes		(419)	(340)	
Net loss	\$	(27,564) \$	(16,191)	
Net loss per share, basic and diluted	\$	(0.93) \$	(0.73)	
Weighted average ordinary shares outstanding, basic and diluted	2	9,605,143	22,100,840	

Balance Sheets Data (In thousands) (Unaudited)

	M	March 31, 2022		December 31, 2021	
Cash and cash equivalents	\$	407,371	\$	438,680	
Working capital		394,352		422,317	
Total assets		459,563		479,792	
Total shareholders' equity		330,258		346,254	

Contact:

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