
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

SCHEDULE 13D
Under the Securities Exchange Act of 1934

(Amendment No. 1)*

Bicycle Therapeutics plc

(Name of Issuer)

Ordinary Shares, nominal value £0.01 per share

(Title of Class of Securities)

088786108**

(CUSIP number)

Alexandra A. Toohey
Chief Financial Officer
Baker Bros. Advisors LP
860 Washington Street, 3rd Floor
New York, NY 10014
(212) 339-5690

(Name, address and telephone number of person authorized to receive notices and communications)

May 23, 2024

(Date of event which requires filing of this statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box.

(Continued on the following pages)

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

**This CUSIP applies to the American Depositary Shares, each representing one Ordinary Share.

1.	NAMES OF REPORTING PERSONS Baker Bros. Advisors LP		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (b) <input type="checkbox"/> (a) <input type="checkbox"/>		
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS (See Instructions) OO		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER 9,399,960 (1)	
	8.	SHARED VOTING POWER: 0	
	9.	SOLE DISPOSITIVE POWER: 9,399,960 (1)	
	10.	SHARED DISPOSITIVE POWER: 0	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 9,399,960 (1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.9% (1)(2)		
14.	TYPE OF REPORTING PERSON (See Instructions) IA, PN		

(1) Includes 7,017,176 Ordinary Shares (“Ordinary Shares”) of Bicycle Therapeutics plc (the “Issuer”) held in the form of 7,017,176 American Depositary Shares (“ADS”) and 2,382,784 Ordinary Shares issuable upon the conversion of 2,382,784 Non-Voting Ordinary Shares (as defined in Item 4 and subject to the limitations as described therein) directly held by the Funds (as defined below). Each ADS represents one Ordinary Share of the Issuer.

(2) Based on 38,088,491 Ordinary Shares of the Issuer outstanding as of May 23, 2024 plus 6,764,705 Ordinary Shares issued in the form of ADS upon the closing of the Offering (as defined in Item 4) on May 29, 2024, as reported in Exhibit 10.1 of the Issuer’s 8-K filed with the Securities and Exchange Commission (“SEC”) on May 23, 2024.

1.	NAMES OF REPORTING PERSONS Baker Bros. Advisors (GP) LLC		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (b) <input type="checkbox"/> (a) <input type="checkbox"/>		
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS (See Instructions) OO		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER 9,399,960 (1)	
	8.	SHARED VOTING POWER: 0	
	9.	SOLE DISPOSITIVE POWER: 9,399,960 (1)	
	10.	SHARED DISPOSITIVE POWER: 0	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 9,399,960 (1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.9% (1)(2)		
14.	TYPE OF REPORTING PERSON (See Instructions) HC, OO		

(1) Includes 7,017,176 Ordinary Shares held in the form of 7,017,176 ADS and 2,382,784 Ordinary Shares issuable upon the conversion of 2,382,784 Non-Voting Ordinary Shares (as defined in Item 4 and subject to the limitations as described therein) directly held by the Funds (as defined below). Each ADS represents one Ordinary Share of the Issuer.

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1.	NAMES OF REPORTING PERSONS Julian C. Baker		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (b) <input type="checkbox"/> (a) <input type="checkbox"/>		
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS (See Instructions) OO		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER: 9,399,960 (1)	
	8.	SHARED VOTING POWER: 0	
	9.	SOLE DISPOSITIVE POWER: 9,399,960 (1)	
	10.	SHARED DISPOSITIVE POWER: 0	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 9,399,960 (1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.9% (1)(2)		
14.	TYPE OF REPORTING PERSON (See Instructions) IN, HC		

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1.	NAMES OF REPORTING PERSONS Felix J. Baker		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (b) <input type="checkbox"/> (a) <input type="checkbox"/>		
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS (See Instructions) OO		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER: 9,399,960 (1)	
	8.	SHARED VOTING POWER: 0	
	9.	SOLE DISPOSITIVE POWER: 9,399,960 (1)	
	10.	SHARED DISPOSITIVE POWER: 0	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 9,399,960 (1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (See Instructions) <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 19.9% (1)(2)		
14.	TYPE OF REPORTING PERSON (See Instructions) IN, HC		

(1) Includes 7,017,176 Ordinary Shares held in the form of 7,017,176 ADS and 2,382,784 Ordinary Shares issuable upon the conversion of 2,382,784 Non-Voting Ordinary Shares (as defined in Item 4 and subject to the limitations as described therein) directly held by the Funds (as defined below). Each ADS represents one Ordinary Share of the Issuer.

(2) Based on 38,088,491 Ordinary Shares of the Issuer outstanding as of May 23, 2024 plus 6,764,705 Ordinary Shares issued in the form of ADS upon the closing of the Offering (as defined in Item 4) on May 29, 2024, as reported in Exhibit 10.1 of the Issuer's 8-K filed with the SEC on May 23, 2024.

Amendment No. 1 to Schedule 13D

This Amendment No. 1 to Schedule 13D amends and supplements the previously filed Schedule 13D filed by Baker Bros. Advisors LP (the “Adviser”), Baker Bros. Advisors (GP) LLC (the “Adviser GP”), Julian C. Baker and Felix J. Baker (collectively, the “Reporting Persons”). Except as supplemented herein, such statements, as heretofore amended and supplemented, remain in full force and effect.

The Adviser GP is the sole general partner of the Adviser. Pursuant to management agreements, as amended, among the Adviser, Baker Brothers Life Sciences, L.P. (“Life Sciences”) and 667, L.P. (“667”, and together with Life Sciences, the “Funds”), and their respective general partners, the Funds’ respective general partners relinquished to the Adviser all discretion and authority with respect to the investment and voting power of the securities held by the Funds, and thus the Adviser has complete and unlimited discretion and authority with respect to the Funds’ investments and voting power over investments.

All capitalized terms contained herein but not otherwise defined shall have the meanings ascribed to such terms in the Schedule 13D, as amended. Information given in response to each item shall be deemed incorporated by reference in all other items, as applicable.

Item 3. Source and Amount of Funds or Other Consideration.

Item 3 of Schedule 13D is supplemented and amended, as the case may be, as follows:

The disclosure in Item 4 below is incorporated herein by reference.

Item 4. Purpose of the Transaction.

Item 4 of this Schedule 13D is supplemented and superseded, as the case may be, as follows:

The disclosure in Item 6 is incorporated herein by reference.

On May 23, 2024, Bicycle Therapeutics plc (the “Issuer”) entered into a securities purchase agreement (the “Securities Purchase Agreement”) with the Funds and certain other investors, providing for a private placement (the “Offering”) of 6,764,705 American Depositary Shares of the Issuer (“ADSs”), each representing one ordinary share of the Issuer, nominal value of £0.01 per share (“Ordinary Shares”), and 19,169,001 non-voting ordinary shares of the Issuer, nominal value of £0.01 per share (“Non-Voting Ordinary Shares”), each at a price of \$21.42 per share. The Funds’ purchase of Non-Voting Ordinary Shares in the Offering is expected to close on May 29, 2024.

Pursuant to the Offering, 667 and Life Sciences agreed to purchase 1,429,986 and 15,684,860 Non-Voting Ordinary Shares, respectively, totaling 17,114,846 Non-Voting Ordinary Shares in the aggregate (“May 2024 Non-Voting Ordinary Shares”). Each of the Funds will purchase the May 2024 Non-Voting Ordinary Shares with its working capital.

The Non-Voting Ordinary Shares are only convertible on a 1-for-1 basis into Ordinary Shares to the extent that after giving effect to such conversion the holders thereof, their affiliates and any persons who are members of a Section 13(d) group with the holders or their affiliates would beneficially own in the aggregate, for purposes of Rule 13d-3 under the Exchange Act, no more than 9.99% of the outstanding Ordinary Shares (“Beneficial Ownership Limitation”). By written notice to the Issuer, the Funds may from time to time increase or decrease the Beneficial Ownership Limitation applicable to that Fund to any other percentage not in excess of 19.9%. Any such increase will not be effective until the 61st day after such notice is delivered to the Issuer. As a result of this restriction, the number of Ordinary Shares that may be issued upon conversion of the Non-Voting Ordinary Shares by the above holders may change depending upon changes in the outstanding Ordinary Shares. The Reporting Persons notified the Issuer of an increase in the Beneficial Ownership Limitation from 9.99% to 19.9% on April 16, 2024 related to the 4,705,882 Non-Voting Ordinary Shares held prior to the Offering (“Pre-Offering Non-Voting Ordinary Shares”). This increase in the Beneficial Ownership Limitation on the Pre-Offering Non-Voting Ordinary Shares will take effect on June 16, 2024.

The Reporting Persons notified the Issuer in a written notice on May 28, 2024 of an increase in the Beneficial Ownership Limitation on May 29, 2024 from 9.99% to 19.9% related to the May 2024 Non-Voting Ordinary Shares. This increase in the Beneficial Ownership Limitation on the May 2024 Non-Voting Ordinary shares will take effect on July 29, 2024. As a result of this restriction the Funds cannot presently convert any of the May 2024 Non-Voting Ordinary Shares.

The Funds hold securities of the Issuer for investment purposes. The Reporting Persons or their affiliates may purchase additional securities or dispose of securities in varying amounts and at varying times depending upon the Reporting Persons' continuing assessments of pertinent factors, including the availability of Ordinary Shares or ADS or other securities for purchase at particular price levels, the business prospects of the Issuer, other business investment opportunities, economic conditions, stock market conditions, money market conditions, the attitudes and actions of the Board and management of the Issuer, the availability and nature of opportunities to dispose of securities of the Issuer and other plans and requirements of the particular entities.

The Reporting Persons may discuss items of mutual interest with the Issuer's management, other members of the Board and other investors, which could include items in subparagraphs (a) through (j) of Item 4 Schedule 13D.

Depending upon their assessments of the above factors, the Reporting Persons or their affiliates may change their present intentions as stated above and they may assess whether to make suggestions to the management of the Issuer regarding financing, and whether to acquire additional securities of the Issuer, including Ordinary Shares or ADS (by means of open market purchases, privately negotiated purchases, exercise of some or all of the Share Options, conversion of Non-Voting Ordinary Shares, or otherwise) or to dispose of some or all of the securities of the Issuer, including Ordinary Shares or ADS, under their control. Except as otherwise disclosed herein, at the present time, the Reporting Persons do not have any plans or proposals with respect to any extraordinary corporate transaction involving the Issuer including, without limitation, those matters described in subparagraphs (a) through (j) of Item 4 of Schedule 13D.

Item 5. Interest in Securities of the Issuer.

The disclosure in Item 4 is incorporated by reference herein.

(a) and (b) Items 7 through 11 and 13 of each of the cover pages of this Amendment No. 1 are incorporated herein by reference. Set forth below is the aggregate number of Ordinary Shares and ADS directly held by each of the Funds, which may be deemed to be indirectly beneficially owned by the Reporting Persons, as well as Ordinary Shares that may be acquired upon conversion of Non-Voting Ordinary Shares, subject to the limitations on conversion described below.

Holder	American Depositary Shares	Non-Voting Ordinary Shares
667, L.P.	579,856	1,793,439
Baker Brothers Life Sciences, L.P.	6,437,320	20,027,289
Total	7,017,176	21,820,728

Felix J. Baker, an independent director and a Class I director and serves as a member of the NCGC and the Scientific Committee until the Issuer's 2026 annual general meeting of shareholders and until his successor has been duly elected and qualified or until his earlier death, resignation or removal.

Felix J. Baker holds 24,000 options to purchase ADS at an exercise price of \$21.82 per share which vest in 3 equal annual installments over a three-year period commencing on April 18, 2025, subject to continued service throughout the applicable vesting dates and expire on April 18, 2034 ("Share Options"), none of which will vest within sixty days following the date of this filing. Felix J. Baker also holds 12,000 restricted stock units (each, an "RSU") which vest into ADS in three equal annual installments over a three-year period commencing on April 18, 2025, subject to continued service throughout the applicable vesting dates. The policies of the Funds and the Adviser do not permit managing members of the Adviser GP to receive compensation for serving as a director of the Issuer, and the Funds are instead entitled to the pecuniary interest in any compensation received for Felix J. Baker's service on the Board.

The Adviser has voting and investment power over the Share Options, Ordinary Shares underlying such Share Options, Ordinary Shares received from the exercise of Share Options, RSUs and Ordinary Shares received from the vesting of RSUs by Felix J. Baker received as directors' compensation. The Adviser GP, and Felix J. Baker and Julian C. Baker as managing members of the Adviser GP, may be deemed to have the power to vote or direct the vote of and the power to dispose or direct the disposition of the Share Options, Ordinary Shares received from the exercise of Share Options, Ordinary Shares underlying such Share Options, RSUs and Ordinary Shares received from the vesting of RSUs held by Felix J. Baker received as director's compensation.

(c) The information set forth in Item 4 is hereby incorporated by reference into this Item 5(c). Except as disclosed herein or in any previous amendments to this Schedule 13D, none of the Reporting Persons or their affiliates has effected any other transactions in securities of the Issuer during the past 60 days.

(d) Certain securities of the Issuer are held directly by 667, a limited partnership the sole general partner of which is Baker Biotech Capital, L.P., a limited partnership the sole general partner of which is Baker Biotech Capital (GP), LLC. Julian C. Baker and Felix J. Baker are the managing members of Baker Biotech Capital (GP), LLC.

Certain securities of the Issuer are held directly by Life Sciences, a limited partnership the sole general partner of which is Baker Brothers Life Sciences Capital, L.P., a limited partnership the sole general partner of which is Baker Brothers Life Sciences Capital (GP), LLC. Julian C. Baker and Felix J. Baker are the managing members of Baker Brothers Life Sciences Capital (GP), LLC.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Item 6 of this Schedule 13D is supplemented and superseded, as the case may be, as follows:

The disclosure in Item 4 is incorporated herein by reference.

Securities Purchase Agreement

On May 23, 2024, the Funds entered into the Securities Purchase Agreement with the Issuer. The Securities Purchase Agreement contains customary representations, warranties, and agreements by the Issuer and the Funds.

The Securities Purchase Agreement requires the Issuer to file with the United States Securities & Exchange Commission (the "SEC") a registration statement on Form S-3 or another appropriate form as promptly as practicable following the closing of the Offering, and in any event within thirty (30) days of such closing, or a prospectus supplement to its registration statement on Form S-3ASR (File No. 333-272248) (if such registration statement is then effective) within fifteen (15) days after such closing, in each case covering the resale of the securities sold in the Offering and any other securities issued or issuable with respect to or in exchange for such securities, including any ADSs to be issued that represent the Non-Voting Ordinary Shares re-designated as Ordinary Shares ("the Registrable Securities").

The Securities Purchase Agreement provides that the Funds and other parties to the Securities Purchase Agreement that, together, hold at least 3% of the Registrable Securities are collectively permitted (i) one underwritten offering per calendar year, but no more than three underwritten offerings in total, and (ii) no more than two underwritten offerings or block trades in any twelve-month period, in each case to effect the sale or distribution of the Registrable Securities. The Issuer is responsible for all fees and expenses incurred in connection with the registration of the Registrable Securities, other than sales commissions and underwriter discounts.

The Issuer granted the Funds customary indemnification rights in connection with the registration statements required by the Securities Purchase Agreement. The Funds also granted the Issuer customary indemnification rights in connection with the registration statements required by the Securities Purchase Agreement.

The foregoing description of the Securities Purchase Agreement does not purport to be complete and is qualified in its entirety by reference to the full text of the Securities Purchase Agreement, which is filed as Exhibit 99.1, and incorporated herein by reference.

Item 7. Material to be Filed as Exhibits.

Exhibit	Description
99.1	Securities Purchase Agreement by and between 667, L.P., Baker Brothers Life Sciences, L.P., Bicycle Therapeutics plc, and certain other investors, dated as of May 23, 2024 (incorporated by reference to Exhibit 10.1 to the Issuer's Current Report on Form 8-K, filed with the SEC on May 23, 2024).

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: May 28, 2024

BAKER BROS. ADVISORS LP

By: Baker Bros. Advisors (GP) LLC, its general partner

By: /s/ Scott L. Lessing

Name: Scott L. Lessing

Title: President

BAKER BROS. ADVISORS (GP) LLC

By: /s/ Scott L. Lessing

Name: Scott L. Lessing

Title: President

/s/ Julian C. Baker

Julian C. Baker

/s/ Felix J. Baker

Felix J. Baker
