

CONFIDENTIAL TREATMENT REQUESTED BY BICYCLE THERAPEUTICS LIMITED

CERTAIN PORTIONS OF THIS LETTER AS FILED VIA EDGAR HAVE BEEN OMITTED AND FILED SEPARATELY WITH THE COMMISSION. CONFIDENTIAL TREATMENT HAS BEEN REQUESTED WITH RESPECT TO THE OMITTED PORTIONS. OMITTED INFORMATION HAS BEEN REPLACED IN THIS LETTER AS FILED VIA EDGAR WITH A PLACEHOLDER IDENTIFIED BY THE MARK “[*].”**

May 1, 2019

VIA EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
Mail Stop 4561
100 F Street, N.E.
Washington, D.C. 20549
Attention: Chris Edwards and Liz Walsh

**Re: Bicycle Therapeutics Ltd.
Draft Registration Statement on Form S-1
Submitted December 21, 2018
CIK 0001761612**

Dear Mr. Edwards and Ms. Walsh:

This letter is submitted on behalf of Bicycle Therapeutics Ltd (the “Company”) to supplement the Company’s prior responses to the staff (the “Staff”) of the U.S. Securities and Exchange Commission (the “Commission”) with respect to the Company’s Registration Statement on Form S-1 filed on April 26, 2019 (the “Registration Statement”).

On behalf of the Company, we are supplementally providing the following:

1. A *bona fide* estimate of the range of the offering price for the Company’s ADSs representing ordinary shares offered by the Registration Statement (before giving effect to the effectiveness of a share capital reorganization prior to the completion of this offering, which is intended to have the effect of a share split of our share capital (the “Stock Split”), as disclosed in the section titled “Share Capital Reorganization and Re-Registration” in the Registration Statement), and a discussion of the factors that the Company believes led to the increase in the value of its ordinary shares between the recent valuations of its ordinary shares and the estimated price range for the offering, attached hereto as Exhibit A. Each ADS is expected to represent one (1) ordinary share of the Company.
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2. For the Staff's convenience, a table summarizing share options granted since January 1, 2018, which reflects the issuance of options to purchase ordinary shares and restricted shares granted by the Company, and has been included in the Registration Statement, attached hereto as Exhibit B.

The Company advises the Staff that the general approach taken by the Company in determining the fair value of its ordinary shares, including as of May 31, 2018, which was used for the fair value assessment of the share option grants on September 18, 2018; as of September 30, 2018, which was used for the fair value assessment of the share option grants on November 30, 2018 and December 1, 2018; as of December 31, 2018, which was used for the fair value assessment of the share option and restricted share grants on December 17, 2018 and share options grants on January 31, 2019; and as of March 31, 2019, which was used for the contemporaneous fair value assessment of the share option grants on April 25, 2019 are set forth beginning on page 111 of the prospectus included in the Registration Statement. The Company advises the Staff, that as disclosed in the Registration Statement, the exercise prices per the respective share options and the subscription price of restricted shares are in pounds sterling. The amounts in this letter are translated to U.S. Dollars at the rate of \$1.2763 to £1.00, which was the noon buying rate of the Federal Reserve Bank of New York on December 31, 2018, the last business day of the year ended December 31, 2018.

As described in the Registration Statement, the Company's retrospective valuations of ordinary shares as of May 31, 2018 and September 30, 2018, as well as its contemporaneous valuation on December 31, 2018 were prepared using the option-pricing method ("OPM") back-solve approach. The OPM treats ordinary and convertible preferred shares as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the ordinary shares only have value if the funds available for distribution to shareholders exceed the value of the convertible preferred shares liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. The ordinary shares are modeled as a call option on the underlying equity value at a predetermined exercise price. In this model, the exercise price is based on a comparison with the total equity value rather than, as in the case of a regular call option, a comparison with a per share price. Thus, ordinary shares are considered to be a call option with a claim on the enterprise at an exercise price equal to the remaining value immediately after the convertible preferred share liquidation preference is paid. The Company used the OPM back-solve approach to estimate the enterprise value under the OPM. The OPM back-solve approach uses the OPM to derive an implied equity value for one type of a company's equity securities from a contemporaneous sale transaction involving another type of the Company's equity securities.

For the March 31, 2019 valuation, the Company used a hybrid method, which is a hybrid between the OPM and the probability-weighted expected return method ("PWERM"). The hybrid method estimates the probability-weighted value across multiple scenarios, but uses the OPM to estimate the allocation of value within one or more of the scenarios. The hybrid method

can be a useful alternative to explicitly modeling all PWERM scenarios in situations when the company has transparency into one or more near term exits, but is unsure what will occur if the current plans fall through. The PWERM is a scenario-based methodology that estimates the fair value of securities based upon an analysis of future values for the company, assuming various outcomes. The securities' value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each share class. The future value under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at an indication of value for the ordinary shares.

May 31, 2018 Valuation

The fair value of the Company's ordinary shares of \$3.77 per share as of May 31, 2018 was retrospectively determined with the assistance of an independent third-party valuation firm. This valuation was used to support the fair value of the Company's ordinary shares with respect to share options granted on September 18, 2018. This valuation utilized the OPM back-solve approach to obtain the equity value of the Company, based in part on the most recent sale of Series B1 preferred shares in September 2017, which was led by a new unrelated third-party investor. To account for an increase in value created in the period between the most recent financing and the valuation date, this equity value reflected an increase in the enterprise value based on recent events in the market including changes in the Dow Jones Industrial Average, NASDAQ Composite Index, S&P 500, and a selection of biotechnology indices and the Company's continued progress on its business plan. The valuation utilized the OPM to allocate the equity value to the various preferred and ordinary share classes in order to arrive at the ordinary shares valuation in both an IPO and a non-IPO scenario. The valuation assumed a [***]% probability of an IPO and an [***]% probability of a non-IPO scenario. A discount for lack of marketability of [***]% was then applied to the ordinary shares value for both scenarios to arrive at the fair value as of May 31, 2018.

September 30, 2018 Valuation

The fair value of the Company's ordinary shares of \$4.87 per share as of September 30, 2018 was retrospectively determined with the assistance of an independent third-party valuation firm. This valuation was used for the retrospective fair value assessment of the share option grants on November 30, 2018 and December 1, 2018. This valuation utilized the OPM back-solve approach to obtain the equity value of the Company, based in part on the most recent sale of Series B1 preferred shares in September 2017 as discussed above. To account for an increase in value created in the period between the most recent financing and the valuation date, this equity value reflected an increase in the enterprise value based on recent events in the market including changes in the Dow Jones Industrial Average, NASDAQ Composite Index, S&P 500, and a selection of biotechnology indices and the Company's continued progress on its business plan. The valuation utilized the OPM to allocate the equity value to the various preferred and ordinary share classes in order to arrive at the ordinary shares valuation in both an IPO and a non-IPO scenario. The valuation assumed a [***]% probability of an IPO and a [***]% probability of a non-IPO scenarios. A discount for lack of marketability of [***]% was then

applied to the ordinary shares value for both scenarios to arrive at the fair value as of September 30, 2018.

December 31, 2018 Valuation

The fair value of the Company's ordinary shares of \$6.87 per share as of December 31, 2018 was determined by the Company's board of directors with the assistance of an independent third-party valuation firm. This valuation was used for the fair value assessment of the share option and restricted share grants on December 17, 2018 and for share option grants on January 31, 2019. This valuation utilized the OPM back-solve approach to obtain the equity value of the Company, based in part on the most recent sale of Series B2 preferred shares in December 2018, which was led by a new unrelated third-party investor. The valuation utilized the OPM to allocate the equity value to the various preferred and ordinary share classes in order to arrive at the ordinary shares valuation. In addition, in December 2018, the Company received new information related to a patent dispute, which indicated that warrants for Series B1 preferred shares might not be exercisable prior to or in conjunction with IPO or non-IPO exit scenario based on their contractual terms. As such, the valuation assumed a [***]% probability that the warrants could be exercised by their contractual terms in the IPO and non-IPO exit scenarios, and a [***]% probability that the warrants could not be exercised by their contractual terms in the IPO and non-IPO exit scenarios. The valuation assigned values in an IPO scenario and in a non-IPO scenario, with separate values in each scenario in which the warrants were exercisable and in one in which the warrants were not exercisable. The valuation assumed a [***]% probability of an IPO and a [***]% probability of a non-IPO scenario. A discount for lack of marketability of [***]% was then applied to the ordinary shares value for both scenarios to arrive at the fair value as of December 31, 2018.

March 31, 2019 Valuation

The fair value of the Company's ordinary shares of \$11.62 per share as of March 31, 2019 was determined by the Company's board of directors with the assistance of an independent third-party valuation firm. This valuation was used for the fair value assessment of the share option grants on April 25, 2019. This valuation utilized the hybrid method, which considered the value of the Company's ordinary shares in both IPO and non-IPO scenarios. The present value of the Company's ordinary shares in an IPO scenario was calculated based on metrics observed from then-recent IPOs in the biotechnology industry. In addition, in March 2019, the Company reached agreement with the holders of Series B1 preferred warrants for the exercise of [***]% of the warrants in an IPO scenario, and thereafter a single valuation was assigned to the Series B1 preferred warrants in an IPO scenario. The value of the Company's ordinary shares in a non-IPO scenario was calculated using the OPM back-solve approach to obtain the equity value of the Company. To account for an increase in value created in the period between the most recent financing and the valuation date, this equity value reflected an increase in the enterprise value based on recent events in the market including changes in the Dow Jones Industrial Average, NASDAQ Composite Index, S&P 500, and a selection of biotechnology indices and the Company's continued progress on its business plan. The valuation continued to assume a [***]% probability that the Series B1 warrants could be exercised by their contractual terms in the non-IPO scenario. The valuation assumed a [***]% probability of an IPO and a [***]% probability of

a non-IPO scenario. A discount for lack of marketability of [***]% and [***]% was applied to the IPO and non-IPO scenarios, respectively.

The weighting attributed to the IPO scenarios in each of the valuations above reflected assessments as to the likelihood of an IPO and the uncertainty concerning whether investors might be receptive to making an investment in the Company. The Company also considered macroeconomic and overall market conditions, including the Company's subjective assessment of market conditions for IPOs of companies similarly situated to the Company and the Company's subjective assessment as to the likelihood of successfully executing an IPO in the coming months, among other factors.

The Company respectfully requests that the Staff return to us this letter and the information provided pursuant to Exhibits A and B pursuant to Rule 418 of the Securities Act of 1933, as amended, once the Staff has completed its review. We have provided a self-addressed stamped envelope for this purpose. In addition, the Company requests confidential treatment under 17 C.F.R. § 200.83 (1992) for this letter and the information provided pursuant to Exhibits A and B of this letter and has submitted a separate request for confidential treatment in accordance therewith to the Commission's Office of Freedom and Information Privacy Act Operations.

If you should have any questions concerning the enclosed matters, please contact the undersigned at (617) 570-1483.

Sincerely,

/s/ James Xu

James Xu, Esq.

cc: Kevin Lee, *Bicycle Therapeutics Limited*
Lee Kalowski, *Bicycle Therapeutics Limited*
Kristopher D. Brown, *Goodwin Procter LLP*
Jonathan A. Schur, *Goodwin Procter LLP*
Divakar Gupta, *Cooley LLP*
Ryan Sansom, *Cooley LLP*
Richard Segal, *Cooley LLP*

Exhibit A

The Company supplementally advises the Staff that the estimated price range for the ADSs representing ordinary shares in the Company's proposed initial public offering ("IPO") is between \$[***] to \$[***] per share. Each ADS is expected to represent (1) ordinary share of the Company. Please note that the Company expects to effect a share capital reorganization prior to the completion of this offering, which is intended to have the effect of a share split as disclosed in the section titled "Share Capital Reorganization and Re-Registration" in the Registration Statement, and the price range above does not reflect the impact of the anticipated share split. This estimated *bona fide* price range is based on a number of factors, including the prevailing market conditions and estimates of the Company's business potential, progress in its research and development programs and developments in its business, the general condition of the securities market, the recent market prices of, and the demand for, publicly-traded ordinary shares of generally comparable companies and preliminary discussions with the underwriters for this offering regarding potential valuations of the Company. The actual *bona fide* price range to be included in a subsequent amendment to the Registration Statement has not yet been determined and remains subject to adjustment based on factors outside of the Company's control. However, the Company believes that the actual *bona fide* price range will be within this estimated *bona fide* price range. In addition, the actual price range to be included in such amendment will comply with the Staff's interpretation regarding the parameters of a *bona fide* price range.

In addition, the Company believes the difference in value reflected between the estimated price range and the determination of the fair value of its ordinary shares as of March 31, 2019 is primarily the result of the following factors:

- Significant progress continued in the ongoing Phase 1 clinical trial of BT1718 which is being sponsored by CRUK, including completion of enrollment of the cohort of patients expected to receive the recommended dose on the twice a week schedule.
 - The third patient in the third cohort of the once a week schedule at a dose of 20 mg/m² was dosed on April 29, 2019 in the ongoing Phase 1 clinical trial of BT1718.
 - The Company made significant progress in advancing its pre-clinical candidates BT5528 and BT8009 toward IND submission. Specifically, GMP manufacturing was initiated at the end of March 2019 for BT5528, and the Company is in the process of completing the GLP toxicology activities for BT8009.
 - The Company advanced its preclinical proof of concept efforts for its immune-oncology product pipeline. Based on preclinical activity, the Company anticipates selecting multivalent and bi-specific CD137 agonist product candidates for further development in 2019.
 - In March 2019 and April 2019, the Company completed "testing the waters" meetings with prospective investors and the Company received feedback in mid-April. As a result, the Company's Board of Directors approved the public filing of the Registration Statement on April 25, 2019.
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- Since January 2019, at least six biotechnology companies successfully completed initial public offerings, suggesting a potentially favorable market for companies similar to the Company in pursuing and completing initial public offerings. This followed a period of significant uncertainty in biotech IPO market following the government shutdown in December 2018 and January 2019.
 - The valuation used for the fair value assessment of the share option grants on September 18, 2018, considered an IPO and non-IPO scenario to which probability weightings of [***]% and [***]% were assigned, and a discount for lack of marketability of [***]% was applied. The valuation used for the fair value assessment of the share option grants on November 30, 2018, and December 1, 2018 considered an IPO and non-IPO scenario to which probability weightings of [***]% and [***]% were assigned, respectively, and a discount for lack of marketability of [***]% was applied. The valuation used to support the valuation of grants on December 17, 2018 and the valuation of grants on January 31, 2019 considered an IPO and non-IPO scenario, to which probability weightings of [***]% and [***]% was assigned, and a discount for lack of marketability of [***]% was applied. The valuation used for the fair value assessment of the share option grants on April 25, 2019 considered an IPO and non-IPO scenario to which probability weightings of [***]% and [***]% were assigned, respectively, and discounts for lack of marketability of [***]% and [***]% were applied, respectively. The consideration of different liquidity event scenarios, including the weighting of the likelihood of an IPO, accounts for some but not all of the difference between the estimated price range for the ordinary shares in the IPO and the fair value of the Company's ordinary shares at the recent grant dates. In addition, the estimated price range for the IPO necessarily assumes that the IPO has occurred and that a public market for the Company's ordinary shares has been created, and therefore excludes any discount for lack of marketability of the Company's ordinary shares.
 - The Company's currently outstanding convertible preferred shares have substantial economic rights and preferences superior to the Company's ordinary shares. The estimated price range assumes the conversion of all of the Company's outstanding convertible preferred shares to ordinary shares upon the completion of the IPO and the corresponding elimination of such superior economic rights and preferences.
 - The proceeds of a successful IPO would substantially strengthen the Company's balance sheet by increasing its cash and cash equivalents. Additionally, the completion of the IPO would provide the Company with access to the public company debt and equity markets and a lower cost of capital following the IPO, and is expected to increase the attractiveness of the Company's equity as a currency to raise capital, compensate employees and other strategic transactions. These projected improvements in the Company's financial position influenced the estimated price range described above.
 - The price that investors are willing to pay in the IPO, for which the price range is intended to serve as an estimate, may take into account other factors that have not been expressly considered in prior valuations of the Company's ordinary shares, but are significant to investors in their own subjective and qualitative assessment of the Company, and thus may not be objectively determinable or quantifiable under the above-described valuation models.
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Exhibit B

The following table sets forth, by grant date, the number of shares subject to options granted from January 1, 2018 through April 25, 2019, the per share exercise price of the options, the fair value per ordinary share on each grant date, and the per share estimated fair value of the options:

<u>Grant Date</u>	<u>Type of Award</u>	<u>Number of Shares</u>	<u>Purchase or Exercise Price Per Share(1)(4)</u>	<u>Fair Value Per Ordinary Share on Grant Date(4)</u> (as restated)	<u>Per Share Estimated Fair Value on Grant Date(3)(4)</u> (as restated)
February 1, 2018(2)	Options	13,100	\$ 2.53	\$ 3.54	\$ 2.53
February 8, 2018(2)	Restricted Shares	6,825	\$ 0.01	\$ 3.54	\$ 3.53
September 18, 2018(2)	Options	36,500	\$ 2.53	\$ 3.62	\$ 2.68
November 30, 2018(2)	Options	16,000	\$ 3.61	\$ 4.76	\$ 3.58
December 1, 2018(2)	Options	3,500	\$ 3.61	\$ 4.76	\$ 3.58
December 17, 2018(2)	Options	16,798	\$ 3.61	\$ 6.87	\$ 5.50
December 17, 2018(2)	Options	112,140	\$ 0.01	\$ 6.87	\$ 6.87
December 17, 2018(2)	Restricted Shares	13,461	\$ 0.01	\$ 6.87	\$ 6.86
January 31, 2019	Options	85,596	\$ 4.95	\$ 6.87	\$ 5.20
April 25, 2019	Options	263,015	\$ 11.62	\$ 11.62	\$ 8.00

(1) Represents the determination by our board of directors of the fair value of our ordinary shares on the date of grant, taking into consideration the various objective and subjective factors described below.

(2) The fair value of ordinary shares at the grant date was adjusted in connection with a retrospective fair value assessment for financial reporting purposes.

(3) For purposes of recording share-based compensation for grants of options to a non-employee, we measure the fair value of the award on the service completion date (vesting date). At the end of each reporting period prior to completion of the services, we remeasure the value of any unvested portion of the award based on the then-current fair value of the award and adjust the expense accordingly. The amount in this column reflects only the grant-date fair value of the award.

(4) The exercise prices per the respective share options and the subscription price of restricted shares are in pounds sterling. The amounts in this table are translated to U.S. Dollars at the rate of \$1.2763 to £1.00, which was the noon buying rate of the Federal Reserve Bank of New York on December 31, 2018, the last business day of the year ended December 31, 2018.

On December 17, 2018, each of the U.K. employees that were holders of share options granted prior to December 2017, each with an exercise price of £0.01 per share, surrendered all of their issued share options that had not lapsed or been exercised. Thereafter, such persons: (a) subscribed for ordinary shares equal to such number of ordinary shares as were vested under their surrendered option agreement at a subscription price of £0.01 per ordinary share; and (b) were granted options to subscribe for ordinary shares equal to such number of ordinary shares as were unvested under their surrendered option agreement at a subscription price of £0.01 per ordinary share, and with identical vesting terms as the original awards. In conjunction with the surrender of 238,443 vested share options, we issued 238,443 ordinary shares. This surrender and subsequent issuance only impacted employees in the U.K. We evaluated the surrender of share options and issuance of vested ordinary shares and unvested share options as a modification in accordance with ASU 2017-09. The modification did not have any accounting impact as there were no changes in the fair value, vesting conditions, or the classification of the awards (as equity or liability) in conjunction with the surrender of share options and issuance of vested ordinary shares and unvested share options. As such, the grant of options to subscribe for ordinary shares equal to such number of ordinary shares as were unvested under their surrendered option agreement at a subscription price of £0.01 per ordinary share, and with identical vesting terms as the original awards is not reflected in the table above.