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CERTAIN PORTIONS OF THIS LETTER AS FILED VIA EDGAR HAVE BEEN OMITTED AND FILED SEPARATELY WITH THE SECURITIES AND EXCHANGE 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 “[*].”**

October 12, 2018

VIA EDGAR

Amanda Ravitz
Assistant Director, Office of Electronics and Machinery
Division of Corporation Finance
United States Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549
Mail Stop 3030

Re: Twist Bioscience Corporation
Registration Statement on Form S-1
Filed October 3, 2018
CIK No. 0001581280

Dear Ms. Ravitz:

On behalf of our client, Twist Bioscience Corporation (the “Company”), we submit this letter to the Staff of the Securities and Exchange Commission (the “Commission”) with respect to the above referenced Registration Statement on Form S-1 (the “Registration Statement”). Set forth below is the Company’s supplemental response to Comment No. 14 in the letter from the staff of the Division of Corporation Finance (the “Staff”) of the Commission in its letter dated March 9, 2018. The page references set forth in the Company’s responses below are to the Registration Statement.

**CONFIDENTIAL TREATMENT REQUESTED BY TWIST BIOSCIENCE CORPORATION
CIK NO. 0001581280**

Because of the commercially sensitive nature of information contained herein, this submission is accompanied by the Company's request for confidential treatment for selected portions of this letter pursuant to Rule 83 of the Commission's Rules on Information and Requests, 17 C.F.R. § 200.83 and the Freedom of Information Act. The Company has filed a separate letter with the Office of Freedom of Information and Privacy Act Operations in connection with this confidential treatment request.

14. **Additionally, provide us with the share price of your common stock determined by your board of director's at the date of each option grant since January 1, 2017 and progressively bridge for us the fair value per share determinations used for each option grant to the estimated IPO price per share. We will delay our assessment of your response pending inclusion of the estimated IPO price in the filing.**

Prior Response to the Staff pursuant to the letter dated July 2, 2018:

The Company respectfully notes the Staff's comment and advises the Staff that the estimated IPO price per share has not yet been determined. The Company confirms that once an estimated IPO price is available, it will provide the staff an explanation to progressively bridge the fair value per share determination in each valuation to the estimated IPO price per share.

Supplemental Response:

To assist the Staff in its evaluation of stock compensation disclosures and certain other matters in the Registration Statement, the Company advises the Staff that, considering information currently available and current market conditions based in part on input received from its underwriters, the Company currently estimates a price range of [***] to [***] per share for the initial public offering ("IPO") of the Company's Common Stock, \$0.0001 par value per share (which is referred to in the Registration Statement as the Company's "common stock"). This per share price range reflects a reverse split of the Company's common stock whereby each outstanding share will be exchanged for .101 of a share (the "Reverse Stock Split"), which the Company expects to reflect in the preliminary prospectus prior to the commencement of the roadshow. For consistency with the Registration Statement expected to be filed prior to commencement of the roadshow, all data in this letter is reflected on a post-split basis. For clarity, the Company advises the Staff that, given the volatility of the public trading market and the uncertainty of the timing of the offering, the Company and the underwriters have not yet agreed to a final price range for the offering, and the Company has not yet conclusively determined the size or ratio of the split of the common stock referred to above. Accordingly, the information in this letter provided to the Staff is for illustrative purposes only and may differ in the actual preliminary prospectus for the offering.

We confirm on behalf of the Company that, prior to circulating copies of the preliminary prospectus in connection with the offering, the Company will file a pre-effective amendment to the Registration Statement that will include the actual price range that complies with the Staff's interpretation regarding the parameters of a bona fide price range.

The Company respectfully requests that the bracketed information contained in this letter be treated as confidential information and that the Commission provide timely notice to James Thorburn, Chief Financial Officer, Twist Bioscience Corporation, 455 Mission Bay Blvd South, San Francisco, CA 95158, before it permits any disclosure of the bracketed information in this letter.

To facilitate the Staff’s review, we have included the table below, which is a complete list of all grants of options to purchase the Company’s common stock made since January 1, 2017:

Grant date	Number of shares of common stock underlying options granted	Exercise price per share of common stock	Estimated fair value per share of common stock
September 13, 2018	91,289	[***]	[***]
August 7, 2018	39,289	[***]	[***]
June 7, 2018	509,944	\$ 11.59*	\$ 11.59
March 20, 2018	17,169	\$ 10.70	\$ 10.70
February 2, 2018	45,622	\$ 10.70	\$ 10.70
December 26, 2017	44,743	\$ 10.60*	\$ 10.60
November 20, 2017	183,054	\$ 10.60*	\$ 10.60
November 10, 2017	18,180	\$ 10.60*	\$ 10.60
September 29, 2017	698,751	\$ 8.82	\$ 8.82
September 20, 2017	55,448	\$ 8.82*	\$ 8.82
August 9, 2017	10,706	\$ 8.82*	\$ 8.82
July 12, 2017	49,086	\$ 8.82*	\$ 8.82
June 8, 2017	27,674	\$ 7.33	\$ 7.33
February 22, 2017	37,673	\$ 6.24*	\$ 6.24

* The Company issued stock options to Israeli taxpayers with an exercise price per share of common stock equal to par value (\$0.0001), which are included in the number of options granted on each grant date.

As stated in the Registration Statement, the Company recognizes stock-based compensation expense based on the estimated fair value of stock-based payment awards on the date of grant using the Black-Scholes option-pricing model (“OPM”). The Company uses the straight-line attribution method for recognizing compensation expense over the requisite service period, which is generally the vesting period of the respective awards, and has elected to recognize the actual forfeitures by reducing the employee stock-based compensation expense in the same period as the forfeitures occur.

Stock-based compensation expense related to stock options granted to employees is measured at the date of grant based on the estimated fair value of the award. Stock-based compensation expense related to stock options granted to non-employees is recognized based on the vesting date fair value of awards as the stock options are earned. The Company recognizes the fair value of stock options granted to non-employees as stock-based compensation expense over the period in which the related services are received. Stock-based compensation expense related to the restricted stock is recognized based on the vesting date fair value of the stock using the Black-Scholes pricing model.

Common Stock Valuations

As set forth in more detail on pages 90-91 of the Registration Statement, as there has been no public market for our equity instruments to date, the estimated fair value of our shares of common stock has been determined by the Company’s Board of Directors (the “Board”) and/or the Compensation Committee of the Board (the “Committee”) as of the grant date, with input from management, considering our most recently available independent third-party valuation of our common stock and our Board’s and/or Committee’s assessment of additional objective and subjective factors that it believed were relevant and which may have changed between the effective date of the most recent valuation and the date of the grant. Following is a discussion of the specific independent third-party valuations reviewed by the Board and/or Committee in establishing the fair market value for each grant date.

Under OPM, the Board and/or the Committee determined that our common stock had a per share value of \$8.32 as of September 30, 2016. As a private company, the analysis provided for a discount for lack of marketability (“DLOM”) of 25% as of September 30, 2016, resulting in a per share fair value of our common stock of \$6.24 as of September 30, 2016.

Under OPM, the Board and/or the Committee determined that our common stock had a per share value of \$9.80 as of March 31, 2017. As a private company, the analysis provided for a DLOM of 25% as of March 31, 2017, resulting in a per share fair value of our common stock of \$7.33 as of March 31, 2017.

The independent third-party valuations with valuation dates of June 30, 2017, September 30, 2017, December 31, 2017, March 31, 2018 and June 30, 2018 weighted OPM and Probability-Weighted Expected Return Method, or PWERM, values based on multiple factors, including discussions with management regarding expected exit outcomes. The per share fair value of our common stock under OPM (\$7.42) and PWERM (\$21.58) accounted for 90% and 10% of the valuation calculation, respectively, for the valuation prepared as of June 30, 2017, resulting in a per share fair value of our common stock of \$8.82 as of June 30, 2017. The per share fair value of our common stock under OPM (\$6.13) and PWERM (\$19.40) accounted for 65% and 35% of the valuation calculation, respectively, for the valuation prepared as of September 30, 2017, resulting in a per share fair value of our common stock of \$10.60 as of September 30, 2017. The per share fair value of our common stock under OPM (\$6.03) and PWERM (\$19.40) accounted for 65% and 35% of the valuation calculation, respectively, for the valuation prepared as of December 31, 2017, resulting in a per share fair value of our common stock of \$10.70 as of December 31, 2017. The per share fair value of our common stock under OPM (\$8.61) and PWERM (\$17.32) accounted for 65% and 35% of the valuation calculation, respectively, for the valuation prepared as of March 31, 2018, resulting in a per share fair value of our common stock of \$11.59 as of March 31, 2018. The per share fair value of our common stock under OPM [***] and PWERM [***] accounted for 60% and 40% of the valuation calculation, respectively, for the valuation prepared as of June 30, 2018, resulting in a per share fair value of our common stock of [***] as of June 30, 2018. As a private company, the analysis provided for a DLOM of [***] under OPM for the valuations prepared as of June 30, 2017, September 30, 2017, December 31, 2017, March 31, 2018 and June 30, 2018, 15% under PWERM for the valuation prepared as of June 30, 2017 and [***] under PWERM for the valuations prepared as of September 30, 2017, December 30, 2017, March 31, 2018 and June 30, 2018, respectively, all of which is accounted for in the per share fair values in this paragraph.

The fair value determinations described above have been adjusted to reflect the Reverse Stock Split, with the ultimate fair value amount for each date reflected as an adjustment to the respective fair value on each date rather than the individual components that combined together for the fair value on each date.

Comparison of Estimated Offering Price Range and Recent Fair Value Determination

The anticipated price range for this offering was determined with reference to several quantitative and qualitative factors, each of which contributed to the difference between the Company’s most recent valuation of its common stock as of June 30, 2018 of [***] the midpoint of the anticipated offering price range of [***] to [***] per share. Specifically, the Company believes that the difference between the fair value of its common stock determined on June 30, 2018 and the midpoint of the anticipated offering price range for this offering is primarily the result of the following factors and events:

- A substantial amount of the difference in value between the June 30, 2018 common stock valuation of [***] per share and the midpoint of the offering price range of [***] per share is attributable to the fact that the public offering price does not factor in a DLOM. The anticipated price range for this offering necessarily assumes that the IPO has occurred and that a public market for the Company’s common stock has been created, and, therefore, excludes any DLOM of the Company’s common stock, which was appropriately taken into account in the Company’s Board of Directors’ determination of the fair value of the Company’s common stock as of June 30, 2018. Stated differently, the anticipated offering price range effectively assigns a probability of 100% to an IPO outcome. The anticipated price range for this offering is based only upon a scenario in which the Company completes this offering and is not probability weighted, in contrast to the

Company's prior valuations of common stock, which had to consider multiple potential outcomes, some of which would have resulted in a lower value of the Company's common stock than in an IPO. Accordingly, without any DLOM factored into the valuation, the Company's June 30, 2018 common stock valuation would have been [***] per share, which is within the anticipated public offering price range.

- The holders of the Company's redeemable convertible preferred stock currently enjoy substantial economic rights and preferences over the holders of its common stock. In particular, the holders of redeemable convertible preferred stock are entitled to receive liquidation payments prior to holders of common stock in the event of any liquidation, dissolution or wind up of the Company. In addition, holders of the Company's redeemable convertible preferred stock are entitled to receive dividends prior to any dividends declared or paid on any shares of the Company's common stock. The holders of redeemable convertible preferred stock also have anti-dilution protection under certain circumstances and special voting rights. The anticipated price range assumes the conversion of the Company's redeemable convertible preferred stock upon the completion of its IPO, and therefore, the corresponding elimination of the preferences and rights enjoyed by the holders of such redeemable convertible preferred stock. The anticipated elimination of the preferences and rights upon an IPO results in an increased common stock valuation for the anticipated price range.
- The proceeds of a successful IPO would substantially strengthen the Company's balance sheet by increasing its cash resources. In addition, the completion of this offering would provide the Company with readier access to the public debt and equity markets. These projected improvements in the Company's financial position influenced the increased common stock valuation indicated by the midpoint of the anticipated price range.
- The price that investors may be willing to pay in this offering may take into account factors that have not been expressly considered in the Company's prior valuations as a private company, and are not objectively determinable and that valuation models are not able to quantify.

Conclusion

The Company has historically determined the fair value of its common stock consistent with the guidance set forth in the American Institute of Certified Public Accountants Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation* (the "AICPA Practice Guide"), including, specifically, its use of the hybrid method using a probability weighting of the OPM and PWERM scenarios, which is an accepted valuation method under the AICPA Practice Guide. The Company believes that the probability weighting of each potential liquidity event used in its fair value analysis was reasonable at the time, in light of the Company's stage of development, including the status of its research and development efforts and financial position, external market conditions affecting the biotechnology industry, the volatility in the capital markets, especially with respect to initial public offerings, and the relative likelihood of achieving a liquidity event such as an initial public offering or sale of the Company in light of prevailing market conditions.

The Company believes the anticipated price range for this offering is reasonable based on the above referenced factors.

Because of the financially sensitive nature of the estimated price range, the Company requests confidential treatment under 17 C.F.R. § 200.83 of the contents 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. Kindly acknowledge receipt of this letter by stamping the enclosed copy of this letter and returning it in the envelope provided.

Amanda Ravitz
Assistant Director
October 12, 2018
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We appreciate your time and attention to the Company's responses to the Staff's comments. Should you have any additional questions or concerns, please call me at (650) 289-7117.

Very truly yours,

/s/Peter M. Lamb

Peter M. Lamb

cc: Emily Leproust
Mark Daniels, Esq.
John V. Bautista, Esq.
Christopher J. Austin, Esq.
Brian J. Cuneo, Esq.
John Williams, Esq.

**CONFIDENTIAL TREATMENT REQUESTED BY TWIST BIOSCIENCE CORPORATION
CIK NO. 0001581280**