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Alan F. Denenberg

Davis Polk & Wardwell LLP 650 752 2011 tel
1600 El Camino Real 650 752 3611 fax
Menlo Park, CA 94025 alan.denenberg@davispolk.com

February 26, 2019

VIA EDGAR TRANSMISSION AND FEDERAL EXPRESS

U.S. Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Washington, D.C. 20549

Attention: Ms. Tara Harkins
 Ms. Lynn Dicker
 Mr. Thomas Jones
 Mr. Geoff Kruczek

Re: ShockWave Medical, Inc.
 Registration Statement on Form S-1 (File No. 333-229590)
 Filed on February 8, 2019

Ladies and Gentlemen:

On behalf of our client, ShockWave Medical, Inc. (the “Company” or “ShockWave”), we are supplementally providing the staff (the “Staff”) of the United States Securities and Exchange Commission (the “Commission”), as requested by the Commission’s comment number 2 of its letter dated February 21, 2019 (the “Comment Letter”) relating to the registration statement on Form S-1 of the Company filed on February 8, 2019 (the “Registration Statement”), the following discussion of the Company’s underlying common stock prices of the equity instruments issued by the Company as presented in the Registration Statement, and a progressive bridge of the fair value per share determinations used for each option grant since January 1, 2018 to the current estimated initial public offering price range.

IPO PRICE RANGE; REVERSE STOCK SPLIT

On February 25, 2019, the Company filed Amendment No. 1 to the Registration Statement (“Amendment No. 1”). Amendment No. 1 includes the Company’s estimated initial public offering price range of \$14.00 to \$16.00 per share (the “IPO Price Range”). The IPO Price Range was determined based, in large part, on input from the underwriters and subsequent discussions among the board of directors of the Company and senior management of the Company, as further discussed below. Amendment No. 1 also reflects that the Company has effected a 12.2:1 reverse stock split; all per share numbers in this letter are post-split, and therefore consistent with Amendment No. 1.

RELEVANT ACCOUNTING GUIDANCE

For purposes of this letter, the Company considered the following accounting guidance:

- Accounting Standards Codification (“ASC”) 718, *Compensation – Stock Compensation* (“ASC 718”);
- American Institute of Certified Public Accountants (“AICPA”) Accounting and Valuation Guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation* (“AICPA Practice Aid”); and
- Various SEC Staff Speeches and Guidance.

OVERVIEW

The Company has evaluated the fair value of its common stock for all grants made from January 1, 2018 through the date of this letter to support the critical accounting estimates disclosed in Amendment No. 1. Stock options granted from January 1, 2018 through the date of this letter are as follows:

<u>Date</u>	<u>No. of Shares Granted</u>	<u>Exercise Price</u>	<u>Fair Value Per Share</u>
January 11, 2018	171,210	\$ 4.03	\$ 4.03*
April 10, 2018	169,878	4.03	4.03*
May 08, 2018	18,319	4.03	4.03*
July 19, 2018	211,270	4.03	4.03*
October 18, 2018	241,188	6.71	6.71
November 14, 2018	204,098	6.71	6.71
February 1, 2019	119,672	6.59	6.59
	1,135,625		

- * The estimated fair value on the date of grant and the exercise price was set at \$4.03 per share based on the most recent third-party valuation report as of September 26, 2017. However, for accounting purposes, the stock-based compensation expense was calculated based on a reassessed valuation of \$4.51 per share, as further described below.

No other stock options have been granted by the board of directors from January 1, 2018 through the date of this letter.

As there is no public market for the Company's common stock because the Company is private, the Company's board of directors determined the fair value of its common stock with the assistance of independent third-party valuation specialists. However, the Company, specifically the board of directors, assumed responsibility for the estimates of fair value of its common stock in the financial statements. The Company utilized methodologies, approaches and assumptions consistent with the AICPA Practice Aid. The Company believes that the determination of the exercise prices and the related estimated fair values of the Company's common stock was fair and reasonable at the time they were made. The fair value of the Company's common stock on a non-marketable, minority basis was as follows:

Valuation Date (As of Date)	Estimated Fair Value Price Per Common Share	Estimated Equity Value
September 26, 2017	\$ 4.03	\$178.5 million
September 30, 2018	\$ 6.71	\$232.0 million
December 31, 2018	\$ 6.59	\$229.5 million

For options that were granted between valuation report issuance dates, the board of directors assessed if there have been any significant changes to the estimated fair value of the Company's common stock since the date of the last valuation. The assessments of estimated fair value of the Company's common stock as made by the board of directors, with assistance from management, for grants between the dates of the valuations were based in part by considering several factors, including the following:

- the Company's stage of development;
- progress of the Company's research and development efforts;
- the impact of significant corporate events or milestones;
- material risks related to the business;
- the Company's actual operating results and financial condition, including the Company's level of available capital resources;
- rights, preferences and privileges of the preferred stock relative to those of the common stock;
- equity market conditions affecting comparable public companies;
- the likelihood and potential timing of achieving a liquidity event for the shares of common stock, such as an initial public offering ("IPO") given prevailing market and biotechnology sector conditions; and
- that the grants involved illiquid securities in a private company.

For awards granted between valuation dates, the Company considered the amount of time between the valuation date and the grant date to determine whether to use the estimated fair value of its common stock in the latest common stock valuation by taking into consideration the factors noted above for financial reporting purposes. The Company determined that it was appropriate to utilize the previously determined fair value for all grants made prior to a subsequent valuation. It was considered whether there were any material changes in established milestones, forecasts, strategic relationships with major suppliers or customers, the Company's financial condition, management team, existing technology, workforce, or the overall industry at specific points in time. At each grant date, the board of directors did not believe there were any significant individual events that should have resulted in a significant increase to the fair value of the Company's common stock when those options were granted.

SUMMARY OF VALUATION DATES*September 26, 2017 Valuation*

The Company used the market approach (OPM back-solve method) in its September 26, 2017 valuation to estimate the value of the common stock of the Company based on the contemporaneous issuance of convertible preferred stock. Total common stock value was estimated by performing an OPM back-solve analysis using relevant preferred stock financing share price as given.

The OPM back-solve entails allocating the total shareholders' equity value to the various share classes based upon their respective claims on a series of call options with strike prices at various value levels depending upon the right and preferences of each class. A Black-Scholes option pricing model is employed to value the options, with an option term assumption consistent with management's expected time to a liquidity event and a volatility assumption based on the estimated stock price volatility of a peer group of comparable public companies over a similar term. The differential in value between each successive option represents the value of that tranche, which is then allocated to all the share classes based on their percentage ownership claim at that level of value. As this OPM method results in a fair value for common stock on a per share basis at the marketable, minority level of value, a discount for lack of marketability ("DLOM") is applied in order to represent a non-marketable equity interest in a private enterprise.

The OPM treats common stock and convertible preferred stock as call options on the equity value, with exercise prices based on the liquidation preference of the convertible preferred stock. Therefore, the common stock has value only if the funds available for distribution to the stockholders exceed the value of the liquidation preference at the time of a liquidity event such as a merger, sale or IPO, assuming the enterprise has funds available to make a liquidation preference meaningful and collectible by the stockholders. The common stock is modelled to be a call option with a claim on the equity value at an exercise price equal to the remaining value immediately after the convertible preferred stock is liquidated. The OPM uses the Black-Scholes option pricing model to price the call option. The OPM is appropriate to use when the range of possible future outcomes is so difficult to predict that forecasts would be highly speculative.

This valuation method was selected because there were not clearly defined exit events at this time and the OPM back-solve method was considered to be the most objective valuation approach given the valuation data provided by the Company's contemporaneous second closing of its Series C convertible preferred stock round of financing in September 2017. The second closing of the Company's Series C convertible preferred stock resulted in the issuance of 2,840,504 shares at a price of \$12.32 per share for gross proceeds of \$35.0 million. The OPM back-solve allocated the total shareholders' equity value to the various share classes based upon their respective claims on a series of call options with strike prices at various value levels depending upon the rights and preferences of each class. The Company used a "back solve" method to determine the Company's equity value using the Black-Scholes option-pricing model. This resulted in a total shareholders' equity value of \$178.5 million.

As of September 26, 2017, the board of directors determined the estimated fair value of the Company's common stock to be \$4.03 per share based primarily on the valuation report performed by a third-party provider that was obtained as of that date. This valuation was prepared on a non-marketable, minority basis.

In conjunction with the Company's preparation of its annual audited financials for the year ended December 31, 2018, management subsequently revisited for financial reporting purposes the fair value of its option grants based on the September 26, 2017 valuation report. With the benefit of hindsight, the Company reassessed the fair value to be \$4.51 per share. The reassessed value was based on the OPM back-solve method with slightly different assumptions with respect to the volatility, time to an exit event, and the discount for lack of marketability. The reassessed fair value of \$4.51 per share was used in the calculation of stock-based compensation in fiscal year 2018 for grants from January 11, 2018 to July 19, 2018 (the last grants prior to the subsequent September 30, 2018 valuation date).

September 30, 2018 and December 31, 2018 Valuations

The Company's M⁵ intravascular lithotripsy catheter was CE-marked in April 2018 and cleared by the U.S. Food and Drug Administration in July 2018 for the treatment of peripheral artery disease. The Company's C² intravascular lithotripsy catheter was CE-marked in June 2018 for the treatment of coronary artery disease.

In 2018, the Company experienced strong quarter over quarter growth in the United States and internationally. Growth in U.S. sales was driven by an increase in sales force, marketing activity and favorable clinical outcomes. Growth in international sales was driven by an increase in distributors and launch of the Company's C² product in June 2018.

After July 2018, the probability of a near-term IPO was considered to be more likely. Based upon the increased probability of a near-term IPO, a change in the valuation approach to incorporate an IPO exit scenario was considered to be appropriate. For the September 30, 2018 and December 31, 2018 valuations, the Company utilized a hybrid probability weighted expected return model ("PWERM") which incorporated aspects of the market and income approaches.

The PWERM involves a forward-looking analysis of the possible future outcomes of the equity value. This method is particularly useful when discrete future outcomes can be predicted at a high confidence level with a probability distribution. The PWERM values each class of equity based on an analysis of the range of potential future enterprise values of a company and the manner in which those values would accrue to the owners of the different classes of equity. This method involves estimating the overall value of the subject company under various liquidity event scenarios and allocating the value to the various share classes based on their respective claim on the proceeds as of the date of each event. These different scenarios typically include an IPO, an acquisition, or a liquidation of the business, each resulting in a different value. For each scenario, the future value of each share class is calculated and discounted to a present value. The results of each scenario are then probability weighted in order to arrive at an estimate of fair value for each share class as of a current date.

The hybrid method combines the PWERM and OPM. The hybrid method can be a useful alternative to explicitly modelling all PWERM scenarios in situations when a company has transparency into one or more near-term exits but is unsure about what will occur if the current plans fall through. The overall models incorporated four outcomes (IPO as of two different dates, M&A, and stay-private). In the stay-private scenario, an OPM was used to allocate the implied present equity value indication. The Company incorporated an OPM in the PWERM to capture the uncertainties of the stay-private scenario by not explicitly using a set exit date, but instead looking at a scenario where the Company operates as a stand-alone entity for a longer time-horizon.

September 30, 2018

As of September 30, 2018, the board of directors determined the estimated fair value of the Company's common stock to be \$6.71 per share based primarily on the valuation report performed by a third-party provider that was obtained as of that date. Specifically, this valuation was prepared on a non-marketable, minority basis and used the market approach to value the Company's common stock. The September 30, 2018 valuation estimated the total shareholders' equity value of the Company by using the PWERM approach to valuation assuming two IPO scenarios and an M&A scenario and an OPM valuation approach assuming a stay-private scenario. This resulted in a fair value indication for total shareholders' equity in the amount of \$232.0 million on a minority, marketable basis. The IPO scenario and M&A scenario valuations were modeled based on revenue multiples of public peer companies. The IPO and M&A scenarios had a combined weighting of 60% and the stay-private scenario had a weighting of 40%. After adjusting the marketable, minority common stock price for the lack of liquidity, the board of directors concluded that the Company's common stock value was \$6.71 per share.

December 31, 2018

Between September 30, 2018 and December 31, 2018, the stock markets experienced increasing volatility and a decline in value. For example, the Dow Jones Industrial Average decreased by 12% during this period of time, the Nasdaq Biotechnology Index declined 20.6%, and the stock price of the group of companies that the Company's board of directors considered to be its "peers" for purposes of valuation declined 24.6%. These market conditions created additional uncertainty regarding the ability to successfully complete an IPO. In addition, the U.S. government was shut down at the end of 2018 and there was considerable uncertainty as to when the government would open. Partially offsetting these negative market developments, the Company continued to generate revenues which were moderately in excess of the internal budget during the fourth quarter of 2018.

As of December 31, 2018, the board of directors determined the estimated fair value of the Company's common stock to be \$6.59 per share based primarily on the valuation report performed by a third-party provider that was obtained as of that date. Specifically, this valuation was prepared on a non-marketable, minority basis. This resulted in a fair value indication for total shareholders' equity in the amount of \$229.5 million on a marketable, minority basis. The slight decline in the estimated enterprise value is attributed to the broader decline in global equity markets, including market comparables for peer companies, a lower assumed probability of an IPO or an M&A due to said decline in market conditions, partially offset by continued positive operating developments for the Company. The IPO scenario and M&A scenario valuations were modeled based on revenue multiples of public peer companies. The IPO and M&A scenarios had a combined weighting of 50% and the stay-private scenario had a weighting of 50%. The decrease in the IPO and M&A scenario probabilities were based upon the uncertainty created by market volatility and the U.S. government shutdown during the period. After adjusting the marketable, minority common share price for the lack of liquidity, the board of directors concluded that the Company's common stock value was \$6.59 per share.

IPO Price Range

The Company notes that, as is typical in IPOs, the IPO Price Range was not derived using a formal determination of fair value but was determined based in part upon discussions between the Company and the underwriters and with reference to several quantitative and qualitative factors. The IPO Price Range does not take into account the current lack of liquidity for the Company's common stock nor the effect of liquidation preferences held by the holders of the Company's convertible preferred stock. Further the IPO Price Range assumes a successful IPO with no weighting attributed to any other outcome for the Company's business, such as remaining a privately held company or being sold in an acquisition. The factors considered in setting the IPO Price Range included:

- a fundamental analysis of the business including a discounted cash flow valuation;
- an analysis of the typical valuation ranges seen in recent initial public offerings for companies in the Company's industry;
- the general condition of the securities markets and the recent market prices of, and the demand for, publicly traded shares of generally comparable companies;
- the Company's belief that the public trading market would remain receptive to companies in the medical device industry;
- the Company's belief that there would be sufficient demand for the Company's common stock to support an offering of the size contemplated by the Company; and
- the successful completion of an IPO would strengthen the Company's balance sheet, provide access to public equity, increase visibility with acquirors, increase the Company's strategic flexibility and provide enhanced operational flexibility to seek and obtain regulatory approval for and commercialize additional product candidates.

The Company believes that the difference in value of \$9.41 per share reflected between the high end of the IPO Price Range and the determination of the fair value of the Company's common stock on December 31, 2018 of \$6.59 per share is primarily the result of the following events and circumstances:

- subsequent to December 31, 2018, U.S. stock markets significantly recovered in value. For example, the Dow Jones Industrial Average increased by 11%, the Nasdaq Biotechnology Index increased by 14%, and the group of companies the board of directors considered to be its "peers" for purposes of valuation increased by 11%¹ from December 31, 2018 to February 22, 2019;
- subsequent to December 31, 2018, the U.S. government reopened after a long shutdown, again making it possible to consummate an IPO, and subsequent activity in the U.S. Congress has greatly reduced the likelihood of a future shutdown;
- from December 31, 2018 through the date of this letter, the Company commenced limited market release of its S4 catheters and has continued to see month over month increases in average daily sales;
- in January 2019, the Company announced it has initiated its FDA Investigational Device Exemption (IDE) study for the use of IVL in heavily calcified coronary arteries;
- the methodology for determining the December 2018 valuation incorporated IPO and non-IPO scenarios, not all of which allocate value to the Company's stockholders on a fully diluted, as-converted to common stock basis. In December of 2018 the assumed probability of a fully-diluted, as-converted outcome was 35%. This percentage was determined by the Company based on current internal factors, including the operating and clinical status of the Company as well as external factors such as the government shut-down, which could have significantly delayed an exit, potentially causing the Company to indefinitely delay or abandon an IPO. The Price Range assumes with 100% probability that the Company successfully completes an IPO, pursuant to which all of the Company's convertible preferred stock will be converted into common stock. This factor is significant because the holders of the Company's preferred stock currently enjoy substantial economic rights and preferences over the holders of the Company's common stock, including (i) the right to receive dividends prior to any dividends declared or paid on any shares of the Company's common stock and (ii) liquidation payments in preference to holders of the Company's common stock. The corresponding elimination of the preferences and rights enjoyed by the holders of such preferred stock results in a higher valuation of the common stock; and
- the IPO Price Range assumes the consummation of a successful IPO and the creation of a public market for the Company's common stock, resulting in liquidity for the common stock while the December 2018 valuation included an assumption that the common stock was illiquid and might never become liquid, and were subject to a DLOM as indicated above.

¹ Excludes one peer company that experienced a market capitalization decrease of 24%, resulting from a voluntary restriction on sales put in effect in January 2019 and a subsequent suspension of its CE mark.

The aggregate equity value of the Company implied by the midpoint of the Company's IPO Price Range is \$309 million, representing a 35% difference compared to the aggregate equity value of the Company per its December 31, 2018 valuation of \$229.5 million at the marketable, minority level of value. Of this, 11-14 percentage points can be explained by the increase in U.S. stock market valuations since the December 31, 2018 described above (assuming that the Company would have experienced a comparable increase in market valuation). Moreover, an additional part of the difference can be explained by the time value of money. The Company used a required rate of return on the equity in the Company for purposes of the December 31, 2018 valuation of 30%, which, over a two month period, would account for 4 percentage points of the 35% increase in valuation. Lastly, an assumed probability of an IPO of 100% (as compared to 35% in the Company's December 31, 2018 valuation), explains the remaining difference.

CONCLUSION

In light of the IPO Price Range and the other factors described in this letter, the Company respectfully advises the Staff that it believes that the deemed per share values used as the basis for determining stock-based compensation in connection with its stock awards have been reasonable and appropriate.

We appreciate your assistance in this matter. Please do not hesitate to contact me at (650) 752-2004 or at alan.denenberg@davispolk.com with any questions or comments regarding this correspondence.

Sincerely,

/s/ Alan F. Denenberg

Alan F. Denenberg

cc: Douglas Godshall, ShockWave Medical, Inc.
Dan Puckett, ShockWave Medical, Inc.
Charles S. Kim, Cooley LLP
David Peinsipp, Cooley LLP
Kristin E. VanderPas, Cooley LLP