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

Date of Report (Date of earliest event reported): May 3, 2019

Regulus Therapeutics Inc.
(Exact name of registrant as specified in its charter)

Delaware	001-35670	26-4738379
(State of incorporation)	(Commission File No.)	(IRS Employer Identification No.)

10628 Science Center Drive, Suite 100 San Diego, CA	92121
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (858) 202-6300

N/A
(Former name or former address, if changed since last report.)

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 (see General Instruction A.2. below):

☐ 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))

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).

Emerging growth company ☐

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. ☐

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	**RGLS**	**The Nasdaq Stock Market LLC**

Item 1.01 Entry into a Material Definitive Agreement.

Private Placement of Common Stock, Non-Voting Preferred Stock and Warrants

On May 3, 2019, Regulus Therapeutics Inc., a Delaware corporation (the "Company"), entered into a Securities Purchase Agreement (the "Purchase Agreement") with certain institutional and other accredited investors (the "Purchasers"), pursuant to which the Company agreed to sell and issue shares of the Company's common stock ("Common Stock"), shares of newly designated non-voting convertible preferred stock of the Company, and warrants to purchase Common Stock, in up to two closings, in a private placement transaction (the "Private Placement").

At an initial closing under the Purchase Agreement that occurred on May 7, 2019 (the "Initial Closing"), the Company sold and issued to the Purchasers (i) 9,730,534 shares of Common Stock and accompanying warrants to purchase up to an aggregate of 9,730,534 shares of Common Stock at a combined purchase price of $1.205 per share, and (ii) 415,898 shares of non-voting Class A-1 convertible preferred stock, in lieu of shares of Common Stock, at a price of $10.80 per share, and accompanying warrants to purchase an aggregate of 4,158,980 shares of Common Stock at a price of $0.125 for each share of Common Stock underlying such warrants. Total gross proceeds from the Initial Closing were approximately $16.7 million, which does not include any proceeds that may be received upon exercise of the warrants. Each share of non-voting Class A-1 convertible preferred stock is convertible into 10 shares of Common Stock, subject to certain beneficial ownership conversion limitations. The warrants will be exercisable for a period of five years following the date of issuance and will have an exercise price of $1.08 per share, subject to proportional adjustments in the event of stock splits or combinations or similar events. The warrants are exercisable on a net exercise "cashless" basis.

Pursuant to the Purchase Agreement, in the event the Company's Board of Directors unanimously resolves to recommence the Company's Phase 1 multiple ascending dose clinical trial of the Company's RGLS4326 product candidate for the treatment of autosomal dominant polycystic kidney disease (ADPKD) (the "Phase 1 Trial") based on correspondence from the U.S. Food & Drug Administration's Division of Cardiovascular and Renal Products, and thereafter but on or before December 31, 2019 the Company makes a public announcement of its plan to recommence the Phase 1 Trial (the "Public Announcement"), the Company has agreed to sell and the Purchasers have agreed to purchase, at a second closing under the Purchase Agreement ("Milestone Closing"), shares of non-voting convertible preferred stock of the Company and accompanying warrants to purchase shares of Common Stock (collectively, "Milestone Securities") having an aggregate purchase price of approximately $25.1 million, excluding the exercise price of the warrants. The additional shares of non-voting convertible preferred stock will each be convertible into 10 shares of Common Stock, subject to certain beneficial ownership conversion limitations. In the event the volume-weighted average price per share of Common Stock on the Nasdaq Stock Market ("VWAP") during the five full trading days following the Public Announcement is at least $1.08, the non-voting convertible preferred stock to be sold the Milestone Closing will be Class A-1 convertible preferred stock and will be sold at a price of $10.80 per share. In the event the VWAP during the five full trading days following the Public Announcement is less than $1.08, the sale and issuance of the Milestone Securities will be subject to stockholder approval under Nasdaq Listing Rule 5635 ("Stockholder Approval"), which must be obtained no later than March 31, 2020 (provided the Company shall use its best efforts to obtain the Stockholder Approval by no later than 45 days following the Public Announcement), and the non-voting preferred stock to be sold in the Milestone Closing will be newly designated Class A-2 convertible preferred stock and will have a purchase price equal to the "Alternative Milestone Price" as defined under the Purchase Agreement. The Alternative Milestone Price per share of Class A-2 convertible preferred stock will, (a) if the Stockholder Approval is obtained prior to the Public Announcement, 10 multiplied by the VWAP over the five full trading days immediately following the Public Announcement or (b) if the Stockholder Approval is obtained after the Public Announcement, the price that is the lower of (i) 10 multiplied by the VWAP over the five full trading days immediately following the Public Announcement and (ii) 10 multiplied by the VWAP over the five full trading days immediately following the date on which the Stockholder Approval is obtained. In the event the relevant VWAP used for the Alternative Minimum Price is less than $0.50 per share, the Milestone Closing will not occur. The accompanying warrants will be sold at a price of $0.125 for each share of Common Stock underlying the warrants, will have an exercise price equal to 100% of the purchase price of the non-voting convertible preferred stock sold in the Milestone Closing (priced on an as-converted to Common Stock basis), subject to proportional adjustments in the event of stock splits or combinations or similar events, and will have an exercise term of five years from the date of issuance. The warrants will be exercisable on a net exercise "cashless" basis.

Certain directors and officers of the Company are Purchasers under the Purchase Agreement and purchased shares of Common Stock and warrants at the Initial Closing, and have committed to purchase shares of non-voting convertible preferred stock and warrants to purchase Common Stock at the Milestone Closing, at the same price per share and warrant as the other Purchasers. The aggregate purchase prices of the securities purchased or to be purchased by the directors and officers who are Purchasers under the Purchase Agreement are as follows:

Name of Insider and Position With Company	Aggregate Purchase Price of Common Stock and Warrants Purchased at Initial Closing	Aggregate Purchase Price of Milestone Securities
Stelios Papadopoulos, Ph.D. *Chairman of the Board*	$ 446,295.85	$ 669,443.78
Joseph Hagan(1) *President, Chief Executive Officer and Director*	$ 39,998.77	$ 59,998.16
William H. Rastetter(1) *Director*	$ 111,931.25	$ 167,896.27
Pascale Witz *Director*	$ 35,704.15	$ 53,555.02

(1) Securities purchased or to be purchased through an affiliated investment entity.

H.C. Wainwright & Co., LLC acted as the sole placement agent for the Private Placement and is entitled to receive a fee equal to 5.5% of the aggregate gross proceeds from the securities sold at the applicable closing, plus the reimbursement of certain expenses.

Under the terms of the Purchase Agreement, the Company has agreed to prepare and file, within 30 days after the Initial Closing and within 30 days after the Milestone Closing, if necessary, one or more registration statements with the Securities and Exchange Commission (the "SEC") to register for resale the Common Stock issued under the Purchase Agreement, the shares of Common Stock issuable upon exercise of the warrants issued under the Purchase Agreement, and the shares of Common Stock issuable upon conversion of any non-voting convertible preferred stock issued pursuant to the Purchase Agreement (the "Registrable Securities"), and generally to cause the applicable registration statements to become effective within 90 days after the applicable closing under the Purchase Agreement. Certain cash penalties will apply to the Company in the event of registration failures, as described in the Purchase Agreement.

The Purchase Agreement contains customary representations, warranties and covenants that were made solely for the benefit of the parties to the Purchase Agreement. Such representations, warranties and covenants (i) are intended as a way of allocating risk between the parties to the Purchase Agreement and not as statements of fact, and (ii) may apply standards of materiality in a way that is different from what may be viewed as material by stockholders of, or other investors in, the Company. Accordingly, the Purchase Agreement is included with this filing only to provide investors with information regarding the terms of transaction and not to provide investors with any other factual information regarding the Company. Investors should not rely on the representations, warranties and covenants or any descriptions thereof as characterizations of the actual state of facts or condition of the Company or any of its subsidiaries or affiliates. Moreover, information concerning the subject matter of the representations and warranties may change after the date of the Purchase Agreement, which subsequent information may or may not be fully reflected in public disclosures.

The foregoing is only a summary of the terms of the Purchase Agreement and the warrants issued and to be issued under the Purchase Agreement, does not purport to be complete and is qualified in its entirety by reference to the full text of (i) the Purchase Agreement, a copy of which is attached to this report as Exhibit 10.1, and (ii) the form of warrant issued or to be issued under the Purchase Agreement, a copy of which is attached to this report as Exhibit 4.2.

On May 6, 2019, the Company issued a press release announcing the Purchase Agreement and on May 7, 2019, the Company issued a press release announcing the completion of the Initial Closing. Copies of these press releases are attached to this report as Exhibits 99.1 and 99.3.

Amendment to Loan and Security Agreement

Concurrently with the Purchase Agreement, on May 3, 2019, the Company entered into an amendment to its Loan and Security Agreement (the "Eighth Amendment") with Oxford Finance LLC, as the collateral agent and a lender (the "Lender"), dated June 17, 2016, as amended, pursuant to which the Lender lent the Company $20.0 million in a term loan (the "Term Loan").

Pursuant to the terms of the Eighth Amendment and as a result of the completion of the Initial Closing, the Company's required monthly payments to the Lender will be comprised of interest only from May 2019 through and including the payment to be made in April 2020, in exchange for an interest only period extension fee of $0.1 million. Additionally, under the Eighth

Amendment, the Term Loan maturity date was extended from June 2020 to May 2022, in exchange for a maturity date extension fee of $0.7 million. Pursuant to the Eighth Amendment, if an additional $20.0 million in capital is received by the Company on or before December 31, 2019 (the "Capital Event"), the Company's required monthly payments to the Lender will be comprised of interest only through and including the payment to be made in April 2021.

Commencing in May 2020, or, if the Capital Event occurs, May 2021, and continuing on each successive payment date thereafter, the Company is required to make consecutive equal monthly payments of principal, together with applicable interest, in arrears, to the Lender.

The Eighth Amendment also provides that the Company has increased the prepayment percentage for the funds that it is required to prepay under the Term Loan, in the event that the Company receives the $10.0 million first development milestone payment (the "Milestone Payment") under the Second Amended and Restated Collaboration and License Agreement, dated February 5, 2014, with Sanofi, from 75% to 100% of the Milestone Payment (the "Sanofi Prepayment"). Under the Eighth Amendment, the Company is required to maintain cash in a collateral account controlled by the Lender (the "Minimum Cash Balance") of $5.0 million if the Company has not yet paid the Sanofi Prepayment. Upon payment of the Sanofi Prepayment to the Lender, the Company will no longer be required to maintain the Minimum Cash Balance and the lien on the Company's intellectual property will be released.

The foregoing is only a summary of the terms of the Eighth Amendment, does not purport to be complete and is qualified in its entirety by reference to the full text of the Eighth Amendment, a copy of which is attached to this report as Exhibit 10.2.

On May 6, 2019, the Company issued a press release announcing the Eighth Amendment. A copy of the press release is attached to this report as Exhibits 99. 2.

Item 2.02 Results of Operations and Financial Condition.

On May 9, 2019, the Company issued a press release announcing its financial results for the quarter ended March 31, 2019. A copy of the press release is attached to this report as Exhibit 99.4.

The information in this Item 2.02, including the attached Exhibit 99.3, is being furnished and shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section, nor shall it be deemed incorporated by reference in any filing made by the Company under the Securities Act of 1933, as amended ("Securities Act"), or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 3.02 Unregistered Sales of Equity Securities.

The disclosure regarding the securities sold and issued or to be sold and issued under the Purchase Agreement as set forth under Item 1.01 of this report is incorporated by reference under this Item 3.02.

The securities described above under Item 1.01 have not been registered under the Securities Act or any state securities laws. The Company relied on the exemption from the registration requirements of the Securities Act by virtue of Section 4(a)(2) thereof. Each of the Purchasers represented that it was acquiring the securities for investment only and not with a view towards, or for resale in connection with, the public sale or distribution thereof.

Item 5.03 Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year.

On May 6, 2019, in connection with the Initial Closing, the Company filed a Certificate of Designation of Preferences, Rights and Limitations of Class A-1 Convertible Preferred Stock (the "Class A-1 Certificate of Designation"). The Class A-1 Certificate of Designation establishes and designates the Class A-1 convertible preferred stock, par value $0.001 per share, and the rights, preferences and privileges thereof.

Each share of Class A-1 convertible preferred stock is convertible into 10 shares of Common Stock, subject to proportional adjustment as provided in the Class A-1 Certificate of Designation. In the event of the Company's liquidation, dissolution or winding up, holders of Class A-1 convertible preferred stock will participate pari passu with any distribution of proceeds to holders of Common Stock. Holders of Class A-1 convertible preferred stock are entitled to receive dividends on shares of Class A-1 convertible preferred stock equal (on an as converted to Common Stock basis) to and in the same form as dividends actually paid on the Common Stock. Shares of Class A-1 convertible preferred stock generally have no voting rights, except as required by law.

The foregoing is only a summary of the terms of the Class A-1 Certificate of Designation, does not purport to be complete and is qualified in its entirety by reference to the full text of the Class A-1 Certificate of Designation, a copy of which is attached to this report as Exhibit 3.1.

Item 8.01 Other Events.

As previously reported, on November 13, 2018 the Company received notice from the Nasdaq Stock Market that the Company's stockholders' equity as reported in the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018 did not satisfy the Nasdaq Global Market continued listing requirement set forth in Nasdaq Stock Market Rule 5450(b)(1)(A) (the "Rule"). The staff of the Nasdaq Stock Market subsequently approved the transfer of the Common Stock to the Nasdaq Capital Market and granted the Company an extension until May 13, 2019 to satisfy the Nasdaq Capital Market's minimum stockholders' equity requirement of $2.5 million (the "Stockholders' Equity Requirement").

The Company received net proceeds of approximately $15.7 million from the sale of its securities at the Initial Closing, after deducting the placement agent's fees and expenses. As of the date of this report, the Company believes it has regained compliance with the Stockholders' Equity Requirement as a result of the receipt of the net proceeds from the Initial Closing.

The Nasdaq Stock Market will continue to monitor the Company's ongoing compliance with the Stockholders' Equity Requirement and, if at the time the Company files its Quarterly Report on Form 10-Q for the quarter ending June 30, 2019, the Company does not evidence compliance with the Stockholders' Equity Requirement, the Common Stock may be subject to delisting from the Nasdaq Capital Market.

Forward-Looking Statements

Statements contained in this report regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including, without limitation, statements associated with the timing, size and completion of the Milestone Closing. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "intends," "will," "goal," "potential" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon the Company's current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation, risks associated with the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics and in the endeavor of building a business around such drugs, feedback from the U.S. Food and Drug Administration and market conditions. These and other risks concerning the Company's financial position and programs are described in additional detail in the Company's filings with the SEC. All forward-looking statements contained in this report speak only as of the date on which they were made. The Company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

3.1	Certificate of Designation of Preferences, Rights and Limitations of Class A-1 Convertible Preferred Stock.
4.1	Reference is made to Exhibit 3.1.
4.2	Form of Common Stock Purchase Warrant.
10.1	Securities Purchase Agreement, dated May 3, 2019, by and among the Company and the Purchasers.
10.2	Eighth Amendment to Loan and Security Agreement, dated May 3, 2019, by and between the Company and Oxford Finance LLC.
99.1	Press release, dated May 6, 2019.
99.2	Press release, dated May 6, 2019.
99.3	Press release, dated May 7, 2019.
99.4	Press release, dated May 9, 2019.

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.

Regulus Therapeutics Inc.

Date: May 9, 2019

By: /s/ Joseph P. Hagan
Joseph P. Hagan
President and Chief Executive Officer

Exhibit 3.1

REGULUS THERAPEUTICS INC.
CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS

OF

CLASS A-1 CONVERTIBLE PREFERRED STOCK

PURSUANT TO SECTION 151 OF THE
DELAWARE GENERAL CORPORATION LAW

REGULUS THERAPEUTICS INC., Delaware corporation (the "**Corporation**"), in accordance with the provisions of Section 103 of the Delaware General Corporation Law (the "**DGCL**") does hereby certify that, in accordance with Sections 141(c) and 151 of the DGCL, the following resolution was duly adopted by the Board of Directors of the Corporation on May 3, 2019:

RESOLVED, that, pursuant to authority expressly set forth in the Corporation's Amended and Restated Certificate of Incorporation (the "**Certificate of Incorporation**"), the issuance of a series of Preferred Stock designated as the Class A-1 Convertible Preferred Stock, par value $0.001 per share, is hereby authorized and the designation, number of shares, powers, preferences, rights, qualifications, limitations and restrictions thereof (in addition to any provisions set forth in the Certificate of Incorporation that are applicable to the Preferred Stock of all classes and series) are hereby fixed, and the Certificate of Designation of Preferences, Rights and Limitations of Class A-1 Convertible Preferred Stock is hereby approved as follows:

CLASS A-1 CONVERTIBLE PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"**Affiliate**" means any person or entity that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a person or entity, as such terms are used in and construed under Rule 144 under the Securities Act of 1933. With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.

"**Business Day**" means any day except Saturday, Sunday, any day which shall be a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"**Commission**" means the U.S. Securities and Exchange Commission.

"**Common Stock**" means the Corporation's common stock, par value $0.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified into.

"**Conversion Price**" for the Class A-1 Preferred Stock (as defined below) shall be $1.08, subject to adjustment as provided herein.

"**Conversion Shares**" means, collectively, the shares of Common Stock issuable upon conversion of the shares of Class A-1 Preferred Stock in accordance with the terms hereof.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"**Holder**" means any holder of Class A-1 Preferred Stock.

"**Issuance Date**" means the first date on which any shares of Class A-1 Preferred Stock are issued by the Corporation.

"**Person**" means any individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"**Stated Value**" means $10.80 per share, subject to increase as set forth in Section 3 below.

"**Threshold Amount**" means 19.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to an applicable Notice of Conversion (as defined below).

"**Trading Day**" means a day on which the Common Stock is traded for any period on a principal securities exchange or if the Common Stock is not traded on a principal securities exchange, on a day that the Common Stock is traded on another securities market on which the Common Stock is then being traded.

Section 2. Designation, Amount and Par Value; Assignment.

(a) The series of preferred stock designated by this Certificate of Designation shall be designated as the Corporation's Class A-1 Convertible Preferred Stock (the "**Class A-1 Preferred Stock**") and the number of shares so designated shall be 2,499,319. The Class A-1 Preferred Stock shall have a par value of $0.001 per share.

(b) The Corporation shall register shares of the Class A-1 Preferred Stock, upon records to be maintained by the Corporation for that purpose (the "**Class A-1 Preferred Stock Register**"), in the name of the Holders thereof from time to time. The Corporation may deem and treat the registered Holder of shares of Class A-1 Preferred Stock as the absolute owner thereof for the purpose of any conversion thereof and for all other purposes. Shares of Class A-1 Preferred Stock may be issued solely in book-entry form or, if requested by any Holder, such Holder's shares may be issued in certificated form. The Corporation shall register the transfer of any shares of Class A-1 Preferred Stock in the Class A-1 Preferred Stock Register, upon surrender of the certificates (if applicable) evidencing such shares to be transferred, duly endorsed by the Holder thereof, to the Corporation at its address specified herein. Upon any such registration or transfer, a new certificate (or book-entry notation, if applicable) evidencing the shares of Class A-1 Preferred Stock so transferred shall be issued to the transferee and a new certificate (or book-entry notation, if applicable) evidencing the remaining portion of the shares not so transferred, if any, shall be issued to the transferring Holder, in each case, within three Business Days. The provisions of this Certificate of Designation are intended to be for the benefit of all Holders from time to time and shall be enforceable by any such Holder.

Section 3. Dividends. Holders shall be entitled to receive, and the Corporation shall pay, dividends on shares of Class A-1 Preferred Stock equal (on an as-if-converted-to-Common-Stock basis) to and in the same form as dividends (other than dividends in the form of Common Stock, which shall be made in accordance with Section 7(a)) actually paid on shares of the Common Stock when, as and if such dividends (other than dividends in the form of Common Stock, which shall be made in accordance with Section 7(a)) are paid on shares of the Common Stock. Other than as set forth in the previous sentence, no other dividends shall be paid on shares of Class A-1 Preferred Stock; and the Corporation shall pay no dividends (other than dividends in the form of Common Stock) on shares of the Common Stock unless it simultaneously complies with the previous sentence. All declared but unpaid dividends on shares of Class A-1 Preferred Stock shall increase the Stated Value of such shares, but when such dividends are actually paid any such increase in the Stated Value shall be rescinded.

Section 4. Voting Rights. Except as otherwise provided herein or as otherwise required by the DGCL, the Class A-1 Preferred Stock shall have no voting rights. However, as long as any shares of Class A-1 Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote of the Holders of a majority of the then outstanding shares of the Class A-1 Preferred Stock, (i) alter or change adversely the powers, preferences or rights given to the Class A-1 Preferred Stock or alter or amend this Certificate of Designation, amend or repeal any provision of, or add any provision to, the Certificate of Incorporation or bylaws of the Corporation, or file any

articles of amendment, certificate of designations, preferences, limitations and relative rights of any series of preferred stock, if such action would adversely alter or change the preferences, rights, privileges or powers of, or restrictions provided for the benefit of the Class A-1 Preferred Stock in a manner materially different than the effect on the Common Stock, regardless of whether any of the foregoing actions shall be by means of amendment to the Certificate of Incorporation or by merger, consolidation or otherwise, (ii) issue further shares of Class A-1 Preferred Stock or increase or decrease (other than by conversion) the number of authorized shares of Class A-1 Preferred Stock, or (iii) enter into any agreement with respect to any of the foregoing.

Section 5. Liquidation. Upon any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary (a "**Liquidation**"), the assets of the Corporation available for distribution to its stockholders shall be distributed *pari passu* among the holders of the shares of Common Stock and Class A-1 Preferred Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of the Certificate of Incorporation (without regard to the Beneficial Ownership Limitation) immediately prior to such Liquidation. The Corporation shall mail written notice of any such Liquidation not less than 45 days prior to the payment date stated therein, to each Holder of shares of Class A-1 Preferred Stock.

Section 6. Conversion.

(a) Conversions at Option of Holder. Each share of Class A-1 Preferred Stock shall be convertible, at any time and from time to time from and after the Issuance Date, at the option of the Holder thereof, into a number of shares of Common Stock equal to the product of the Conversion Ratio (as defined below) and the number of shares of Class A-1 Preferred Stock to be converted. Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as **Annex A** (a "**Notice of Conversion**"), duly completed and executed. Other than a conversion following a Fundamental Transaction (as defined below) or following a notice provided for under Section 7(f)(ii) hereof, the Notice of Conversion must specify at least a number of shares of Class A-1 Preferred Stock to be converted equal to the lesser of (x) 100 shares (such number subject to appropriate adjustment following the occurrence of an event specified in Section 7(a) hereof) and (y) the number of shares of Class A-1 Preferred Stock then held by the Holder. Provided the Corporation's transfer agent is participating in the Depository Trust Company ("**DTC**") Fast Automated Securities Transfer program and there is an effective registration statement permitting the resale of the Conversion Shares by the Holder, the Notice of Conversion may specify, at the Holder's election, whether the applicable Conversion Shares shall be credited to the DTC participant account nominated by the Holder through DTC's Deposit Withdrawal Agent Commission system (a "**DWAC Delivery**"). The "**Conversion Date**", or the date on which a conversion shall be deemed effective, shall be defined as the Trading Day that the Notice of Conversion, completed and executed, is sent by facsimile or other electronic transmission to, and received during regular business hours by, the Corporation; provided that the original certificate(s) (if any) representing such shares of Class A-1 Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation within two (2) Trading Days thereafter. In all other cases, the Conversion Date shall be defined as the Trading Day on which the original shares of Class A-1 Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation. The calculations set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error.

(b) Conversion Ratio. The "**Conversion Ratio**" for each share of Class A-1 Preferred Stock shall be equal to the Stated Value divided by the Conversion Price.

(c) Beneficial Ownership Limitation. Notwithstanding anything herein to the contrary, the Corporation shall not effect any conversion of the Class A-1 Preferred Stock, and a Holder shall not have the right to convert any portion of the Class A-1 Preferred Stock, to the extent that, after giving effect to an attempted conversion set forth on an applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) or Section 16 of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member (the foregoing, "**Attribution Parties**")) would beneficially own a number of shares of Common Stock in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by such Holder and its Attribution

Parties shall include the number of shares of Common Stock issuable upon conversion of the Class A-1 Preferred Stock subject to the Notice of Conversion with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted shares of Class A-1 Preferred Stock beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Attribution Parties that are subject to a limitation on conversion or exercise similar to the limitation contained herein. For purposes of this Section 6(c), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission. For purposes of this Section 6(c), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (A) the Corporation's most recent periodic or annual filing with the Commission, as the case may be, (B) a more recent public announcement by the Corporation that is filed with the Commission, or (C) a more recent notice by the Corporation or the Corporation's transfer agent to the Holder setting forth the number of shares of Common Stock then outstanding. Upon the written request of a Holder (which may be by email), the Corporation shall, within three (3) Trading Days thereof, confirm in writing to such Holder (which may be by email) the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to any actual conversion or exercise of securities of the Corporation, including shares of Class A-1 Preferred Stock, by such Holder or its Attribution Parties since the date as of which such number of outstanding shares of Common Stock was last publicly reported or confirmed to the Holder. The "**Beneficial Ownership Limitation**" shall initially be 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to such Notice of Conversion (to the extent permitted pursuant to this Section 6(c)). The Corporation shall be entitled to rely on representations made to it by the Holder in any Notice of Conversion regarding its Beneficial Ownership Limitation. Notwithstanding the foregoing, by written notice to the Corporation, the Holder may reset the Beneficial Ownership Limitation percentage to a higher or lower percentage, not to exceed 19.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to such Notice of Conversion. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such written notice is delivered to the Corporation. Notwithstanding the foregoing, at any time following notice of a Fundamental Transaction, the Holder may waive and/or change the Beneficial Ownership Limitation effective immediately upon written notice to the Corporation and may reinstitute a Beneficial Ownership Limitation at any time thereafter effective immediately upon written notice to the Corporation.

(d) Nasdaq Conversion Limits; Solicitation of Stockholder Approval. Notwithstanding Section 6(a) and 6(c) of this Certificate of Designation, the Corporation shall not be required to issue any shares of Common Stock to a given Holder upon conversion by such Holder (or its assigns) of any shares of Class A-1 Preferred Stock to the extent (and only to the extent) that such conversion would result in a given Holder (including its predecessors-in-interest) beneficially owning a number of shares of Common Stock in excess of the applicable Threshold Amount that has not been approved by the Corporation's stockholders in accordance with the stockholder approval requirements of Nasdaq Marketplace Rule 5635.

(e) Mechanics of Conversion

(i) Delivery of Certificate or Electronic Issuance Upon Conversion. Not later than two (2) Trading Days after the applicable Conversion Date, or if the Holder holds shares of Class A-1 Preferred Stock in certificated form, two (2) Trading Days after receipt by the Corporation of the original certificate(s) representing such shares of Class A-1 Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion (the "**Share Delivery Date**"), the Corporation shall (a) issue in book-entry form or, if requested by any Holder, a physical certificate or certificates, the number of Conversion Shares being acquired upon the conversion of shares of Class A-1 Preferred Stock, and deliver, or cause to be delivered, to the converting Holder a book-entry notation or such physical certificate or certificates evidencing such shares, or (b) in the case of a DWAC Delivery (if so requested by the Holder to the extent permitted by Section 6(a) hereof), electronically transfer such Conversion Shares by crediting the DTC participant account nominated by the Holder through DTC's DWAC system. If in the case of any Notice of Conversion such certificate or certificates are not delivered to or as directed by or, in the case of a book-entry issuance or DWAC Delivery,

such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Conversion Notice by written notice to the Corporation at any time on or before its receipt of such certificate or certificates for Conversion Shares or electronic receipt of such shares, as applicable, in which event the Corporation shall promptly return to such Holder any original Class A-1 Preferred Stock certificate delivered to the Corporation and such Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder through the DWAC system, representing the shares of Class A-1 Preferred Stock unsuccessfully tendered for conversion to the Corporation.

(ii) Obligation Absolute. Subject to Sections 6(c) and 6(d) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(e)(i) above, the Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Class A-1 Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares. Subject to Sections 6(c) and 6(d) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(e)(i) above, in the event a Holder shall elect to convert any or all of its Class A-1 Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or anyone associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and/or enjoining conversion of all or part of the Class A-1 Preferred Stock of such Holder shall have been sought and obtained by the Corporation, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the value of the Conversion Shares into which would be converted the Class A-1 Preferred Stock which is subject to such injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment. In the absence of such injunction, the Corporation shall, subject to Sections 6(c) and 6(d) hereof and subject to Holder's right to rescind a Conversion Notice pursuant to Section 6(e)(i) above, issue Conversion Shares upon a properly noticed conversion. Nothing herein shall limit a Holder's right to pursue actual damages for the Corporation's failure to deliver Conversion Shares within the period specified herein and such Holder shall have the right to pursue all remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief; provided that Holder shall not receive duplicate damages for the Corporation's failure to deliver Conversion Shares within the period specified herein. The exercise of any such rights shall not prohibit a Holder from seeking to enforce damages pursuant to any other Section hereof or under applicable law.

(iii) Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Conversion. In addition to any other rights available to the Holder, if the Corporation fails for any reason to deliver to a Holder the applicable certificate or certificates or to effect a DWAC Delivery, as applicable, by the Share Delivery Date pursuant to Section 6(e)(i) (other than a failure caused by incorrect or incomplete information provided by Holder to the Corporation), and if after such Share Delivery Date such Holder is required to or otherwise purchases (in an open market transaction or otherwise), shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "**Buy-In**"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount by which (x) such Holder's total purchase price (including any brokerage commissions) for the shares of Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of such Holder, either reissue (if surrendered) the shares of Class A-1 Preferred Stock equal to the number of shares of Class A-1 Preferred Stock submitted for conversion or deliver to such Holder the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(e)(i). For example, if a Holder purchases shares of Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted conversion of shares

of Class A-1 Preferred Stock with respect to which the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of $10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder $1,000. The Holder shall provide the Corporation written notice, within three (3) Trading Days after the occurrence of a Buy-In, indicating the amounts payable to such Holder in respect of such Buy-In together with applicable confirmations and other evidence reasonably requested by the Corporation. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Corporation's failure to timely deliver certificates representing shares of Common Stock upon conversion of the shares of Class A-1 Preferred Stock as required pursuant to the terms hereof; provided, however, that the Holder shall not be entitled to both (i) require the reissuance of the shares of Class A-1 Preferred Stock submitted for conversion for which such conversion was not timely honored and (ii) receive the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6(e)(i).

(iv) Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Class A-1 Preferred Stock, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holders of the Class A-1 Preferred Stock, not less than such aggregate number of shares of the Common Stock as shall be issuable (taking into account the adjustments of Section 7) upon the conversion of all outstanding shares of Class A-1 Preferred Stock. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid, non-assessable and free and clear of all liens and other encumbrances.

(v) Fractional Shares. No fractional shares or scrip representing fractional shares of Common Stock shall be issued upon the conversion of the Class A-1 Preferred Stock. As to any fraction of a share which a Holder would otherwise be entitled to receive upon such conversion, the Corporation shall pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price.

(vi) Transfer Taxes and Expenses. The issuance of certificates (or book entry notations) for shares of the Common Stock upon conversion of the Class A-1 Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates (or such book entry notation), provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate (or such book entry notation) upon conversion in a name other than that of the registered Holder(s) of such shares of Class A-1 Preferred Stock and the Corporation shall not be required to issue or deliver such certificates (or such book entry notation) unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid. The Corporation shall pay any transfer agent fees required for same-day processing of any Notice of Conversion and any fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Conversion Shares.

(f) Status as Stockholder. Upon each Conversion Date: (i) the shares of Class A-1 Preferred Stock being converted shall be deemed converted into shares of Common Stock; and (ii) the Holder's rights as a holder of such converted shares of Class A-1 Preferred Stock shall cease and terminate, excepting only the right to receive certificates (or book entry notations) for such shares of Common Stock and to any remedies provided herein or otherwise available at law or in equity to such Holder because of a failure by the Corporation to comply with the terms of this Certificate of Designation. In all cases, the holder shall retain all of its rights and remedies for the Corporation's failure to convert Class A-1 Preferred Stock.

Section 7. Certain Adjustments.

(a) Stock Dividends and Stock Splits. If the Corporation, at any time while any shares of Class A-1 Preferred Stock are outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock with respect to the then outstanding shares of Common Stock; (ii) subdivides outstanding shares of Common Stock into a larger number of shares; or (iii) combines (including by way of a reverse stock split)

outstanding shares of Common Stock into a smaller number of shares, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event (excluding any treasury shares of the Corporation). Any adjustment made pursuant to this Section 7(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.

(b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 7(a) above, if at any time the Corporation grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "**Purchase Rights**"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of such Holder's Class A-1 Preferred Stock (without regard to any limitations on exercise hereof) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights.

(c) Pro Rata Distributions. During such time as the Class A-1 Preferred Stock is outstanding, if the Corporation declares or makes any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "**Distribution**"), at any time after the issuance of the Class A-1 Preferred Stock, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of the Class A-1 Preferred Stock (without regard to any limitations on conversion hereof) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution.

(d) Fundamental Transaction. If, at any time while any shares of Class A-1 Preferred Stock are outstanding, (i) the Corporation, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Corporation with or into another Person, (ii) the Corporation, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Corporation, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Corporation, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination and excluding shares acquired upon conversion of any currently outstanding convertible securities in accordance with the terms thereof as in effect on the date hereof) (each, a "**Fundamental Transaction**"), then, upon any subsequent conversion of the Class A-1 Preferred Stock, each Holder shall have the right to receive, in lieu of the right to receive Conversion Shares, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 6(c) on the conversion of the Class A-1 Preferred Stock), the number of shares of Common Stock of the successor or acquiring corporation or of the Corporation, if it is the surviving corporation, and/or any additional or other consideration (the "**Alternate Consideration**") as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of one share of Common Stock (without regard to any limitation in Section 6(c) on the conversion of the Class A-1

Preferred Stock). For purposes of any such subsequent conversion, the determination of the Conversion Ratio shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall adjust the Conversion Ratio in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then each Holder shall be given the same choice as to the Alternate Consideration it receives upon conversion of the Class A-1 Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The terms of any agreement to which the Corporation is a party and pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 7(d) and insuring that this Class A-1 Preferred Stock (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction.

(e) Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the number of shares of Common Stock issued and outstanding (excluding any treasury shares of the Corporation).

(f) Notice to the Holders.

(i) Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly deliver to each Holder a notice setting forth the Conversion Ratio after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

(ii) Other Notices. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of the shares of Class A-1 Preferred Stock, and shall cause to be delivered to each Holder at its last address as it shall appear upon the stock books of the Corporation, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Corporation, the Corporation shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to convert the Conversion Shares of the Class A-1 Preferred Stock (or any part hereof) during the 20-day period commencing on the date of such notice through the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 8. Miscellaneous.

(a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally, by facsimile, via email, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 10628 Science Center Drive, San Diego, California 92121, Attention: Dan Chevallard, email: dchevallard@regulusrx.com, with a copy (which shall not constitute notice) to: Cooley LLP, 4401 Eastgate Mall, San Diego, California 92121, Attention: Ken Rollins, email: krollins@cooley.com; or such other email address or mailing address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by email or sent by a nationally recognized overnight courier service addressed to each Holder at the email address or mailing address of such Holder appearing on the books of the Corporation, or if no such email address or mailing address appears on the books of the Corporation, at the principal place of business of such Holder. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of: (i) the date of transmission, if such notice or communication is delivered via email prior to 5:30 p.m. (New York City time) on any date, (ii) the date immediately following the date of transmission, if such notice or communication is delivered via email between 5:30 p.m. and 11:59 p.m. (New York City time) on any date, (iii) the second Business Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

(b) Lost or Mutilated Class A-1 Preferred Stock Certificate. If a Holder's Class A-1 Preferred Stock certificate, if applicable, shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, if requested by the Holder, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Class A-1 Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership thereof, reasonably satisfactory to the Corporation and, in each case, customary and reasonable indemnity, if requested. Applicants for a new certificate under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Corporation may prescribe.

(c) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation. Any waiver by the Corporation or a Holder must be in writing. Notwithstanding any provision in this Certificate of Designation to the contrary, any provision contained herein and any right of the Holders of Class A-1 Preferred Stock granted hereunder may be waived as to all shares of Class A-1 Preferred Stock (and the Holders thereof) upon the written consent of the Holders of a majority of the shares of Class A-1 Preferred Stock then outstanding, unless a higher percentage is required by the DGCL, in which case the written consent of the Holders of not less than such higher percentage shall be required.

(d) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

(e) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

(f) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

(g) Status of Converted Class A-1 Preferred Stock. If any shares of Class A-1 Preferred Stock shall be converted by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Class A-1 Preferred Stock.

(h) Redemption by the Corporation. The Class A-1 Preferred Stock shall not be redeemable by the Corporation.

****

IN WITNESS WHEREOF, Regulus Therapeutics Inc. has caused this Certificate of Designation of Preferences, Rights and Limitations of Class A-1 Convertible Preferred Stock to be executed by its duly authorized officer this 6th day of May, 2019.

/s/ Joseph P. Hagan
Joseph P. Hagan
President and Chief Executive Officer

ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER
IN ORDER TO CONVERT SHARES OF CLASS A-1 PREFERRED STOCK)

The undersigned Holder hereby irrevocably elects to convert the number of shares of Class A-1 Preferred Stock indicated below, represented by stock certificate No(s)._____ or book entry notation (the "**Preferred Stock Certificates**"), into shares of common stock, par value $0.001 per share (the "**Common Stock**"), of Regulus Therapeutics Inc., a Delaware corporation (the "**Corporation**"), as of the date written below. If securities are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto. Capitalized terms utilized but not defined herein shall have the meaning ascribed to such terms in that certain Certificate of Designation of Preferences, Rights and Limitations of Class A-1 Convertible Preferred Stock (the "**Certificate of Designation**") filed by the Corporation with the Delaware Secretary of State on May 6, 2019.

As of the date hereof, the number of shares of Common Stock beneficially owned by the undersigned Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) or Section 16 of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member (the foregoing, "**Attribution Parties**")), including the number of shares of Common Stock issuable upon conversion of the Class A-1 Preferred Stock subject to this Notice of Conversion, but excluding the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Class A-1 Preferred Stock beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Attribution Parties that are subject to a limitation on conversion or exercise similar to the limitation contained in Section 6(c) of the Certificate of Designation, is _____%. For purposes hereof, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission.

Conversion calculations:

Date to Effect Conversion: _____

Number of shares of Class A-1 Preferred Stock owned prior to Conversion: _____

Number of shares of Class A-1 Preferred Stock to be Converted: _____

Number of shares of Common Stock to be Issued: _____

Address for delivery of physical certificates: _____

Or

for DWAC Delivery: _____

DWAC Instructions: _____

Broker no: _____

Account no: _____

HOLDER

By: _____

Name: _____

Title: _____

Date: _____

NEITHER THIS SECURITY NOR THE SECURITIES FOR WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS. THIS SECURITY AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

TRANCHE [1] [2] COMMON STOCK PURCHASE WARRANT

REGULUS THERAPEUTICS INC.

Warrant Shares: [_____]

Initial Exercise Date: [_____]
Issue Date:[_____]

THIS TRANCHE [1] [2] COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received,[_____] or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Initial Exercise Date") and until 5:00 p.m. (New York City time) on [_____][1] (the "Termination Date") but not thereafter, to subscribe for and purchase from Regulus Therapeutics Inc., a Delaware corporation (the "Company"), up to [_____] shares (as subject to adjustment hereunder, the "Warrant Shares") of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b).

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

"Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act.

"Bid Price" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a

[1] Fifth anniversary of the applicable closing.

Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the "Pink Sheets" published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Commission" means the United States Securities and Exchange Commission.

"Common Stock" means the common stock of the Company, par value $0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

"Common Stock Equivalents" means any securities of the Company or any subsidiaries of the Company which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

"Exchange Act" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"Person" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"Purchase Agreement" means the Securities Purchase Agreement, dated May 3, 2019, by and among the Company and the original Holder of this Warrant and the other parties named therein.

"Securities Act" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"Trading Day" means a day on which the Common Stock is traded on a Trading Market.

"Trading Market" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global

Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

"Transfer Agent" means Computershare, the current transfer agent of the Company, with a mailing address of 250 Royall Street, Canton, MA 02021, and any successor transfer agent of the Company.

"VWAP" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the "Pink Sheets" published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

"Warrants" means this Warrant and other warrants issued by the Company pursuant to the Purchase Agreement.

Section 2. Exercise.

a) Exercise of Warrants. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly executed e-mail attachment of the Notice of Exercise in the form annexed hereto (the "Notice of Exercise"). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price to the Company for the Warrant Shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall

surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

b) Exercise Price. The exercise price per share of the Common Stock under this Warrant shall be $[__]2, subject to adjustment hereunder (the "Exercise Price").

c) Cashless Exercise. This Warrant may also be exercised, in whole or in part, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of "regular trading hours" (as defined in Rule 600(b)(64) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder's execution of the applicable Notice of Exercise if such Notice of Exercise is executed during "regular trading hours" on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of "regular trading hours" on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of "regular trading hours" on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

2 Equal to 100% of the purchase price of the shares (as-converted, if applicable) at the applicable closing.

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by book-entry form or, if requested by the Holder, a physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earlier of (i) the earlier of (A) two (2) Trading Days after the delivery to the Company of the Notice of Exercise and (B) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (ii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the "Warrant Share Delivery Date"). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a

Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date (other than a failure caused by incorrect or incomplete information provided by Holder to the Company), and if after such date the Holder is required to or otherwise purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder was entitled to receive upon the exercise relating to such Warrant Share Delivery Date (a "Buy-In"), then the Company shall (A) pay in cash to the Holder (in addition to any other remedies available to or elected by such Holder) the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that the Holder was entitled to receive in connection with the exercise at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions), and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued if the Company had timely complied with its exercise and delivery obligations requirements under Section 2(d)(i). For example, if the Holder purchases shares of Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with respect to which the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of $10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder $1,000. The Holder shall provide the Company written notice, within three (3) Trading Days after the occurrence of a Buy-In, indicating the amounts payable to the Holder in respect of the Buy-In together with applicable confirmations and other evidence reasonably requested by the Company. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof; provided,

however, that the Holder shall not be entitled to both (i) require the Company to reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not timely honored and (ii) receive the number of shares of Common Stock that would have been issued if the Company had timely complied with its delivery requirements under Section 2(d)(i).

iv. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

v. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vi. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of

shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one (1) Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall initially be [9.99]%[3] of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds [19.99]%[4] of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in

[3] Each warrant to either reflect 4.99%, 9.99% or 19.99% based on particular investor's preference.

[4] Each warrant to either reflect 9.99% or 19.99% based on particular investor's preference.

the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case on the effective date, the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then in each case on the effective date, the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common

Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock other than as set forth in Section 3(a), by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case on the effective date, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or

other business combination and excluding shares acquired upon conversion of any currently outstanding convertible securities in accordance with the terms thereof as in effect on the date hereof) (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and/or any additional or other consideration (the "Alternate Consideration") as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of one share of Common Stock (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and reasonably approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder and to the extent applicable in light of the structure of the Fundamental Transaction, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) (only to the extent such capital stock is the form of consideration paid in the Fundamental Transaction) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of

the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

e) Black Scholes Value. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity shall, at the Holder's option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction, purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, if the Fundamental Transaction is not within the Company's control, including not approved by the Company's Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity, as of the date of consummation of such Fundamental Transaction, the same type or form of consideration (and in the same proportion), at the Black Scholes Value (as defined below) of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction. "Black Scholes Value" means the value of this Warrant based on the Black and Scholes Option Pricing Model obtained from the "OV" function on Bloomberg, L.P. ("Bloomberg") determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 75% and the 100 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, or, if the Fundamental Transaction is not publicly announced, the date the Fundamental Transaction is consummated, (C) the underlying price per share used in such calculation shall be the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction, (D) a zero cost of borrow and (E) a 360 day annualization factor. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds within five Business Days of the Holder's election (or, if later, on the effective date of the Fundamental Transaction).

f) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

g) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall

promptly deliver to the Holder by email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by email to the Holder at its last email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, liquidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, liquidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any subsidiaries of the Company, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within two (2) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the Issue Date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

d) Transfer Restrictions. If, at the time of the surrender of this Warrant in connection with any transfer of this Warrant, the transfer of this Warrant shall not be either (i) registered pursuant to an effective registration statement under the Securities Act and under applicable state securities or blue sky laws or (ii) eligible for resale pursuant to Rule 144, the Company may require, as a condition of allowing such transfer, that the Holder or transferee of this Warrant, as the case may be, provide to the Company an opinion of counsel selected by the Holder and reasonably acceptable to the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Warrant under the Securities Act.

e) Representation by the Holder. The Holder, by the acceptance hereof, represents and warrants that it is acquiring this Warrant and, upon any exercise hereof, will acquire the Warrant Shares issuable upon such exercise, for its own account and not with a view to or for distributing or reselling such Warrant Shares or any part thereof in violation of the Securities Act or any applicable state securities law, except pursuant to sales registered or exempted under the Securities Act.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting the rights of a Holder to receive Warrant Shares on a "cashless exercise," in no event will the Company be required to net cash settle a Warrant exercise.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or any stock certificate, if mutilated, the Company will make and deliver a new Warrant or issue stock (in certificated or book entry form) of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then, such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized,

validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof (whether of the State of New York or any other jurisdiction) which would result in the application of the laws of any other jurisdiction. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the

address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant or the Purchase Agreement pursuant to which this Warrant was issued, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at Regulus Therapeutics Inc., 10628 Science Center Drive, Suite 100, San Diego, California 92121, Attention: Chief Financial Officer, email address: dchevallard@regulusrx.com, or such other email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the

Company or any subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

****

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

REGULUS THERAPEUTICS INC.

By: _____
Name: Dan Chevallard
Title: Chief Financial Officer

NOTICE OF EXERCISE

TO: **REGULUS THERAPEUTICS INC.**

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

☐ in lawful money of the United States; or

☐ if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

_____

The Warrant Shares shall be delivered to the following DWAC Account Number:

_____

_____

_____

[SIGNATURE OF HOLDER]

Name of Investing Entity: _____

Signature of Authorized Signatory of Investing Entity: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

EXHIBIT B

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____ __, _____

Holder's Signature: _____

Holder's Address: _____

Exhibit 10.1

Execution Version

SECURITIES PURCHASE AGREEMENT

This **SECURITIES PURCHASE AGREEMENT** (this ***"Agreement"***), dated as of May 3, 2019, is made by and among **REGULUS THERAPEUTICS INC.**, a Delaware corporation (the ***"Company"***), and the Purchasers listed on **Exhibit A** hereto, together with their permitted transferees (each, a ***"Purchaser"*** and collectively, the ***"Purchasers"***).

RECITALS:

A. The Company and the Purchasers are executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act.

B. The Purchasers desire to purchase and the Company desires to sell, upon the terms and conditions stated in this Agreement, shares of Common Stock (the ***"Common Shares"***), warrants to purchase Common Stock (***"Warrants"***) and shares of Class A Convertible Preferred Stock (the ***"Preferred Shares"*** and, together with the Common Shares, the ***"Shares"***), having an aggregate purchase price of up to $41,842,218.87 as more fully described in this Agreement.

C. The capitalized terms used herein and not otherwise defined have the meanings given them in Article 7.

AGREEMENT

In consideration of the premises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the Purchasers (severally and not jointly) hereby agree as follows:

ARTICLE 1

PURCHASE AND SALE OF SECURITIES

1.1 Initial Closing.

(a) Purchase and Sale of Securities. At the initial closing of the transaction contemplated by this Agreement (the ***"Initial Closing"***), the Company will sell and issue to each Purchaser, and each Purchaser will, severally and not jointly, purchase from the Company, (A) the number of Common Shares equal to (x) the dollar amount set forth opposite such Purchaser's name on **Exhibit A** hereto under the heading "Initial Closing Common Shares Subscription Amount" divided by (y) the Initial Market Price, rounded down to the nearest whole share; *provided, however,* in the event the number of Common Shares resulting from the foregoing calculation would result in such Purchaser, together with its Attribution Parties, beneficially owning in excess of the Beneficial Ownership Limitation of the outstanding Common Stock immediately after the Initial Closing, then (i) the number of Common Shares otherwise issuable to such Purchaser at the Initial Closing will be reduced by the number (such number, the "***Initial Overage Number***") of Common Shares that would result in such Purchaser beneficially owning, together with its Attribution Parties, no more than the Beneficial Ownership Limitation of the outstanding Common Stock immediately after the Initial Closing, and (ii) the Company will issue to such Purchaser at the Initial Closing the maximum number of whole Preferred Shares which are convertible (in the aggregate and without regard to any conversion limitations) into a number of Preferred Conversion Shares that does not exceed the Initial Overage Number; and (B) a Warrant in the form attached hereto as **Exhibit B** exercisable for a number of shares of Common Stock equal to the number of Common Shares purchased by the Purchaser at the Initial Closing plus, if applicable, the number of Preferred Conversion Shares issuable upon conversion of the Preferred Shares purchased by the Purchaser at the Initial Closing. The Common Shares, Warrants and Preferred Shares to be issued in the Initial Closing are collectively referred to herein as the "***Initial Closing Securities***".

(b) Payment. At the Initial Closing, each Purchaser will pay to the Escrow Agent for the Initial Closing, by wire transfer of immediately available funds in accordance with the Escrow Agreement for the Initial Closing, the amount set forth opposite its name on **Exhibit A** hereto under the heading "Initial Closing Common Shares Subscription Amount" plus the product of (x) $0.125 multiplied by (y) each share of Common Stock issuable upon exercise of the Warrant (without regard to any exercise limitations set forth in the Warrant) to be issued to such Purchaser at the Initial Closing (the ***"Initial Closing Warrant Subscription Amount"***). The Company will (i) instruct its transfer agent to credit each Purchaser the number of Common Shares purchased by the Purchaser pursuant to Section 1.1 hereof (and, upon request, will deliver stock certificates to such Purchaser representing such Common Shares), (ii) deliver to each Purchaser the Warrant purchased by such Purchaser pursuant to Section 1.1 hereof and (iii) if applicable, issue a certificate evidencing the Preferred Shares purchased by such Purchaser pursuant to Section 1.1 hereof.

(c) Initial Closing Date. The Initial Closing will take place as soon as reasonably practicable after the date hereof but no later than May 7, 2019 (the date on which the Initial Closing actually occurs, the ***"Initial Closing Date"***) and the Initial Closing will be held remotely via the exchange of documents and signatures, or at such other time and place as agreed upon by the Company and the Purchasers subscribing for a majority of the Initial Closing Securities to be sold and issued in the Initial Closing hereunder (the Preferred Shares to be counted on an as-converted-to-common-stock basis), based on the amounts set forth on **Exhibit A** hereto under the heading "Initial Closing Common Shares Subscription Amount".

1.2 Milestone Closing.

(a) Purchase and Sale of Securities. In the event the Company's Board of Directors unanimously resolves to recommence the Phase 1 multiple ascending dose clinical trial of its RGLS4326 product candidate for the treatment of autosomal dominant polycystic kidney disease (ADPKD) (the ***"Phase 1 Trial"***) based on correspondence from the FDA's Division of Cardiovascular and Renal Products, and thereafter but on or before December 31, 2019 the Company makes a public announcement of its plan to recommence the Phase 1 Trial (the ***"Public Announcement"***), there shall be a closing under this Agreement (the ***"Milestone Closing"*** and, together with the Initial Closing, the ***"Closings"*** and each a ***"Closing"***) at which the Company will sell and issue to each Purchaser, and each Purchaser will, severally and not jointly, purchase from the Company, the maximum number of whole Preferred Shares which are convertible (in the aggregate and without regard to any conversion limitations) into a number of Preferred Conversion Shares that does not exceed the quotient of (x) the dollar amount set forth opposite such Purchaser's name on **Exhibit A** hereto under the heading "Milestone Closing Shares Subscription Amount" divided by (y) the Milestone Price, rounded down to the nearest whole share; and (B) a Warrant in the form attached hereto as **Exhibit B** exercisable for a number of shares of Common Stock equal to the number of Preferred Conversion Shares issuable upon conversion of the Preferred Shares purchased by the Purchaser at the Milestone Closing. The Preferred Shares and the Warrants to be issued in the Milestone Closing are collectively referred to herein as the ***"Milestone Securities"*** and, together with the Initial Closing Securities, are referred to herein as the ***"Securities"***.

(b) Payment. At the Milestone Closing, each Purchaser will pay to the applicable Escrow Agent for the Milestone Closing, by wire transfer of immediately available funds in accordance with the applicable Escrow Agreement for the Milestone Closing, the amount set forth opposite its name on **Exhibit A** hereto under the heading "Milestone Closing Shares Subscription Amount" plus the product of (x) $0.125 multiplied by (y) each share of Common Stock issuable upon exercise of the Warrant (without regard to any exercise limitations set forth in the Warrant) to be issued to such Purchaser at the Milestone Closing (the ***"Milestone Closing Warrant Subscription Amount"***). The Company will deliver to each Purchaser (i) a certificate evidencing the Preferred Shares purchased by such Purchaser pursuant to Section 1.2 hereof and (ii) the Warrant purchased by such Purchaser pursuant to Section 1.2 hereof.

(c) Milestone Closing Date. The Milestone Closing will take place as soon as reasonably practicable after the Public Announcement, but no later than the fifth Business Day after the determination of the Milestone Price (the date on which the Milestone Closing actually occurs, the ***"Milestone Closing Date"***), or at such other time and place as agreed upon by the Company and the Purchasers subscribing for a majority of the Milestone Securities to be sold and issued in the Milestone Closing hereunder (the Preferred Shares to be counted on an as-converted-to-common-stock basis), based on the amounts set forth on **Exhibit A** hereto under the heading "Milestone Closing Shares Subscription Amount". Notwithstanding any other provision of this Agreement, if the Alternative Milestone Price is less than $0.50 per share (as adjusted for any stock splits or combinations occurring after the date of this Agreement), then the Milestone Closing will not occur and no party to this Agreement will have any right or obligation to sell, issue or purchase the Milestone Securities.

ARTICLE 2

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

Except as specifically contemplated by this Agreement, the Company hereby represents and warrants to the Purchasers and the Placement Agent as of the date of this agreement that:

2.1 Good Standing of the Company. The Company has been duly incorporated, is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation, has the corporate power and authority to own its property and to conduct its business as described in the reports, schedules, forms, statements and other documents required to be filed by it with the SEC, pursuant to the reporting requirements of the Exchange Act (all of the foregoing filed prior to the date hereof and all exhibits included therein and financial statements and schedules thereto and documents (other than exhibits) incorporated by reference therein, the ***"SEC Documents"***) and is duly qualified to transact business and is in good standing in each jurisdiction in which the conduct of its business or its ownership or leasing of property requires such qualification, except to the extent that the failure to be so qualified or be in good standing would not have a Material Adverse Effect on the Company.

2.2 Authorization of Capital Stock. The authorized capital stock of the Company consists of 200,000,000 shares of Common Stock, $0.001 par value per share, and 10,000,000 shares of Preferred Stock, $0.001 par value per share. As of May 2, 2019, 10,817,916 shares of Common Stock were issued and outstanding and no shares of Preferred Stock were issued or outstanding. The shares of capital stock of the Company, including the Common Stock outstanding prior to the issuance of the Securities, the shares of Common Stock issuable upon exercise of the Warrants (the ***"Warrant Shares"***) and the shares of Common Stock issuable upon conversion of the Class A Convertible Preferred Stock (the ***"Preferred Conversion Shares"*** and, together with the Warrant Shares, the "***Conversion Shares***"), have been duly authorized and are validly issued, fully paid and non-assessable and were not issued in violation of the preemptive or similar rights of any security holder of the Company.

2.3 Authorization of Shares. The Shares and Conversion Shares have been duly authorized and, when issued and delivered in accordance with the terms of this Agreement (and, in the case of the Warrant Shares, the Warrants, and in the case of the Preferred Conversion Shares, the Certificate of Designation), will be validly issued, fully paid and non-assessable, and the issuance of such Shares and Conversion Shares will not be subject to any preemptive or similar rights of stockholders of the Company.

2.4 Private Placement. Neither the Company nor any of its Affiliates, nor any Person acting on its or their behalf, has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under any circumstances that would require registration of the Securities under the Securities Act. Assuming the accuracy of the representations and warranties of the Purchasers contained in Article 3 hereof, the issuance of the Securities and the Conversion Shares are exempt from registration under the Securities Act.

2.5 Authorization and Execution of Agreement. This Agreement has been duly authorized, executed and delivered by the Company. The Company has all requisite corporate power and authority to execute, deliver and perform its obligations under this Agreement.

2.6 Absence of Defaults and Conflicts. Except as otherwise disclosed in the SEC Documents, the Company is not (i) in violation of its charter, by-laws or similar incorporation or organizational documents or (ii) in violation or default in the performance or observance of any obligation, agreement, covenant or condition contained in any contract, indenture, mortgage, deed of trust, loan or credit agreement, note, lease or other agreement or instrument to which the Company is a party or by which it may be bound, or to which any of the property or assets of the Company is subject (collectively, ***"Agreements and Instruments"***), except in the case of clause (ii), for such violations and defaults that would not result in a Material Adverse Effect on the Company; and the execution, delivery and performance of this Agreement and the consummation of the transactions contemplated in this Agreement, and compliance by the Company with its obligations under this Agreement, do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or result in a breach of any of the terms and provisions of, or constitute a default or Repayment Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to, the Agreements and Instruments, nor will such action result in any violation of the provisions of the charter, by-laws or similar organizational documents of the Company or any applicable law, statute, rule, regulation, judgment, order, writ or decree of any government, government instrumentality or court, domestic or foreign, having jurisdiction over the Company or any of its assets, properties or operations, except in each case (other than with respect to such charter, by-laws or similar organizational documents of the Company) for such conflicts, violations, breaches or defaults which would not reasonably be expected to result in a Material Adverse Effect on the Company. As used herein, a ***"Repayment Event"*** means any event or condition which gives the holder of any note, debenture or other evidence of indebtedness that is material to the operations or financial results of the Company (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company.

2.7 Absence of Further Requirements. No filing with, or authorization, approval, consent, license, order, registration, exemption, qualification or decree of, any court or governmental authority or agency or any sub-division thereof is required for the performance by the Company of its obligations hereunder, in connection with the offering, issuance or sale of the Securities and Conversion Shares under this Agreement or the consummation of the transactions contemplated by this Agreement, except such as have been already obtained or as may be required under the Securities Act or the rules and regulations of the SEC thereunder, state securities or blue sky laws, the rules and regulations of the Financial Industry Regulatory Authority, Inc. ("***FINRA***") or Nasdaq.

2.8 No Material Adverse Effect. Except as otherwise disclosed in the SEC Documents, subsequent to the respective dates as of which information is given in the SEC Documents: (a) the Company has not sustained any material loss or material interference with its business from fire, explosion, flood or other calamity, whether or not covered by insurance, or from any labor dispute or court or governmental action, order or decree, (b) there has not been any change in the capital stock or increase in short-term or long-term debt of the Company, other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise or settlement of outstanding options, warrants or restricted stock units as described in the SEC Documents, and (c) there has not occurred any Material Adverse Effect, or any development that would result in a prospective Material Adverse Effect, in or affecting the condition, financial or otherwise, or in or affecting the revenues, business, assets, management, financial position, stockholders' equity, operations or results of operations or prospects of the Company.

2.9 Absence of Proceedings. There are no legal or governmental proceedings, inquiries or investigations pending or, to the Company's knowledge, threatened to which the Company is a party or to which

any of the properties of the Company is subject, other than proceedings accurately described in all material respects in the SEC Documents or proceedings that would not have a Material Adverse Effect on the Company, or on the power or ability of the Company to perform its obligations under this Agreement or to consummate the transactions contemplated by this Agreement.

2.10 Investment Company Act of 1940. The Company is not, and after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described herein will not be, required to register as an "investment company" as such term is defined in the Investment Company Act of 1940, as amended.

2.11 Registration Rights. Except as described in the SEC Documents, there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company or to require the Company to include such securities with the Shares and Conversion Shares registered pursuant to a Registration Statement other than rights that have been validly waived.

2.12 Title to Real and Personal Property. Except as set forth in the SEC Documents, the Company has good and marketable title in fee simple to all real property and good and marketable title to all personal property owned by it which is material to the business of the Company, in each case free and clear of all liens, encumbrances and defects, except such as are described in the SEC Documents or such as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company; and any real property and buildings held under lease by the Company are held by it under valid, subsisting and enforceable leases with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company.

2.13 Title to Intellectual Property. Except as disclosed in the SEC Documents, the Company owns, possesses, licenses or has other rights to use all patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, technology, know-how and other intellectual property that, to the knowledge of the Company, is necessary for the conduct of the Company's business as now conducted (as described in the SEC Documents, collectively, the ***"Company Intellectual Property"***), and, to the Company's knowledge, the patents, trademarks, and copyrights included within the Company Intellectual Property are valid, enforceable, and subsisting. Except as set forth in the SEC Documents or except in each case as would not reasonably be expected to have a Material Adverse Effect on the Company: (a) there are no material rights of third parties to any such Company Intellectual Property; (b) to the Company's knowledge, there is no material infringement by third parties of any such Company Intellectual Property; (c) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the Company's rights in or to any such Company Intellectual Property; (d) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Company Intellectual Property; (e) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others that the Company infringes or otherwise violates any patent, trademark, copyright, trade secret or other proprietary rights of others; (f) to the Company's knowledge, there is no U.S. patent which contains claims that dominate any Company Intellectual Property described in the SEC Documents or that interferes under 35 U.S.C. §102(g) with the pending claims of any Company Intellectual Property; (g) to the Company's knowledge, there is no prior art of which the Company is aware that would render any U.S. patent held by the Company invalid which has not been disclosed to the U.S. Patent and Trademark Office (the ***"PTO"***); and (h) the Company is not obligated to pay a material royalty, grant a license, or provide other material consideration to any third party in connection with the Company Intellectual Property. Except as otherwise disclosed in the SEC Documents, to the Company's knowledge, all patents and patent applications owned by the Company and filed with the PTO or any foreign or international patent authority (the ***"Company Patent Rights"***) and all patents and patent applications in-licensed by the Company and filed with the PTO or any foreign or

international patent authority (the ***"In-licensed Patent Rights"***) have been duly and properly filed; the Company has complied with their duty of candor and disclosure to the PTO for the Company Patent Rights and, to the Company's knowledge, the licensors of the In-licensed Patent Rights have complied with their duty of candor and disclosure to the PTO for the In-licensed Patent Rights.

2.14 Insurance. Except as set forth in the SEC Documents, the Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the business in which it is engaged; the Company has not been refused any coverage sought or applied for; and the Company does not have any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Effect on the Company.

2.15 Licenses and Permits. Except as set forth in the SEC Documents, the Company possesses all certificates, authorizations, consents, approvals, orders, licenses and permits issued by the appropriate federal, state or foreign regulatory authorities (collectively, the ***"Permits"***), including the FDA and any other state, federal or foreign agencies or bodies engaged in the regulation of pharmaceuticals or biohazardous materials, necessary to conduct its business as now conducted and described in the SEC Documents, other than such certificates, authorizations, consents, approvals, orders, licenses and permits, the lack of which would not individually or in the aggregate have a Material Adverse Effect on the Company. Except as otherwise disclosed in the SEC Documents, all of such Permits are valid and in full force and effect, except where the invalidity of such Permits or the failure to be in full force and effect, individually or in the aggregate, would not have a Material Adverse Effect on the Company. Except as otherwise disclosed in the SEC Documents, there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or investigation that individually or in the aggregate would reasonably be expected to lead to the revocation, modification, termination, suspension or any other impairment of the rights of the holder of any such Permit which revocation, modification, termination, suspension or other impairment would have a Material Adverse Effect on the Company.

2.16 Accounting Controls. The Company has taken all actions reasonably necessary to ensure that, within the time period required by applicable law, the Company will have established and will maintain a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) sufficient to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with United States generally accepted accounting principles (***"U.S. GAAP"***). Except as set forth in the SEC Documents, since the end of the Company's most recent audited fiscal year, there has been (A) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (B) no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

2.17 Disclosure Controls. The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the applicable requirements of the Exchange Act; and such disclosure controls and procedures have been designed to ensure that material information relating to the Company is made known to the Company's principal executive officer and principal financial officer by others within the Company. The Company has carried out evaluations of the effectiveness of its disclosure controls and procedures as required by Rule 13a-15 of the Exchange Act.

2.18 Independent Accountants. Ernst & Young LLP, who have certified the financial statements and supporting schedules of the Company that are included in the SEC Documents and which will be included as a part of the Registration Statement, is an independent registered public accounting firm with respect to the Company as required by the Securities Act and the rules and regulations of the SEC thereunder.

2.19 SEC Documents. The Company has timely filed the SEC Documents required to be filed by it with the SEC since January 1, 2018, pursuant to the reporting requirements of the Exchange Act. As of their respective dates, the SEC Documents complied in all material respects with the requirements of the Exchange Act or the Securities Act, as the case may be, and the rules and regulations of the SEC promulgated thereunder applicable to the SEC Documents, and none of the SEC Documents, at the time they were filed with the SEC, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

2.20 Financial Statements. (a) The financial statements included in the SEC Documents, together with the related schedules and notes, present fairly, in all material respects, the financial position of the Company at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company for the periods specified; said financial statements have been prepared in conformity with U.S. GAAP applied on a consistent basis throughout the periods involved except, in the case of unaudited interim financial statements, for normal year-end audit adjustments and the exclusion of footnotes. The selected financial data and the summary financial information included in the SEC Documents present fairly, in all material respects, the information shown therein and have been compiled on a basis consistent in all material respects with that of the audited financial statements included in the SEC Documents. (b) Except as set forth in the SEC Documents, there are no off-balance sheet arrangements, outstanding guarantees or other contingent obligations of the Company that would reasonably be expected to have a Material Adverse Effect on the Company. There are no transactions, arrangements or other relationships between and/or among the Company, any of its affiliates (as such term is defined in Rule 405 of the Securities Act) and any unconsolidated entity, including, but not limited to, any structured finance, special purpose or limited purpose entity, that would reasonably be expected to materially affect the Company's liquidity or the availability of or requirements for its capital resources required to be described in SEC Documents which have not been described as required.

2.21 Tax Liabilities and Reserves. Other than as set forth in the SEC Documents, any tax returns required to be filed by the Company in any jurisdiction have been filed and any taxes, including any withholding taxes, excise taxes, penalties and interest, assessments and fees and other charges due or claimed to be due from the Company have been paid, other than any of those being contested in good faith and for which adequate reserves have been provided or any of those currently payable without penalty or interest, except to the extent that the failure to so file or pay would not result in a Material Adverse Effect on the Company. There is no material proposed tax deficiency, assessment, charge or levy against the Company, as to which a reserve would be required to be established under U.S. GAAP, that has not been so reserved or that should be disclosed in the SEC Documents that has not been so disclosed, except for any such deficiency, assessment, charge or levy which, individually or in the aggregate, would not have a Material Adverse Effect on the Company.

2.22 Related Party Transactions. Except as described in the SEC Documents, no relationship, direct or indirect, exists between or among the Company, on the one hand, and the directors, officers, stockholders, licensees, licensors or suppliers of the Company, on the other hand, that is required to be described in the SEC Documents which is not so described. There are no outstanding loans, advances (except normal advances for business expense in the ordinary course of business) or guarantees of indebtedness by the Company, to or for the benefit of any of the officers or directors of the Company or any of their respective family members, except as otherwise disclosed in the SEC Documents.

2.23 Commission Agreements. The Company is not a party to any contract, agreement or understanding with any person that would give rise to a valid claim against the Company or the Placement Agent for a brokerage commission, finder's fee or like payment in connection with any transaction contemplated by this Agreement, except for dealings with the Placement Agent, whose commissions and fees will be paid by the Company.

2.24 Foreign Corrupt Practices Act. Except as otherwise disclosed in the SEC Documents, neither the Company nor, to the Company's knowledge, any of its affiliates, directors, officers, employees, agents or other person acting on behalf of the Company is aware of or has taken any action, directly or indirectly, that would result in a material violation by such person of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the ***"FCPA"***), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company and, to the Company's knowledge, its affiliates have conducted their businesses in material compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

2.25 Use of Proceeds. The Company shall use the net proceeds of the sale of the Securities hereunder for clinical development, working capital and general corporate purposes.

2.26 Acknowledgment Regarding Purchasers' Purchase of Securities. The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm's length purchaser with respect to this Agreement and the transactions contemplated hereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity with respect to the Company) with respect to this Agreement and the transactions contemplated hereby and any advice given by any Purchaser or any of their respective representatives or agents to the Company in connection with this Agreement and the transactions contemplated hereby is merely incidental to such Purchaser's purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement has been based on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

2.27 No Reliance. The Company has not relied upon the Placement Agent or legal counsel for the Placement Agent for any legal, tax or accounting advice in connection with the offering and sale of the Securities.

2.28 No Manipulation of Stock. The Company has not taken, directly or indirectly, any action designed to stabilize or manipulate the price of the Common Stock or any security of the Company to facilitate the sale or resale of any of the Securities.

2.29 The Nasdaq Capital Market. The Common Stock is listed on The Nasdaq Capital Market, and to the Company's knowledge, there are no proceedings to revoke or suspend such listing. Except as otherwise disclosed in the SEC Documents, the Company is in material compliance with the requirements of Nasdaq for continued listing of the Common Stock thereon and any other Nasdaq listing and maintenance requirements.

Any certificate signed by an authorized officer of the Company and required to be delivered to the Placement Agent or to counsel for the Placement Agent in connection with this Agreement shall be deemed to be a representation and warranty by the Company to the Placement Agent as to the matters set forth therein.

ARTICLE 3

PURCHASER'S REPRESENTATIONS AND WARRANTIES

Each Purchaser represents and warrants to the Company and the Placement Agent, severally and not jointly, with respect to itself and its purchase hereunder, that as of each Closing:

3.1 Investment Purpose. The Purchaser is purchasing the Securities for its own account and not with a present view toward the public sale or distribution thereof and has no intention of selling or distributing any of such Securities or any arrangement or understanding with any other Persons regarding the sale or distribution of such Securities except in accordance with the provisions of Article 6 and except as would not result in a violation of the Securities Act. The Purchaser will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) any of the Securities except in accordance with the provisions of Article 6 or pursuant to and in accordance with the Securities Act.

3.2 Information. The Purchaser has been furnished with all relevant materials relating to the business, finances and operations of the Company necessary to make an investment decision, and materials relating to the offer and sale of the Securities, that have been requested by the Purchaser, including, without limitation, the SEC Documents, and the Purchaser has had the opportunity to review the SEC Documents. The Purchaser has been afforded the opportunity to ask questions of the Company. Neither such inquiries nor any other investigation conducted by or on behalf of such Purchaser or its representatives or counsel shall modify, amend or affect such Purchaser's right to rely on the truth, accuracy and completeness of the SEC Documents and the Company's representations and warranties contained in the Agreement.

3.3 Acknowledgement of Risk.

(a) The Purchaser acknowledges and understands that its investment in the Securities involves a significant degree of risk, including, without limitation, (i) the Company remains a development stage business with limited operating history and requires substantial funds in addition to the proceeds from the sale of the Securities; (ii) an investment in the Company is speculative, and only Purchasers who can afford the loss of their entire investment should consider investing in the Company and the Securities; (iii) the Purchaser may not be able to liquidate its investment; (iv) transferability of the Securities is extremely limited; (v) in the event of a disposition of the Securities, the Purchaser could sustain the loss of its entire investment; and (vi) the Company has not paid any dividends on its Common Stock since inception and does not anticipate the payment of dividends in the foreseeable future. Such risks are more fully set forth in the SEC Documents;

(b) The Purchaser is able to bear the economic risk of holding the Securities for an indefinite period, and has knowledge and experience in financial and business matters such that it is capable of evaluating the risks of the investment in the Securities; and

(c) The Purchaser has, in connection with the Purchaser's decision to purchase Securities, not relied upon any representations or other information (whether oral or written) other than as set forth in the representations and warranties of the Company contained herein and the information disclosed in the SEC Documents, and the Purchaser has, with respect to all matters relating to this Agreement and the offer and sale of the Securities, relied solely upon the advice of such Purchaser's own counsel and has not relied upon or consulted any counsel to the Placement Agent or counsel to the Company.

3.4 Governmental Review. The Purchaser understands that no United States federal or state agency or any other government or governmental agency has passed upon or made any recommendation or endorsement of the Securities or an investment therein.

3.5 Transfer or Resale. The Purchaser understands that:

(a) the Securities have not been and are not being registered under the Securities Act (other than as contemplated in Article 6) or any applicable state securities laws and, consequently, the Purchaser may have to bear the risk of owning the Securities for an indefinite period of time because the Securities may not be transferred unless (i) the resale of the Securities is registered pursuant to an effective registration statement under the Securities Act, as contemplated in Article 6; (ii) the Purchaser has delivered to the Company an opinion of counsel (in form, substance and scope customary for opinions of counsel in comparable transactions) to the effect that the Securities to be sold or transferred may be sold or transferred pursuant to an exemption from such registration; or (iii) the Securities are sold or transferred pursuant to Rule 144;

(b) any sale of the Securities made in reliance on Rule 144 may be made only in accordance with the terms of Rule 144 and, if Rule 144 is not applicable, any resale of the Securities under circumstances in which the seller (or the Person through whom the sale is made) may be deemed to be an underwriter (as that term is defined in the Securities Act) may require compliance with some other exemption under the Securities Act or the rules and regulations of the SEC thereunder; and

(c) except as set forth in Article 6, neither the Company nor any other Person is under any obligation to register the resale of the Securities under the Securities Act or any state securities laws or to comply with the terms and conditions of any exemption thereunder.

3.6 Legends.

(a) The Purchaser understands the certificates or book entries representing the Securities will bear a restrictive legend in substantially the following form, in addition to any other legend required by applicable state securities laws or as may be appropriate to legend any restrictions on transfer set forth in this Agreement (and a stop-transfer order may be placed against transfer of the certificates or book entries for such Securities):

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. THE SECURITIES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER APPLICABLE SECURITIES LAWS, OR UNLESS OFFERED, SOLD, PLEDGED, HYPOTHECATED OR TRANSFERRED PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THOSE LAWS. THE COMPANY SHALL BE ENTITLED TO REQUIRE AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED TO THE EXTENT THAT SUCH OPINION IS REQUIRED PURSUANT TO THAT CERTAIN SECURITIES PURCHASE AGREEMENT UNDER WHICH THE SECURITIES WERE ISSUED.

(b) To the extent the resale of any issued Shares or Warrant Shares is registered under the Securities Act pursuant to an effective Registration Statement, the Company agrees to promptly (i) authorize the removal of the legend set forth in Section 3.6(a) and any other legend not required by applicable law from such Shares or Warrant Shares and (ii) cause its transfer agent to issue such Shares or Warrant Shares without such legends to the holders thereof by electronic delivery at the applicable balance account at the Depository Trust Company upon surrender of any stock certificates evidencing such Shares or Warrant Shares. With respect to any Shares or Warrant Shares for which restrictive legends are removed pursuant to this Section 3.6(b), the holder thereof agrees to only sell such Shares or Warrant Shares when and as permitted by the effective Registration Statement covering such resale and in accordance with applicable securities laws and regulations, or in accordance with Rule 144.

(c) The Purchaser may request that the Company remove, and the Company agrees to authorize the removal of any legend from any Shares or Warrant Shares issued to such Purchaser (i) following

any sale of such Shares or Warrant Shares pursuant to Rule 144, or (ii) if such Shares or Warrant Shares are eligible for sale under Rule 144 following the expiration of the one-year holding requirement under subparagraphs (b)(1)(i) and (d) thereof and the Purchaser is not an affiliate of the Company, in each case following receipt from the Purchaser of an appropriate certification to such effect. Following the time a legend is no longer required for the Shares or Warrant Shares under this Section 3.6(c), the Company will, no later than two Trading Days following the delivery by a Purchaser to the Company or the Company's transfer agent of a legended certificate representing such securities (if any) and appropriate certifications that the applicable requirements have been satisfied (the "***Securities Delivery Date***"), deliver or cause to be delivered to such Purchaser a certificate or evidence of book entry representing such securities that is free from all restrictive and other legends or, in the case of Common Shares, if requested by Purchaser, by crediting such Common Shares to the account of the Purchaser or its designee with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("***DWAC***") if the Company is then a participant in such system ("***DWAC Delivery***"); if the Company fails for any reason to deliver Common Shares via DWAC Delivery (if the Company is then a participant in DWAC) to a Purchaser as required by this Section 3.6(c) (other than a failure caused by incorrect or incomplete information provided by Purchaser to the Company), and if after such Securities Delivery Date such Purchaser is required to or otherwise purchases (in an open market transaction or otherwise), shares of Common Stock to deliver in satisfaction of a sale by such Purchaser of the Common Shares which such Purchaser was entitled to receive relating to such Securities Delivery Date (a ***"Buy-In"***), then the Company shall pay in cash to such Purchaser (in addition to any other remedies available to or elected by such Purchaser) the amount by which (x) such Purchaser's total purchase price (including any brokerage commissions) for the shares of Common Stock so purchased exceeds (y) the product of (1) the lesser of the (a) the number of shares of Common Stock so purchased and (b) the aggregate number of Common Shares that such Purchaser was entitled to receive for the Securities Delivery Date multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions). For example, if a Purchaser purchases shares of Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to Common Shares that were not delivered via DWAC Delivery by the Securities Delivery Date with respect to which the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of $10,000, the Company shall be required to pay such Purchaser $1,000. The Purchaser shall provide the Company written notice, within three (3) Business Days after the occurrence of a Buy-In, indicating the amounts payable to such Purchaser in respect of such Buy-In together with applicable confirmations and other evidence reasonably requested by the Company. Nothing herein shall limit a Purchaser's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver the Common Shares via DWAC Delivery as required pursuant to the terms hereof.

3.7 Authorization; Enforcement. The Purchaser has the requisite power and authority to enter into this Agreement and to consummate the transactions contemplated hereby. The Purchaser has taken all necessary action to authorize the execution, delivery and performance of this Agreement. Upon the execution and delivery of this Agreement, this Agreement shall constitute a valid and binding obligation of the Purchaser enforceable in accordance with its terms, except as enforceability may be limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' and contracting parties' rights generally and except as enforceability may be subject to general principles of equity and except as rights to indemnity and contribution may be limited by state or federal securities laws or public policy underlying such laws.

3.8 Residency. Unless the Purchaser has otherwise notified the Company in writing, the Purchaser is a resident of the jurisdiction set forth immediately below such Purchaser's name on the signature pages hereto.

3.9 Acknowledgements Regarding Placement Agent.

(a) The Purchaser acknowledges that the Placement Agent is acting as placement agent on a "best efforts" basis for the Securities being offered hereby and will be compensated by the Company for acting in such capacity. The Purchaser represents that (i) the Purchaser was contacted regarding the sale of the Securities by the Placement Agent or the Company (or an authorized agent or representative thereof) with whom the Purchaser entered into a verbal or written confidentiality agreement and (ii) no Securities were offered or sold to it by means of any form of general solicitation or general advertising as such terms are used in Regulation D of the Securities Act.

(b) The Purchaser represents that it is making this investment based on the results of its own due diligence investigation of the Company, and has not relied on any information or advice furnished by or on behalf of the Placement Agent in connection with the transactions contemplated hereby. The Purchaser acknowledges that the Placement Agent has not made, and will not make, any representations and warranties with respect to the Company or the transactions contemplated hereby, and the Purchaser will not rely on any statements made by the Placement Agent, orally or in writing, to the contrary.

ARTICLE 4

COVENANTS

4.1 Reporting Status. The Company's Common Stock is registered under Section 12 of the Exchange Act. During the Registration Period, the Company will timely file all documents with the SEC, and the Company will not terminate its status as an issuer required to file reports under the Exchange Act even if the Exchange Act or the rules and regulations thereunder would permit such termination.

4.2 Expenses. The Company and each Purchaser shall be liable for, and will pay, its own expenses incurred in connection with the negotiation, preparation, execution and delivery of this Agreement, including, without limitation, attorneys' and consultants' fees and expenses.

4.3 Financial Information. The financial statements of the Company to be included in any documents filed with the SEC will be prepared in accordance with accounting principles generally accepted in the United States, consistently applied (except (i) as may be otherwise indicated in such financial statements or the notes thereto, or (ii) in the case of unaudited interim statements, to the extent they may not include footnotes, may be condensed or summary statements or may conform to the SEC's rules and instructions for Reports on Form 10-Q), and will fairly present in all material respects the financial position of the Company and results of its operations and cash flows as of, and for the periods covered by, such financial statements (subject, in the case of unaudited statements, to normal and recurring year-end audit adjustments).

4.4 Securities Laws Disclosure; Publicity. On or before the fourth business day following the date hereof, the Company shall file a Current Report on Form 8-K with the SEC describing the terms of the transactions contemplated by this Agreement and including as an exhibit to such Current Report on Form 8-K this Agreement, in the form required by the Exchange Act. From and after the filing of such Current Report on Form 8-K, the Company represents to the Purchasers that it shall have publicly disclosed the material terms and conditions of the transactions contemplated by this Agreement.

4.5 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by this Agreement, which shall be disclosed pursuant to Section 4.4, the Company covenants and agrees that neither it, nor any other Person acting on its behalf will provide any Purchaser or its agents or counsel with any information following the date of this Agreement that constitutes, or the Company reasonably believes constitutes, material non-public information, unless prior thereto such Purchaser has consented to the receipt of such information and agreed with the Company to keep such information

confidential. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company, provided that the Purchaser shall remain subject to applicable law.

4.6 Sales by Purchasers; Purchases Prior to the Initial Closing. Each Purchaser will sell any Shares and, if applicable, any Conversion Shares held by it in compliance with applicable prospectus delivery requirements, if any, or otherwise in compliance with the requirements for an exemption from registration under the Securities Act and the rules and regulations promulgated thereunder. No Purchaser will make any sale, transfer or other disposition of the Securities or, if applicable, Conversion Shares in violation of federal or state securities laws. Between the date of this Agreement and the Initial Closing, each Purchaser agrees that neither it nor any of such Purchaser's Attribution Parties will acquire any shares of Common Stock or any securities of the Company which would entitle the holder thereof to acquire at any time Common Stock, other than the Initial Closing Securities.

4.7 Reservation of Common Stock. The Company shall reserve and keep available at all times during which the Warrants remain exercisable and the Preferred Shares remain convertible, free of preemptive rights, a sufficient number of shares of Common Stock for the purpose of enabling the Company to issue the Conversion Shares pursuant to the Warrants and the Certificate of Designation, as applicable.

4.8 Stockholder Approval. After the date of this Agreement and on or before the 45th day following the Public Announcement (the "***Stockholder Meeting Deadline***"), the Company shall, at its own expense, hold an annual or special meeting of stockholders (the "***Stockholder Meeting***"), the proxy statement for which shall solicit the affirmative approval of the Company's stockholders of the Company's issuance of all of the Milestone Securities (and shares of Common Stock issuable upon conversion or exercise thereof) at the Alternative Milestone Price (based on the formula set forth in the definition of Alternative Milestone Price) to the extent the Milestone Price is the Alternative Milestone Price pursuant to the terms of this Agreement, in accordance with applicable law and Nasdaq Listing Rule 5635 (such affirmative approval being referred to herein as the "***Stockholder Approval***"), and the Company shall use its reasonable best efforts to solicit the Stockholder Approval and to cause the Board of Directors of the Company to recommend the Stockholder Approval to the Company's stockholders entitled to vote at the Stockholder Meeting. The Company shall be obligated to use its reasonable best efforts to obtain the Stockholder Approval by the Stockholder Meeting Deadline. If, despite the Company's reasonable best efforts the Stockholder Approval is not obtained on or prior to the Stockholder Meeting Deadline, the Company shall cause an additional Stockholder Meeting to be held every three (3) months thereafter until such Stockholder Approval is obtained. Notwithstanding anything to the contrary contained in this Section 4.8, the Company shall have no obligation to solicit or obtain the Stockholder Approval if the Milestone Price is determined to be the Initial Closing Price rather than the Alternative Milestone Price, and the Company shall have no obligation to solicit or obtain the Stockholder Approval after March 31, 2020.

ARTICLE 5

CONDITIONS TO CLOSING

5.1 Conditions to Obligations of the Company. The Company's obligation to complete the purchase and sale of the Securities to each Purchaser at each Closing is subject to the waiver by the Company or fulfillment as of the applicable Closing Date of the following conditions:

(a) Receipt of Funds. The applicable Escrow Agent shall have received immediately available funds in the full amount of the Initial Closing Common Shares Subscription Amount and the Initial Closing Warrant Subscription Amount or the Milestone Closing Shares Subscription Amount and the Milestone

Closing Warrant Subscription Amount (collectively, ***"Subscription Amounts"***), as applicable and in accordance with the Escrow Agreement for the applicable Closing, for the Securities being purchased in the applicable Closing hereunder as set forth opposite such Purchaser's name on **Exhibit A** hereto.

(b) Representations and Warranties. The representations and warranties made by each Purchaser in Article 3 shall be true and correct in all material respects as of the applicable Closing Date.

(c) Covenants. All covenants, agreements and conditions contained in this Agreement to be performed by the Purchasers on or prior to the applicable Closing Date shall have been performed or complied with in all material respects.

(d) Blue Sky. The Company shall have obtained all necessary blue sky law permits and qualifications, or secured exemptions therefrom, required by any state for the offer and sale of the Securities.

(e) Nasdaq Qualification. The Shares to be issued shall be duly authorized for listing by Nasdaq, subject to official notice of issuance, to the extent required by the rules of Nasdaq.

(f) Absence of Litigation. No proceeding challenging this Agreement or the transactions contemplated hereby, or seeking to prohibit, alter, prevent or materially delay the applicable Closing, shall have been instituted or be pending before any court, arbitrator, governmental body, agency or official.

(g) No Governmental Prohibition. The sale of the Securities by the Company shall not be prohibited by any law or governmental order or regulation.

(h) Milestone Closing Stockholder Approval. In the event that the Milestone Price is the Alternative Milestone Price, the Stockholder Approval shall have been obtained on or before March 31, 2020.

5.2 Conditions to Purchasers' Obligations at each Closing. Each Purchaser's obligation to complete the purchase and sale of the Securities is subject to the waiver by such Purchaser or fulfillment as of the applicable Closing Date of the following conditions:

(a) Representations and Warranties. The representations and warranties made by the Company in Article 2 shall be true and correct in all material respects as of the applicable Closing Date.

(b) Covenants. All covenants, agreements and conditions contained in this Agreement to be performed by the Company on or prior to the applicable Closing Date shall have been performed or complied with in all material respects.

(c) Blue Sky. The Company shall have obtained all necessary blue sky law permits and qualifications, or secured exemptions therefrom, required by any state or foreign or other jurisdiction for the offer and sale of the Securities.

(d) Nasdaq Qualification. The Shares to be issued shall be duly authorized for listing by Nasdaq, subject to official notice of issuance, to the extent required by the rules of Nasdaq.

(e) No Governmental Prohibition. The sale of the Securities by the Company shall not be prohibited by any law or governmental order or regulation

(f) Certificate of Designation. The Company shall have filed the Class A-1 Certificate of Designation with the Secretary of State of the State of Delaware prior to the Initial Closing. In the event the

Milestone Price is the Alternative Milestone Price, the Company shall have filed the Class A-2 Certificate of Designation with the Secretary of State of the State of Delaware prior to the Milestone Closing.

(g) No Material Adverse Effect. There shall not have occurred any Material Adverse Effect, or any development that could reasonably be expected to result in a Material Adverse Effect, as of the applicable Closing.

(h) Transfer Agent Instructions. The Company shall have delivered to its transfer agent irrevocable instructions to issue to such Purchaser or in such nominee name(s) as designated by such Purchaser in writing such number of Shares set forth opposite such Purchaser's name on Exhibit A hereto and the Warrants to purchase the Warrant Shares set forth opposite such Purchaser's name on Exhibit A hereto.

(i) Milestone Closing Stockholder Approval. In the event that the Milestone Price is the Alternative Milestone Price, the Stockholder Approval shall have been obtained on or before March 31, 2020.

ARTICLE 6

REGISTRATION RIGHTS

6.1 As soon as reasonably practicable, but in no event later than 30 days after the Initial Closing Date (the ***"Initial Filing Date"***), the Company shall file a registration statement covering the resale of the Registrable Securities related to the Initial Closing (and, if the Milestone Closing has occurred on or before the Initial Filing Date, the Registrable Securities related to the Milestone Closing), with the SEC for an offering to be made on a continuous basis pursuant to Rule 415, or if Rule 415 is not available for offers and sales of the Registrable Securities, by such other means of distribution of Registrable Securities as the Holders of a majority of such Registrable Securities may reasonably specify (the ***"First Initial Registration Statement"***). In the event that the Milestone Closing has not occurred on or before the Initial Filing Date and the Registrable Securities related to the Milestone Closing are not covered in the Initial Registration Statement, as soon as reasonably practicable, but in no event later than 30 days after the Milestone Closing Date (the ***"Milestone Filing Date"***, and together with the Initial Filing Date, the "***Filing Date***"), the Company shall file a registration statement covering the resale of the Registrable Securities related to the Milestone Closing with the SEC for an offering to be made on a continuous basis pursuant to Rule 415, or if Rule 415 is not available for offers and sales of the Registrable Securities, by such other means of distribution of Registrable Securities as the Holders of a majority of such Registrable Securities may reasonably specify (the ***"Milestone Initial Registration Statement"*** and, together with the First Initial Registration Statement, the "***Initial Registration Statement***"). The applicable Initial Registration Statement shall be on Form S-3 (except if the Company is ineligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on Form S-1) and the Company shall effect the registration, qualifications or compliances (including, without limitation, the execution of any required undertaking to file post-effective amendments, appropriate qualifications or exemptions under applicable blue sky or other state securities laws and appropriate compliance with applicable securities laws, requirements or regulations) as promptly as possible after the filing thereof, but in any event prior to the date which is five days after the receipt of a notification of no-review in the event of no review by the SEC, or 90 days after the applicable Filing Date in the event of a review by the SEC. For purposes of clarification, any failure by the Company to file the applicable Initial Registration Statement by the applicable Filing Date or to effect such Registration Statement within such five days after the notification of no-review or 90 days after the applicable Filing Date, as applicable, shall not otherwise relieve the Company of its obligations to file or effect the applicable Initial Registration Statement as set forth above in this Section 6.1. In the event the SEC informs the Company that all of the Registrable Securities cannot, as a result of the application of Rule 415, be registered for resale as a secondary offering on a single registration statement, the Company agrees to promptly

(i) inform each of the Holders thereof, (ii) use its best efforts to file amendments to the applicable Initial Registration Statement as required by the SEC and/or (iii) withdraw the applicable Initial Registration Statement and file a new registration statement (a ***"New Registration Statement"***), in either case covering the maximum number of applicable Registrable Securities permitted to be registered by the SEC, on Form S-3 or, if the Company is ineligible to register for resale the Registrable Securities on Form S-3, Form S-1; *provided, however*, that prior to filing such amendment or New Registration Statement, the Company shall be obligated to use its best efforts to advocate with the SEC for the registration of all of the Registrable Securities. In the event the Company amends the applicable Initial Registration Statement or files a New Registration Statement, as the case may be, under clauses (ii) or (iii) above, the Company will use its best efforts to file with the SEC, within 30 days following the date allowed by the SEC, one or more registration statements on Form S-3 or, if the Company is ineligible to register for resale the Registrable Securities on Form S-3, Form S-1, to register for resale those Registrable Securities that were not registered for resale on the applicable Initial Registration Statement, as amended, or the New Registration Statement (the "***Remainder Registration Statements***"). If the SEC limits the number of Registrable Securities permitted to be registered on a particular Registration Statement (and notwithstanding that the Company used diligent efforts to advocate with the SEC for the registration of all or a greater number of Registrable Securities), any required cutback of Registrable Securities (such Registrable Securities so cut back, the ***"Cut Back Securities"***) shall be applied to the Purchasers pro rata in accordance with the number of such Registrable Securities sought to be included in such Registration Statement by reference to the amount of Registrable Securities set forth opposite such Purchaser's name on **Exhibit A** (and in the case of a subsequent transfer, the initial Purchaser's transferee) relative to the aggregate amount of all Registrable Securities.

6.2 All Registration Expenses incurred in connection with any registration, qualification, exemption or compliance pursuant to Section 6.1 shall be borne by the Company. All Selling Expenses relating to the sale of securities registered by or on behalf of Holders shall be borne by such Holders pro rata on the basis of the number of securities so registered.

6.3 The Company further agrees that, in the event that (i) the applicable Initial Registration Statement has not been filed with the SEC within 30 days after the applicable Closing Date, (ii) the applicable Initial Registration Statement or the applicable New Registration Statement, as applicable, has not been declared effective by the SEC (a) within five days after receipt of a notification of no-review (in the event of a "no-review" by the SEC), or (b) within 90 days after the applicable Filing Date (in the event of a review by the SEC), or (iii) after such Registration Statement is declared effective by the SEC, is suspended by the Company or ceases to remain continuously effective as to all Registrable Securities for which it is required to be effective, other than, in each case, within the time period(s) permitted by Section 6.7(b) (each such event referred to in clauses (i), (ii) and (iii), (a ***"Registration Default"***)), for more than 20 consecutive days or more than 40 days in any period of 365 days during which the Registration Default remains uncured, the Company shall pay to each Purchaser 1.0% of such Purchaser's Aggregate Purchase Price as set forth on **Exhibit A** hereto (the ***"Aggregate Purchase Price"***) of such Purchaser's Registrable Securities for each 30-day period (a ***"Penalty Period"***) (provided the payment amount shall increase by 1.0% of such Purchaser's Aggregate Purchase Price as set forth on **Exhibit A** hereto for each subsequent 30-day period following the initial 30-day period), or pro rata for any portion thereof, during which the Registration Default remains uncured; *provided, however*, that if a Purchaser fails to provide the Company with any information that is required to be provided in such Registration Statement with respect to such Purchaser as set forth herein, then the commencement of the Penalty Period described above shall be extended until two Business Days following the date of receipt by the Company of such required information; and provided, further, that in no event shall the Company be required hereunder to pay to any Purchaser pursuant to this Agreement more than 3.0% of such Purchaser's Aggregate Purchase Price of such Purchaser's Registrable Securities in any Penalty Period and in no event shall the Company be required hereunder to pay to any Purchaser pursuant to this Agreement an aggregate amount that exceeds 10.0% of the Aggregate Purchase Price paid by such Purchaser for such Purchaser's Securities. The Company shall deliver

said cash payment to the Purchaser by the fifth Business Day after the end of such Penalty Period. Notwithstanding any other provision of this Section 6.3, no Registration Default as to the Cut Back Securities shall be deemed to have occurred until the date that is 30 days following the date on which the SEC permits the Cut Back Securities to be registered, and the payment of any penalty pursuant to this Section 6.3 shall be calculated to apply only to the percentage of Registrable Securities which are permitted by the SEC to be registered within the timeframes provided for in this Agreement.

6.4 In the case of the registration, qualification, exemption or compliance effected by the Company pursuant to this Agreement, the Company shall, upon reasonable request, inform each Holder as to the status of such registration, qualification, exemption and compliance. At its expense the Company shall:

(a) except for such times as the Company is permitted hereunder to suspend the use of the prospectus forming part of a Registration Statement, use its best efforts to keep such registration, and any qualification, exemption or compliance under state securities laws which the Company determines to obtain, continuously effective with respect to a Holder, and to keep the applicable Registration Statement free of any material misstatements or omissions, until the earlier of the following: (i) the second anniversary of the Closing Date or (ii) the date all Common Shares and Conversion Shares held by or issuable to such Holder may be sold under Rule 144 without being subject to any volume, manner of sale or publicly available information requirements. The period of time during which the Company is required hereunder to keep a Registration Statement effective is referred to herein as the ***"Registration Period."***

(b) advise the Holders within two Business Days:

(i) when a Registration Statement or any amendment thereto has been filed with the SEC and when such Registration Statement or any post-effective amendment thereto has become effective;

(ii) of any request by the SEC for amendments or supplements to any Registration Statement or the prospectus included therein or for additional information;

(iii) of the issuance by the SEC of any stop order suspending the effectiveness of any Registration Statement or the initiation of any proceedings for such purpose;

(iv) of the receipt by the Company of any notification with respect to the suspension of the qualification of the Registrable Securities included therein for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; and

(v) of the occurrence of any event that requires the making of any changes in any Registration Statement or prospectus so that, as of such date, the statements therein are not misleading and do not omit to state a material fact required to be stated therein or necessary to make the statements therein (in the case of a prospectus, in the light of the circumstances under which they were made) not misleading;

(c) use its commercially reasonable efforts to obtain the withdrawal of any order suspending the effectiveness of any Registration Statement as soon as reasonably practicable;

(d) if a Holder so requests in writing, promptly furnish to each such Holder, without charge, at least one copy of each Registration Statement and each post-effective amendment thereto, including financial statements and schedules, and, if explicitly requested, all exhibits in the form filed with the SEC;

(e) during the Registration Period, promptly deliver to each such Holder, without charge, as many copies of each prospectus included in a Registration Statement and any amendment or supplement thereto as such Holder may reasonably request in writing; and the Company consents to the use, consistent with the

provisions hereof, of the prospectus or any amendment or supplement thereto by each of the selling Holders of Registrable Securities in connection with the offering and sale of the Registrable Securities covered by a prospectus or any amendment or supplement thereto;

(f) during the Registration Period, if a Holder so requests in writing, deliver to each Holder, without charge, (i) one copy of the following documents, other than those documents available via EDGAR: (A) its annual report to its stockholders, if any (which annual report shall contain financial statements audited in accordance with generally accepted accounting principles in the United States by a firm of certified public accountants of recognized standing), (B) if not included in substance in its annual report to stockholders, its annual report on Form 10-K (or similar form), (C) its definitive proxy statement with respect to its annual meeting of stockholders, (D) each of its quarterly reports to its stockholders, and, if not included in substance in its quarterly reports to stockholders, its quarterly report on Form 10-Q (or similar form), and (E) a copy of each full Registration Statement (the foregoing, in each case, excluding exhibits); and (ii) if explicitly requested, all exhibits excluded by the parenthetical to the immediately preceding clause (E);

(g) prior to any public offering of Registrable Securities pursuant to any Registration Statement, promptly take such actions as may be necessary to register or qualify or obtain an exemption for offer and sale under the securities or blue sky laws of such United States jurisdictions as any such Holders reasonably request in writing, provided that the Company shall not for any such purpose be required to qualify generally to transact business as a foreign corporation in any jurisdiction where it is not so qualified or to consent to general service of process in any such jurisdiction, and do any and all other acts or things reasonably necessary or advisable to enable the offer and sale in such jurisdictions of the Registrable Securities covered by any such Registration Statement;

(h) upon the occurrence of any event contemplated by Section 6.4(b)(v) above, except for such times as the Company is permitted hereunder to suspend the use of a prospectus forming part of a Registration Statement, the Company shall use its best efforts to as soon as reasonably practicable prepare a post-effective amendment to such Registration Statement or a supplement to the related prospectus, or file any other required document so that, as thereafter delivered to purchasers of the Registrable Securities included therein, such prospectus will not include any untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(i) otherwise use its commercially reasonable efforts to comply in all material respects with all applicable rules and regulations of the SEC which could affect the sale of the Registrable Securities;

(j) use its commercially reasonable efforts to cause all Registrable Securities to be listed on each securities exchange or market, if any, on which equity securities issued by the Company have been listed;

(k) use its commercially reasonable efforts to take all other steps necessary to effect the registration of the Registrable Securities contemplated hereby and to enable the Holders to sell Registrable Securities under Rule 144;

(l) provide to each Purchaser and its representatives, if requested, the opportunity to conduct a reasonable inquiry of the Company's financial and other records during normal business hours and make available its officers, directors and employees for questions regarding information which such Purchaser may reasonably request in order to fulfill any due diligence obligation on its part; and

(m) permit a single counsel for the Purchasers to review any Registration Statement and all amendments and supplements thereto (other than supplements to a Registration Statement on Form S-1 solely for the purpose of incorporating other filings with the SEC into such Registration Statement and other than an

amendment to a Registration Statement on Form S-1 on Form S-3 for the purpose of converting such Registration Statement into a Registration Statement on Form S-3), within two Business Days prior to the filing thereof with the SEC;

provided that, in the case of clauses (l) and (m) above, the Company shall not be required (A) to delay the filing of any Registration Statement or any amendment or supplement thereto as a result of any ongoing diligence inquiry by or on behalf of a Holder or to incorporate any comments to any Registration Statement or any amendment or supplement thereto by or on behalf of a Holder if such inquiry or comments would require a delay in the filing of such Registration Statement, amendment or supplement, as the case may be, or (B) to provide, and shall not provide, any Purchaser or its representatives with material, non-public information unless such Purchaser agrees to receive such information and enters into a written confidentiality agreement with the Company in a form reasonably acceptable to the Company.

6.5 The Holders shall have no right to take any action to restrain, enjoin or otherwise delay any registration pursuant to Section 6.1 hereof as a result of any controversy that may arise with respect to the interpretation or implementation of this Agreement.

6.6 (a) To the extent permitted by law, the Company shall indemnify each Holder and each Person controlling such Holder within the meaning of Section 15 of the Securities Act, with respect to which any registration that has been effected pursuant to this Agreement, against all claims, losses, damages and liabilities (or action in respect thereof), including any of the foregoing incurred in settlement of any litigation, commenced or threatened (subject to Section 6.6(c) below), arising out of or based on any untrue statement (or alleged untrue statement) of a material fact contained in any Registration Statement, prospectus, any amendment or supplement thereof, or other document incident to any such registration, qualification or compliance or based on any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in light of the circumstances in which they were made, or any violation by the Company of any rule or regulation promulgated by the Securities Act applicable to the Company and relating to any action or inaction required of the Company in connection with any such registration, qualification or compliance, and will reimburse each Holder and each Person controlling such Holder, for reasonable legal and other out-of-pocket expenses reasonably incurred in connection with investigating or defending any such claim, loss, damage, liability or action as incurred; provided that the Company will not be liable in any such case to the extent that any untrue statement or omission or allegation thereof is made in reliance upon and in conformity with written information furnished to the Company by or on behalf of such Holder for use in preparation of any Registration Statement, prospectus, amendment or supplement; *provided further*, that the Company will not be liable in any such case where the claim, loss, damage or liability arises out of or is related to the failure of such Holder to comply with the covenants and agreements contained in this Agreement respecting sales of Registrable Securities, and except that the foregoing indemnity agreement is subject to the condition that, insofar as it relates to any such untrue statement or alleged untrue statement or omission or alleged omission made in any preliminary prospectus but eliminated or remedied in the amended prospectus on file with the SEC at the time any Registration Statement becomes effective or in an amended prospectus filed with the SEC pursuant to Rule 424(b) which meets the requirements of Section 10(a) of the Securities Act (each, a ***"Final Prospectus"***), such indemnity shall not inure to the benefit of any such Holder or any such controlling Person, if a copy of a Final Prospectus furnished by the Company to the Holder for delivery was not furnished to the Person asserting the loss, liability, claim or damage at or prior to the time such furnishing is required by the Securities Act and a Final Prospectus would have cured the defect giving rise to such loss, liability, claim or damage.

(b) Each Holder will severally, and not jointly, indemnify the Company, each of its directors and officers, and each Person who controls the Company within the meaning of Section 15 of the Securities Act, against all claims, losses, damages and liabilities (or actions in respect thereof), including any of the foregoing

incurred in settlement of any litigation, commenced or threatened (subject to Section 6.6(c) below), arising out of or based on any untrue statement (or alleged untrue statement) of a material fact contained in any Registration Statement, prospectus, or any amendment or supplement thereof, incident to any such registration, or based on any omission (or alleged omission) to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in light of the circumstances in which they were made, and will reimburse the Company, such directors and officers, and each Person controlling the Company for reasonable legal and any other expenses reasonably incurred in connection with investigating or defending any such claim, loss, damage, liability or action as incurred, in each case to the extent, but only to the extent, that such untrue statement or omission or allegation thereof is made in reliance upon and in conformity with written information furnished to the Company by or on behalf of the Holder for use in preparation of any Registration Statement, prospectus, amendment or supplement; provided that the indemnity shall not apply to the extent that such claim, loss, damage or liability results from the fact that a current copy of a prospectus was not made available to the Person asserting the loss, liability, claim or damage at or prior to the time such furnishing is required by the Securities Act and a Final Prospectus would have cured the defect giving rise to such loss, claim, damage or liability. Notwithstanding the foregoing, a Holder's aggregate liability pursuant to this subsection (b) and subsection (d) shall be limited to the net amount actually received by the Holder from the sale of the Registrable Securities.

(c) Each party entitled to indemnification under this Section 6.6 (the ***"Indemnified Party"***) shall give notice to the party required to provide indemnification (the ***"Indemnifying Party"***) promptly after such Indemnified Party has actual knowledge of any claim as to which indemnity may be sought, and shall permit the Indemnifying Party (at its expense) to assume the defense of any such claim or any litigation resulting therefrom, provided that counsel for the Indemnifying Party, who shall conduct the defense of such claim or litigation, shall be approved by the Indemnified Party (whose approval shall not unreasonably be withheld), and the Indemnified Party may participate in such defense at such Indemnified Party's expense, and provided further that the failure of any Indemnified Party to give notice as provided herein shall not relieve the Indemnifying Party of its obligations under this Agreement, unless such failure is materially prejudicial to the Indemnifying Party in defending such claim or litigation. An Indemnifying Party shall not be liable for any settlement of an action or claim effected without its written consent (which consent will not be unreasonably withheld). No Indemnifying Party, in its defense of any such claim or litigation, shall, except with the consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation.

(d) If the indemnification provided for in this Section 6.6 is held by a court of competent jurisdiction to be unavailable to an Indemnified Party with respect to any loss, liability, claim, damage or expense referred to therein, then the Indemnifying Party, in lieu of indemnifying such Indemnified Party thereunder, shall contribute to the amount paid or payable by such Indemnified Party as a result of such loss, liability, claim, damage or expense in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party on the one hand and of the Indemnified Party on the other in connection with the statements or omissions which resulted in such loss, liability, claim, damage or expense as well as any other relevant equitable considerations. The relative fault of the Indemnifying Party and of the Indemnified Party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the Indemnifying Party or by the Indemnified Party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

6.7 (a) Each Holder agrees that, upon receipt of any notice from the Company of the happening of any event requiring the preparation of a supplement or amendment to a prospectus relating to Registrable Securities so that, as thereafter delivered to the Holders, such prospectus shall not contain an untrue statement

of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading, each Holder will forthwith discontinue disposition of Registrable Securities pursuant to a Registration Statement and prospectus contemplated by Section 6.1 until its receipt of copies of the supplemented or amended prospectus from the Company and, if so directed by the Company, each Holder shall deliver to the Company all copies, other than permanent file copies then in such Holder's possession, of the prospectus covering such Registrable Securities current at the time of receipt of such notice.

(b) Each Holder shall suspend, upon request of the Company, any disposition of Registrable Securities pursuant to any Registration Statement and prospectus contemplated by Section 6.1 during no more than two periods of no more than 30 calendar days each during any 12-month period to the extent that the Board of Directors of the Company determines in good faith that the sale of Registrable Securities under any such Registration Statement would be reasonably likely to cause a violation of the Securities Act or Exchange Act.

(c) As a condition to the inclusion of its Registrable Securities, each Holder shall furnish to the Company such information regarding such Holder and the distribution proposed by such Holder as the Company may reasonably request in writing, including completing a Registration Statement Questionnaire in the form provided by the Company, or as shall be required in connection with any registration referred to in this Article 6.

(d) Each Holder hereby covenants with the Company (i) not to make any sale of the Registrable Securities without effectively causing the prospectus delivery requirements under the Securities Act to be satisfied, and (ii) if such Registrable Securities are to be sold by any method or in any transaction other than on a national securities exchange or in the over-the-counter market, in privately negotiated transactions, or in a combination of such methods, to notify the Company at least five Business Days prior to the date on which the Holder first offers to sell any such Registrable Securities.

(e) At the end of the Registration Period the Holders shall discontinue sales of any Shares or Conversion Shares pursuant to any Registration Statement upon receipt of notice from the Company of its intention to remove from registration the Shares or Conversion Shares covered by any such Registration Statement which remain unsold, and such Holders shall notify the Company of the number of Shares or Conversion Shares registered which remain unsold immediately upon receipt of such notice from the Company.

6.8 With a view to making available to the Holders the benefits of certain rules and regulations of the SEC which at any time permit the sale of the Registrable Securities to the public without registration, so long as the Holders still own Registrable Securities, the Company shall use its best efforts to:

(a) make and keep public information available, as those terms are understood and defined in Rule 144 under the Securities Act, at all times;

(b) file with the SEC in a timely manner all reports and other documents required of the Company under the Exchange Act; and

(c) so long as a Holder owns any Registrable Securities, furnish to such Holder, upon any reasonable request, a written statement by the Company as to its compliance with Rule 144 under the Securities Act, and of the Exchange Act, a copy of the most recent annual or quarterly report of the Company, and such other reports and documents of the Company as such Holder may reasonably request in availing itself of any rule or regulation of the SEC allowing a Holder to sell any such securities without registration.

6.9 The rights to cause the Company to register Registrable Securities granted to the Holders by the Company under Section 6.1 may be assigned by a Holder in connection with a transfer by such Holder of all or a portion of its Registrable Securities, *provided, however*, that such transfer must be made at least ten days prior

to the applicable Filing Date and that (i) such transfer may otherwise be effected in accordance with applicable securities laws; (ii) such Holder gives prior written notice to the Company at least ten days prior to the applicable Filing Date; and (iii) such transferee agrees to comply with the terms and provisions of this Agreement, and such transfer is otherwise in compliance with this Agreement. Except as specifically permitted by this Section 6.9, the rights of a Holder with respect to Registrable Securities as set out herein shall not be transferable to any other Person, and any attempted transfer shall cause all rights of such Holder therein to be forfeited.

6.10 Prior to the time that Registration Statement(s) covering the resale of all Registrable Securities have been declared effective by the SEC, the Company shall not file with the SEC a registration statement under the Securities Act of any of its equity securities other than a registration statement required to be filed pursuant to this Agreement; a registration statement on Form S-8 or, in connection with an acquisition, a registration statement on Form S-4; *provided, however*, that the foregoing restrictions in this Section 6.10 shall terminate upon such time as all of the Registrable Securities (i) have been publicly sold by the Holders or (ii) may be sold under Rule 144 during any 90-day period.

6.11 The rights of any Holder under any provision of this Article 6 may be waived (either generally or in a particular instance, either retroactively or prospectively and either for a specified period of time or indefinitely) or amended by an instrument in writing signed by such Holder.

ARTICLE 7

DEFINITIONS

7.1 ***"Aggregate Purchase Price"*** has the meaning set forth in Section 6.3.

7.2 ***"Agreement"*** has the meaning set forth in the preamble.

7.3 ***"Affiliate"*** means, with respect to any Person (as defined below), any other Person controlling, controlled by or under direct or indirect common control with such Person (for the purposes of this definition ***"control,"*** when used with respect to any specified Person, shall mean the power to direct the management and policies of such Person, directly or indirectly, whether through ownership of voting securities, by contract or otherwise; and the terms ***"controlling"*** and ***"controlled"*** shall have meanings correlative to the foregoing).

7.4 ***"Alternative Milestone Price"*** means (a) if the Stockholder Approval is obtained prior to the Public Announcement, the VWAP over the five full Trading Days immediately following the Public Announcement or (b) if the Stockholder Approval is obtained after the Public Announcement, the Alternative Minimum Price shall be the lower of (i) the VWAP over the five full Trading Days immediately following the Public Announcement and (ii) the VWAP over the five full Trading Days immediately following the date on which the Stockholder Approval is obtained.

7.5 ***"Attribution Parties"*** means, with respect to any Person, such Person's Affiliates and any other Person whose beneficial ownership of Common Stock would be aggregated with such Person's for purposes of Section 13(d) or Section 16 of the Exchange Act and the applicable regulations of the SEC, including any "group" of which such Person is a member.

7.6 ***"Beneficial Ownership Limitation"*** means the percentage set forth opposite such Purchaser's name on **Exhibit A** hereto under the heading "Beneficial Ownership Limitation".

7.7 ***"Business Day"*** means a day Monday through Friday on which banks are generally open for business in New York City.

7.8 ***"Certificate of Designation"*** means the Class A-1 Certificate of Designation or Class A-2 Certificate of Designation, as applicable.

7.9 ***"Class A-1 Certificate of Designation"*** means the Certificate of Designation of Rights, Preferences and Privileges of the Class A-1 Convertible Preferred Stock setting forth the preferences, rights and limitations of the Preferred Shares to be filed prior to the Initial Closing by the Company with the Secretary of State of Delaware substantially in the form attached hereto as **Exhibit C-1**.

7.10 ***Class A-2 Certificate of Designation"*** means the Certificate of Designation of Rights, Preferences and Privileges of the Class A-2 Convertible Preferred Stock setting forth the preferences, rights and limitations of the Preferred Shares to be filed prior to the Milestone Closing in the event the Milestone Price equals the Alternative Milestone Price by the Company with the Secretary of State of Delaware substantially in the form attached hereto as **Exhibit C-2**.

7.11 ***"Class A Convertible Preferred Stock"*** includes Class A-1 Convertible Preferred Stock and Class A-2 Convertible Preferred Stock of the Company.

7.12 ***"Closing"*** has the meaning set forth in Section 1.2(a).

7.13 ***"Common Shares"*** has the meaning set forth in Recital B to this Agreement.

7.14 ***"Common Stock"*** means the common stock, par value $0.001 per share, of the Company.

7.15 ***"Common Stock Equivalents"*** means any options, warrants or other securities or rights convertible into or exercisable or exchangeable for, whether directly or following conversion into or exercise or exchange for other options, warrants or other securities or rights, shares of Common Stock, or any swap, hedge or similar agreement or arrangement that transfers in whole or in part, the economic risk of ownership of, or voting or other rights of, shares of Common Stock.

7.16 ***"Company Intellectual Property"*** has the meaning set forth in Section 2.13.

7.17 ***"Conversion Shares"*** has the meaning set forth in Section 2.2.

7.18 ***"Cut Back Securities"*** has the meaning set forth in Section 6.1.

7.19 ***"Escrow Agent"*** means, (i) with respect to the Initial Closing, Signature Bank, a New York State chartered bank, and (ii) with respect to the Milestone Closing, a bank selected by the Company that is chartered in a State located in the United States of America.

7.20 ***"Escrow Agreement"*** means the escrow agreement entered into for and prior to the applicable Closing by and among the Company, the Escrow Agent and the Placement Agent pursuant to which the Purchasers shall deposit their applicable Subscription Amounts for the Securities to be sold and purchased at the applicable Closing.

7.21 ***"Exchange Act"*** means the Securities Exchange Act of 1934, as amended.

7.22 ***"FDA"*** means the United States Food and Drug Administration.

7.23 ***"Filing Date"*** has the meaning set forth in Section 6.1.

7.24 ***"Final Prospectus"*** has the meaning set forth in Section 6.6(a).

7.25 ***"Financial Statements"*** means the financial statements of the Company included in the SEC Documents.

7.26 ***"First Initial Registration Statement"*** has the meaning set forth in Section 6.1.

7.27 ***"Holders"*** means any Person holding Registrable Securities or any Person to whom the rights under Article 6 have been transferred in accordance with Section 6.9 hereof.

7.28 ***"Indemnified Party"*** has the meaning set forth in Section 6.6(c).

7.29 ***"Indemnifying Party"*** has the meaning set forth in Section 6.6(c).

7.30 ***"Initial Closing"*** has the meaning set forth in Section 1.1(a).

7.31 ***"Initial Closing Securities"*** has the meaning set forth in Section 1.1(a).

7.32 ***"Initial Closing Date"*** has the meaning set forth in Section 1.1(c).

7.33 ***"Initial Closing Warrant Subscription Amount"*** has the meaning set forth in Section 1.1(b).

7.34 ***"Initial Filing Date"*** has the meaning set forth in Section 6.1.

7.35 ***"Initial Market Price"*** means (i) $1.08 (the "***Threshold Price***") for any Purchaser that is not an officer, director, employee or consultant of the Company and (ii) $1.08 for any Purchaser that is an officer, director, employee or consultant of the Company.

7.36 ***"Initial Registration Statement"*** has the meaning set forth in Section 6.1.

7.37 ***"Material Adverse Effect"*** means a material adverse effect on (a) the business, operations, assets or condition (financial or otherwise) of the Company, taken as a whole, or (b) the ability of the Company to perform its obligations pursuant to the transactions contemplated by this Agreement.

7.38 ***"Milestone Closing"*** has the meaning set forth in Section 1.2(a).

7.39 ***" Milestone Closing Shares"*** has the meaning set forth in Section 1.2(a).

7.40 ***" Milestone Closing Date"*** has the meaning set forth in Section 1.2(c).

7.41 ***"Milestone Closing Warrant Subscription Amount"*** has the meaning set forth in Section 1.2(b).

7.42 ***"Milestone Filing Date"*** has the meaning set forth in Section 6.1.

7.43 ***"Milestone Initial Registration Statement"*** has the meaning set forth in Section 6.1.

7.44 ***"Milestone Price"*** means the Initial Market Price; *provided, however*, that if the VWAP over the five full Trading Days immediately following the Public Announcement is not at or above the Threshold Price, then the Milestone Price shall mean the Alternative Milestone Price; *provided further*, that each Purchaser may deem the Milestone Price to be the Initial Market Price in its sole discretion.

7.45 ***"Milestone Securities"*** has the meaning set forth in Section 1.2(a).

7.46 ***"Nasdaq"*** means The Nasdaq Stock Market LLC.

7.47 ***"New Registration Statement"*** has the meaning set forth in Section 6.1.

7.48 ***"Penalty Period"*** has the meaning set forth in Section 6.3.

7.49 ***"Person"*** means any person, individual, corporation, limited liability company, partnership, trust or other nongovernmental entity or any governmental agency, court, authority or other body (whether foreign, federal, state, local or otherwise).

7.50 ***"Placement Agent"*** means H.C. Wainwright & Co.

7.51 ***"Preferred Conversion Shares"*** has the meaning set forth in Section 2.2.

7.52 ***"Preferred Shares"*** has the meaning set forth in Recital B to this Agreement.

7.53 ***"Purchasers"*** has the meaning set forth in the preamble.

7.54 ***"Public Announcement"*** has the meaning set forth in Section 1.2(a).

7.55 The terms ***"register," "registered"*** and ***"registration"*** refer to the registration effected by preparing and filing a registration statement in compliance with the Securities Act, and the declaration or ordering of the effectiveness of such registration statement.

7.56 ***"Registrable Securities"*** means (i) the Common Shares and (ii) the Conversion Shares; *provided, however*, that Common Shares and Conversion Shares shall only be treated as Registrable Securities if and only for so long as they (A) have not been disposed of pursuant to a registration statement declared effective by the SEC, (B) have not been sold in a transaction exempt from the registration and prospectus delivery requirements of the Securities Act so that all transfer restrictions and restrictive legends with respect thereto are removed upon the consummation of such sale or (C) are held by a Holder or a permitted transferee pursuant to Section 6.9.

7.57 ***"Registration Default"*** has the meaning set forth in Section 6.3.

7.58 ***"Registration Expenses"*** means all expenses incurred by the Company in complying with Section 6.1 hereof, including, without limitation, all registration, qualification and filing fees, printing expenses, escrow fees, fees and expenses of counsel for the Company, blue sky fees and expenses and the expense of any special audits incident to or required by any such registration (but excluding the fees of legal counsel for any Holder).

7.59 ***"Registration Statement"*** means any one or more registration statements of the Company filed under the Securities Act that covers the resale of any of the Registrable Securities pursuant to the provisions of this Agreement (including without limitation any Initial Registration Statement, any New Registration Statement and any Remainder Registration Statements) and amendments and supplements to such Registration Statements, including post-effective amendments.

7.60 ***"Registration Period"*** has the meaning set forth in Section 6.4(a).

7.61 ***"Remainder Registration Statement"*** has the meaning set forth in Section 6.1.

7.62 ***"Rule 144"*** means Rule 144 promulgated under the Securities Act, or any successor rule.

7.63 **"*Rule 415*"** means Rule 415 promulgated under the Securities Act, or any successor rule.

7.64 ***"SEC"*** means the United States Securities and Exchange Commission.

7.65 ***"SEC Documents"*** has the meaning set forth in Section 2.1.

7.66 ***"Securities"*** has the meaning set forth in Section 1.2(a).

7.67 ***"Securities Act"*** means the Securities Act of 1933, as amended, and the rules and regulations thereunder, or any similar successor statute.

7.68 ***"Selling Expenses"*** means all selling commissions applicable to the sale of Registrable Securities and all fees and expenses of legal counsel for any Holder.

7.69 ***"Shares"*** has the meaning set forth in Recital B to this Agreement.

7.70 ***"Stockholder Approval"*** has the meaning set forth in Section 4.8.

7.71 ***"Subscription Amounts"*** has the meaning set forth in Section 5.1(a).

7.72 ***"Trading Day"*** means a day on which the principal Trading Market is open for trading.

7.73 ***"Trading Market"*** means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, Nasdaq, or the New York Stock Exchange (or any successors to any of the foregoing).

7.74 ***"VWAP"*** means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the "Pink Sheets" published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Purchasers of a majority in interest of the Securities then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

7.75 ***"Warrants"*** has the meaning set forth in Recital B to this Agreement.

7.76 ***"Warrant Shares"*** has the meaning set forth in Section 2.2.

ARTICLE 8

GOVERNING LAW; MISCELLANEOUS

8.1 Governing Law; Jurisdiction. This Agreement will be governed by and interpreted in accordance with the laws of the State of New York without regard to the principles of conflict of laws (whether

of the State of New York or any other jurisdiction) which would result in the application of the laws of any other jurisdiction.

8.2 Counterparts; Signatures by Facsimile. This Agreement may be executed in counterparts, all of which are considered one and the same agreement and will become effective when counterparts have been signed by each party and delivered to the other parties. This Agreement may also be executed and delivered by facsimile signature, PDF or any electronic signature complying with the U.S. federal ESIGN Act of 2000 (e.g., www.docusign.com).

8.3 Headings. The headings of this Agreement are for convenience of reference only, are not part of this Agreement and do not affect its interpretation.

8.4 Severability. If any provision of this Agreement is invalid or unenforceable under any applicable statute or rule of law, then such provision will be deemed modified in order to conform with such statute or rule of law. Any provision hereof that may prove invalid or unenforceable under any law will not affect the validity or enforceability of any other provision hereof.

8.5 Entire Agreement; Amendments. This Agreement (including all schedules and exhibits hereto) constitutes the entire agreement among the parties hereto with respect to the subject matter hereof and thereof. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein or therein. This Agreement supersedes all prior agreements and understandings among the parties hereto with respect to the subject matter hereof. No provision of this Agreement may be waived or amended other than by an instrument in writing signed by the party to be charged with enforcement. Any amendment or waiver by a party effected in accordance with this Section 8.5 shall be binding upon such party, including with respect to any Securities purchased under this Agreement at the time outstanding and held by such party (including securities into which such Securities are convertible and for which such Securities are exercisable) and each future holder of all such securities.

8.6 Notices. All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed email or facsimile if sent during normal business hours of the recipient, and if sent at a time other than during normal business hours of the recipient, then on the next business day, (c) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one business day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. The addresses for such communications are:

If to the Company: Regulus Therapeutics Inc.
10628 Science Center Drive, Suite 100
San Diego, CA 92121
Attn: Dan Chevallard
Email: dchevallard@regulusrx.com

With a copy to: Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
Attn: Ken Rollins
Email: krollins@cooley.com

If to a Purchaser: To the address set forth immediately below such Purchaser's name on the signature pages hereto. Each party will provide ten days' advance written notice to the other parties of any change in its address.

8.7 Successors and Assigns. This Agreement is binding upon and inures to the benefit of the parties and their successors and assigns. The Company will not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Purchasers, and no Purchaser may assign this Agreement or any rights or obligations hereunder without the prior written consent of the Company, except as permitted in accordance with Section 6.9 hereof.

8.8 Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto, their respective permitted successors and assigns and the Placement Agent, and is not for the benefit of, nor may any provision hereof be enforced by, any other Person.

8.9 Further Assurances. Each party will do and perform, or cause to be done and performed, all such further acts and things, and will execute and deliver all other agreements, certificates, instruments and documents, as another party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

8.10 No Strict Construction. The language used in this Agreement is deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party.

8.11 Equitable Relief. The Company recognizes that, if it fails to perform or discharge any of its obligations under this Agreement, any remedy at law may prove to be inadequate relief to the Purchasers. The Company therefore agrees that the Purchasers are entitled to seek temporary and permanent injunctive relief in any such case. Each Purchaser also recognizes that, if it fails to perform or discharge any of its obligations under this Agreement, any remedy at law may prove to be inadequate relief to the Company. Each Purchaser therefore agrees that the Company is entitled to seek temporary and permanent injunctive relief in any such case.

8.12 Survival of Representations and Warranties. Notwithstanding any investigation made by any party to this Agreement, all representations and warranties made by the Company and the Purchasers herein shall survive for a period of one year following the date hereof.

8.13 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under this Agreement are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance of the obligations of any other Purchaser under this Agreement. Nothing contained herein and no action taken by any Purchaser pursuant thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group, or are deemed affiliates with respect to such obligations or the transactions contemplated by this Agreement. Each Purchaser shall be entitled to independently protect and enforce its rights, including without limitation the rights arising out of this Agreement, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose. The Company has elected to provide all Purchasers with the same terms of this Agreement for the convenience of the Company and not because it was required or requested to do so by any of the Purchasers. It is expressly understood and agreed that each provision contained in this Agreement is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers. Notwithstanding anything to the contrary in the foregoing, each of the Purchasers has been advised, and is being advised by this Agreement, to consult with an attorney before executing this Agreement, and each Purchaser has consulted (or had an opportunity to consult) with counsel of such Purchaser's choice concerning the terms and conditions of this Agreement for a reasonable period of time prior to the execution hereof and thereof.

8.14 Waiver of Conflicts. Each Purchaser acknowledges that Cooley LLP, outside general counsel to the Company, may have in the past performed and may now or in the future represent one or more Purchasers or their affiliates in matters unrelated to the transactions contemplated by this Agreement (the ***"Financing"***), including representation of such Purchasers or their affiliates in matters of a similar nature to the Financing. The applicable rules of professional conduct require that Cooley LLP inform the Purchasers hereunder of this representation and obtain their consent. Cooley LLP has served as outside general counsel to the Company and has negotiated the terms of the Financing solely on behalf of the Company. Each Purchaser hereby (a) acknowledges that they have had an opportunity to ask for and have obtained information relevant to such representation, including disclosure of the reasonably foreseeable adverse consequences of such representation; (b) acknowledges that with respect to the Financing, Cooley LLP has represented solely the Company, and not any Purchaser or any stockholder, director or employee of the Company or any Purchaser; and (c) gives its informed consent to Cooley LLP's representation of the Company in the Financing.

[Signature Pages Follow]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

REGULUS THERAPEUTICS INC.

By: /s/ Joseph P. Hagan
Name: Joseph P. Hagan
Title: President and Chief Executive Officer

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: GROWTH EQUITY OPPORTUNITIES FUND V, LLC

By: /s/ Louis S. Citron
Name: Louis S. Citron
Title: Chief Legal Officer

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

BIOTECHNOLOGY VALUE FUND, LP

By: /s/ Mark Lampert
Name: Mark Lampert
Title: President BVF Inc., General Partner of BVF Partners L.P., itself GP of Biotechnology Value Fund, L.P.

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

BIOTECHNOLOGY VALUE FUND II, LP

By: /s/ Mark Lampert
Name: Mark Lampert
Title: President BVF Inc., General Partner of BVF Partners L.P., itself GP of Biotechnology Value Fund II, L.P.

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

BIOTECHNOLOGY VALUE TRADING FUND OS, LP

By: /s/ Mark Lampert
Name: Mark Lampert
Title: President BVF Inc., General Partner of BVF Partners L.P., itself sole member of BVF Partners OS Ltd., itself GP of Biotechnology Value Trading Fund OS, L.P.

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

MSI BVF SPV, L.L.C.

By: /s/ Mark Lampert
Name: Mark Lampert
Title: President BVF Inc., itself General Partner of BVF Partners L.P., itself sole member of BVF Partners Partners L.P., itself attorney-in-fact for MSI BVF SPV, L.L.C.

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

EcoR1 Capital Fund, L.P.
By: EcoR1 Capital, LLC, its General Partner

By: /s/ Oleg Nodelman
Name: Oleg Nodelman
Title: Managing Director

EcoR1 Capital Fund Qualified, L.P.
By: EcoR1 Capital, LLC, its General Partner

By: /s/ Oleg Nodelman
Name: Oleg Nodelman
Title: Managing Director

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: ACORN BIOVENTURES, L.P.

By:

ACORN CAPITAL ADVISORS GP, LLC,
A Delaware limited liability company
Its: General Partner

By: /s/ Anders Hove
Name: Anders Hove
Title: Managing Member

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: Sarissa Capital Catapult Fund LLC

By: /s/ Patrice Bonfiglio
Name: Patrice Bonfiglio
Title: CFO

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: Sarissa Capital Hawkeye Fund LP

By: /s/ Patrice Bonfiglio
Name: Patrice Bonfiglio
Title: CFO

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: Sarissa Capital Offshore Master Fund LP

By: /s/ Patrice Bonfiglio
Name: Patrice Bonfiglio
Title: CFO

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: ALTIUM GROWTH FUND, LP

By: /s/ Mark Gottlieb
Name: Mark Gottlieb
Title: COO

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: CVI Investments, Inc.

By: Heights Capital Management, Inc.
its authorized agent

By: /s/ Martin Kobinger
Name: Martin Kobinger
Title: Investment Manager

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: AMZAK HEALTH INVESTORS, L.L.C.

By: /s/ Joyce E. Erony
Name: Joyce E. Erony
Title: Partner

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: Samsara BioCapital, L.P.

By: Samsara BioCapital GP, LLC,
General Partner

By: /s/ Dr. Srinivas Akkaraju, MD, PhD
Name: Dr. Srinivas Akkaraju, MD, PhD
Title: Managing Member

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: Stelios Papadopoulos

By: /s/ Stelios Papadopoulos
Name: Stelios Papadopoulos Ph.D.

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: PENSCO Trust Company Custodian FBO
Joseph P. Hagan IRA

By: /s/ Chris Rains
Name: Chris Rains
Title: Authorized Signatory

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: The Rastetter Family Trust

By: /s/ William Rastetter
Name: William Rastetter
Title: Trustee

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: Pascale Witz

By: /s/ Pascale Witz
Name: Pascale Witz

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: John Chambers

By: /s/ John Chambers
Name: John Chambers

[Signature Page to Securities Purchase Agreement]

IN WITNESS WHEREOF, the undersigned has caused this Securities Purchase Agreement to be duly executed as of the date first above written.

PURCHASER: Richard E. Gormley

By: /s/ Richard E. Gormley
Name: Richard E. Gormley

[Signature Page to Securities Purchase Agreement]

EXHIBIT A

SCHEDULE OF PURCHASERS

Purchaser	Beneficial Ownership Limitation	Initial Closing Common Shares Subscription Amount	Initial Closing Warrant Subscription Amount	Milestone Closing Shares Subscription Amount	Milestone Closing Warrant Subscription Amount	Aggregate Purchase Price
Acorn Bioventures, L.P.	4.99%	$ 799,999.20	$ 92,592.50	$ 1,199,999.88	$ 138,888.88	$ 2,231,480.46
Amzak Health Investors, LLC	4.99%	$ 358,506.00	$ 41,493.75	$ 537,759.00	$ 62,240.63	$ 999,999.38
Altium Growth Fund, LP	9.99%	$ 1,434,025.08	$ 165,975.13	$ 2,151,037.08	$ 248,962.63	$ 3,999,999.92
Biotechnology Value Fund, L.P.	9.99%	$ 1,388,262.24	$ 160,678.50	$ 2,082,393.36	$ 241,017.75	$ 3,872,351.85
Biotechnology Value Fund II, L.P.	9.99%	$ 1,170,142.20	$ 135,433.13	$ 1,755,212.76	$ 203,149.63	$ 3,263,937.72
Biotechnology Value Trading Fund OS, L.P.	9.99%	$ 192,782.16	$ 22,312.75	$ 289,173.24	$ 33,469.13	$ 537,737.28
MSI BVF SPV, LLC	9.99%	$ 48,812.76	$ 5,649.63	$ 73,218.60	$ 8,474.38	$ 136,155.37
EcoR1 Capital Fund, L.P.	9.99%	$ 199,761.12	$ 23,120.50	$ 299,641.68	$ 34,680.75	$ 557,204.05
EcoR1 Capital Fund Qualified, L.P.	9.99%	$ 1,000,237.68	$ 115,768.25	$ 1,500,357.60	$ 173,652.50	$ 2,790,016.03
Growth Equity Opportunities Fund V, LLC	9.99%	$ 4,000,000.32	$ 462,963.00	$ 5,999,999.40	$ 694,444.38	$11,157,407.10
Samsara BioCapital, L.P.	9.99%	$ 1,199,999.88	$ 138,888.88	$ 1,799,999.28	$ 208,333.25	$ 3,347,221.29
Sarissa Capital Offshore Master Fund LP	19.99%	$ 1,266,723.36	$ 146,611.50	$ 1,900,085.04	$ 219,917.25	$ 3,533,337.15
Sarissa Capital Catapult Fund LLC	19.99%	$ 412,944.48	$ 47,794.50	$ 619,417.80	$ 71,691.88	$ 1,151,848.66
Sarissa Capital Hawkeye Fund LP	19.99%	$ 320,331.24	$ 37,075.38	$ 480,496.32	$ 55,613.00	$ 893,515.94
Heights Capital Management, Inc.	4.99%	$ 579,999.96	$ 67,129.63	$ 869,999.40	$ 100,694.38	$ 1,617,823.37
Stelios Papadopoulos	19.99%	$ 399,999.60	$ 46,296.25	$ 599,999.40	$ 69,444.38	$ 1,115,739.63
The Rastetter Family Trust	19.99%	$ 100,320.12	$ 11,611.13	$ 150,479.64	$ 17,416.63	$ 279,827.52
Pascale Witz	19.99%	$ 32,000.40	$ 3,703.75	$ 47,999.52	$ 5,555.50	$ 89,259.17
Pensco Trust Company LLC Custodian FBO Joseph Hagan IRA	19.99%	$ 35,849.52	$ 4,149.25	$ 53,774.28	$ 6,223.88	$ 99,996.93
Richard Gormley	19.99%	$ 39,999.96	$ 4,629.63	$ 59,999.40	$ 6,944.38	$ 111,573.37
John Chambers	19.99%	$ 19,999.44	$ 2,314.75	$ 30,000.24	$ 3,472.25	$ 55,786.68
Total:		**$15,000,696.72**	**$1,736,191.79**	**$22,501,042.92**	**$2,604,287.44**	**$41,842,218.87**

EXHIBIT B

FORM OF WARRANT

EXHIBIT C-1

FORM OF CLASS A-1 CERTIFICATE OF DESIGNATION

EXHIBIT C-2

FORM OF CLASS A-2 CERTIFICATE OF DESIGNATION

Exhibit 10.2

EIGHTH AMENDMENT TO THE LOAN AND SECURITY AGREEMENT

THIS EIGHTH AMENDMENT TO THE LOAN AND SECURITY AGREEMENT (this "**Amendment**") is made effective as of May 3, 2019 (the "**Eighth Amendment Date**") by and among OXFORD FINANCE LLC, a Delaware limited liability company with an office located at 133 North Fairfax Street, Alexandria, Virginia 22314 (in its individual capacity, "**Oxford**"; and in its capacity as Collateral Agent, "**Collateral Agent**"), the Lenders listed on Schedule 1.1 of the Loan Agreement (as defined below) from time to time including Oxford in its capacity as a Lender (each a "**Lender**" and collectively, the "**Lenders**") and REGULUS THERAPEUTICS INC., a Delaware corporation with offices located at 10628 Science Center Dr., Suite 100, San Diego, California 92121 ("**Borrower**").

WHEREAS, Collateral Agent, Borrower and Lenders party thereto from time to time have entered into that certain Loan and Security Agreement, dated as of June 17, 2016 (as amended, supplemented or otherwise modified from time to time, the "**Loan Agreement**"), pursuant to which Lenders have provided to Borrower certain loans in accordance with the terms and conditions thereof; and

WHEREAS, Borrower, Lenders and Collateral Agent desire to amend certain provisions of the Loan Agreement as provided herein and subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the promises, covenants and agreements contained herein, and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, Borrower, Lenders and Collateral Agent hereby agree as follows:

1. Capitalized terms used herein but not otherwise defined shall have the respective meanings given to them in the Loan Agreement.

2. Section 2.5 of the Loan Agreement is hereby amended by deleting the word "and" immediately following Section 2.5(i), replacing "." at the end of Section 2.5(i) with ";" and adding the following Section 2.5(k) and Section 2.5 (l) thereto:

   (j) Maturity Date Extension Fee. A fully earned and non-refundable maturity date extension fee in the amount of Six Hundred Fifty Thousand Dollars ($650,000), which shall become due and payable, if the Maturity Date becomes May 1, 2022, upon the earliest of: (i) the Maturity Date, (ii) the acceleration of any Term Loan, or (iii) the date on which the Term Loans are fully prepaid pursuant to Section 2.2(c) or (d); and

   (k) Second I/O Extension Fee. A fully earned and non-refundable second interest only period extension fee in the amount of One Hundred and Fifteen Thousand Dollars ($115,000.00) which shall become due and payable upon the earlier of: (i) the Maturity Date, (ii) the acceleration of any Term Loan, or (iii) the prepayment of a Term Loan pursuant to Section 2.2(c) or (d); provided, however, in lieu of paying the aforementioned fee of One Hundred and Fifteen Thousand Dollars ($115,000.00), Borrower shall only be required to pay on the earliest date by which both Capital Event and Second Capital Event have occurred and also notify Collateral Agent of such payment on such date, a fully earned and non-refundable second interest only period extension fee in the amount of Thirty Five Thousand Dollars ($35,000.00).

3. Section 13.1 of the Loan Agreement is hereby amended by adding the following definitions thereto in alphabetical order:

   "**Capital Event**" means the receipt by Borrower on or after the Eighth Amendment Date and on or before May 9, 2019, of unrestricted gross cash proceeds of not less than Ten Million Dollars ($10,000,000.00) from (i) the issuance and sale by Borrower of its unsecured subordinated convertible debt and/or equity

securities and/or (ii) "up front" or milestone payments in connection with a joint venture, collaboration or other partnering transaction other than pursuant to the Sanofi License Agreement.

"**Second Capital Event"** means the receipt by Borrower on or after the Eighth Amendment Date and on or before December 31, 2019, of unrestricted gross cash proceeds of not less than Twenty Million Dollars ($20,000,000.00) (which shall not include proceeds from the Capital Event other than proceeds from Capital Event in excess of Ten Million Dollars) from (i) the issuance and sale by Borrower of its unsecured subordinated convertible debt and/or equity securities and/or (ii) "up front" or milestone payments in connection with a joint venture, collaboration or other partnering transaction other than pursuant to the Sanofi License Agreement.

"**Eighth Amendment Date**" means May 3, 2019.

4. Section 13.1 of the Loan Agreement is hereby further amended by amending and restating the following definitions therein as follows:

"**Applicable Sanofi Percentage**" is 100%.

"**Second Amortization Date**" means (i) April 1, 2019, if the Capital Event does not occur, (ii) May 1, 2020, if the Capital Event occurs but the Second Capital Event does not occur and (iii) May 1, 2021, if both the Capital Event and the Second Capital Event occur.

"**Maturity Date**" is (i) June 1, 2020, if the Capital Event does not occur and (ii) May 1, 2022, if the Capital Event occurs.

"**Minimum Cash Balance**" is (i) Five Million Dollars ($5,000,000.00) if Borrower has not as yet made the full Sanofi License Payment related to the License Amendment Payments (described in the clause (ii) of the definition of License Amendment Payments), regardless of whether or not such Sanofi License Payment had become due, and (ii) Zero Dollars ($0.00) if Borrower has made the full Sanofi License Payment related to the License Amendment Payments (described in the clause (ii) of the definition of License Amendment Payments).

5. The Amortization Table attached to the Disbursement Letter dated as of the Effective Date is amended and restated as set forth on the Amortization Table attached as Exhibit A hereto effective upon the occurrence of the Capital Event.

6. Upon the Borrower's payment in full of Sanofi License Payment related to the License Amendment Payments (described in the clause (ii) of the definition of License Amendment Payments) in accordance with the terms of the Loan Agreement, Collateral Agent's Lien on Intellectual Property of Borrower shall be released and (i) Collateral Agent and, if applicable, Lenders shall upon request of Borrower, promptly execute and deliver to Borrower any other Lien releases and discharges, intellectual property security interest releases or other release documents (in recordable form, if applicable) as are necessary to terminate and release the Lien under the Loan Documents with respect to the Intellectual Property of Borrower and (ii) the parties shall enter into an appropriate amendment to the Loan Agreement in such form and substance as acceptable to Collateral Agent and Lenders to release Collateral Agent's Lien on the Intellectual Property of Borrower and make other related changes; provided, however, the Intellectual Property of Borrower shall remain subject to all other provisions of the Loan Agreement (including without limitation all applicable provisions of Section 7 of the Loan Agreement).

7. Limitation of Amendment.

    a. The amendments set forth above are effective for the purposes set forth herein and shall be limited precisely as written and shall not be deemed to (a) be a consent to any amendment, waiver or

modification of any other term or condition of any Loan Document, or (b) otherwise prejudice any right, remedy or obligation which Lenders or Borrower may now have or may have in the future under or in connection with any Loan Document, as amended hereby.

b. This Amendment shall be construed in connection with and as part of the Loan Documents and all terms, conditions, representations, warranties, covenants and agreements set forth in the Loan Documents, except as herein amended, are hereby ratified and confirmed and shall remain in full force and effect.

8. To induce Collateral Agent and Lenders to enter into this Amendment, Borrower hereby represents and warrants to Collateral Agent and Lenders as follows:

a. Immediately after giving effect to this Amendment (a) the representations and warranties contained in the Loan Documents are true, accurate and complete in all material respects as of the date hereof (except to the extent such representations and warranties relate to an earlier date, in which case they are true and correct as of such date), and (b) no Event of Default has occurred and is continuing;

b. Borrower has the power and due authority to execute and deliver this Amendment and to perform its obligations under the Loan Agreement, as amended by this Amendment;

c. The organizational documents of Borrower delivered to Collateral Agent on the Effective Date, and updated pursuant to subsequent deliveries by the Borrower to the Collateral Agent, remain true, accurate and complete and have not been amended, supplemented or restated and are and continue to be in full force and effect;

d. The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not and will not contravene (i) any law or regulation binding on or affecting Borrower, (ii) any contractual restriction with a Person binding on Borrower, (iii) any order, judgment or decree of any court or other governmental or public body or authority, or subdivision thereof, binding on Borrower, or (iv) the organizational documents of Borrower;

e. The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not require any order, consent, approval, license, authorization or validation of, or filing, recording or registration with, or exemption by any governmental or public body or authority, or subdivision thereof, binding on Borrower, except as already has been obtained or made;

f. This Amendment has been duly executed and delivered by Borrower and is the binding obligation of Borrower, enforceable against Borrower in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, liquidation, moratorium or other similar laws of general application and equitable principles relating to or affecting creditors' rights; and

g. The Borrower hereby remises, releases, acquits, satisfies and forever discharges the Lenders and Collateral Agent, their agents, employees, officers, directors, predecessors, attorneys and all others acting or purporting to act on behalf of or at the direction of the Lenders and Collateral Agent ("**Releasees**"), of and from any and all manner of actions, causes of action, suit, debts, accounts, covenants, contracts, controversies, agreements, variances, damages, judgments, claims and demands whatsoever, in law or in equity, which any of such parties ever had, now has or, to the extent arising from or in connection with any act, omission or state of facts taken or existing on or prior to the date hereof, may have after the date hereof against the Releasees, for, upon or by

reason of any matter, cause or thing whatsoever relating to or arising out of the Loan Agreement or the other Loan Documents on or prior to the date hereof through the date hereof. Without limiting the generality of the foregoing, the Borrower waives and affirmatively agrees not to allege or otherwise pursue any defenses, affirmative defenses, counterclaims, claims, causes of action, setoffs or other rights they do, shall or may have as of the date hereof, including the rights to contest: (a) the right of Collateral Agent and each Lender to exercise its rights and remedies described in the Loan Documents; (b) any provision of this Amendment or the Loan Documents; or (c) any conduct of the Lenders or other Releasees relating to or arising out of the Loan Agreement or the other Loan Documents on or prior to the date hereof.

9. Except as expressly set forth herein, the Loan Agreement shall continue in full force and effect without alteration or amendment. This Amendment and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements.

10. Borrower agrees to promptly pay (but in no event in less than 5 Business Days of invoice date) all unpaid Lenders' Expenses incurred through the date hereof, which may be debited (or ACH'd) from any of Borrower's accounts.

11. This Amendment shall be deemed effective as of the Eighth Amendment Date upon the due execution and delivery to Collateral Agent of this Amendment by each party hereto.

12. This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, and all of which, taken together, shall constitute one and the same instrument.

13. This Amendment and the rights and obligations of the parties hereto shall be governed by and construed in accordance with the laws of the State of California.

[*Balance of Page Intentionally Left Blank – Signature Pages to Follow*]

IN WITNESS WHEREOF, the parties hereto have caused this Eighth Amendment to Loan and Security Agreement to be executed as of the date first set forth above.

BORROWER:

REGULUS THERAPEUTICS INC.

By: /s/ Daniel Chevallard
Name: Daniel Chevallard
Title: Chief Financial Officer

COLLATERAL AGENT AND LENDER:

OXFORD FINANCE LLC

By: /s/ Colette H. Featherly
Name: Colette H. Featherly
Title: Senior Vice President

EXHIBIT A

Amortization Table

Please see attached.

Oxford Finance LLC
Amortization Table
Regulus Total

Start Date:		6/22/2016	
Interest Rate:		8.97885%	
Term:		70	45 IO + 25 PI
Payment:		Varies	
Final Payment:	$	1,007,809.27	5.50%
3rd Amendment Fee:	$	25,000.00	
Fifth Amendment Fee:	$	25,000.00	
Sixth Amendment Fee:	$	17,000.00	
Seventh Amendment Fee:	$	15,000.00	
Eighth Amendment Fee	$	650,000.00	
Amount:		20,000,000.00	
Interim Interest Days:		9	
Interim Interest:			
	$	44,894.25	

Disclaimer:

THIS IS A STANDARD AMORTIZATION SCHEDULE. IT IS NOT INTENDED TO BE USED FOR PAYOFF PURPOSES.

THIS AMORTIZATION SCHEDULE REPRESENTS A FLOATING INTEREST RATE LOAN. INTEREST RATE CHARGED MAY DIFFER FROM RATE PER THIS SCHEDULE BASED ON THE TERMS OF THE LOAN AGREEMENT

PMT No.	Payment Date	Beginning Balance	Monthly Payment	Interest	Principal	Ending Balance
	7/1/16			Interim Interest Due		$ 20,000,000.00
1	8/1/16	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
2	9/1/16	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
3	10/1/16	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
4	11/1/16	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
5	12/1/16	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
6	1/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
7	2/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
8	3/1/17	$ 20,000,000.00	$ 139,671.00	$ 139,671.00	$ 0.00	$ 20,000,000.00
9	4/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
10	5/1/17	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
11	6/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
12	7/1/17	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
13	8/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
14	9/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
15	10/1/17	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
16	11/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
17	12/1/17	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
18	1/1/18	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
19	2/1/18	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
20	3/1/18	$ 20,000,000.00	$ 139,671.00	$ 139,671.00	$ 0.00	$ 20,000,000.00
21	4/1/18	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
22	5/1/18	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
23	6/1/18	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
24	7/1/18	$ 20,000,000.00	$ 982,980.83	$ 149,647.50	$ 833,333.33	$ 19,166,666.67
25	8/1/18	$ 19,166,666.67	$ 148,192.59	$ 148,192.59	$ 0.00	$ 19,166,666.67
26	9/1/18	$ 19,166,666.67	$ 148,192.59	$ 148,192.59	$ 0.00	$ 19,166,666.67
27	10/1/18	$ 19,166,666.67	$ 143,412.19	$ 143,412.19	$ 0.00	$ 19,166,666.67
28	11/1/18	$ 19,166,666.67	$ 1,106,525.93	$ 148,192.59	$ 958,333.33	$ 18,208,333.33
29	12/1/18	$ 18,208,333.33	$ 1,686,680.17	$ 136,241.58	$ 1,550,438.60	$ 16,657,894.74
30	1/1/19	$ 16,657,894.74	$ 1,054,233.90	$ 128,795.30	$ 925,438.60	$ 15,732,456.14
31	2/1/19	$ 15,732,456.14	$ 121,640.01	$ 121,640.01	$ 0.00	$ 15,732,456.14
32	3/1/19	$ 15,732,456.14	$ 109,868.39	$ 109,868.39	$ 0.00	$ 15,732,456.14
33	4/1/19	$ 15,732,456.14	$ 560,335.01	$ 121,640.01	$ 438,695.00	$ 15,293,761.14
34	5/1/19	$ 15,293,761.14	$ 726,933.66	$ 114,433.66	$ 612,500.00	$ 14,681,261.14
35	6/1/19	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
36	7/1/19	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14
37	8/1/19	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
38	9/1/19	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
39	10/1/19	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14
40	11/1/19	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
41	12/1/19	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14
42	1/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
43	2/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
44	3/1/20	$ 14,681,261.14	$ 106,189.01	$ 106,189.01	$ 0.00	$ 14,681,261.14
45	4/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
46	5/1/20	$ 14,681,261.14	$ 697,101.15	$ 109,850.70	$ 587,250.45	$ 14,094,010.69
47	6/1/20	$ 14,094,010.69	$ 696,222.34	$ 108,971.90	$ 587,250.45	$ 13,506,760.25
48	7/1/20	$ 13,506,760.25	$ 688,313.09	$ 101,062.65	$ 587,250.45	$ 12,919,509.80
49	8/1/20	$ 12,919,509.80	$ 687,141.35	$ 99,890.90	$ 587,250.45	$ 12,332,259.36
50	9/1/20	$ 12,332,259.36	$ 682,600.85	$ 95,350.41	$ 587,250.45	$ 11,745,008.91
51	10/1/20	$ 11,745,008.91	$ 675,131.01	$ 87,880.56	$ 587,250.45	$ 11,157,758.47

52	11/1/20	$ 11,157,758.47	$ 673,519.86	$ 86,269.42	$ 587,250.45	$ 10,570,508.02
53	12/1/20	$ 10,570,508.02	$ 666,342.95	$ 79,092.50	$ 587,250.45	$ 9,983,257.58
54	1/1/21	$ 9,983,257.58	$ 664,438.87	$ 77,188.43	$ 587,250.45	$ 9,396,007.13
55	2/1/21	$ 9,396,007.13	$ 659,898.38	$ 72,647.93	$ 587,250.45	$ 8,808,756.68
56	3/1/21	$ 8,808,756.68	$ 648,766.84	$ 61,516.39	$ 587,250.45	$ 8,221,506.24
57	4/1/21	$ 8,221,506.24	$ 650,817.38	$ 63,566.94	$ 587,250.45	$ 7,634,255.79
58	5/1/21	$ 7,634,255.79	$ 644,372.81	$ 57,122.36	$ 587,250.45	$ 7,047,005.35
59	6/1/21	$ 7,047,005.35	$ 641,736.39	$ 54,485.95	$ 587,250.45	$ 6,459,754.90
60	7/1/21	$ 6,459,754.90	$ 635,584.75	$ 48,334.31	$ 587,250.45	$ 5,872,504.46
61	8/1/21	$ 5,872,504.46	$ 632,655.40	$ 45,404.96	$ 587,250.45	$ 5,285,254.01
62	9/1/21	$ 5,285,254.01	$ 628,114.91	$ 40,864.46	$ 587,250.45	$ 4,698,003.56
63	10/1/21	$ 4,698,003.56	$ 622,402.67	$ 35,152.22	$ 587,250.45	$ 4,110,753.12
64	11/1/21	$ 4,110,753.12	$ 619,033.92	$ 31,783.47	$ 587,250.45	$ 3,523,502.67
65	12/1/21	$ 3,523,502.67	$ 613,614.61	$ 26,364.17	$ 587,250.45	$ 2,936,252.23
66	1/1/22	$ 2,936,252.23	$ 609,952.92	$ 22,702.48	$ 587,250.45	$ 2,349,001.78
67	2/1/22	$ 2,349,001.78	$ 605,412.43	$ 18,161.98	$ 587,250.45	$ 1,761,751.34
68	3/1/22	$ 1,761,751.34	$ 599,553.72	$ 12,303.28	$ 587,250.45	$ 1,174,500.89
69	4/1/22	$ 1,174,500.89	$ 596,331.44	$ 9,080.99	$ 587,250.45	$ 587,250.45
70	5/1/22	$ 587,250.45	$ 591,644.47	$ 4,394.03	$ 587,250.45	$ 0.00
Final	5/1/22	Final Payment	$ 1,739,809.27	$ 1,739,809.27	$ 0.00	
		Totals	$ 29,381,611.93	$ 9,381,611.93	$ 20,000,000.00	

Note: Interest rate floats monthly (greater of 1 Month Libor + 8.51 % or 8.95%)

Oxford Finance LLC
Amortization Table
Regulus Total

Start Date:		6/22/2016	
Interest Rate:		8.97885%	
Term:		70	57 IO + 13 PI
Payment:		Varies	
Final Payment:	$	1,007,809.27	5.50%
3rd Amendment Fee:	$	25,000.00	
Fifth Amendment Fee:	$	25,000.00	
Sixth Amendment Fee:	$	17,000.00	
Seventh Amendment Fee:	$	15,000.00	
Eighth Amendment Fee	$	765,000.00	
Amount:		20,000,000.00	
Interim Interest Days:		9	
Interim Interest:			
	$	44,894.25	

Disclaimer:

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THIS AMORTIZATION SCHEDULE REPRESENTS A FLOATING INTEREST RATE LOAN. INTEREST RATE CHARGED MAY DIFFER FROM RATE PER THIS SCHEDULE BASED ON THE TERMS OF THE LOAN AGREEMENT

PMT No.	Payment Date	Beginning Balance	Monthly Payment	Interest	Principal	Ending Balance
	7/1/16			Interim Interest Due		$ 20,000,000.00
1	8/1/16	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
2	9/1/16	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
3	10/1/16	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
4	11/1/16	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
5	12/1/16	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
6	1/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
7	2/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
8	3/1/17	$ 20,000,000.00	$ 139,671.00	$ 139,671.00	$ 0.00	$ 20,000,000.00
9	4/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
10	5/1/17	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
11	6/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
12	7/1/17	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
13	8/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
14	9/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
15	10/1/17	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
16	11/1/17	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
17	12/1/17	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
18	1/1/18	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
19	2/1/18	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
20	3/1/18	$ 20,000,000.00	$ 139,671.00	$ 139,671.00	$ 0.00	$ 20,000,000.00
21	4/1/18	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
22	5/1/18	$ 20,000,000.00	$ 149,647.50	$ 149,647.50	$ 0.00	$ 20,000,000.00
23	6/1/18	$ 20,000,000.00	$ 154,635.75	$ 154,635.75	$ 0.00	$ 20,000,000.00
24	7/1/18	$ 20,000,000.00	$ 982,980.83	$ 149,647.50	$ 833,333.33	$ 19,166,666.67
25	8/1/18	$ 19,166,666.67	$ 148,192.59	$ 148,192.59	$ 0.00	$ 19,166,666.67
26	9/1/18	$ 19,166,666.67	$ 148,192.59	$ 148,192.59	$ 0.00	$ 19,166,666.67
27	10/1/18	$ 19,166,666.67	$ 143,412.19	$ 143,412.19	$ 0.00	$ 19,166,666.67
28	11/1/18	$ 19,166,666.67	$ 1,106,525.93	$ 148,192.59	$ 958,333.33	$ 18,208,333.33
29	12/1/18	$ 18,208,333.33	$ 1,686,680.17	$ 136,241.58	$ 1,550,438.60	$ 16,657,894.74
30	1/1/19	$ 16,657,894.74	$ 1,054,233.90	$ 128,795.30	$ 925,438.60	$ 15,732,456.14
31	2/1/19	$ 15,732,456.14	$ 121,640.01	$ 121,640.01	$ 0.00	$ 15,732,456.14
32	3/1/19	$ 15,732,456.14	$ 109,868.39	$ 109,868.39	$ 0.00	$ 15,732,456.14
33	4/1/19	$ 15,732,456.14	$ 560,335.01	$ 121,640.01	$ 438,695.00	$ 15,293,761.14
34	5/1/19	$ 15,293,761.14	$ 726,933.66	$ 114,433.66	$ 612,500.00	$ 14,681,261.14
35	6/1/19	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
36	7/1/19	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14
37	8/1/19	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
38	9/1/19	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
39	10/1/19	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14
40	11/1/19	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
41	12/1/19	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14
42	1/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
43	2/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
44	3/1/20	$ 14,681,261.14	$ 106,189.01	$ 106,189.01	$ 0.00	$ 14,681,261.14
45	4/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
46	5/1/20	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14
47	6/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
48	7/1/20	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14
49	8/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
50	9/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$ 14,681,261.14
51	10/1/20	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$ 14,681,261.14

52	11/1/20	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$	14,681,261.14
53	12/1/20	$ 14,681,261.14	$ 109,850.70	$ 109,850.70	$ 0.00	$	14,681,261.14
54	1/1/21	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$	14,681,261.14
55	2/1/21	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$	14,681,261.14
56	3/1/21	$ 14,681,261.14	$ 102,527.32	$ 102,527.32	$ 0.00	$	14,681,261.14
57	4/1/21	$ 14,681,261.14	$ 113,512.39	$ 113,512.39	$ 0.00	$	14,681,261.14
58	5/1/21	$ 14,681,261.14	$ 1,239,178.48	$ 109,850.70	$ 1,129,327.78	$	13,551,933.36
59	6/1/21	$ 13,551,933.36	$ 1,234,108.45	$ 104,780.67	$ 1,129,327.78	$	12,422,605.58
60	7/1/21	$ 12,422,605.58	$ 1,222,278.37	$ 92,950.59	$ 1,129,327.78	$	11,293,277.80
61	8/1/21	$ 11,293,277.80	$ 1,216,645.00	$ 87,317.22	$ 1,129,327.78	$	10,163,950.02
62	9/1/21	$ 10,163,950.02	$ 1,207,913.28	$ 78,585.50	$ 1,129,327.78	$	9,034,622.24
63	10/1/21	$ 9,034,622.24	$ 1,196,928.21	$ 67,600.43	$ 1,129,327.78	$	7,905,294.46
64	11/1/21	$ 7,905,294.46	$ 1,190,449.84	$ 61,122.06	$ 1,129,327.78	$	6,775,966.68
65	12/1/21	$ 6,775,966.68	$ 1,180,028.10	$ 50,700.32	$ 1,129,327.78	$	5,646,638.90
66	1/1/22	$ 5,646,638.90	$ 1,172,986.39	$ 43,658.61	$ 1,129,327.78	$	4,517,311.12
67	2/1/22	$ 4,517,311.12	$ 1,164,254.67	$ 34,926.89	$ 1,129,327.78	$	3,387,983.34
68	3/1/22	$ 3,387,983.34	$ 1,152,987.93	$ 23,660.15	$ 1,129,327.78	$	2,258,655.56
69	4/1/22	$ 2,258,655.56	$ 1,146,791.22	$ 17,463.44	$ 1,129,327.78	$	1,129,327.78
70	5/1/22	$ 1,129,327.78	$ 1,137,777.83	$ 8,450.05	$ 1,129,327.78	($	0.00)
Final	5/1/22	Final Payment	$ 1,854,809.27	$ 1,854,809.27	$ 0.00		
		Totals	$ 30,164,752.06	$ 10,164,752.06	$ 20,000,000.00		

Note: Interest rate floats monthly (greater of 1 Month Libor + 8.51 % or 8.95%)

Exhibit 99.1

Regulus Therapeutics Announces Private Placement of Equity

May 6, 2019

Up to $41.8 Million in Gross Proceeds to be Funded in Two Tranches

LA JOLLA, Calif., May 6, 2019 /PRNewswire/ — Regulus Therapeutics Inc. (Nasdaq: RGLS), a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs, today announced that it has entered into a definitive securities purchase agreement with certain institutional and other accredited investors for aggregate gross proceeds of up to approximately $41.8 million in a two-tranche private placement of equity. The initial tranche of approximately $16.7 million, priced at the market, is anticipated to close on or about May 7, 2019, subject to the satisfaction of customary closing conditions. Investors in the private placement include the Company's two largest existing institutional shareholders, New Enterprise Associates (NEA) and BVF Partners L.P., and several members of the Board and management. The financing also includes participation from several new institutional investors, including Acorn Bioventures, Altium Capital, EcoR1 Capital, Samsara BioCapital, and Sarissa Capital. H.C. Wainwright and Co. is acting as exclusive placement agent for the financing.

Under the securities purchase agreement the investors have agreed to purchase, at an initial closing, approximately 9.7 million shares of the Company's Common Stock ("Common Stock") and accompanying warrants to purchase up to an aggregate of approximately 9.7 million shares of Common Stock, at a combined purchase price of $1.205 per share and accompanying warrant. Certain investors have also agreed to purchase, in lieu of shares of Common Stock, an aggregate of approximately 416,000 shares of non-voting Class A-1 convertible preferred stock at a price of $10.80 per share, and accompanying warrants to purchase an aggregate of up to approximately 4.16 million shares of Common Stock at a price of $0.125 for each share of Common Stock underlying the warrants. Each share of non-voting Class A-1 convertible preferred stock will be convertible into 10 shares of Common Stock, subject to certain beneficial ownership conversion limitations. The warrants will be exercisable for a period of five years following the date of issuance and will have an exercise price of $1.08 per share, subject to proportional adjustments in the event of stock splits or combinations or similar events. The total gross proceeds to the Company from the sale of these securities at the initial closing is expected to be approximately $16.7 million. The initial closing is expected to occur on or about May 7, 2019, subject to customary closing conditions.

Subject to the Company's public announcement on or before December 31, 2019 of its plan to recommence the Phase 1 multiple ascending dose clinical trial of RGLS4326 based upon correspondence from FDA (the "Public Announcement"), the investors have agreed to purchase shares of non-voting convertible preferred stock and accompanying warrants to purchase shares of Common Stock ("Milestone Securities") in a second closing (collectively, "Milestone Closing"). The Milestone Closing will have aggregate gross proceeds of approximately $25.1 million.

Each additional share of non-voting convertible preferred stock will be convertible into 10 shares of common stock, subject to certain beneficial ownership conversion limitations. The additional non-voting preferred stock will be sold at a price per share of $10.80 in the event the volume-weighted average price per share of Common Stock on Nasdaq ("VWAP") during the five full trading days following the Public Announcement is at least $1.08. In the event the VWAP during the five full trading days following the Public Announcement is less than $1.08, the price per share of the additional non-voting preferred stock will be based on a VWAP preceding the Milestone Closing, and the issuance of the Milestone Securities will be subject to stockholder approval under Nasdaq Listing Rule 5635. The accompanying warrants will be sold at a price of $0.125 for each share of Common Stock underlying the warrants, will have an exercise price equal to 100% of the purchase price of the non-voting convertible preferred stock sold in the Milestone Closing (priced on an as-converted to Common Stock basis), subject to proportional adjustments in the event of stock splits or combinations or similar events, and will have an exercise term of five years from the date of issuance.

The offer and sale of the foregoing securities are being made in a transaction not involving a public offering and have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), or applicable state securities laws. Accordingly, the securities may not be reoffered or resold in the United States except pursuant to an effective registration statement or an applicable exemption from the registration requirements of the Securities Act and such applicable state securities laws.

This press release does not constitute an offer to sell or the solicitation of an offer to buy the securities, nor shall there be any sale of the securities in any state in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of such state.

About Autosomal Dominant Polycystic Kidney Disease (ADPKD)

ADPKD, caused by the mutations in the PKD1 or PKD2 genes, is among the most common human monogenic disorders and a leading cause of end-stage renal disease. The disease is characterized by the development of multiple fluid filled cysts primarily in the kidneys, and to a lesser extent in the liver and other organs. Excessive kidney cyst cell proliferation, a central pathological feature, ultimately leads to end-stage renal disease in approximately 50% of ADPKD patients by age 60. It is estimated that approximately 1 in 1,000 people bear a mutation in either PKD1 or PKD2 genes worldwide.

About RGLS4326

RGLS4326 is a novel oligonucleotide designed to inhibit miR-17 and designed to preferentially target the kidney. Preclinical studies with RGLS4326

have demonstrated direct regulation of PKD1 and PKD2 in human ADPKD cyst cells, a reduction in kidney cyst formation, improved kidney weight/body weight ratio, decreased cyst cell proliferation, and preserved kidney function in mouse models of ADPKD.

About Regulus

Regulus Therapeutics Inc. (Nasdaq: RGLS) is a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs. Regulus maintains its corporate headquarters in La Jolla, CA.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, including statements associated with the timing, size and completion of the proposed private financing, including statements regarding the Milestone Closing. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as “believes,” “anticipates,” “plans,” “expects,” “intends,” “will,” “goal,” “potential” and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon Regulus’ current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation, risks associated with the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics and in the endeavor of building a business around such drugs, feedback from the FDA and market conditions. These and other risks concerning Regulus’ financial position and programs are described in additional detail in Regulus’ filings with the Securities and Exchange Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made. Regulus undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

Investor Relations Contact: Dan Chevallard, Chief Financial Officer, 858-202-6376, dchevallard@regulusrx.com

Exhibit 99.2

Regulus Therapeutics Announces Restructuring of Term Loan

May 6, 2019

Term Loan Amended to Provide Up to Two Years of Interest Only Payments and Extension of Maturity Date to May 2022

LA JOLLA, Calif., May 6, 2019 /PRNewswire/ — Regulus Therapeutics Inc. (Nasdaq: RGLS), a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs, today announced that it has entered into an amendment (the "Amendment") with Oxford Finance LLC. The Amendment to the Term Loan, with a principal balance outstanding of $14.7 million, provides the Company with a new twelve-month period of interest-only payments, commencing May 2019 and a two-year extension of its maturity date to May 2022. Upon the closing of the second tranche of the Company's recently announced private financing, the Company will receive an additional twelve-month period of interest-only payments, commencing May 2020.

"This restructuring of our Term Loan, coupled with our recently announced private financing extends our cash runway and provides the necessary capital for Regulus to complete our Phase 1 program for RGLS4326, pending FDA alignment on the re-initiation of the Multiple Ascending Dose study, as well as advancement of our preclinical programs targeting HBV and NASH," said Jay Hagan, CEO of Regulus. "We appreciate the continued support of Oxford as we advance our pipeline of promising therapeutics."

About Autosomal Dominant Polycystic Kidney Disease (ADPKD)

ADPKD, caused by the mutations in the PKD1 or PKD2 genes, is among the most common human monogenic disorders and a leading cause of end-stage renal disease. The disease is characterized by the development of multiple fluid filled cysts primarily in the kidneys, and to a lesser extent in the liver and other organs. Excessive kidney cyst cell proliferation, a central pathological feature, ultimately leads to end-stage renal disease in approximately 50% of ADPKD patients by age 60. It is estimated that approximately 1 in 1,000 people bear a mutation in either PKD1 or PKD2 genes worldwide.

About RGLS4326

RGLS4326 is a novel oligonucleotide designed to inhibit miR-17 and designed to preferentially target the kidney. Preclinical studies with RGLS4326 have demonstrated direct regulation of PKD1 and PKD2 in human ADPKD cyst cells, a reduction in kidney cyst formation, improved kidney weight/body weight ratio, decreased cyst cell proliferation, and preserved kidney function in mouse models of ADPKD.

About Regulus

Regulus Therapeutics Inc. (Nasdaq: RGLS) is a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs. Regulus has leveraged its oligonucleotide drug discovery and development expertise to develop a pipeline complemented by a rich intellectual property estate in the microRNA field. Regulus maintains its corporate headquarters in La Jolla, CA. For more information, please visit http://www.regulusrx.com.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements associated with the expected ability of Regulus to undertake certain activities and accomplish certain goals (including with respect to development and other activities related to RGLS4326 or its preclinical programs), Regulus' sales of securities, its estimated cash runway, the projected timeline of clinical development activities, and expectations regarding future therapeutic and commercial potential of Regulus' business plans, technologies and intellectual property related to microRNA therapeutics and biomarkers being discovered and developed by Regulus. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "intends," "will," "goal," "potential" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon Regulus' current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation, risks associated with the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such drugs. These and other risks concerning Regulus' financial position and programs are described in additional detail in Regulus filings with the Securities and Exchange Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made. Regulus undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

Investor Relations Contact: Dan Chevallard, Chief Financial Officer, 858-202-6376, dchevallard@regulusrx.com

Regulus Therapeutics Announces Closing of First Tranche of $41.8 Million Private Placement of Equity

May 7, 2019

LA JOLLA, Calif., May 7, 2019 /PRNewswire/ — Regulus Therapeutics Inc. (Nasdaq: RGLS), a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs, today announced the closing of the first tranche of its previously announced private placement of equity. The Company received gross proceeds of approximately $16.7 million from the sale of 9,730,534 shares of the Company's common stock ("Common Stock") and accompanying warrants to purchase up to an aggregate of 9,730,534 shares of common stock at a combined purchase price of $1.205 per share. In addition, the Company sold 415,898 shares of non-voting Class A-1 convertible preferred stock, in lieu of shares of Common Stock, at a price of $10.80 per share, and accompanying warrants to purchase an aggregate of 4,158,980 shares of Common Stock at a price of $0.125 for each share of Common Stock underlying these warrants. Each share of non-voting Class A-1 convertible preferred stock is convertible into 10 shares of Common Stock, subject to certain beneficial ownership conversion limitations. The Company expects to use the proceeds from the transaction primarily to advance RGLS4326 for the treatment of ADPKD, to advance select programs from its pipeline of microRNA therapies and for general corporate purposes. H.C. Wainwright and Co. acted as exclusive placement agent for the financing.

Subject to the Company's public announcement on or before December 31, 2019 of its plan to recommence the Phase 1 multiple ascending dose clinical trial of RGLS4326 based upon correspondence from FDA (the "Public Announcement"), the investors who purchased securities in the first tranche of the private financing have agreed to purchase shares of non-voting convertible preferred stock and accompanying warrants to purchase shares of Common Stock in a second closing ("Milestone Closing"), subject to certain closing conditions. If the Milestone Closing occurs, the gross proceeds to the Company from that closing will be approximately $25.1 million.

The offer and sale of the foregoing securities were made or will be made in a transaction not involving a public offering and have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), or applicable state securities laws. Accordingly, the securities may not be reoffered or resold in the United States except pursuant to an effective registration statement or an applicable exemption from the registration requirements of the Securities Act and such applicable state securities laws.

This press release does not constitute an offer to sell or the solicitation of an offer to buy the securities, nor shall there be any sale of the securities in any state in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of such state.

About Autosomal Dominant Polycystic Kidney Disease (ADPKD)

ADPKD, caused by the mutations in the PKD1 or PKD2 genes, is among the most common human monogenic disorders and a leading cause of end-stage renal disease. The disease is characterized by the development of multiple fluid filled cysts primarily in the kidneys, and to a lesser extent in the liver and other organs. Excessive kidney cyst cell proliferation, a central pathological feature, ultimately leads to end-stage renal disease in approximately 50% of ADPKD patients by age 60. It is estimated that approximately 1 in 1,000 people bear a mutation in either PKD1 or PKD2 genes worldwide.

About RGLS4326

RGLS4326 is a novel oligonucleotide designed to inhibit miR-17 and designed to preferentially target the kidney. Preclinical studies with RGLS4326 have demonstrated direct regulation of PKD1 and PKD2 in human ADPKD cyst cells, a reduction in kidney cyst formation, improved kidney weight/body weight ratio, decreased cyst cell proliferation, and preserved kidney function in mouse models of ADPKD.

About Regulus

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Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements associated with the anticipated use of proceeds from the private financing as well as the timing, size and completion of the Milestone Closing. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "intends," "will," "goal," "potential" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon Regulus' current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation, risks associated with the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics and in the endeavor of building a business around such drugs, feedback from the FDA and market conditions. These and other risks concerning Regulus' financial position and programs are described in additional detail in Regulus' filings with the Securities and Exchange

Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made. Regulus undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

Investor Relations Contact: Dan Chevallard, Chief Financial Officer, 858-202-6376, dchevallard@regulusrx.com

Regulus Therapeutics Reports First Quarter 2019 Financial Results and Recent Updates

Closing of First Tranche of $41.8 Million Private Placement of Equity

Term Loan Restructured Providing Up to Two Years of Interest Only and Extended Maturity Date to May 2022

Engagement with FDA on RGLS4326 Clinical Program Ongoing

LA JOLLA, Calif., May 9, 2019 – Regulus Therapeutics Inc. (Nasdaq: RGLS), a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs (the "Company" or "Regulus"), today reported financial results for the first quarter ended March 31, 2019 and provided a summary of recent events.

"I am proud of the significant progress we have made thus far in 2019 to reposition Regulus with a strengthened balance sheet, restructured term loan and reduced operating cash burn rate. Importantly, the team has maintained its focus in its engagement with FDA, and we look forward to resuming our ADPKD clinical program pending FDA alignment. We believe the total potential proceeds from the recent financing, highlighted by a strong investor syndicate, provides sufficient capital to fund planned activities into the second half of 2021", said Jay Hagan, CEO of Regulus. "We look forward to providing future updates on our ADPKD program, as well as further advancements from our promising preclinical pipeline."

First Quarter 2019 Corporate Highlights and Recent Updates

- **Private Financing:** In May 2019, the Company closed the first tranche of its $41.8 million private placement of equity (the "Private Placement"). Regulus received net proceeds of approximately $15.7 million from the first tranche, after deducting placement agent fees and other offering expenses. Subject to the Company's public announcement on or before December 31, 2019 of its plan to recommence the Phase 1 multiple ascending dose clinical trial for RGLS4326 based upon correspondence from FDA, the investors who purchased securities in the first tranche of the Private Placement have agreed to purchase shares of non-voting convertible preferred stock and accompanying warrants to purchase shares of common stock in a second closing (the "Milestone Closing"). If the Milestone Closing occurs, the gross proceeds to the Company from that closing will be approximately $25.1 million. The Company expects to use the proceeds from the Private Placement primarily to advance RGLS4326 for the treatment of ADPKD, to advance select programs from its pipeline of microRNA therapies and for general corporate purposes.
- **Term Loan Amendments:** In January 2019, March 2019, and April 2019 the Company amended its Term Loan with Oxford Finance to provide for additional periods of interest only for the months of February 2019, March 2019, and April 2019, respectively. The maturity date of the Term Loan remained unchanged. In May 2019, and concurrently with the Private Placement, the Company amended its Term Loan with Oxford Finance to provide a new twelve-month period of interest-only payments, commencing May 2019, and a two-year extension of its maturity date from June 2020 to May 2022. Upon the closing of the second tranche of the Company's Private Placement, the Company will receive an additional twelve-month period of interest-only payments, commencing May 2020.

- **RG-012 Transition to Sanofi:** In November 2018, the Company and Sanofi agreed to transition further development activities of the miR-21 programs, including the Company's RG-012 program, to Sanofi who will be responsible for all costs incurred in the development of these miR-21 programs (the "2018 Sanofi Amendment"). As of March 31, 2019, the transition activities, including the transfer of the investigational new drug application ("IND"), were substantially completed. The Company received $2.5 million and $1.8 million in upfront and material transfer-related payments in November 2018 and March 2019, respectively. In April 2019, the Company received an additional $2.5 million upfront payment. These payments, totaling $6.8 million, were recognized as revenue in the first quarter ended March 31, 2019. Regulus is also eligible to receive up to $40 million in clinical milestone payments.
- **Lease Agreement:** In February 2019, the Company entered into an amendment of its lease (the "Lease Amendment") of 59,248 square feet located at 10614 Science Center Drive, San Diego, California 92121. Under the terms of the Lease Amendment, the expiration of the lease was accelerated from April 30, 2024 to March 31, 2019 and the lease terminated on April 1, 2019. Concurrently with the Lease Amendment, the Company entered into a new lease agreement (the "Lease") for 24,562 square feet at 10628 Science Center Drive, Suite 100, San Diego, California, 92121, which it expects to use as its new principal offices and laboratory for research and development. This relocation reduced the Company's facility size by approximately 60% and reduced its future contractual lease obligations by approximately 70%.

Program Updates

- **RGLS4326 for ADPKD:** In January 2019, the Company announced data from a planned interim analysis of a new mouse chronic toxicity study after 13 weeks of dosing in which no adverse or other significant findings across the range of doses tested were shown. In January 2019, the Company submitted a comprehensive data package for RGLS4326 to FDA that included the results from the planned 13-week interim analysis of the repeat mouse chronic toxicity study, as well as results from additional investigations, analytical testing, additional data from the previously terminated mouse chronic toxicity study, data from the completed Phase I SAD study and data from the first cohort of the Phase I MAD study, to support its plan to resume the Phase I MAD study. The Company's engagement with FDA is ongoing.
- **RGLS5579 for Glioblastoma Multiforme (GBM):** In January 2019, the Company announced RGLS5579 as a clinical candidate for the treatment of GBM. RGLS5579, which targets microRNA-10b, demonstrated statistically significant improvements in survival as both a monotherapy as well as in combination with temozolomide ("TMZ") in an orthotopic GBM animal model. In combination with TMZ, the addition of a single dose of RGLS5579, delivered intracranially, led to a more than two-fold improvement in survival compared to TMZ alone. The Company plans to seek a partner to further advance RGLS5579 development.
- **Anti-miR-132 for Nonalcoholic Steatohepatitis (NASH):** In April 2019, Regulus presented a late breaker poster at the EASL International Liver Congress™ describing the development of its lead anti-miR-132 for the treatment of NASH. Across multiple animal models of NASH, the lead candidate demonstrated improvement in key endpoints, including NAFLD Activity Score (NAS), liver transaminases, hyperglycemia, and disease-related gene expression. In the diet-induced NASH mouse model (Amylin model) after two to four weekly doses, early onset of improvement across multiple disease parameters including liver triglycerides and blood levels of transaminases was observed. After nine weeks of treatment, there was evidence of sustained benefit with significant improvement of liver fibrosis and hyperglycemia compared to control-treated animals. The Company believes that targeting dysregulated microRNA in a complex disease like NASH may offer a unique mechanism of action from other programs in development. The Company plans to seek a partner to further advance the development of this program.

First Quarter 2019 Financial Results

Revenue: Revenue was $6.8 million for the three months ended March 31, 2019, compared to less than $0.1 million for the three months ended March 31, 2018. The increase was associated with revenue recognition of the upfront payments received under the 2018 Sanofi Amendment related to the transfer of RG-012 during the three months ended March 31, 2019.

Cash Position: As of March 31, 2019, Regulus had $10.3 million in cash and cash equivalents.

Research and Development (R&D) Expenses: R&D expenses were $6.0 million for the three months ended March 31, 2019, compared to $11.8 million for the same period in 2018. The aggregate decrease was driven by a $3.8 million decrease in external development expenses during the three months ended March 31, 2019, primarily attributable to the pausing of the RGLS4326 program in the third quarter of 2018 and commencement of the transfer of the RG-012 program to Sanofi under the 2018 Sanofi Amendment in the fourth quarter of 2018. In addition, personnel and internal expenses decreased by approximately $1.9 million, primarily as a result of a reduction in headcount and related costs subsequent to our corporate restructuring in the third quarter of 2018.

General and Administrative (G&A) Expenses: G&A expenses were $3.5 million for the three months ended March 31, 2019 compared to $3.8 million for the same period in 2018. These amounts reflect personnel-related and ongoing general business operating costs.

Net Loss: Net loss was $3.3 million, or $0.31 per share (basic and diluted), for the three months ended March 31, 2019, compared to $16.0 million, or $1.85 per share (basic and diluted), for the same period in 2018. Historical and current period net loss per share values have been retroactively adjusted to reflect our October 2018 reverse stock split.

About Autosomal Dominant Polycystic Kidney Disease (ADPKD)

ADPKD, caused by the mutations in the PKD1 or PKD2 genes, is among the most common human monogenic disorders and a leading cause of end-stage renal disease. The disease is characterized by the development of multiple fluid filled cysts primarily in the kidneys, and to a lesser extent in the liver and other organs. Excessive kidney cyst cell proliferation, a central pathological feature, ultimately leads to end-stage renal disease in approximately 50% of ADPKD patients by age 60. It is estimated that approximately 1 in 1,000 people bear a mutation in either PKD1 or PKD2 genes worldwide.

About RGLS4326

RGLS4326 is a novel oligonucleotide designed to inhibit miR-17 and designed to preferentially target the kidney. Preclinical studies with RGLS4326 have demonstrated direct regulation of PKD1 and PKD2 in human ADPKD cyst cells, a reduction in kidney cyst formation, improved kidney weight/body weight ratio, decreased cyst cell proliferation, and preserved kidney function in mouse models of ADPKD.

About Regulus

Regulus Therapeutics Inc. (Nasdaq: RGLS) is a biopharmaceutical company focused on the discovery and development of innovative medicines targeting microRNAs. Regulus has leveraged its oligonucleotide drug discovery and development expertise to develop a pipeline complemented by a rich intellectual property estate in the microRNA field. Regulus maintains its corporate headquarters in La Jolla, California. For more information, please visit http://www.regulusrx.com.

Forward-Looking Statements

Statements contained in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including statements associated with the expected ability of Regulus to undertake certain activities and accomplish certain goals (including with respect to development and other activities related to RG-012, RGLS4326, RGLS5579 or its other preclinical programs), Regulus' sales of securities, including timing, size and completion of the Milestone Closing, its estimated cash runway and anticipated cost savings associated with its planned reduction in workforce, the projected timeline of clinical development activities, and expectations regarding future therapeutic and commercial potential of Regulus' business plans, technologies and intellectual property related to microRNA therapeutics and biomarkers being discovered and developed by Regulus. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Words such as "believes," "anticipates," "plans," "expects," "intends," "will," "goal," "potential" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon Regulus' current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, which include, without limitation, risks associated with the process of discovering, developing and commercializing drugs that are safe and effective for use as human therapeutics, and in the endeavor of building a business around such drugs. These and other risks concerning Regulus' financial position and programs are described in additional detail in Regulus filings with the Securities and Exchange Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made. Regulus undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

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Regulus Therapeutics Inc.

Selected Financial Information
Condensed Statement of Operations
(In thousands, except share and per share data)

	Three months ended March 31,	
	2019	**2018**
Revenues:		
Revenue under strategic alliances	$ 6,778	$ 18
Operating expenses:		
Research and development	5,983	11,828
General and administrative	3,533	3,773
Total operating expenses	9,516	15,601
Loss from operations	(2,738)	(15,583)
Other expense, net	(522)	(441)
Loss before income taxes	(3,260)	(16,024)
Income tax benefit	—	(1)
Net loss	$ (3,260)	$ (16,025)
Net loss per share, basic and diluted	$ (0.31)	$ (1.85)
Weighted average shares used to compute basic and diluted net loss per share:	10,379,830	8,668,695

	March 31, 2019	**December 31, 2018**
	(Unaudited)	
Cash and cash equivalents	$ 10,320	$ 13,935
Total assets	19,877	27,927
Term loan, less debt issuance costs	15,225	16,575
Stockholders' deficit	(6,069)	(5,854)