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): **April 23, 2019**

HOOKIPA PHARMA INC.

(Exact name of registrant as specified in its charter)

Delaware	**001-38869**	**81-5395687**
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

350 Fifth Avenue, 72nd Floor, Suite 7240
New York, New York 10118
(Address of principal executive offices, including zip code)

+43 1 890 63 60
(Registrant's telephone number, including area code)

Not Applicable
(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:

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

o 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 x

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. o

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

As previously disclosed in the Registration Statement on Form S-1 (File No. 333-230451) (the "Registration Statement") of HOOKIPA Pharma Inc. (the "Company"), on April 23, 2019 and in connection with the consummation of the Company's initial public offering of its common stock (the "IPO"), the Company filed an amended and restated certificate of incorporation (the "Restated Certificate") with the Secretary of State of the State of Delaware. The Company's board of directors (the "Board") and the Company's stockholders previously approved the Restated Certificate to be filed in connection with, and to be effective upon, the consummation of the IPO. The Restated Certificate amends and restates the Company's existing amended and restated certificate of incorporation in its entirety to, among other things: (i) authorize 100,000,000 shares of common stock; (ii) eliminate all references to the previously-existing series of preferred stock; (iii) authorize 3,900,000 shares of Class A common stock; and (iv) authorize 10,000,000 shares of undesignated preferred stock that may be issued from time to time by the Board in one or more series.

The foregoing description of the Restated Certificate is qualified by reference to the Restated Certificate, a copy of which is attached hereto as Exhibit 3.1 and is incorporated herein by reference.

In addition, as previously disclosed in the Registration Statement, on April 23, 2019 and in connection with the consummation of the IPO, the amended and restated by-laws of the Company (the "Amended and Restated By-Laws"), previously approved by the Board and the Company's stockholders to become effective immediately upon the consummation of the IPO, became effective. The Amended and Restated By-Laws amend and restate the Company's by-laws in their entirety to, among other things: (i) eliminate the ability of the Company's stockholders to take action by written consent in lieu of a meeting; (ii) establish procedures relating to the presentation of stockholder proposals at stockholder meetings; (iii) establish procedures relating to the nomination of directors; and (iv) conform to the amended provisions of the Restated Certificate.

The foregoing description of the Amended and Restated By-Laws is qualified by reference to the Amended and Restated By-Laws, a copy of which is attached hereto as Exhibit 3.2 and is incorporated herein by reference.

Item 8.01. Other Events.

On April 23, 2018, the Company completed its IPO of 6,000,000 shares of common stock at a price to the public of $14.00 per share for gross proceeds of $84.0 million.

Upon the closing the IPO, the holders of 18,401,893 shares of the Company's common stock, including those issuable upon the conversion of Class A common stock into common stock, are entitled to rights with respect to the registration of such securities under the Securities Act of 1933, as amended, or the Securities Act. These rights are provided under the terms of a Shareholders Agreement between the Company and certain of its shareholders, a copy of which is attached hereto as Exhibit 4.1 and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

3.1	Amended and Restated Certificate of Incorporation of HOOKIPA Pharma Inc.
3.2	Amended and Restated By-laws of HOOKIPA Pharma Inc.
4.1	Shareholders Agreement among HOOKIPA Pharma Inc. and certain of its shareholders, dated February 15, 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.

HOOKIPA Pharma Inc.

Date: April 23, 2019

By: /s/ JÖRN ALDAG
Jörn Aldag
Chief Executive Officer

Exhibit 3.1

AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION

OF

HOOKIPA PHARMA INC.

HOOKIPA Pharma Inc., a corporation organized and existing under the laws of the State of Delaware (the "Corporation"), hereby certifies as follows:

1. The name of the Corporation is HOOKIPA Pharma Inc. The date of the filing of its original Certificate of Incorporation with the Secretary of State of the State of Delaware was February 15, 2017 (the "Original Certificate"). The name under which the Corporation filed the Original Certificate was HOOKIPA Biotech, Inc.

2. This Amended and Restated Certificate of Incorporation (the "Certificate") amends, restates and integrates the provisions of the Amended and Restated Certificate of Incorporation that was filed with the Secretary of State of the State of Delaware on February 15, 2019 (as amended, the "Amended and Restated Certificate"), and was duly adopted in accordance with the provisions of Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware (the "DGCL").

3. The text of the Amended and Restated Certificate is hereby amended and restated in its entirety to provide as herein set forth in full.

ARTICLE I

The name of the Corporation is HOOKIPA Pharma Inc.

ARTICLE II

The address of the Corporation's registered office in the State of Delaware is c/o The Corporation Trust Company, 1209 Orange Street in the City of Wilmington, County of New Castle, 19801. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the DGCL.

ARTICLE IV

CAPITAL STOCK

The total number of shares of capital stock which the Corporation shall have authority to issue is one hundred thirteen million nine hundred thousand (113,900,000) shares of which (i) one hundred million (100,000,000) shares shall be a class designated as common stock, par value $0.0001 per share (the "Common Stock"), (ii) three million nine hundred thousand (3,900,000) shares shall be a class designated as Class A common stock, par value $0.0001 per share (the "Class A Common Stock") and (iii) ten million (10,000,000) shares shall be a class designated as undesignated preferred stock, par value $0.0001 per share (the "Undesignated Preferred Stock").

Except as otherwise provided in any certificate of designations of any series of Undesignated Preferred Stock, the number of authorized shares of the class of Common Stock or Undesignated Preferred Stock may from time to time be increased or decreased (but not below the number of shares of such class outstanding) by the affirmative vote of the holders of a majority in voting power of the outstanding shares of capital stock of the Corporation irrespective of the provisions of Section 242(b)(2) of the DGCL.

The powers, preferences and rights of, and the qualifications, limitations and restrictions upon, each class or series of stock shall be determined in accordance with, or as set forth below in, this Article IV.

A. COMMON STOCK; CLASS A COMMON STOCK

Subject to all the rights, powers and preferences of the Undesignated Preferred Stock and except as provided by law or in this Certificate (or in any certificate of designations of any series of Undesignated Preferred Stock):

(a) the holders of the Common Stock shall have the exclusive right to vote for the election of directors of the Corporation (the "Directors") and on all other matters requiring stockholder action, each outstanding share entitling the holder thereof to one vote on each matter properly submitted to the stockholders of the Corporation for their vote; provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Certificate (or on any amendment to a certificate of designations of any series of Undesignated Preferred Stock) that alters or changes the powers, preferences, rights or other terms of one or more outstanding series of Undesignated Preferred Stock if the holders of such affected series of Undesignated Preferred Stock are entitled to vote, either separately or together with the holders of one or more other such series, on such amendment pursuant to this Certificate (or pursuant to a certificate of designations of any series of Undesignated Preferred Stock) or pursuant to the DGCL;

(b) the holders of the Class A Common Stock shall be non-voting shares, except as required by law;

(c) dividends may be declared and paid or set apart for payment upon the Common Stock out of any assets or funds of the Corporation legally available for the payment of dividends, but only when and as declared by the Board of Directors or any authorized committee thereof; in the event that such dividend is paid in the form of shares of capital stock of the Corporation, holders of Common Stock shall receive Common Stock and holders of Class A Common Stock shall receive Class A Common Stock;

(d) upon the voluntary or involuntary liquidation, dissolution or winding up of the Corporation, the net assets of the Corporation shall be distributed pro rata to the holders of the Common Stock and Class A Common Stock, treated equally and identically;

(e) in connection with any merger or consolidation of the Corporation with or into any other entity, shares of Common Stock and shares of Class A Common Stock shall be treated equally, identically and ratably, on a per share basis, with respect to any consideration into which such shares are converted or any other consideration paid or otherwise distributed to stockholders of the Corporation in the merger or consolidation, unless different treatment of the shares of each class is approved by the affirmative vote of the holders of a majority of the outstanding shares of Common Stock and Class A Common Stock, each voting separately as a class; and

(f) in no event shall any stock dividends or stock splits or combinations of stock be declared or made on Common Stock or Class A Common Stock unless the shares of Common Stock and Class A Common Stock at the time outstanding are treated equally and identically, except that such dividends or stock splits or combinations shall be made in respect of shares of Common Stock and Class A Common Stock in the form of shares of Common Stock or Class A Common Stock, respectively.

B. CONVERSION OF CLASS A COMMON STOCK

1. Each holder of shares of Class A Common Stock shall have the right to convert each share of Class A Common Stock held by such holder into one share of Common Stock at such holder's election, which shall be made upon written notice to the Corporation delivered, provided that, the shares of Class A Common Stock may only be converted into shares of Common Stock during such time or times as immediately prior to or as a result of such conversion would not result in the holder(s) thereof beneficially owning (for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (collectively, the "Exchange Act")), when aggregated with affiliates with whom such holder is required to aggregate beneficial ownership for purposes of Section 13(d) of the Exchange Act, in excess of the Beneficial Ownership Limitation. The "Beneficial Ownership Limitation" means initially 4.99% of any class of securities of the Corporation registered under the Exchange Act, which percentage may be increased or decreased by a holder of outstanding shares of Class A Common Stock to such other percentage as such holder may designate in writing upon 61 days' notice the Corporation, provided, however, that such increase or decrease shall only be applicable to such holder.

2. In order for a holder of Series A Common Stock to voluntarily convert shares of Class A Common Stock to Common Stock, such holder shall deliver written notice to the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of the Corporation that such holder elects to convert all or any number of the shares of the Class A Common Stock to Common Stock. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice shall be the time of conversion, and the shares of Common Stock issuable upon conversion of the Class A Common Stock set forth in the notice shall be deemed to be outstanding of record as of such date. For any remaining fraction of a share of Common Stock, the Corporation shall, in lieu of issuing a fractional share, pay cash to such holder equal to the product of such fraction multiplied by the fair market value of one share of Common Stock.

3. The one-to-one conversion ratio for the conversion of the Class A Common Stock into Common Stock shall in all events be equitably adjusted in the event of any recapitalization of the Corporation by means of a stock dividend on, or a stock split or combination of, outstanding Common Stock or Class A Common Stock, or in the event of any merger, consolidation or other reorganization of the Corporation with another corporation.

4. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of Class A Common Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Class A Common Stock.

5. If any shares of Class A Common Stock shall be converted pursuant to this Article IV(B), the shares so converted shall be retired and returned to the authorized but unissued shares of Class A Common Stock.

C. UNDESIGNATED PREFERRED STOCK

The Board of Directors or any authorized committee thereof is expressly authorized, to the fullest extent permitted by law, to provide by resolution or resolutions for, out of the unissued shares of Undesignated Preferred Stock, the issuance of the shares of Undesignated Preferred Stock in one or more series of such stock, and by filing a certificate of designations pursuant to applicable law of the State of Delaware, to establish or change from time to time the number of shares of each such series, and to fix the designations, powers, including voting powers, full or limited, or no voting powers, preferences and the relative, participating, optional or other special rights of the shares of each series and any qualifications, limitations and restrictions thereof.

ARTICLE V

STOCKHOLDER ACTION

1. Action without Meeting. Any action required or permitted to be taken by the stockholders of the Corporation at any annual or special meeting of stockholders of the Corporation must be effected at a duly called annual or special meeting of stockholders and may not be taken or effected by a written consent of stockholders in lieu thereof. Notwithstanding anything herein to the contrary, the affirmative vote of not less than two thirds (2/3) of the outstanding shares of capital stock entitled to vote thereon, and the affirmative vote of not less than two thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of this Article V, Section 1.

2. Special Meetings. Except as otherwise required by statute and subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock, special meetings of the stockholders of the Corporation may be called only by the Board of Directors acting pursuant to a resolution approved by the affirmative vote of a majority of the Directors then in office, and special meetings of stockholders may not be called by any other person or persons. Only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders of the Corporation.

ARTICLE VI

DIRECTORS

1. General. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors except as otherwise provided herein or required by law.

2. Election of Directors. Election of Directors need not be by written ballot unless the By-laws of the Corporation (the "By-laws") shall so provide.

3. Number of Directors; Term of Office. The number of Directors of the Corporation shall be fixed solely and exclusively by resolution duly adopted from time to time by the Board of Directors. The Directors, other than those who may be elected by the holders of any series of Undesignated Preferred Stock, shall be classified, with respect to the term for which they severally hold office, into three classes. The initial Class I Directors of the Corporation shall be Joern Aldag, Jan van de Winkel and David Kaufman; the initial Class II Directors of the Corporation shall be Sander van Deventer, Graziano Seghezzi and Michael A. Kelly; and the initial Class III Directors of the Corporation shall be Julie O'Neill, Christoph Lengauer and Reinhard Kandera. The initial Class I Directors shall serve for a term expiring at the annual meeting of stockholders to be held in 2020, the initial Class II Directors shall serve for a term expiring at the annual meeting of stockholders to be held in 2021, and the initial Class III Directors shall serve for a term expiring at the annual meeting of stockholders to be held in 2022. The mailing address of each person who is to serve initially as a director is c/o HOOKIPA Pharma Inc., 350 Fifth Avenue, 72nd Floor, Suite 7240, New York, New York 10118. At each annual meeting of stockholders, Directors elected to succeed those Directors whose terms expire shall be elected for a term of office to expire at the third succeeding annual meeting of

stockholders after their election. Notwithstanding the foregoing, the Directors elected to each class shall hold office until their successors are duly elected and qualified or until their earlier resignation, death or removal.

Notwithstanding the foregoing, whenever, pursuant to the provisions of Article IV of this Certificate, the holders of any one or more series of Undesignated Preferred Stock shall have the right, voting separately as a series or together with holders of other such series, to elect Directors at an annual or special meeting of stockholders, the election, term of office, filling of vacancies and other features of such directorships shall be governed by the terms of this Certificate and any certificate of designations applicable to such series.

Notwithstanding anything herein to the contrary, the affirmative vote of not less than two thirds (2/3) of the outstanding shares of capital stock entitled to vote thereon, and the affirmative vote of not less than two thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of this Article VI, Section 3.

4. Vacancies. Subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock to elect Directors and to fill vacancies in the Board of Directors relating thereto, any and all vacancies in the Board of Directors, however occurring, including, without limitation, by reason of an increase in the size of the Board of Directors, or the death, resignation, disqualification or removal of a Director, shall be filled solely and exclusively by the affirmative vote of a majority of the remaining Directors then in office, even if less than a quorum of the Board of Directors, and not by the stockholders. Any Director appointed in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of Directors in which the new directorship was created or the vacancy occurred and until such Director's successor shall have been duly elected and qualified or until his or her earlier resignation, death or removal. Subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock to elect Directors, when the number of Directors is increased or decreased, the Board of Directors shall, subject to Article VI, Section 3 hereof, determine the class or classes to which the increased or decreased number of Directors shall be apportioned; provided, however, that no decrease in the number of Directors shall shorten the term of any incumbent Director. In the event of a vacancy in the Board of Directors, the remaining Directors, except as otherwise provided by law, shall exercise the powers of the full Board of Directors until the vacancy is filled.

5. Removal. Subject to the rights, if any, of any series of Undesignated Preferred Stock to elect Directors and to remove any Director whom the holders of any such series have the right to elect, any Director (including persons elected by Directors to fill vacancies in the Board of Directors) may be removed from office (i) only with cause and (ii) only by the affirmative vote of the holders of not less than two thirds (2/3) of the outstanding shares of capital stock then entitled to vote at an election of Directors. At least forty-five (45) days prior to any annual or special meeting of stockholders at which it is proposed that any Director be removed from office, written notice of such proposed removal and the alleged grounds thereof shall be sent to the Director whose removal will be considered at the meeting.

ARTICLE VII

LIMITATION OF LIABILITY

A Director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of his or her fiduciary duty as a Director, except for liability (a) for any breach of the Director's duty of loyalty to the Corporation or its stockholders, (b) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) under Section 174 of the DGCL or (d) for any transaction from which the Director derived an improper personal benefit. If the DGCL is amended after the effective date of this Certificate to authorize corporate action further eliminating or limiting the personal liability of Directors, then the liability of a Director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Any amendment, repeal or modification of this Article VII by either of (i) the stockholders of the Corporation or (ii) an amendment to the DGCL, shall not adversely affect any right or protection existing at the time of such amendment, repeal or modification with respect to any acts or omissions occurring before such amendment, repeal or modification of a person serving as a Director at the time of such amendment, repeal or modification.

Notwithstanding anything herein to the contrary, the affirmative vote of not less than two thirds (2/3) of the outstanding shares of capital stock entitled to vote thereon, and the affirmative vote of not less than two thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of this Article VII.

ARTICLE VIII

AMENDMENT OF BY-LAWS

1. Amendment by Directors. Except as otherwise provided by law, the By-laws of the Corporation may be amended or repealed by the Board of Directors by the affirmative vote of a majority of the Directors then in office.

2. Amendment by Stockholders. Except as otherwise provided therein, the By-laws of the Corporation may be amended or repealed at any annual meeting of stockholders, or special

meeting of stockholders called for such purpose, by the affirmative vote of not less than two thirds (2/3) of the outstanding shares of capital stock entitled to vote on such amendment or repeal, voting together as a single class; provided, however, that if the Board of Directors recommends that stockholders approve such amendment or repeal at such meeting of stockholders, such amendment or repeal shall only require the affirmative vote of the majority of the outstanding shares of capital stock entitled to vote on such amendment or repeal, voting together as a single class.

ARTICLE IX

AMENDMENT OF CERTIFICATE OF INCORPORATION

The Corporation reserves the right to amend or repeal this Certificate in the manner now or hereafter prescribed by statute and this Certificate, and all rights conferred upon stockholders herein are granted subject to this reservation. Except as otherwise required by this Certificate or by law, whenever any vote of the holders of capital stock of the Corporation is required to amend or repeal any provision of this Certificate, such amendment or repeal shall require the affirmative vote of the majority of the outstanding shares of capital stock entitled to vote on such amendment or repeal, and the affirmative vote of the majority of the outstanding shares of each class entitled to vote thereon as a class, at a duly constituted meeting of stockholders called expressly for such purpose.

[End of Text]

THIS AMENDED AND RESTATED CERTIFICATE OF INCORPORATION is executed as of this 23rd day of April, 2019.

HOOKIPA PHARMA INC.

By: /s/ Joern Aldag
Name: Joern Aldag
Title: Chief Executive Officer

Signature Page to Amended and Restated Certificate of Incorporation

AMENDED AND RESTATED

BY-LAWS

OF

HOOKIPA PHARMA INC.

(the "Corporation")

ARTICLE I

Stockholders

SECTION 1. Annual Meeting. The annual meeting of stockholders (any such meeting being referred to in these By-laws as an "Annual Meeting") shall be held at the hour, date and place within or without the United States which is fixed by the Board of Directors, which time, date and place may subsequently be changed at any time by vote of the Board of Directors. If no Annual Meeting has been held for a period of thirteen (13) months after the Corporation's last Annual Meeting, a special meeting in lieu thereof may be held, and such special meeting shall have, for the purposes of these By-laws or otherwise, all the force and effect of an Annual Meeting. Any and all references hereafter in these By-laws to an Annual Meeting or Annual Meetings also shall be deemed to refer to any special meeting(s) in lieu thereof.

SECTION 2. Notice of Stockholder Business and Nominations.

(a) Annual Meetings of Stockholders.

(1) Nominations of persons for election to the Board of Directors of the Corporation and the proposal of other business to be considered by the stockholders may be brought before an Annual Meeting (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the Corporation who was a stockholder of record at the time of giving of notice provided for in this By-law, who is entitled to vote at the meeting, who is present (in person or by proxy) at the meeting and who complies with the notice procedures set forth in this By-law as to such nomination or business. For the avoidance of doubt, the foregoing clause (ii) shall be the exclusive means for a stockholder to bring nominations or business properly before an Annual Meeting (other than matters properly brought under Rule 14a-8 (or any successor rule) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")), and such stockholder must comply with the notice and other procedures set forth in Article I, Section 2(a)(2) and (3) of this By-law to bring such nominations or business properly before an Annual Meeting. In addition to the other requirements set forth in this By-law, for any proposal of business to be considered at an Annual Meeting, it must be a proper subject for action by stockholders of the Corporation under Delaware law.

(2) For nominations or other business to be properly brought before an Annual Meeting by a stockholder pursuant to clause (ii) of Article I, Section 2(a)(1) of this By-law, the stockholder must (i) have given Timely Notice (as defined below)

thereof in writing to the Secretary of the Corporation, (ii) have provided any updates or supplements to such notice at the times and in the forms required by this By-law and (iii) together with the beneficial owner(s), if any, on whose behalf the nomination or business proposal is made, have acted in accordance with the representations set forth in the Solicitation Statement (as defined below) required by this By-law. To be timely, a stockholder's written notice shall be received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred twentieth (120th) day prior to the one-year anniversary of the preceding year's Annual Meeting; provided, however, that in the event the Annual Meeting is first convened more than thirty (30) days before or more than sixty (60) days after such anniversary date, or if no Annual Meeting were held in the preceding year, notice by the stockholder to be timely must be received by the Secretary of the Corporation not later than the close of business on the later of the ninetieth (90th) day prior to the scheduled date of such Annual Meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made (such notice within such time periods shall be referred to as "Timely Notice"). Notwithstanding anything to the contrary provided herein, for the first Annual Meeting following the initial public offering of common stock of the Corporation, a stockholder's notice shall be timely if received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the later of the ninetieth (90th) day prior to the scheduled date of such Annual Meeting or the tenth (10th) day following the day on which public announcement of the date of such Annual Meeting is first made or sent by the Corporation. Such stockholder's Timely Notice shall set forth:

(A) as to each person whom the stockholder proposes to nominate for election or reelection as a director, (i) the name, age, business address and residence address of the nominee, (ii) the principal occupation or employment of the nominee, (iii) the class and number of shares of the Corporation that are held of record or are beneficially owned by the nominee and any derivative positions held or beneficially held by the nominee, (iv) whether and the extent to which any hedging or other transaction or series of transactions has been entered into by or on behalf of the nominee with respect to any securities of the Corporation, and a description of any other agreement, arrangement or understanding (including any short position or any borrowing or lending of shares), the effect or intent of which is to mitigate loss to, or to manage the risk or benefit of share price changes for, or to increase or decrease the voting power of the nominee, (v) a description of all arrangements or understandings between or among the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nominations are to be made by the stockholder or concerning the nominee's potential service on the Board of Directors, (vi) a written statement executed by the nominee acknowledging that as a director of the corporation, the nominee will owe fiduciary duties under Delaware law with respect to the Corporation and its stockholders, and (vii) all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors in an election contest, or is otherwise required, in each case pursuant to Regulation 14A under the Exchange Act (including such person's

written consent to being named in the proxy statement as a nominee and to serving as a director if elected);

(B) as to any other business that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, the text, if any, of any resolutions or By-law amendment proposed for adoption, and any material interest in such business of each Proposing Person (as defined below);

(C) (i) the name and address of the stockholder giving the notice, as they appear on the Corporation's books, and the names and addresses of the other Proposing Persons (if any) and (ii) as to each Proposing Person, the following information: (a) the class or series and number of all shares of capital stock of the Corporation which are, directly or indirectly, owned beneficially or of record by such Proposing Person or any of its affiliates or associates (as such terms are defined in Rule 12b-2 promulgated under the Exchange Act), including any shares of any class or series of capital stock of the Corporation as to which such Proposing Person or any of its affiliates or associates has a right to acquire beneficial ownership at any time in the future, (b) all Synthetic Equity Interests (as defined below) in which such Proposing Person or any of its affiliates or associates, directly or indirectly, holds an interest including a description of the material terms of each such Synthetic Equity Interest, including without limitation, identification of the counterparty to each such Synthetic Equity Interest and disclosure, for each such Synthetic Equity Interest, as to (x) whether or not such Synthetic Equity Interest conveys any voting rights, directly or indirectly, in such shares to such Proposing Person, (y) whether or not such Synthetic Equity Interest is required to be, or is capable of being, settled through delivery of such shares and (z) whether or not such Proposing Person and/or, to the extent known, the counterparty to such Synthetic Equity Interest has entered into other transactions that hedge or mitigate the economic effect of such Synthetic Equity Interest, (c) any proxy (other than a revocable proxy given in response to a public proxy solicitation made pursuant to, and in accordance with, the Exchange Act), agreement, arrangement, understanding or relationship pursuant to which such Proposing Person has or shares a right to, directly or indirectly, vote any shares of any class or series of capital stock of the Corporation, (d) any rights to dividends or other distributions on the shares of any class or series of capital stock of the Corporation, directly or indirectly, owned beneficially by such Proposing Person that are separated or separable from the underlying shares of the Corporation, and (e) any performance-related fees (other than an asset based fee) that such Proposing Person, directly or indirectly, is entitled to based on any increase or decrease in the value of shares of any class or series of capital stock of the Corporation or any Synthetic Equity Interests (the disclosures to be made pursuant to the foregoing clauses (a) through (e) are referred to, collectively, as "Material Ownership Interests") and (iii) a description of the material terms of all agreements, arrangements or understandings (whether or not in writing) entered into by any Proposing Person or any of its affiliates or associates with any other

person for the purpose of acquiring, holding, disposing or voting of any shares of any class or series of capital stock of the Corporation;

(D) (i) a description of all agreements, arrangements or understandings by and among any of the Proposing Persons, or by and among any Proposing Persons and any other person (including with any proposed nominee(s)), pertaining to the nomination(s), or other business proposed to be brought before the meeting of stockholders (which description shall identify the name of each other person who is party to such an agreement, arrangement or understanding), and (ii) identification of the names and addresses of other stockholders (including beneficial owners) known by any of the Proposing Persons to support such nominations or other business proposal(s), and to the extent known the class and number of all shares of the Corporation's capital stock owned beneficially or of record by such other stockholder(s) or other beneficial owner(s); and

(E) a statement whether or not the stockholder giving the notice and/or the other Proposing Person(s), if any, will deliver a proxy statement and form of proxy to holders of, in the case of a business proposal, at least the percentage of voting power of all of the shares of capital stock of the Corporation required under applicable law to approve the proposal or, in the case of a nomination or nominations, at least the percentage of voting power of all of the shares of capital stock of the Corporation reasonably believed by such Proposing Person to be sufficient to elect the nominee or nominees proposed to be nominated by such stockholder (such statement, the "Solicitation Statement").

For purposes of this Article I of these By-laws, the term "Proposing Person" shall mean the following persons: (i) the stockholder of record providing the notice of nominations or business proposed to be brought before a stockholders' meeting, and (ii) the beneficial owner(s), if different, on whose behalf the nominations or business proposed to be brought before a stockholders' meeting is made. For purposes of this Section 2 of Article I of these By-laws, the term "Synthetic Equity Interest" shall mean any transaction, agreement or arrangement (or series of transactions, agreements or arrangements), including, without limitation, any derivative, swap, hedge, repurchase or so-called "stock borrowing" agreement or arrangement, the purpose or effect of which is to, directly or indirectly: (a) give a person or entity economic benefit and/or risk similar to ownership of shares of any class or series of capital stock of the Corporation, in whole or in part, including due to the fact that such transaction, agreement or arrangement provides, directly or indirectly, the opportunity to profit or avoid a loss from any increase or decrease in the value of any shares of any class or series of capital stock of the Corporation, (b) mitigate loss to, reduce the economic risk of or manage the risk of share price changes for, any person or entity with respect to any shares of any class or series of capital stock of the Corporation, (c) otherwise provide in any manner the opportunity to profit or avoid a loss from any decrease in the value of any shares of any class or series of capital stock of the Corporation, or (d) increase or decrease the voting power of any person or entity with respect to any shares of any class or series of capital stock of the Corporation.

(3) A stockholder providing Timely Notice of nominations or business proposed to be brought before an Annual Meeting shall further update and supplement such notice, if necessary, so that the information (including, without limitation, the Material Ownership Interests information) provided or required to be provided in such notice pursuant to this By-law shall be true and correct as of the record date for the meeting and as of the date that is ten (10) business days prior to such Annual Meeting, and such update and supplement shall be received by the Secretary at the principal executive offices of the Corporation not later than the close of business on the fifth (5th) business day after the record date for the Annual Meeting (in the case of the update and supplement required to be made as of the record date), and not later than the close of business on the eighth (8th) business day prior to the date of the Annual Meeting (in the case of the update and supplement required to be made as of ten (10) business days prior to the meeting).

(4) Notwithstanding anything in the second sentence of Article I, Section 2(a)(2) of this By-law to the contrary, in the event that the number of directors to be elected to the Board of Directors of the Corporation is increased and there is no public announcement naming all of the nominees for director or specifying the size of the increased Board of Directors made by the Corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination in accordance with the second sentence of Article I, Section 2(a)(2), a stockholder's notice required by this By-law shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be received by the Secretary of the Corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the Corporation.

(b) General.

(1) Only such persons who are nominated in accordance with the provisions of this By-law shall be eligible for election and to serve as directors and only such business shall be conducted at an Annual Meeting as shall have been brought before the meeting in accordance with the provisions of this By-law or in accordance with Rule 14a-8 under the Exchange Act. The Board of Directors or a designated committee thereof shall have the power to determine whether a nomination or any business proposed to be brought before the meeting was made in accordance with the provisions of this By-law. If neither the Board of Directors nor such designated committee makes a determination as to whether any stockholder proposal or nomination was made in accordance with the provisions of this By-law, the presiding officer of the Annual Meeting shall have the power and duty to determine whether the stockholder proposal or nomination was made in accordance with the provisions of this By-law. If the Board of Directors or a designated committee thereof or the presiding officer, as applicable, determines that any stockholder proposal or nomination was not made in accordance with the provisions of this By-law, such proposal or nomination shall be disregarded and shall not be presented for action at the Annual Meeting.

(2) Except as otherwise required by law, nothing in this Article I, Section 2 shall obligate the Corporation or the Board of Directors to include in any proxy statement

or other stockholder communication distributed on behalf of the Corporation or the Board of Directors information with respect to any nominee for director or any other matter of business submitted by a stockholder.

(3) Notwithstanding the foregoing provisions of this Article I, Section 2, if the nominating or proposing stockholder (or a qualified representative of the stockholder) does not appear at the Annual Meeting to present a nomination or any business, such nomination or business shall be disregarded, notwithstanding that proxies in respect of such vote may have been received by the Corporation. For purposes of this Article I, Section 2, to be considered a qualified representative of the proposing stockholder, a person must be authorized by a written instrument executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such written instrument or electronic transmission, or a reliable reproduction of the written instrument or electronic transmission, to the presiding officer at the meeting of stockholders.

(4) For purposes of this By-law, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

(5) Notwithstanding the foregoing provisions of this By-law, a stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth in this By-law. Nothing in this By-law shall be deemed to affect any rights of (i) stockholders to have proposals included in the Corporation's proxy statement pursuant to Rule 14a-8 (or any successor rule), as applicable, under the Exchange Act and, to the extent required by such rule, have such proposals considered and voted on at an Annual Meeting or (ii) the holders of any series of Undesignated Preferred Stock to elect directors under specified circumstances.

(c) Notwithstanding anything herein to the contrary, the affirmative vote of not less than two thirds (2/3) of the outstanding shares of capital stock entitled to vote thereon, and the affirmative vote of not less than two thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of this Article I, Section 2; provided, however, that if the Board of Directors recommends that stockholders approve such amendment or repeal at such meeting of stockholders, such amendment or repeal shall only require the affirmative vote of a majority of the outstanding shares entitled to vote on such amendment or repeal, voting together as a single class.

SECTION 3. Special Meetings. Except as otherwise required by statute and subject to the rights, if any, of the holders of any series of Undesignated Preferred Stock, special meetings of the stockholders of the Corporation may be called only by the Board of Directors acting pursuant to a resolution approved by the affirmative vote of a majority of the Directors then in office. The Board of Directors may postpone or reschedule any previously scheduled special meeting of stockholders. Only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders of the Corporation. Nominations

of persons for election to the Board of Directors of the Corporation and stockholder proposals of other business shall not be brought before a special meeting of stockholders to be considered by the stockholders unless such special meeting is held in lieu of an annual meeting of stockholders in accordance with Article I, Section 1 of these By-laws, in which case such special meeting in lieu thereof shall be deemed an Annual Meeting for purposes of these By-laws and the provisions of Article I, Section 2 of these By-laws shall govern such special meeting.

Notwithstanding anything herein to the contrary, the affirmative vote of not less than two thirds (2/3) of the outstanding shares of capital stock entitled to vote thereon, and the affirmative vote of not less than two thirds (2/3) of the outstanding shares of each class entitled to vote thereon as a class, shall be required to amend or repeal any provision of this Article I, Section 3; provided, however, that if the Board of Directors recommends that stockholders approve such amendment or repeal at such meeting of stockholders, such amendment or repeal shall only require the affirmative vote of a majority of the outstanding shares entitled to vote on such amendment or repeal, voting together as a single class.

SECTION 4. Notice of Meetings; Adjournments.

(a) A notice of each Annual Meeting stating the hour, date and place, if any, of such Annual Meeting and the means of remote communication, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting, shall be given not less than ten (10) days nor more than sixty (60) days before the Annual Meeting, to each stockholder entitled to vote thereat by delivering such notice to such stockholder or by mailing it, postage prepaid, addressed to such stockholder at the address of such stockholder as it appears on the Corporation's stock transfer books. Without limiting the manner by which notice may otherwise be given to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the Delaware General Corporation Law ("DGCL").

(b) Unless otherwise required by the DGCL, notice of all special meetings of stockholders shall be given in the same manner as provided for Annual Meetings, except that the notice of all special meetings shall state the purpose or purposes for which the meeting has been called.

(c) Notice of an Annual Meeting or special meeting of stockholders need not be given to a stockholder if a waiver of notice is executed, or waiver of notice by electronic transmission is provided, before or after such meeting by such stockholder or if such stockholder attends such meeting, unless such attendance is for the express purpose of objecting at the beginning of the meeting to the transaction of any business because the meeting was not lawfully called or convened.

(d) The Board of Directors may postpone and reschedule any previously scheduled Annual Meeting or special meeting of stockholders and any record date with respect thereto, regardless of whether any notice or public disclosure with respect to any such meeting has been sent or made pursuant to Section 2 of this Article I of these By-laws or otherwise. In no event shall the public announcement of an adjournment, postponement or rescheduling of any

previously scheduled meeting of stockholders commence a new time period for the giving of a stockholder's notice under this Article I of these By-laws.

(e) When any meeting is convened, the presiding officer may adjourn the meeting if (i) no quorum is present for the transaction of business, (ii) the Board of Directors determines that adjournment is necessary or appropriate to enable the stockholders to consider fully information which the Board of Directors determines has not been made sufficiently or timely available to stockholders, or (iii) the Board of Directors determines that adjournment is otherwise in the best interests of the Corporation. When any Annual Meeting or special meeting of stockholders is adjourned to another hour, date or place, notice need not be given of the adjourned meeting other than an announcement at the meeting at which the adjournment is taken of the hour, date and place, if any, to which the meeting is adjourned and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting; provided, however, that if the adjournment is for more than thirty (30) days from the meeting date, or if after the adjournment a new record date is fixed for the adjourned meeting, notice of the adjourned meeting and the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such adjourned meeting shall be given to each stockholder of record entitled to vote thereat and each stockholder who, by law or under the Certificate of Incorporation of the Corporation (as the same may hereafter be amended and/or restated, the "Certificate") or these By-laws, is entitled to such notice.

SECTION 5. Quorum. A majority of the outstanding shares entitled to vote, present in person or represented by proxy, shall constitute a quorum at any meeting of stockholders. If less than a quorum is present at a meeting, the holders of voting stock representing a majority of the voting power present at the meeting or the presiding officer may adjourn the meeting from time to time, and the meeting may be held as adjourned without further notice, except as provided in Section 4 of this Article I. At such adjourned meeting at which a quorum is present, any business may be transacted which might have been transacted at the original meeting. The stockholders present at a duly constituted meeting may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum.

SECTION 6. Voting and Proxies. Stockholders shall have one vote for each share of stock entitled to vote owned by them of record according to the stock ledger of the Corporation as of the record date, unless otherwise provided by law or by the Certificate. Stockholders may vote either (i) in person, (ii) by written proxy or (iii) by a transmission permitted by Section 212(c) of the DGCL. Any copy, facsimile telecommunication or other reliable reproduction of the writing or transmission permitted by Section 212(c) of the DGCL may be substituted for or used in lieu of the original writing or transmission for any and all purposes for which the original writing or transmission could be used, provided that such copy, facsimile telecommunication or other reproduction shall be a complete reproduction of the entire original writing or transmission. Proxies shall be filed in accordance with the procedures established for the meeting of stockholders. Except as otherwise limited therein or as otherwise provided by law, proxies authorizing a person to vote at a specific meeting shall entitle the persons authorized thereby to vote at any adjournment of such meeting, but they shall not be valid after final adjournment of such meeting. A proxy with respect to stock held in the name of two or more

persons shall be valid if executed by or on behalf of any one of them unless at or prior to the exercise of the proxy the Corporation receives a specific written notice to the contrary from any one of them.

SECTION 7. Action at Meeting. When a quorum is present at any meeting of stockholders, any matter before any such meeting (other than an election of a director or directors) shall be decided by a majority of the votes properly cast for and against such matter, except where a larger vote is required by law, by the Certificate or by these By-laws. Any election of directors by stockholders shall be determined by a plurality of the votes properly cast on the election of directors.

SECTION 8. Stockholder Lists. The Secretary or an Assistant Secretary (or the Corporation's transfer agent or other person authorized by these By-laws or by law) shall prepare and make, at least ten (10) days before every Annual Meeting or special meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for a period of at least ten (10) days prior to the meeting as provided in the manner, and subject to the terms, set forth in Section 219 of the DGCL (or any successor provision). The list shall also be open to the examination of any stockholder during the whole time of the meeting as provided by law.

SECTION 9. Presiding Officer. The Board of Directors shall designate a representative to preside over all Annual Meetings or special meetings of stockholders, provided that if the Board of Directors does not so designate such a presiding officer, then the Chairman of the Board, if one is elected, shall preside over such meetings. If the Board of Directors does not so designate such a presiding officer and there is no Chairman of the Board or the Chairman of the Board is unable to so preside or is absent, then the Chief Executive Officer, if one is elected, shall preside over such meetings, provided further that if there is no Chief Executive Officer or the Chief Executive Officer is unable to so preside or is absent, then the President shall preside over such meetings. The presiding officer at any Annual Meeting or special meeting of stockholders shall have the power, among other things, to adjourn such meeting at any time and from time to time, subject to Sections 4 and 5 of this Article I. The order of business and all other matters of procedure at any meeting of the stockholders shall be determined by the presiding officer.

SECTION 10. Inspectors of Elections. The Corporation shall, in advance of any meeting of stockholders, appoint one or more inspectors to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting of stockholders, the presiding officer shall appoint one or more inspectors to act at the meeting. Any inspector may, but need not, be an officer, employee or agent of the Corporation. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of his or her ability. The inspectors shall perform such duties as are required by the DGCL, including the counting of all votes and ballots. The inspectors may appoint or retain other persons or entities to assist the inspectors in the performance of the duties of the inspectors. The presiding officer may review all determinations made by the inspectors, and in so doing the

presiding officer shall be entitled to exercise his or her sole judgment and discretion and he or she shall not be bound by any determinations made by the inspectors. All determinations by the inspectors and, if applicable, the presiding officer, shall be subject to further review by any court of competent jurisdiction.

ARTICLE II

Directors

SECTION 1. Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors except as otherwise provided by the Certificate or required by law.

SECTION 2. Number and Terms. The number of directors of the Corporation shall be fixed solely and exclusively by resolution duly adopted from time to time by the Board of Directors. The directors shall hold office in the manner provided in the Certificate.

SECTION 3. Qualification. No director need be a stockholder of the Corporation.

SECTION 4. Vacancies. Vacancies in the Board of Directors shall be filled in the manner provided in the Certificate.

SECTION 5. Removal. Directors may be removed from office only in the manner provided in the Certificate.

SECTION 6. Resignation. A director may resign at any time by electronic transmission or by giving written notice to the Chairman of the Board, if one is elected, the President or the Secretary. A resignation shall be effective upon receipt, unless the resignation otherwise provides.

SECTION 7. Regular Meetings. The regular annual meeting of the Board of Directors shall be held, without notice other than this Section 7, on the same date and at the same place as the Annual Meeting following the close of such meeting of stockholders. Other regular meetings of the Board of Directors may be held at such hour, date and place as the Board of Directors may by resolution from time to time determine and publicize by means of reasonable notice given to any director who is not present at the meeting at which such resolution is adopted.

SECTION 8. Special Meetings. Special meetings of the Board of Directors may be called, orally or in writing, by or at the request of a majority of the directors, the Chairman of the Board, if one is elected, or the President. The person calling any such special meeting of the Board of Directors may fix the hour, date and place thereof.

SECTION 9. Notice of Meetings. Notice of the hour, date and place of all special meetings of the Board of Directors shall be given to each director by the Secretary or an Assistant Secretary, or in case of the death, absence, incapacity or refusal of such persons, by the Chairman of the Board, if one is elected, or the President or such other officer designated by the Chairman of the Board, if one is elected, or the President. Notice of any special meeting of the Board of Directors shall be given to each director in person, by telephone, or by facsimile,

electronic mail or other form of electronic communication, sent to his or her business or home address, at least twenty-four (24) hours in advance of the meeting, or by written notice mailed to his or her business or home address, at least forty-eight (48) hours in advance of the meeting. Such notice shall be deemed to be delivered when hand-delivered to such address, read to such director by telephone, deposited in the mail so addressed, with postage thereon prepaid if mailed, dispatched or transmitted if sent by facsimile transmission or by electronic mail or other form of electronic communications. A written waiver of notice signed or electronically transmitted before or after a meeting by a director and filed with the records of the meeting shall be deemed to be equivalent to notice of the meeting. The attendance of a director at a meeting shall constitute a waiver of notice of such meeting, except where a director attends a meeting for the express purpose of objecting at the beginning of the meeting to the transaction of any business because such meeting is not lawfully called or convened. Except as otherwise required by law, by the Certificate or by these By-laws, neither the business to be transacted at, nor the purpose of, any meeting of the Board of Directors need be specified in the notice or waiver of notice of such meeting.

SECTION 10. Quorum. At any meeting of the Board of Directors, a majority of the total number of directors shall constitute a quorum for the transaction of business, but if less than a quorum is present at a meeting, a majority of the directors present may adjourn the meeting from time to time, and the meeting may be held as adjourned without further notice. Any business which might have been transacted at the meeting as originally noticed may be transacted at such adjourned meeting at which a quorum is present. For purposes of this section, the total number of directors includes any unfilled vacancies on the Board of Directors.

SECTION 11. Action at Meeting. At any meeting of the Board of Directors at which a quorum is present, the vote of a majority of the directors present shall constitute action by the Board of Directors, unless otherwise required by law, by the Certificate or by these By-laws.

SECTION 12. Action by Consent. Any action required or permitted to be taken at any meeting of the Board of Directors may be taken without a meeting if all members of the Board of Directors consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the records of the meetings of the Board of Directors. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form. Such consent shall be treated as a resolution of the Board of Directors for all purposes.

SECTION 13. Manner of Participation. Directors may participate in meetings of the Board of Directors by means of conference telephone or other communications equipment by means of which all directors participating in the meeting can hear each other, and participation in a meeting in accordance herewith shall constitute presence in person at such meeting for purposes of these By-laws.

SECTION 14. Presiding Director. The Board of Directors shall designate a representative to preside over all meetings of the Board of Directors, provided that if the Board of Directors does not so designate such a presiding director or such designated presiding director is unable to so preside or is absent, then the Chairman of the Board, if one is elected, shall preside over all meetings of the Board of Directors. If both the designated presiding director, if

one is so designated, and the Chairman of the Board, if one is elected, are unable to preside or are absent, the Board of Directors shall designate an alternate representative to preside over a meeting of the Board of Directors.

SECTION 15. Committees. The Board of Directors, by vote of a majority of the directors then in office, may elect one or more committees, including, without limitation, a Compensation Committee, a Nominating & Corporate Governance Committee and an Audit Committee, and may delegate thereto some or all of its powers except those which by law, by the Certificate or by these By-laws may not be delegated. Except as the Board of Directors may otherwise determine, any such committee may make rules for the conduct of its business, but unless otherwise provided by the Board of Directors or in such rules, its business shall be conducted so far as possible in the same manner as is provided by these By-laws for the Board of Directors. All members of such committees shall hold such offices at the pleasure of the Board of Directors. The Board of Directors may abolish any such committee at any time. Any committee to which the Board of Directors delegates any of its powers or duties shall keep records of its meetings and shall report its action to the Board of Directors.

SECTION 16. Compensation of Directors. Directors shall receive such compensation for their services as shall be determined by a majority of the Board of Directors, or a designated committee thereof, provided that directors who are serving the Corporation as employees and who receive compensation for their services as such, shall not receive any salary or other compensation for their services as directors of the Corporation.

ARTICLE III

Officers

SECTION 1. Enumeration. The officers of the Corporation shall consist of a President, a Treasurer, a Secretary and such other officers, including, without limitation, a Chairman of the Board of Directors, a Chief Executive Officer and one or more Vice Presidents (including Executive Vice Presidents or Senior Vice Presidents), Assistant Vice Presidents, Assistant Treasurers and Assistant Secretaries, as the Board of Directors may determine.

SECTION 2. Election. At the regular annual meeting of the Board of Directors following the Annual Meeting, the Board of Directors shall elect the President, the Treasurer and the Secretary. Other officers may be elected by the Board of Directors at such regular annual meeting of the Board of Directors or at any other regular or special meeting.

SECTION 3. Qualification. No officer need be a stockholder or a director. Any person may occupy more than one office of the Corporation at any time.

SECTION 4. Tenure. Except as otherwise provided by the Certificate or by these By-laws, each of the officers of the Corporation shall hold office until the regular annual meeting of the Board of Directors following the next Annual Meeting and until his or her successor is elected and qualified or until his or her earlier resignation or removal.

SECTION 5. Resignation. Any officer may resign by delivering his or her written or electronically transmitted resignation to the Corporation addressed to the President or the

Secretary, and such resignation shall be effective upon receipt, unless the resignation otherwise provides.

SECTION 6. Removal. Except as otherwise provided by law or by resolution of the Board of Directors, the Board of Directors may remove any officer with or without cause by the affirmative vote of a majority of the directors then in office.

SECTION 7. Absence or Disability. In the event of the absence or disability of any officer, the Board of Directors may designate another officer to act temporarily in place of such absent or disabled officer.

SECTION 8. Vacancies. Any vacancy in any office may be filled for the unexpired portion of the term by the Board of Directors.

SECTION 9. President. The President shall, subject to the direction of the Board of Directors, have such powers and shall perform such duties as the Board of Directors may from time to time designate.

SECTION 10. Chairman of the Board. The Chairman of the Board, if one is elected, shall have such powers and shall perform such duties as the Board of Directors may from time to time designate.

SECTION 11. Chief Executive Officer. The Chief Executive Officer, if one is elected, shall have such powers and shall perform such duties as the Board of Directors may from time to time designate.

SECTION 12. Vice Presidents and Assistant Vice Presidents. Any Vice President (including any Executive Vice President or Senior Vice President) and any Assistant Vice President shall have such powers and shall perform such duties as the Board of Directors or the Chief Executive Officer may from time to time designate.

SECTION 13. Treasurer and Assistant Treasurers. The Treasurer shall, subject to the direction of the Board of Directors and except as the Board of Directors or the Chief Executive Officer may otherwise provide, have general charge of the financial affairs of the Corporation and shall cause to be kept accurate books of account. The Treasurer shall have custody of all funds, securities, and valuable documents of the Corporation. He or she shall have such other duties and powers as may be designated from time to time by the Board of Directors or the Chief Executive Officer. Any Assistant Treasurer shall have such powers and perform such duties as the Board of Directors or the Chief Executive Officer may from time to time designate.

SECTION 14. Secretary and Assistant Secretaries. The Secretary shall record all the proceedings of the meetings of the stockholders and the Board of Directors (including committees of the Board of Directors) in books kept for that purpose. In his or her absence from any such meeting, a temporary secretary chosen at the meeting shall record the proceedings thereof. The Secretary shall have charge of the stock ledger (which may, however, be kept by any transfer or other agent of the Corporation). The Secretary shall have custody of the seal of the Corporation, and the Secretary, or an Assistant Secretary shall have authority to affix it to any instrument requiring it, and, when so affixed, the seal may be attested by his or her signature

or that of an Assistant Secretary. The Secretary shall have such other duties and powers as may be designated from time to time by the Board of Directors or the Chief Executive Officer. In the absence of the Secretary, any Assistant Secretary may perform his or her duties and responsibilities. Any Assistant Secretary shall have such powers and perform such duties as the Board of Directors or the Chief Executive Officer may from time to time designate.

SECTION 15. Other Powers and Duties. Subject to these By-laws and to such limitations as the Board of Directors may from time to time prescribe, the officers of the Corporation shall each have such powers and duties as generally pertain to their respective offices, as well as such powers and duties as from time to time may be conferred by the Board of Directors or the Chief Executive Officer.

ARTICLE IV

Capital Stock

SECTION 1. Certificates of Stock. Each stockholder shall be entitled to a certificate of the capital stock of the Corporation in such form as may from time to time be prescribed by the Board of Directors. Such certificate shall be signed by any two authorized officers of the Corporation. The Corporation seal and the signatures by the Corporation's officers, the transfer agent or the registrar may be facsimiles. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed on such certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he or she were such officer, transfer agent or registrar at the time of its issue. Every certificate for shares of stock which are subject to any restriction on transfer and every certificate issued when the Corporation is authorized to issue more than one class or series of stock shall contain such legend with respect thereto as is required by law. Notwithstanding anything to the contrary provided in these Bylaws, the Board of Directors of the Corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares (except that the foregoing shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation), and by the approval and adoption of these Bylaws the Board of Directors has determined that all classes or series of the Corporation's stock may be uncertificated, whether upon original issuance, re-issuance, or subsequent transfer.

SECTION 2. Transfers. Subject to any restrictions on transfer and unless otherwise provided by the Board of Directors, shares of stock that are represented by a certificate may be transferred on the books of the Corporation by the surrender to the Corporation or its transfer agent of the certificate theretofore properly endorsed or accompanied by a written assignment or power of attorney properly executed, with transfer stamps (if necessary) affixed, and with such proof of the authenticity of signature as the Corporation or its transfer agent may reasonably require. Shares of stock that are not represented by a certificate may be transferred on the books of the Corporation by submitting to the Corporation or its transfer agent such evidence of transfer and following such other procedures as the Corporation or its transfer agent may require.

SECTION 3. Record Holders. Except as may otherwise be required by law, by the Certificate or by these By-laws, the Corporation shall be entitled to treat the record holder of

stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect thereto, regardless of any transfer, pledge or other disposition of such stock, until the shares have been transferred on the books of the Corporation in accordance with the requirements of these By-laws.

SECTION 4. Record Date. In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date: (a) in the case of determination of stockholders entitled to vote at any meeting of stockholders, shall, unless otherwise required by law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting and (b) in the case of any other action, shall not be more than sixty (60) days prior to such other action. If no record date is fixed: (i) the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; and (ii) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

SECTION 5. Replacement of Certificates. In case of the alleged loss, destruction or mutilation of a certificate of stock of the Corporation, a duplicate certificate may be issued in place thereof, upon such terms as the Board of Directors may prescribe.

ARTICLE V

Indemnification

SECTION 1. Definitions. For purposes of this Article:

(a) "Corporate Status" describes the status of a person who is serving or has served (i) as a Director of the Corporation, (ii) as an Officer of the Corporation, (iii) as a Non-Officer Employee of the Corporation, or (iv) as a director, partner, trustee, officer, employee or agent of any other corporation, partnership, limited liability company, joint venture, trust, employee benefit plan, foundation, association, organization or other legal entity which such person is or was serving at the request of the Corporation. For purposes of this Section 1(a), a Director, Officer or Non-Officer Employee of the Corporation who is serving or has served as a director, partner, trustee, officer, employee or agent of a Subsidiary shall be deemed to be serving at the request of the Corporation. Notwithstanding the foregoing, "Corporate Status" shall not include the status of a person who is serving or has served as a director, officer, employee or agent of a constituent corporation absorbed in a merger or consolidation transaction with the Corporation with respect to such person's activities prior to said transaction, unless specifically authorized by the Board of Directors or the stockholders of the Corporation;

(b) "Director" means any person who serves or has served the Corporation as a director on the Board of Directors of the Corporation;

(c) "Disinterested Director" means, with respect to each Proceeding in respect of which indemnification is sought hereunder, a Director of the Corporation who is not and was not a party to such Proceeding;

(d) "Expenses" means all attorneys' fees, retainers, court costs, transcript costs, fees of expert witnesses, private investigators and professional advisors (including, without limitation, accountants and investment bankers), travel expenses, duplicating costs, printing and binding costs, costs of preparation of demonstrative evidence and other courtroom presentation aids and devices, costs incurred in connection with document review, organization, imaging and computerization, telephone charges, postage, delivery service fees, and all other disbursements, costs or expenses of the type customarily incurred in connection with prosecuting, defending, preparing to prosecute or defend, investigating, being or preparing to be a witness in, settling or otherwise participating in, a Proceeding;

(e) "Liabilities" means judgments, damages, liabilities, losses, penalties, excise taxes, fines and amounts paid in settlement;

(f) "Non-Officer Employee" means any person who serves or has served as an employee or agent of the Corporation, but who is not or was not a Director or Officer;

(g) "Officer" means any person who serves or has served the Corporation as an officer of the Corporation appointed by the Board of Directors of the Corporation;

(h) "Proceeding" means any threatened, pending or completed action, suit, arbitration, alternate dispute resolution mechanism, inquiry, investigation, administrative hearing or other proceeding, whether civil, criminal, administrative, arbitrative or investigative; and

(i) "Subsidiary" shall mean any corporation, partnership, limited liability company, joint venture, trust or other entity of which the Corporation owns (either directly or through or together with another Subsidiary of the Corporation) either (i) a general partner, managing member or other similar interest or (ii) (A) fifty percent (50%) or more of the voting power of the voting capital equity interests of such corporation, partnership, limited liability company, joint venture or other entity, or (B) fifty percent (50%) or more of the outstanding voting capital stock or other voting equity interests of such corporation, partnership, limited liability company, joint venture or other entity.

SECTION 2. Indemnification of Directors and Officers.

(a) Subject to the operation of Section 4 of this Article V of these By-laws, each Director and Officer shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the DGCL, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than such law permitted the Corporation to provide prior to such amendment), and to the extent authorized in this Section 2.

(1) Actions, Suits and Proceedings Other than By or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses and Liabilities that are incurred or paid by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein (other than an action by or in the right of the Corporation), which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful.

(2) Actions, Suits and Proceedings By or In the Right of the Corporation. Each Director and Officer shall be indemnified and held harmless by the Corporation against any and all Expenses that are incurred by such Director or Officer or on such Director's or Officer's behalf in connection with any Proceeding or any claim, issue or matter therein by or in the right of the Corporation, which such Director or Officer is, or is threatened to be made, a party to or participant in by reason of such Director's or Officer's Corporate Status, if such Director or Officer acted in good faith and in a manner such Director or Officer reasonably believed to be in or not opposed to the best interests of the Corporation; provided, however, that no indemnification shall be made under this Section 2(a)(2) in respect of any claim, issue or matter as to which such Director or Officer shall have been finally adjudged by a court of competent jurisdiction to be liable to the Corporation, unless, and only to the extent that, the Court of Chancery or another court in which such Proceeding was brought shall determine upon application that, despite adjudication of liability, but in view of all the circumstances of the case, such Director or Officer is fairly and reasonably entitled to indemnification for such Expenses that such court deems proper.

(3) Survival of Rights. The rights of indemnification provided by this Section 2 shall continue as to a Director or Officer after he or she has ceased to be a Director or Officer and shall inure to the benefit of his or her heirs, executors, administrators and personal representatives.

(4) Actions by Directors or Officers. Notwithstanding the foregoing, the Corporation shall indemnify any Director or Officer seeking indemnification in connection with a Proceeding initiated by such Director or Officer only if such Proceeding (including any parts of such Proceeding not initiated by such Director or

Officer) was authorized in advance by the Board of Directors of the Corporation, unless such Proceeding was brought to enforce such Officer's or Director's rights to indemnification or, in the case of Directors, advancement of Expenses under these By-laws in accordance with the provisions set forth herein.

SECTION 3. Indemnification of Non-Officer Employees. Subject to the operation of Section 4 of this Article V of these By-laws, each Non-Officer Employee may, in the discretion of the Board of Directors of the Corporation, be indemnified by the Corporation to the fullest extent authorized by the DGCL, as the same exists or may hereafter be amended, against any or all Expenses and Liabilities that are incurred by such Non-Officer Employee or on such Non-Officer Employee's behalf in connection with any threatened, pending or completed Proceeding, or any claim, issue or matter therein, which such Non-Officer Employee is, or is threatened to be made, a party to or participant in by reason of such Non-Officer Employee's Corporate Status, if such Non-Officer Employee acted in good faith and in a manner such Non-Officer Employee reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. The rights of indemnification provided by this Section 3 shall exist as to a Non-Officer Employee after he or she has ceased to be a Non-Officer Employee and shall inure to the benefit of his or her heirs, personal representatives, executors and administrators. Notwithstanding the foregoing, the Corporation may indemnify any Non-Officer Employee seeking indemnification in connection with a Proceeding initiated by such Non-Officer Employee only if such Proceeding was authorized in advance by the Board of Directors of the Corporation.

SECTION 4. Determination. Unless ordered by a court, no indemnification shall be provided pursuant to this Article V to a Director, to an Officer or to a Non-Officer Employee unless a determination shall have been made that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Corporation and, with respect to any criminal Proceeding, such person had no reasonable cause to believe his or her conduct was unlawful. Such determination shall be made by (a) a majority vote of the Disinterested Directors, even though less than a quorum of the Board of Directors, (b) a committee comprised of Disinterested Directors, such committee having been designated by a majority vote of the Disinterested Directors (even though less than a quorum), (c) if there are no such Disinterested Directors, or if a majority of Disinterested Directors so directs, by independent legal counsel in a written opinion, or (d) by the stockholders of the Corporation.

SECTION 5. Advancement of Expenses to Directors Prior to Final Disposition.

(a) The Corporation shall advance all Expenses incurred by or on behalf of any Director in connection with any Proceeding in which such Director is involved by reason of such Director's Corporate Status within thirty (30) days after the receipt by the Corporation of a written statement from such Director requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Director and shall be preceded or accompanied by an undertaking by or on behalf of such Director to repay any Expenses so advanced if it shall ultimately be determined that such Director is not entitled to be indemnified against such Expenses. Notwithstanding the foregoing, the Corporation shall advance all

Expenses incurred by or on behalf of any Director seeking advancement of expenses hereunder in connection with a Proceeding initiated by such Director only if such Proceeding (including any parts of such Proceeding not initiated by such Director) was (i) authorized by the Board of Directors of the Corporation, or (ii) brought to enforce such Director's rights to indemnification or advancement of Expenses under these By-laws.

(b) If a claim for advancement of Expenses hereunder by a Director is not paid in full by the Corporation within thirty (30) days after receipt by the Corporation of documentation of Expenses and the required undertaking, such Director may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim and if successful in whole or in part, such Director shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such advancement of Expenses under this Article V shall not be a defense to an action brought by a Director for recovery of the unpaid amount of an advancement claim and shall not create a presumption that such advancement is not permissible. The burden of proving that a Director is not entitled to an advancement of expenses shall be on the Corporation.

(c) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Director has not met any applicable standard for indemnification set forth in the DGCL.

SECTION 6. Advancement of Expenses to Officers and Non-Officer Employees Prior to Final Disposition.

(a) The Corporation may, at the discretion of the Board of Directors of the Corporation, advance any or all Expenses incurred by or on behalf of any Officer or any Non-Officer Employee in connection with any Proceeding in which such person is involved by reason of his or her Corporate Status as an Officer or Non-Officer Employee upon the receipt by the Corporation of a statement or statements from such Officer or Non-Officer Employee requesting such advance or advances from time to time, whether prior to or after final disposition of such Proceeding. Such statement or statements shall reasonably evidence the Expenses incurred by such Officer or Non-Officer Employee and shall be preceded or accompanied by an undertaking by or on behalf of such person to repay any Expenses so advanced if it shall ultimately be determined that such Officer or Non-Officer Employee is not entitled to be indemnified against such Expenses.

(b) In any suit brought by the Corporation to recover an advancement of expenses pursuant to the terms of an undertaking, the Corporation shall be entitled to recover such expenses upon a final adjudication that the Officer or Non-Officer Employee has not met any applicable standard for indemnification set forth in the DGCL.

SECTION 7. Contractual Nature of Rights.

(a) The provisions of this Article V shall be deemed to be a contract between the Corporation and each Director and Officer entitled to the benefits hereof at any time while this

Article V is in effect, in consideration of such person's past or current and any future performance of services for the Corporation. Neither amendment, repeal or modification of any provision of this Article V nor the adoption of any provision of the Certificate of Incorporation inconsistent with this Article V shall eliminate or reduce any right conferred by this Article V in respect of any act or omission occurring, or any cause of action or claim that accrues or arises or any state of facts existing, at the time of or before such amendment, repeal, modification or adoption of an inconsistent provision (even in the case of a proceeding based on such a state of facts that is commenced after such time), and all rights to indemnification and advancement of Expenses granted herein or arising out of any act or omission shall vest at the time of the act or omission in question, regardless of when or if any proceeding with respect to such act or omission is commenced. The rights to indemnification and to advancement of expenses provided by, or granted pursuant to, this Article V shall continue notwithstanding that the person has ceased to be a director or officer of the Corporation and shall inure to the benefit of the estate, heirs, executors, administrators, legatees and distributes of such person.

(b) If a claim for indemnification hereunder by a Director or Officer is not paid in full by the Corporation within sixty (60) days after receipt by the Corporation of a written claim for indemnification, such Director or Officer may at any time thereafter bring suit against the Corporation to recover the unpaid amount of the claim, and if successful in whole or in part, such Director or Officer shall also be entitled to be paid the expenses of prosecuting such claim. The failure of the Corporation (including its Board of Directors or any committee thereof, independent legal counsel, or stockholders) to make a determination concerning the permissibility of such indemnification under this Article V shall not be a defense to an action brought by a Director or Officer for recovery of the unpaid amount of an indemnification claim and shall not create a presumption that such indemnification is not permissible. The burden of proving that a Director or Officer is not entitled to indemnification shall be on the Corporation.

(c) In any suit brought by a Director or Officer to enforce a right to indemnification hereunder, it shall be a defense that such Director or Officer has not met any applicable standard for indemnification set forth in the DGCL.

SECTION 8. Non-Exclusivity of Rights. The rights to indemnification and to advancement of Expenses set forth in this Article V shall not be exclusive of any other right which any Director, Officer, or Non-Officer Employee may have or hereafter acquire under any statute, provision of the Certificate or these By-laws, agreement, vote of stockholders or Disinterested Directors or otherwise.

SECTION 9. Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any Director, Officer or Non-Officer Employee against any liability of any character asserted against or incurred by the Corporation or any such Director, Officer or Non-Officer Employee, or arising out of any such person's Corporate Status, whether or not the Corporation would have the power to indemnify such person against such liability under the DGCL or the provisions of this Article V.

SECTION 10. Other Indemnification. The Corporation's obligation, if any, to indemnify or provide advancement of Expenses to any person under this Article V as a result of such person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or

agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall be reduced by any amount such person may collect as indemnification or advancement of Expenses from such other corporation, partnership, joint venture, trust, employee benefit plan or enterprise (the "Primary Indemnitor"). Any indemnification or advancement of Expenses under this Article V owed by the Corporation as a result of a person serving, at the request of the Corporation, as a director, partner, trustee, officer, employee or agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise shall only be in excess of, and shall be secondary to, the indemnification or advancement of Expenses available from the applicable Primary Indemnitor(s) and any applicable insurance policies.

ARTICLE VI

Miscellaneous Provisions

SECTION 1. Fiscal Year. The fiscal year of the Corporation shall be determined by the Board of Directors.

SECTION 2. Seal. The Board of Directors shall have power to adopt and alter the seal of the Corporation.

SECTION 3. Execution of Instruments. All deeds, leases, transfers, contracts, bonds, notes and other obligations to be entered into by the Corporation in the ordinary course of its business without director action may be executed on behalf of the Corporation by the Chairman of the Board, if one is elected, the Chief Executive Officer, President or the Treasurer or any other officer, employee or agent of the Corporation as the Board of Directors or the executive committee of the Board may authorize.

SECTION 4. Voting of Securities. Unless the Board of Directors otherwise provides, the Chairman of the Board, if one is elected, the Chief Executive Officer, President or the Treasurer may waive notice of and act on behalf of the Corporation (including with regard to voting and actions by written consent), or appoint another person or persons to act as proxy or attorney in fact for the Corporation with or without discretionary power and/or power of substitution, at any meeting of stockholders or shareholders of any other corporation or organization, any of whose securities are held by the Corporation.

SECTION 5. Resident Agent. The Board of Directors may appoint a resident agent upon whom legal process may be served in any action or proceeding against the Corporation.

SECTION 6. Corporate Records. The original or attested copies of the Certificate, By-laws and records of all meetings of the incorporators, stockholders and the Board of Directors and the stock transfer books, which shall contain the names of all stockholders, their record addresses and the amount of stock held by each, may be kept outside the State of Delaware and shall be kept at the principal office of the Corporation, at an office of its counsel, at an office of its transfer agent or at such other place or places as may be designated from time to time by the Board of Directors.

SECTION 7. Certificate. All references in these By-laws to the Certificate shall be deemed to refer to the Amended and Restated Certificate of Incorporation of the Corporation, as amended and/or restated and in effect from time to time.

SECTION 8. Exclusive Jurisdiction. Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for state law claims for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any current or former directors, officers and employees of the Corporation to the Corporation or the Corporation's stockholders, (iii) any action asserting a claim arising against the Corporation or any current or former directors, officers and employees of the Corporation pursuant to any provision of the Delaware General Corporation Law or the Certificate or By-laws, (iv) any action to interpret, apply, enforce or determine the validity of the Certificate or By-laws, or (v) any action asserting a claim against the Corporation or current or former directors or officers or other employees that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Section 8.

SECTION 9. Amendment of By-laws.

(a) Amendment by Directors. Except as provided otherwise by law, these By-laws may be amended or repealed by the Board of Directors by the affirmative vote of a majority of the directors then in office.

(b) Amendment by Stockholders. Except as otherwise required by these By-laws or by law, these By-laws may be amended or repealed at any Annual Meeting, or special meeting of stockholders called for such purpose in accordance with these By-Laws, by the affirmative vote of not less than two thirds (2/3) of the outstanding shares of capital stock entitled to vote on such amendment or repeal, voting together as a single class; provided, however, that if the Board of Directors recommends that stockholders approve such amendment or repeal at such meeting of stockholders, such amendment or repeal shall only require the affirmative vote of the majority of the outstanding shares of capital stock entitled to vote on such amendment or repeal, voting together as a single class. Notwithstanding the foregoing, stockholder approval shall not be required unless mandated by the Certificate, these By-laws, or other applicable law.

SECTION 10. Notices. If mailed, notice to stockholders shall be deemed given when deposited in the mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the Corporation. Without limiting the manner by which notice otherwise may be given to stockholders, any notice to stockholders may be given by electronic transmission in the manner provided in Section 232 of the DGCL.

SECTION 11. Waivers. A written waiver of any notice, signed by a stockholder or director, or waiver by electronic transmission by such person, whether given before or after the time of the event for which notice is to be given, shall be deemed equivalent to the notice

required to be given to such person. Neither the business to be transacted at, nor the purpose of, any meeting need be specified in such a waiver.

Adopted March 14, 2019, subject to and effective upon the effectiveness of the Corporation's Registration Statement on Form S-1 for its initial public offering.

SHAREHOLDERS AGREEMENT

Series D Round of Financing of Hookipa Pharma Inc.
dated February 15, 2019

by and among

Prof. Dr. Daniel Pinschewer
Dr. Lukas Flatz
Dr. Andreas Bergthaler
Prof. Dr. Rudolf M. Zinkernagel
Dr. Katherine Cohen
Universität Zürich
Prof. Dr. Paul-Henri Lambert
Igor Matushansky
Sofinnova Capital VI FCPR
Forbion Capital Fund II Coöperatief U.A.
Boehringer Ingelheim Venture Fund GmbH
Takeda Ventures, Inc.
BioMedInvest II LP
667, L.P.
Baker Brothers Life Sciences, L.P.
HH HKP (HK) Limited
ImmunVax Pte. Ltd.
HBM BioCapital II LP
Gilead Sciences Ireland UC
Gilead Sciences, Inc.
Redmile Biopharma Investments I, L.P.
RAF, L.P.
Fynveur SCA
Samsara BioCapital, L.P.

as well as

Hookipa Pharma Inc.

TABLE OF CONTENTS

This shareholders agreement is dated February 15, 2019 and entered into by and among:

(1) **Prof. Dr. Daniel Pinschewer**, born 21 August 1974, with his address at Im Zehntenfrei 5, CH-4102 Binningen, Switzerland ("**Pinschewer**");

(2) **Dr. Lukas Flatz**, born 2 September 1978, with his address at Saxgasse 16, FL- 9494 Schaan, Principality of Liechtenstein ("**Flatz**");

(3) **Dr. Andreas Bergthaler**, born 1 November 1977, with his address at Richard-Wagner-Platz 2/13, 1160 Vienna, Austria ("**Bergthaler**");

(4) **Prof. Dr. Rudolf M. Zinkernagel**, born 6 January 1944 with his address at Rebhusstrasse 47, CH-8126 Zumikon, Switzerland ("**Zinkernagel**");

Pinschewer, Flatz, Bergthaler and Zinkernagel are collectively referred to as the "**Founders**", acting severally but not jointly, and each individually referred to as a "**Founder**";

(5) **Dr. Katherine Cohen**, born 16 February 1963, with her address at Hermanngasse 6/44, A-1070 Vienna, Austria ("**Cohen**");

(6) **Universität Zürich**, Rämistrasse 71, CH-8006 Zürich, Switzerland ("**University**");

(7) **Prof. Dr. Paul-Henri Lambert**, born 10 May 1938, with his address at Chemin Jean-Baptiste Terray, 4, 1290 Versoix, Switzerland ("**Lambert**");

(8) **Igor Matushansky**, born 10 August 1972, with his address at 2517 E. 65th Street, Brooklyn, NY 11234 ("**Matushansky**");

(9) **Sofinnova Capital VI FCPR**, a French *fonds commun de placement à risques* represented by its manager (*société de gestion*), Sofinnova Partners, a French *société par actions simplifiée* having its registered office at 18, rue du 4 Septembre, 75002 Paris, France, registered with the registry of commerce and companies of Paris under number 413 388 596 ("**Sofinnova**");

(10) **Forbion Capital Fund II Coöperatief U.A.**, represented by its manager Forbion II Management B.V., a Dutch Coöperatie U.A., having its registered office at Gooimeer 2-35, 1411 DC Naarden, registered with the trade register of the Chamber of Commerce for Gooi-, Eem- en Flevoland under number 32142139 ("**Forbion**");

Forbion and Sofinnova are collectively referred to as the "**Series A Investors**", acting severally but not jointly, and each individually referred to as a "**Series A Investor**";

(11) **Boehringer Ingelheim Venture Fund GmbH**, a German company with limited liability with its corporate seat in Ingelheim / Rhein, Germany, having its registered office at Binger Strasse 173, 55216 Ingelheim / Rhein, Germany, registered with the trade register (*Handelsregister*) of the Local Court of Mainz (*Amtsgericht* Mainz) under number HRB 42763 ("**Boehringer Ingelheim**");

(12) **Takeda Ventures, Inc.,** a company duly organized and existing under the laws of the State of Delaware with its headquarters in California, U.S.A., having its registered office at 435 Tasso Street, Suite 300, Palo Alto, CA 94301, U.S.A., registered with the State of Delaware under file number 3440843 ("**Takeda Ventures**");

(13) **BioMedInvest II LP**, a company duly organized and existing under the laws of Guernsey with its registered office at St Peters House, Le Bordage, St Peter Port, Guernsey GY1 1BR registered with the trade register of Guernsey under number 1140 ("**BioMedInvest**");

Forbion, Sofinnova, Boehringer Ingelheim, Takeda Ventures and BioMedInvest are collectively referred to as the "**Series B Investors**", acting severally but not jointly, and each individually referred to as a "**Series B Investor**";

(14) **667, L.P.**, a limited partnership duly organized and existing under the laws of the State of Delaware with its headquarters in c/o Baker Bros. Advisors LP, 860 Washington Street, 3rd Floor, New York, NY 10014, U.S.A., having its registered office at Corporation Trust Center 1209 Orange Street, Wilmington, Delaware, 19801, U.S.A., registered with the State of Delaware under file number 3354881 ("**667**");

(15) **Baker Brothers Life Sciences, L.P.**, a limited partnership duly organized and existing under the laws of the State of Delaware with its headquarters in c/o Baker Bros. Advisors LP, 860 Washington Street, 3rd Floor, New York, NY 10014, U.S.A., having its registered office at Corporation Trust Center 1209 Orange Street, Wilmington, Delaware, 19801, U.S.A., registered with the State of Delaware under file number 3833212 ("**Life Sciences**" and, together with 667, "**BBA**");

(16) **HH HKP (HK) Limited**, a limited partnership duly organized and existing under the laws of Hong Kong with its registered office at Suite 2202, 22nd Floor, Two International Finance Centre, 8 Finance Street, Central, Hong Kong, registered under number 2609065 ("**Hillhouse**");

(17) **ImmunVax Pte. Ltd.** an exempt private limited company duly organized and existing under the laws of Singapore with its registered office at 96 Robinson Road #16-04 SIF Building, Singapore 068899 ("**Sirona Capital**");

(18) **HBM BioCapital II LP**, a company duly organized and existing under the laws of Jersey, with its registered office at 11-15 Seaton Place, St Helier JE4 0QH, Jersey, Channel Islands, registered with the trade register of Jersey under number 1421 ("**HBM**");

(19) **Gilead Sciences Ireland UC**, a company duly organized and existing under the laws of Ireland, with its registered office at IDA Business & Technology Park, Carrigtohill, Co. Cork, Ireland, registered under number 259755 ("**Gilead Sciences Ireland**");

The Series B Investors, 667, BBA, Hillhouse, Sirona Capital, HBM and Gilead Sciences Ireland are collectively referred to as the "**Series C Investors**", acting severally but not jointly, and each individually referred to as a "**Series C Investor**";

(20) **Redmile Biopharma Investments I, L.P.**, a limited partnership duly organized and existing under the laws of the State of Delaware with its headquarters in One Letterman Drive, Building D, Suite D3-300, San Francisco, CA 94129 ("**Redmile Biopharma**");

(21) **RAF, L.P.**, an exempted limited partnership duly organized and existing under the laws of the Cayman Islands with its headquarters in One Letterman Drive, Building D, Suite D3-300, San Francisco, CA 94129 ("**RAF**" and, together with Redmile Biopharma, "**Redmile**");

(22) **Fynveur SCA**, a private partnership limited by shares (Société en Commandite par Actions), organized and existing under the laws of Luxembourg, with its registered office at Valley Park, 44 rue de la Vallée, L-2661 Luxembourg, registered with the commercial register of Luxembourg under number B-147753, and being represented by Fynveur Management S. à r. L. in its capacity as Managing Partner of Fynveur ("**Fynveur**");

(23) **Gilead Sciences, Inc.**, a Delaware Corporation ("**Gilead Sciences**" and, together with Gilead Sciences Ireland, "**Gilead**");

(24) **Samsara BioCapital, L.P.**, a limited partnership duly organized and existing under the laws of the State of Delaware with its headquarters in c/o Samsara BioCapital, LLC, 628 Middlefield Road, Palo Alto, CA 94301 ("**Samsara**");

Redmile, 667, BBA, Hillhouse, Takeda, Gilead Sciences, Fynveur and Samsara are collectively referred to as the "**Series D Investors**", acting severally but not jointly, and each individually referred to as a "**Series D Investor**";

The Series A Investors, the Series B Investors, the Series C Investors and the Series D Investors are collectively referred to as the "**Investors**", acting severally but not jointly, and each individually referred to as an "**Investor**";

(25) **HOOKIPA Pharma Inc.**, a Delaware corporation with its business address at Alexandria Center for Life Sciences, 430 East 29th Street, 14th Floor, New York, NY 10016 (the "**Company**").

The Shareholders (as defined herein) and the Company are collectively referred to as the "**Parties**" and each individually as a "**Party**".

PREAMBLE

WHEREAS:

(A) In December 2011, the shareholders of Hookipa Biotech AG (the "**Prior Parent**") (at that time) and the Company agreed to a financing round of the Prior Parent in the form of an ordinary share capital increase from EUR 35,000 to EUR 172,814 by issuing 137,814 new class (A) voting preference shares to the Series A Investors against payment of a total investment amount of EUR 6,965,000 (the "**Series A Financing Round**").

(B) In October 2013, the shareholders of the Prior Parent (at that time) and the Prior Parent agreed to a further financing round of the Prior Parent in the form of three ordinary share capital increases from EUR 184,669 to in total EUR 512,797 by issuing in total 328,128 new class (B) voting preference shares to the Series B Investors against payment of a total investment amount of EUR 20,000,000 (the "**Series B Financing Round**").

(C) In October 2016, the shareholders of the Prior Parent (at that time) and the Prior Parent agreed to a further financing round of the Prior Parent in the form of two ordinary share capital increases from EUR 544,253 to in total EUR 708,317 by issuing in total 164,064 new class (B) voting preference shares to the Series B Investors against payment of a total investment amount of EUR 10,000,000 (the "**Series B Extended Financing Round**").

(D) In November 2017, the shareholders of the Prior Parent (at that time) and the Prior Parent agreed to a further financing round of the Prior Parent in the form of an ordinary share capital increase from EUR 708,317 to in total EUR 1,401,817 by issuing in total 693,500 new class (C) voting preference shares to the Series C Investors against payment of a total investment amount of EUR 50,001,350 (the "**Series C Extended Financing Round**").

(E) The Company seeks further growth financing and the Series D Investors have agreed to invest in the Company a global amount of up to approximately $45,000,000 (the "**Series D Financing Round**") subject to the terms and conditions of a separate investment agreement entered into on February 15, 2019 (the "**Series D Investment Agreement**").

(F) The current capitalization table of the Company before and after the completion of the Series D Financing Round, on a fully diluted basis, will be held as set forth on Schedule ./E.

(G) The purpose of this Agreement is to provide for a framework for the corporate governance of the Company by setting forth certain regulations and procedures, including, without limitation, for the exercise of voting rights in the corporate bodies, the composition of such corporate bodies and the transfer of shares of the Company.

(H) The Shareholders Agreement by and among the Company and the Shareholders (prior to the Series D Financing Round) dated June 29, 2018 (the "**Prior Agreement**") shall be superseded and replaced by this Agreement.

NOW THEREFORE, in consideration of the mutual covenants and agreements contained herein, the Parties have agreed as follows:

1. Definitions and Interpretation

1.1 Definitions. Terms defined in the recitals or the preamble to this Agreement shall have the meaning as given to them in the recitals or the preamble to this Agreement throughout this Agreement. Further, in this Agreement, the following words and expressions shall have the following meaning:

Accepting Preferred Beneficiaries	Shall have the meaning set out in section 6.6.
Acquirer	Shall have the meaning set out in section 6.1.
Agreement	Shall mean this Shareholders Agreement.
Affiliate	Shall mean with respect to any specified Person, any other Person that directly or indirectly, through one or more intermediaries, controls or is controlled by, or is under common control with (according to the Securities Act) or is a member of immediate family of such first Person. With regard to any Investor, it refers in particular to any entity of any type whatsoever, including any natural Person or legal entity, or any investment fund (i) managed or of which the control is directly or indirectly, individually or jointly held, by an Investor and/or by the management company of an Investor or (ii) managing or holding the control, directly or indirectly, individually or jointly, of any Investor. For the purpose of this definition, the term "control" shall include, directly or indirectly, ownership of fifty per cent (50%) or more of the legal or beneficial interest in any Person or possession of the power to direct or cause the direction of the management and/or policies of such Person, whether through the ownership of (voting) securities, by contract or otherwise.
BBA Director	Shall have the meaning as set forth in section 3.3(i).
BBA New Shares	Shall have the meaning set forth in section 11.7.1.
BBA Transfer	Shall have the meaning as set forth in section 3.4.
Beneficiaries	Shall have the meaning set out in section 6.1.
Board of Directors	Shall mean the Board of Directors of the Company.
Board Information	Shall have the meaning as set forth in section 3.13.

Board Observer	Shall have the meaning as set forth in section 3.12.
Certificate	Shall mean the Amended and Restated Certificate of Incorporation of the Company as the same is amended from time to time.
Commission	Shall mean the United States Securities and Exchange Commission.
Committed Transferor(s)	Shall have the meaning as set forth in section 7.1.
Common Shares	Shall mean all shares of Common Stock and Class A Common Stock (as defined in the Certificate), par value $0.0001 per share.
Common Shareholder	Shall mean each holder of Common Shares.
Competition Area	Shall have the meaning as set forth in section 13.1(i).
Director	Shall mean a member of the Board of Directors.
Dissenting Investor Appointed Director	Shall have the meaning as set forth in section 3.8.
Drag Along Right	Shall have the meaning as set forth in section 9.1.
Effective Date	Shall mean the date hereof.
EUR	Shall mean Euro.
Excluded Registration	Shall mean (i) a registration relating to the sale or grant of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, equity incentive or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Shares; or (iv) a registration in which the only Common Shares being registered are Common Shares issuable upon conversion of debt securities that are also being registered.
Exercise Period	Shall have the meaning set out in section 6.6.

Fair Market Value	Shall mean the market value of a Share as determined by a fairness opinion issued by an internationally recognized valuation institution to be agreed upon (i) by approval of the Board of Directors by simple majority or (ii) in case the approval according to (i) has not been granted within 4 (four) weeks, by approval of the majority of Shares of the Company then outstanding, in each case, which shall not have performed any material engagement for the Company or any Investor for the two years prior to such engagement, applying a valuation methodology generally recognized as standard market practice in the field of corporate finance for start-up and innovative companies (i.e. discounted cash flow and variations thereof, option pricing, etc.) and also taking into consideration, if possible, comparables in the market (trade sale, IPO, etc.). The costs of the valuation shall be borne by the Company.
Forbion Transfer	Shall have the meaning as set forth in section 3.4.
Independent Directors	Shall have the meaning as set forth in section 3.1(iv).
Institutional Investors	Shall mean Sofinnova, Forbion, BioMedInvest, 667, BBA, Sirona Capital, HBM, Fynveur, Hillhouse and Redmile
Investor Appointed Directors	Shall have the meaning as set forth in section 3.1(iii).
Investors	Shall mean any holder of Preferred Shares.
IPO	Shall mean an underwritten initial public offering of the Common Shares in the Company on an internationally recognized stock exchange or regulated securities market. For the avoidance of doubt, a Qualified IPO constitutes an IPO.
Liquidation Event	Shall mean any liquidation, dissolution or winding up of the Corporation or any Deemed Liquidation Event (as defined in the Certificate).
Listing	Shall mean listing of any Common Shares of the Company on any public stock exchange, or other recognised exchange for the public trading of shares, anywhere in the world.
Non-Selling Shareholder	Shall have the meaning set forth in section 7.1.
Notice of Acceptance	Shall have the meaning set out in section 6.6.
Option Pool	Shall have the meaning as set forth in section 15.1.

Ownership Percentage	Shall have the meaning set out in section 6.4.
Permitted BI Recipients	Shall have the meaning as set forth in section 17.1.
Person	Shall mean an individual, a partnership, a corporation, an association, a limited liability company, a joint stock company, a trust, a joint venture, an investment fund, an unincorporated organisation, or a governmental entity (or any department, agency or political subdivision thereof).
Preferred Beneficiaries	Shall have the meaning set out in section 6.5.
Preferred Majority	Shall mean a vote by the holders of the simple majority (more than 50%) of the Preferred Shares (calculated on the basis of all Preferred Shares issued and outstanding at that time (on an as-converted to Common Stock basis) and not *per capita*).
Preferred Shares	Shall mean the Series A Preferred Shares, the Series B Preferred Shares, the Series C Preferred Shares and the Series D Preferred Shares collectively.
Proposed Sale	Shall have the meaning as set forth in section 9.2.
Qualified IPO	Shall mean a Qualified Public Offering (as defined in the Certificate).
Qualified Videoconference	Shall have the meaning as set forth in section 3.11.
Quarterly Meetings	Shall have the meaning set out in section 3.11.
Remaining Beneficiaries	Shall have the meaning set out in section 6.10.
Restricted Period	Shall have the meaning as set forth in section 13.1.
Securities Act	Shall mean the Securities Act of 1933, as amended from time to time.
Selling Investors	Shall have the meaning as set forth in section 9.1.
Series A/B Majority	Shall mean a vote by the holders of the simple majority (more than 50%) of the Series A Preferred Shares and Series B Preferred Shares (calculated on the basis of all Series A Preferred Shares and Series B Preferred Shares issued and outstanding at that time (on an as-converted to Common Stock basis) and not *per capita*).

Series A Investors	Shall have the meaning as set forth in the recitals.
Series A Majority	Shall mean a vote by the holders of the simple majority (more than 50%) of the Series A Preferred Shares (calculated on the basis of all Series A Preferred Shares issued and outstanding at that time and not *per capita*).
Series A Preferred Shares	Shall mean all shares of Series A Preferred Stock (as defined in the Certificate), par value $0.0001 per share.
Series B Investors	Shall have the meaning as set forth in the recitals.
Series B Majority	Shall mean a vote by the holders of the simple majority (more than 50%) of the Series B Preferred Shares (calculated on the basis of all Series B Preferred Shares issued and outstanding at that time and not *per capita*).
Series B Preferred Shares	Shall mean all shares of Series B Preferred Stock (as defined in the Certificate), par value $0.0001 per share.
Series C Investors	Shall have the meaning as set forth in the recitals.
Series C Majority	Shall mean (a) for so long as no single Series C Preferred Shareholder (or group of Affiliated Series C Preferred Shareholders) holds more than 50% of the Series C Preferred Shares, a vote by the holders of at least 60% of the Series C Preferred Shares; provided, however, that if a single Series C Preferred Shareholder (or group of Affiliated Series C Preferred Shareholders) holds more than 40% (but less than 50%) of the Series C Preferred Shares, the vote of all other Series C Preferred Shareholders in favor of any action shall be deemed approval of the Series C Majority with respect to such action and (b) for so long as any single Series C Preferred Shareholder (or group of Affiliated Series C Preferred Shareholders) holds more than 50% of the Series C Preferred Shares, a vote by the holders of the simple majority (more than 50%) of the Series C Preferred Shares (in each case, calculated on the basis of all Series C Preferred Shares issued and outstanding at that time and not *per capita*).
Series C Preferred Shares	Shall mean all shares of Series C Preferred Stock (as defined in the Certificate), par value $0.0001 per share.
Series C Preferred Shareholder	Shall mean a holder of Series C Preferred Shares.

Series D Investors	Shall have the meaning as set forth in the recitals.
Series D Majority	Shall mean (a) for so long as no single Series D Preferred Shareholder (or group of Affiliated Series D Preferred Shareholders) holds more than 50% of the Series D Preferred Shares, a vote by the holders of at least 60% of the Series D Preferred Shares; provided, however, that if a single Series D Preferred Shareholder (or group of Affiliated Series D Preferred Shareholders) holds more than 40% (but less than 50%) of the Series D Preferred Shares, the vote of all other Series D Preferred Shareholders in favor of any action shall be deemed approval of the Series D Majority with respect to such action and (b) for so long as any single Series D Preferred Shareholder (or group of Affiliated Series D Preferred Shareholders) holds more than 50% of the Series D Preferred Shares, a vote by the holders of the simple majority (more than 50%) of the Series D Preferred Shares (in each case, calculated on the basis of all Series D Preferred Shares issued and outstanding at that time and not *per capita*).
Series D New Shares	Shall have the meaning set forth in section 11.9.1.
Series D Preferred Shares	Shall mean all shares of Series D Preferred Stock (as defined in the Certificate), par value $0.0001 per share.
Series D Preferred Shareholder	Shall mean a holder of Series D Preferred Shares.
Share(s)	Shall mean any share(s) of Common Stock or Preferred Stock (as defined in the Certificate) of the Company outstanding as at the relevant date, irrespective of its (their) class or category.
Shareholder	Shall mean any holder of a Share.
Shareholders' Meeting	Shall mean any shareholders' meeting of the Company.
Shelf Registration Statement	Shall mean a continuously effective registration of securities pursuant to a registration statement filed with the Commission or any successor governmental agency in accordance with and pursuant to Rule 415 promulgated under the Securities Act (or any successor rule then in effect).
Sofinnova Transfer	Shall have the meaning as set forth in section 3.4.
SOP Escrow Agent	Shall have the meaning as set forth in section 15.2.

SOP Escrow Agreement	Shall have the meaning as set forth in section 15.2.
SOP Shares	Shall have the meaning as set forth in section 15.2.
Stock Option Plan	Shall have the meaning as set forth in section 15.1.
Tag-along Notice	Shall have the meaning as set forth in section 7.2.
Tag-along Right	Shall have the meaning as set forth in section 7.1.
Trade Sale	Shall mean the sale of the entire issued nominal share capital of the Company in a single or series of related transactions.
Transfer	Shall have the meaning set out in section 6.2.
Transfer Offer	Shall have the meaning set out in section 6.3.
Transfer Price	Shall have the meaning set out in section 6.3.
Transfer Shares	Shall have the meaning set out in section 6.3.
Transferor	Shall have the meaning set out in section 6.1.
Underwritten Offering	Shall mean a sale of Shares by the Company or an Investor to an underwriter for reoffering to the public.
USD	Shall mean United States Dollar.

1.2 Interpretation. In this Agreement, unless the context otherwise requires:

1.2.1 Words denoting the singular shall include the plural and *vice versa*;

1.2.2 Words denoting one gender shall include each gender and all genders;

1.2.3 references to a person include any individual, firm, body corporate (wherever incorporated), governmental authority (meaning the government of any nation, state, city, locality or other political subdivision thereof, any entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government, and any corporation or other entity owned or controlled, through stock or capital ownership or otherwise, by any of the foregoing), state or agency of a state or any joint venture, association, partnership, trust, works council or employee representative body (whether or not having separate legal personality) or other entity of any kind and shall include any legal successor (by merger or otherwise) of such entity;

1.2.4 references to any legal term or any action, remedy, method of financial proceedings, legal document, legal status, court, official or any legal concept shall, in respect of any jurisdiction other than Austria, be construed as references to the term or concept which most nearly corresponds to it in that jurisdiction;

1.2.5 any phrase introduced by the terms including, include, in particular or any similar expression shall be construed as illustrative and shall be deemed to read "including without limitation";

1.2.6 the terms hereof, herein, hereby, hereto and derivative or similar words refer to this entire Agreement, including its schedules;

1.2.7 the terms section and schedule shall refer to the specified section or schedule of or to this Agreement;

1.2.8 any reference to writing or written means any method of reproducing words in a legible and non-transitory form (excluding email);

1.2.9 references to any statutory provision or to a legal or accounting principle shall include a reference to that provision or principle as amended, consolidated or replaced from time to time (whether before or after the date of this Agreement) and any subordinate legislation (including regulations) made under the relevant law, except to the extent that any of these matters occurs after the date of this Agreement and increases or alters the liability of any Party under this Agreement;

1.2.10 references to contract and agreement shall be construed as a reference to that arrangement, obligation, understanding or commitment as the same may have been, or may from time to time be, amended or supplemented; and

1.2.11 references to shares in a person include a reference to the shares, membership interests or other equity interests in such person and references to shareholders shall be construed accordingly.

1.3 Headings. The table of contents and titles and headings to sections are inserted for convenience of reference only, and are not intended to be a part of or to affect the meaning or interpretation of this Agreement.

1.4 Preamble, Schedules and Exhibits. The preamble, schedules and exhibits to this Agreement shall be deemed to be incorporated in this Agreement.

2. Objectives

2.1 The purpose of the Company is to carry out research and development in the field of vaccine for prevention and treatment of infectious diseases and cancer and to carry on any other activities incidental thereto.

3. Board of Directors

3.1 Each Shareholder agrees to vote, or cause to be voted, all Shares owned by such Shareholder, or over which such Shareholder has voting control, from time to time and at all times, in whatever manner as shall be necessary to ensure that the size of the Board of Directors shall be set and remain at nine (9) directors.

3.2 Each Shareholder agrees to vote, or cause to be voted, all Shares owned by such Shareholder, or over which such Shareholder has voting control, from time to time and at all times, in whatever manner as shall be necessary to ensure that at each annual or special meeting of Shareholders at which an election of directors is held or pursuant to any

written consent of the Shareholders, the following persons shall be elected to the Board of Directors:

(i) BBA shall have the right (but not the obligation) to delegate one Director (the "**BBA Director**"), who shall be entitled to be a member of each committee of the Board of Directors (if any);

(ii) Sofinnova shall have the right (but not the obligation) to delegate one Director;

(iii) Forbion shall have the right (but not the obligation) to delegate one Director (the Directors delegated in accordance with section 3.1(i) to (iii) together the "**Investor Appointed Directors**" and each an "**Investor Appointed Director**"); and

(iv) the remaining six Directors who are/will be recognized industry experts and independent of the Company and each Shareholder shall be "Independent Directors" and nominated by agreement between the Shareholders and the Company, whereby each of BBA and the Series A/B Majority shall have the right to propose one Independent Director which has to be nominated by the Shareholders and the Company unless the majority of the respective remaining (non-proposing) Shareholders object to such proposed Independent Director for good reason (together the "**Independent Directors**" and each an "**Independent Director**").

3.3 The right to nominate or delegate according to section 3.2 above shall include the right by an Investor (or group of Investors) to remove a Director that was delegated or elected upon nomination by such Investor (or group of Investors) according to section 3.2 above (including, for the avoidance of doubt, section 3.2 (iv)). The right to nominate or delegate shall also include the right of an Investor (or group of Investors) to fill the vacant position of a resigned member which has originally been delegated or nominated by such Investor (or group of Investors) according to section 3.2 above (including, for the avoidance of doubt, section 3.2 (iv)). For the avoidance of doubt, any (initial or subsequent) vacancy of an Investor Appointed Director must not be filled by any other Director or any other Shareholder other than the Investor entitled to delegate such Investor Appointed Director according to section 3.2.

3.4 Upon the transfer by BBA, directly or indirectly, of 50% or more of the Series C Preferred Shares held by BBA (based on ownership as of the date hereof) to any Person not Affiliated with BBA (the "**BBA Transfer**"), BBA's right to delegate an Investor Appointed Director (according to section 3.2 (i)) shall terminate and, provided that after the BBA Transfer the Series C Investors (based on ownership as of the date hereof) still hold more than 50% of the Series C Preferred Shares then outstanding, be replaced by a nomination right of the Series C Majority which shall be binding on all Shareholders. Upon the transfer by Sofinnova, directly or indirectly, of 50% or more of the Series A Preferred Shares and the Series B Preferred Shares held by Sofinnova (based on ownership as of the date hereof) to any Person not Affiliated with Sofinnova (the "**Sofinnova Transfer**"), Sofinnova's right to delegate an Investor Appointed Director (according to section 3.2 (ii)), shall terminate and, provided that after the Sofinnova Transfer the Series A Investors (based on ownership as of the date hereof) still hold more than 50% of the Series A Preferred Shares then outstanding, be replaced by a nomination right of the Series A Majority which shall be binding on all Shareholders. Upon the transfer by Forbion, directly or indirectly, of 50% or more of the Series A Preferred Shares and the Series B Preferred

Shares held by Forbion (based on ownership as of the date hereof) to any Person not Affiliated with Forbion (the "**Forbion Transfer**"), Forbion's right to delegate an Investor Appointed Director (according to section 3.2 (iii)), shall terminate and, provided that after the Forbion Transfer the Series B Investors (based on ownership as of the date hereof) still hold more than 50% of the Series B Preferred Shares then outstanding, be replaced by a nomination right of the Series B Majority, which shall be binding on all Shareholders. In the event that a BBA Transfer, a Sofinnova Transfer or a Forbion Transfer, as applicable, occurs and the original Investors of the applicable series of Preferred Shares do not hold more than 50% or more of such series at the time of such transfer in accordance with the foregoing provisions of this section 3.4, in the sole discretion of the Board of Directors (in which case all Shareholders shall be obliged to exercise their voting rights to comply with the resolutions of the Board of Directors), either (a) the number of Directors shall be reduced accordingly or (b) such Investor Appointed Director(s) shall be replaced with an Independent Director(s).

Notwithstanding the foregoing, in case of an IPO the right of any Investor to delegate an Investor Appointed Director according to section 3.2 shall terminate and be replaced by a nomination right of the respective Investor.

3.5 The Parties shall exercise their voting rights in the Shareholders' Meeting of the Company in a way to ensure that the respective nominated Directors are also formally elected, removed or replaced as members of the Board of Directors.

3.6 The Parties agree that an Independent Director shall be elected as Chairman of the Board of Directors. Respecting the statutory independence of the Board of Directors, the Shareholders shall exercise, to the extent legally permissible, their influence on the members of the Board of Directors and use their best efforts to ensure compliance by the Board of Directors with this section 3.6.

3.7 The Board of Directors constitutes a quorum if all members have been invited in writing by telefax and by e-mail to the contact data announced at last and if at least four members, including at least two Investor Appointed Directors (one of whom shall be the BBA Director in case the respective meeting has been convened with an invitation period of less than fourteen days), are present or represented. The members of the Board of Directors shall be invited under adherence to a time period of fourteen days under indication of the agenda. In urgent cases, the Chairman may shorten this time period to 3 business days, or if all Directors agree, to even shorter time period. Any Director can be represented by another Director, if such Director sends a written power of attorney to the Chairman of the Board of Directors prior to the meeting. Furthermore resolutions can be given in writing by way of written consent if all Directors agree.

3.8 The decisions of the Board of Directors require a simple majority of the Directors who are present. However, the resolutions on the approval of transactions and measures according to section 3.9 shall in addition require the consent of the simple majority of the Investor Appointed Directors (*per capita)*.

3.9 Without prejudice to measures and transactions subject to Board of Directors approval by operation of mandatory law, the following business measures and transactions, by the Company or a subsidiary of the Company, shall be subject to the Board of Directors' approval:

(i) A Deemed Liquidation Event as well as the appointment of a reputable independent investment bank or M&A advisor in order to advise on and/or initiate a Deemed Liquidation Event;

(ii) Any sale, license or lapse by the Company of material intellectual property rights owned by the Company;

(iii) Approval of or any material change to the annual budget or business plan;

(iv) Any capital investments in tangible and/or intangible assets exceeding EUR 1,000,000 in the individual case or in total in the financial year;

(v) Enter into loans, credits or any similar financing arrangement or lease arrangement in excess of EUR 2,000,000 in each particular case and of EUR 3,000,000 in each business year;

(vi) The granting of stock options, phantom shares or virtual shares to employees or advisors or Directors of the Company;

(vii) The acquisition and the disposal of participations as well as the acquisition and disposal of undertakings and businesses through purchase or divestiture, license or other transfer of assets or purchase or sale of stock of EUR 2,000,000 in each particular case and of EUR 3,000,000 in each business year;

(viii) Determination of general principals and business policy of the Company;

(ix) Execution, amendment or termination of any employment agreements granting a yearly gross salary in excess of EUR 200,000;

(x) The granting of profit or turnover participations and pension commitments to the Directors, Company's executive officers, senior management or other key employees;

(xi) Success fees payable by the Company to Directors and/or employees of the Company in connection with the occurrence of a Liquidation Event; and

(xii) Material change of compensation schemes for executives or senior management.

3.10 The approval by the Board of Directors of the transactions and measures listed in section 3.9 that are carried out during one fiscal year is not necessary as far as these transactions and measures are included in the approved budget without any reservation by the Board of Directors for the respective fiscal year.

3.11 The Board of Directors shall meet at least six times a year, whereof at least one meeting shall take place every quarter in person ("**Quarterly Meetings**"), and at least two Quarterly Meetings shall be held in New York, New York. Any Director can request the convocation of an extraordinary board meeting if such Director deems such a meeting necessary. Any Director may participate, as far as legally permissible, in any Quarterly Meeting of the Board of Directors or of a committee thereof by means of videoconference or similar communications equipment by means of which all persons participating in the meeting can see and hear each other ("**Qualified Videoconference**") (thereby qualifying as an attendance in person), and the Company shall provide such means of participation for any meeting of the Board of Directors or of a committee thereof. Two meetings per year (other

than Quarterly Meetings) may also be held by teleconference in which case decisions will have to be confirmed in the form of written consent in order to be legally valid.

3.12 The Company shall invite an appointed observer of each of (i) BBA, if and as long as BBA has not nominated/delegated a BBA Director who is an employee or director of BBA or an Affiliate of BBA, and (ii) any Investor who has invested in the Company an aggregate amount of at least EUR 5,000,000 (whereby for the purpose of this provision the investment of Sirona Capital shall be deemed as an investment of Hillhouse), provided that its representative has not been delegated/nominated in accordance with section 3.1(ii) or (iii) (each such person a "**Board Observer**"), to attend any Board of Directors meetings and, subject to Section 3.17, each meeting of each committee of the Board of Directors (if any) as a guest, and may attend in person or by way of videoconference or teleconference. The Board Observer shall not have any voting rights in Board of Directors meetings.

3.13 The officers of the Company shall submit reporting information required by the Board of Directors one week in advance of a Board of Directors meeting. Each Board Observer shall receive all information related to any Board of Directors meeting or otherwise provided to all Directors, including written consents, at the same time and in the same form as provided to the Directors (the "**Board Information**"), provided the Board Observer has submitted to sufficient confidentiality declarations in form and substance reasonably acceptable to the Company and the Investor delegating/nominating such Board Observer. Notwithstanding the foregoing sentence, the Board Observer appointed by Hillhouse, if any, shall have the right to transmit any Board Information to Sirona Capital provided that Sirona Capital has submitted to sufficient confidentiality declarations in form and substance reasonably acceptable to the Company.

3.14 Subject to restrictions under Delaware Law, the Chairman shall be entitled to invite guests to the meetings of the Board of Directors. Such guests will be entitled to receive all related information provided that they submit to sufficient confidentiality declarations.

3.15 Unless otherwise resolved by the Shareholders' Meeting in respect of the Independent Directors, the members of the Board of Directors shall receive no compensation for their service. The Company, however, will cover reasonable out-of-pocket expenses (including travel expenses) of the Directors and the Board Observers, whereby with regard to flight expenses of the Board Observers the Company shall only be obliged to reimburse the costs of one transatlantic return flight per year.

3.16 Upon reasonable request of the Investors, the Company shall enter into insurance policies for the Directors and officers, for such level of cover as the Investors may reasonably require.

3.17 The Board of Directors shall form a compensation committee consisting of (i) at least two Investor Appointed Directors (one of whom shall be the BBA Director) and (ii) one Independent Director, which shall (a) determine any kind of remuneration to be granted to the Directors and (b) provide proposals to the Shareholders' Meeting in respect of any kind of remuneration to be granted to the Independent Directors. For the avoidance of doubt, the Board of Directors may form additional committees (of which the BBA Director shall be entitled to be a member pursuant to section 3.2(i)), including a strategic committee; provided that the Board of Directors (with simple majority of the votes cast) may exclude any Board Observer from any meeting (or portion thereof) of any such strategic committee in the event that the Board of Directors determines, in its sole and absolute discretion, that based on reasonable grounds the presence of such Board Observer presents an actual or

potential conflict of interest for the Company; the grounds for such exclusion have to be disclosed to the respective Board Observer prior to exclusion.

3.18 Each Investor with the right to designate or participate in the designation of a Director as specified above hereby represents and warrants to the Company that, to such Investor's knowledge, none of the "bad actor" disqualifying events described in Rule 506(d)(1)(i)-(viii) promulgated under the Securities Act (each, a "**Disqualification Event**") is applicable to such Investor's Director designee named above except, if applicable, for a Disqualification Event as to which Rule 506(d)(2)(ii) or (iii) or (d)(3) is applicable. Any Director to whom any Disqualification Event is applicable, except for a Disqualification Event as to which Rule 506(d)(2)(ii) or (iii) or (d)(3) is applicable, is hereinafter referred to as a "**Disqualified Designee**". Each Investor with the right to designate or participate in the designation of a director as specified above hereby covenants and agrees (A) not to designate or participate in the designation of any director designee who, to such Investor's knowledge, is a Disqualified Designee and (B) that in the event such Investor becomes aware that any individual previously designated by any such Investor is or has become a Disqualified Designee, such Investor shall as promptly as practicable take such actions as are necessary to remove such Disqualified Designee from the Board of Directors and designate a replacement designee who is not a Disqualified Designee.

4. Vote to Increase Authorized Common Stock

4.1 Each Shareholder agrees to vote or cause to be voted all Shares owned by such Shareholder, or over which such Shareholder has voting control, from time to time and at all times, in whatever manner as shall be necessary to increase the number of authorized shares of Common Stock from time to time to ensure that there will be sufficient shares of Common Stock available for conversion of all of the shares of Preferred Stock outstanding at any given time.

5. Subsequent Increase of Share Capital

5.1 For so long as at least 15% of the Preferred Shares as of the date hereof remain outstanding and except for (i) Exempted Securities (as defined in the Certificate), (ii) in connection with a Qualified IPO or (iii) to the Series D Investors pursuant to the Series D Investment Agreement, new Shares issued by the Company must first be offered to the Investors on a pro rata basis, unless such right of first subscription has been waived with the approval of the Preferred Majority. Investors shall have 14 (fourteen) Business Days from the date of the notice of a new potential issuance to notify the Company of their decision regarding new Shares subscription and the time of payment shall be at the date and time proposed for such issuance.

5.2 To the extent an Investor chooses not to subscribe for the Shares offered pursuant to section 5.1, the other Investors shall have a right on a pro rata basis to subscribe for such Shares unless otherwise agreed among the Shareholders.

5.3 Shares that are not subscribed pursuant to Subsections 5.1 and 5.2 may be offered to third parties for the same price and for the same terms and conditions for a period of three (3) months following the date of notice referred to in section 5.1.

5.4 No Shares shall be issued to a new shareholder until the new shareholder has agreed in writing to be bound by the Agreement in the same way as all other Investors.

6. Right of First Refusal

6.1 Subject to section 6.2, if any Shareholder (a "**Transferor**") desires to Transfer all or part of its Shares to any Person (including another Shareholder) (an "**Acquirer**"), such Transferor shall first offer its Shares to the other Shareholders (the "**Beneficiaries**") pursuant to the following provisions of this Section 6.

6.2 In this section 6, a "**Transfer**" shall mean any transfer or disposition of all or part of the ownership rights attached to the Shares, for consideration or for free, irrespective of the legal qualification of such transfer (sale, exchange, payment in kind, gift, inheritance, liquidation of matrimonial regime, constitution of a real right, merger or similar transactions).

6.3 The Transferor shall first send to each Beneficiary and the Company the binding offer (if applicable, in a form required by law) (the "**Transfer Offer**"), which shall state (i) the number and type of Shares subject to Transfer (the "**Transfer Shares**"), (ii) the price per Share offered by the Acquirer (the "**Transfer Price**"), (iii) the name and address of the Acquirer and (iv) the other terms and conditions offered to the Acquirer. Furthermore, if the Acquirer is a privately held legal entity, the Transferor shall provide the Beneficiaries with the identity of the Acquirer's majority shareholder or beneficial owner. Finally, any Transfer Offer shall be signed by the Transferor and contain the following wording:

"The undersigned Shareholder hereby warrants, to its knowledge, that the Acquirer mentioned above is a solvent Person, acting in good faith, in its own name and not as a fiduciary. Furthermore, the undersigned Shareholder warrants that, to its knowledge, the Transfer Price is offered in good faith by the Acquirer and represents the whole consideration offered for the Transfer Shares."

6.4 Within 5 (five) Business Days of receipt of the Transfer Offer, the Company shall prepare and send to each Shareholder a calculation of each Shareholder's pro rata share of the Transfer Shares, calculated by multiplying the number of Transfer Shares by the quotient of the number of Shares held by each Shareholder as of the date of the Transfer Offer divided by the number of Shares then issued and outstanding (such calculation, the "**Ownership Percentage**"). If the consideration offered by the Acquirer for the Transfer Shares is not cash but in kind, the Transfer Price shall be deemed to be equal to the Fair Market Value.

6.5 First, each holder of Preferred Shares (the "**Preferred Beneficiaries**") shall have a right of first refusal with respect to all Transfer Shares proportional to its respective share in the Company's share capital (relative to the total number of Shares then held by all such Preferred Beneficiaries).

6.6 Each of the Preferred Beneficiaries willing to exercise their right of first refusal (the "**Accepting Preferred Beneficiaries**") shall give a notice thereof (a "**Notice of Acceptance**") to the Transferor — with a copy to the Company and each of the other Preferred Beneficiaries — within 30 (thirty) Business Days upon receipt of the Ownership Percentage or - in case of a determination of the Fair Market Value under Section 6.4 hereof - within 30 (thirty) Business Days upon receipt of the respective valuation (the "**Exercise Period**"). Such Notice of Acceptance shall state the number of Transfer Shares the Accepting Preferred Beneficiary is willing to purchase. If the Notice of Acceptance states a wish for less than such Accepting Preferred Beneficiary's pro rata share of the

Transfer, such Notice of Acceptance shall be treated as a waiver of such Accepting Preferred Beneficiary's right of first refusal for the remainder of such Transfer Shares.

6.7 The Transfer Shares shall be allocated between the Accepting Preferred Beneficiaries pursuant to the following principles:

(i) each Accepting Preferred Beneficiary shall be entitled to purchase up to its pro rata share of the Transfer Shares for the Transfer Price.

(ii) In the event one or more Preferred Beneficiaries does not exercise its right of first refusal in full, the unallocated Transfer Shares will be allocated to the Accepting Preferred Beneficiaries who indicated their intent to buy more than their pro rata share. Should the number of unallocated Transfer Shares be insufficient to accommodate the wishes of such Accepting Preferred Beneficiaries, such Transfer Shares shall be allocated among them pro rata to the number of Transfer Shares the Accepting Preferred Beneficiaries indicated they would be willing to purchase in their respective Notices of Acceptance.

6.8 Within 20 (twenty) Business Days upon the receipt of timely Notices of Acceptance, the Company shall notify the Transferor and all Beneficiaries of the result of the Transfer Shares' allocation among the Accepting Preferred Beneficiaries (the "**Preferred Exercise Notification**").

6.9 The Accepting Preferred Beneficiaries shall pay for their allocated Transfer Shares, against delivery, within 30 (thirty) Business Days from receipt of the Preferred Exercise Notification.

6.10 Should the Preferred Beneficiaries elect not to purchase all or parts of the Transfer Shares, each of the Founders, the University and Cohen (the "**Remaining Beneficiaries**") shall have a right of first refusal with respect to the remaining Transfer Shares proportional to their respective share in the Company's share capital (relative to the total number of Shares then held by all such Remaining Beneficiaries). Sections 6.6 to 6.9 above shall apply by analogy, whereas the Exercise Period shall start upon receipt of the Preferred Exercise Notification by the Remaining Beneficiaries.

6.11 Should the Remaining Beneficiaries elect not to purchase all or parts of the Transfer Shares, the Transferor shall be free to sell the remaining Transfer Shares to the Acquirer for exactly the same Transfer Price or a higher price and under the same conditions stated in the Transfer Offer, within 3 (three) months after the expiry of the time limit for due service of a Notice of Acceptance applicable to the Remaining Beneficiaries.

6.12 The right of first refusal shall not apply to any Transfer made by a Shareholder (i) pursuant to a Deemed Liquidation Event or (ii) in favour of any of its Affiliates, provided the latter shall become a party to this Agreement and agree to be bound by all the existing obligations of the Transferor to the other Shareholders. The right of first refusal shall not apply to any Transfer of up to 2,400 Common Shares made by Igor Matuchansky to Forbion, Sofinnova or any other Investor.

6.13 Except as set forth in Section 6.12, in the event that a Person acquires Shares from a Shareholder (i) by way of inheritance or liquidation of matrimonial regime or (ii) in connection with the direct or indirect transfer of equity interests in such Shareholder, such Shareholder shall promptly notify the Company in order for the Company to notify the Beneficiaries thereof. First, the Preferred Beneficiaries willing to exercise their right of first refusal shall then give to the Company a Notice of Acceptance. Sections 6.5 to 6.13 shall apply by analogy. The Transfer Price shall be the Fair Market Value and the Shares will be

purchased based on the Notices of Acceptance received and allocated among the relevant Beneficiaries.

6.14 Irrespective of anything stated herein, no transfer of Shares shall be effected by any Party to this Agreement until the Acquirer (if not already a Shareholder) shall become a party to this Agreement and agree to be bound by all the existing obligations of the Transferor to the other Shareholders.

6.15 In order to secure the performance of the Transferor's obligations under this section 6, the Shares shall be registered with restricted rights of transfer upon approval of all Shareholders.

7. Tag Along

7.1 In the event that one or more Transferor(s) wish to transfer more than 50% of the entire Shares in the Company (the "**Committed Transferor(s)**") (after taking into account the exercise of the Shareholders' right of first refusal pursuant to section 6 with respect to such Shares) each Shareholder other than the Transferor(s) (each, a "**Non-Selling Shareholder**") shall be entitled to demand that the Committed Transferor(s) shall arrange for a participation of such Non-Selling Shareholders who wish to participate in the respective share transfer to the Acquirer at the same price and, subject to the liquidation preference according to the Certificate, on the same terms and conditions, which apply between the Committed Transferor(s) and the Acquirer (the "**Tag-along Right**"). The Tag-along Right pursuant to this section 7.1 shall affect the total number of Shares of such Non-Selling Shareholders if the Committed Transferor(s) intend(s) to transfer its/their total number of Shares. If the Committed Transferor(s) intend(s) to transfer only a certain portion of its/their Shares, such Non-Selling Shareholders are entitled to transfer their Shares only in the same proportion. The Tag-Along Right may in any case also be exercised only with respect to a portion of the Shares which are comprised by the Tag-Along Right.

7.2 The Committed Transferor(s) must notify the Non-Selling Shareholders within 3 (three) Business Days after ineffectual expiry of the Exercise Period according to section 6.6 and 6.10 if it/they still intend(s) to transfer its/their Shares. In order to exercise the Tag-along Right, a Non-Selling Shareholder must notify the Committed Transferor(s) thereof (the "**Tag-along Notice**") within 10 (ten) Business Days upon receipt of the notice delivered pursuant to the previous sentence.

7.3 In case the Acquirer is not willing to take over all Shares comprised by the Tag-along Notice, the intended share transfer has to be omitted by the Committed Transferor(s).

7.4 No Tag-along Right shall apply with respect to Share sales and/or transfers effected for implementation of the right of first refusal pursuant to section 6 or the Tag-along Right under this section 7.

7.5 The Tag-along Right shall not be applicable in case of a Transfer made by a Shareholder in favour of any of its Affiliates in accordance with section 6.12.

7.6 Each Party is obliged to do or cause to be done everything which is or seems to be necessary or useful in connection with the execution of the provisions of this section 7.

8. Effect of Failure to Comply

8.1 Any proposed Transfer not made in compliance with the requirements of this Agreement shall be null and void ab initio, shall not be recorded on the books of the Company or its transfer agent and shall not be recognized by the Company. Each Party acknowledges and agrees that any breach of this Agreement would result in substantial harm to the other parties hereto for which monetary damages alone could not adequately compensate. Therefore, the Parties unconditionally and irrevocably agree that any non-breaching Party shall be entitled to seek protective orders, injunctive relief and other remedies available at law or in equity (including, without limitation, seeking specific performance or the rescission of purchases, sales and other transfers of Transfer Shares not made in strict compliance with this Agreement).

8.2 If any Party becomes obligated to sell any Transfer Shares to any Beneficiary under this Agreement and fails to deliver such Transfer Shares in accordance with the terms of this Agreement, such Beneficiary may, at its option, in addition to all other remedies it may have, send to such Party the purchase price for such Transfer Shares as is herein specified and transfer to the name of such Beneficiary (or request that the Company effect such transfer in the name of such Beneficiary) on the Company's books any certificates, instruments, or book entry representing the Transfer Shares to be sold.

8.3 If any Party purports to sell any Transfer Shares in contravention of the Tag-along Right (a "**Prohibited Transfer**"), each Non-Selling Shareholder who desires to exercise its Tag-along Right may, in addition to such remedies as may be available by law, in equity or hereunder, require such Party to purchase from such Non-Selling Shareholder the type and number of shares of Shares that such Non-Selling Shareholder would have been entitled to sell to the Acquirer had the Prohibited Transfer been effected in compliance with the terms of Section 7. The sale will be made on the same terms, and subject to the same conditions as would have applied had the Party not made the Prohibited Transfer, except that the sale (including, without limitation, the delivery of the purchase price) must be made within ninety (90) days after the Non-Selling Shareholder learns of the Prohibited Transfer, as opposed to the timeframe proscribed in Section 7. Such Party shall also reimburse each Non-Selling Shareholder for any and all reasonable and documented out-of-pocket fees and expenses, including reasonable legal fees and expenses, incurred pursuant to the exercise or the attempted exercise of the Non-Selling Shareholder's rights under Sections 7 and 8.

9. Drag Along

9.1 If the holders of at least 75% of the Preferred Shares (calculated on the basis of all Preferred Shares issued and outstanding at that time (on an as-converted to Common Stock basis) and not *per capita*) (the "**Selling Investors**") requests the initiation of a Trade Sale, all Shareholders will be obliged to do all things without undue delay as may be necessary and reasonable to permit such Trade Sale. The Selling Investors shall notify the remaining Shareholders on such intended Trade Sale, whereas is applicable by analogy to this notice. Upon request of the Selling Investors, the remaining Shareholders shall simultaneously sell their Shares to the Acquirer, for total consideration sufficient to be allocated per Share in accordance with the Certificate, at the same price and on the same terms and conditions, which apply between the Selling Investors and the Acquirer (the "**Drag Along Right**"). The Drag Along Right shall also include the right of the Selling Investors to appoint a reputable investment bank or advisor in relation to the preparation and execution of the Trade Sale.

9.2 Notwithstanding the foregoing, a Shareholder will not be required to comply with Section 9.1 in connection with any proposed Trade Sale (the "**Proposed Sale**"), unless:

9.2.1 there are no representations, warranties, covenants or indemnities required to be made by such Shareholder in connection with the Proposed Sale other than reasonable and customary representations and warranties given by the Selling Investors;

9.2.2 the Shareholder shall not be liable for the inaccuracy of any representation or warranty made by any other Person in connection with the Proposed Sale, other than representations and warranties by the respective Shareholder or the Company, if any, relating to the Company's business, assets and liabilities;

9.2.3 the liability for indemnification, if any, of such Shareholder in the Proposed Sale and for the inaccuracy of any representations and warranties made by the Company or its Shareholders in connection with such Proposed Sale, is several and not joint with any other Person;

9.2.4 liability shall be limited to such Shareholder's applicable share (determined based on the respective proceeds payable to each Shareholder in connection with such Proposed Sale in accordance with the Certificate) of a negotiated aggregate indemnification amount that applies equally to all Shareholders but that in no event exceeds the amount of consideration otherwise payable to such Shareholder in connection with such Proposed Sale, except with respect to claims related to fraud by such Shareholder, the liability for which need not be limited as to such Shareholder; and

9.2.5 if any holders of any Shares are given an option as to the form and amount of consideration to be received as a result of the Proposed Sale, all holders of such Shares will be given the same option.

9.3 Section 6 (Right of First Refusal) shall not be applicable in connection with any exercise and execution of the Drag Along Right.

10. Remedies

10.1 The Company agrees to use its best efforts, within the requirements of applicable law, to ensure that the rights granted under this Agreement are effective and that the parties enjoy the benefits of this Agreement. Such actions include, without limitation, the use of the Company's best efforts to cause the nomination and election of the directors as provided in this Agreement.

10.2 Each Common Shareholder hereby constitutes and appoints as the proxies of the party and hereby grants a power of attorney to the President of the Company, and a designee of the Selling Investors, and each of them, with full power of substitution, with respect to the matters set forth herein, including, without limitation, election of persons as members of the Board of Directors in accordance with Section 3 hereof, votes to increase authorized shares pursuant to Section 4 hereof and votes regarding any Trade Sale of the Company pursuant to Section 9 hereof, and hereby authorizes each of them to represent and vote, if and only if such Common Shareholder (i) fails to vote or (ii) attempts to vote (whether by proxy, in person or by written consent), in a manner which is inconsistent with the terms of this Agreement, all of such Common Shareholder's Shares in favor of the election of

persons as members of the Board of Directors determined pursuant to and in accordance with the terms and provisions of this Agreement or the increase of authorized shares or approval of any Trade Sale of the Company pursuant to and in accordance with the terms and provisions of Sections 4 and 9, respectively, of this Agreement or to take any action necessary to effect Sections 4 and 9, respectively, of this Agreement. Each of the proxy and power of attorney granted pursuant to the immediately preceding sentence is given in consideration of the agreements and covenants of the Company and the parties in connection with the transactions contemplated by this Agreement and, as such, each is coupled with an interest and shall be irrevocable unless and until this Agreement terminates or expires pursuant to Section 16 hereof. Each Common Shareholder hereby revokes any and all previous proxies or powers of attorney with respect to the Shares and shall not hereafter, unless and until this Agreement terminates or expires pursuant to Section 16 hereof, purport to grant any other proxy or power of attorney with respect to any of the Shares, deposit any of the Shares into a voting trust or enter into any agreement (other than this Agreement), arrangement or understanding with any person, directly or indirectly, to vote, grant any proxy or give instructions with respect to the voting of any of the Shares, in each case, with respect to any of the matters set forth herein.

10.3 Each Party acknowledges and agrees that each Party will be irreparably damaged in the event any of the provisions of this Agreement are not performed by the parties in accordance with their specific terms or are otherwise breached. Accordingly, it is agreed that each of the Company and the Shareholders shall be entitled to an injunction to prevent breaches of this Agreement, and to specific enforcement of this Agreement and its terms and provisions in any action instituted in any court of the United States or any state having subject matter jurisdiction.

10.4 All remedies, either under this Agreement or by law or otherwise afforded to any Party, shall be cumulative and not alternative.

11. Listing and Registration Rights

11.1 For so long as any Preferred Shares remain outstanding, the Preferred Majority will have the right (i) to request the initiation of a Listing and (ii) to appoint a reputable investment bank or advisor in relation to a Listing, in each case ((i) and (ii)) following five years from the signing of this Agreement.

11.2 The Company shall procure that on a Listing there shall be no restriction on the dealing in the Shares held by the Investors in the Company except for customary lock-up periods as requested by the investment banks and/or competent stock exchange.

11.3 If the Company seeks a Listing in the United States, it will grant to each Investor the following registration rights:

11.3.1 two demand registration rights for registration under the Securities Act of all or any portion of the Shares held by such Investor pursuant to an Underwritten Offering, provided, that in the case of any such Underwritten Offering, an Investor will be entitled to make such demand only if the total offering price of the Shares to be sold in such Underwritten Offering (including piggyback shares and before deduction of underwriting discounts) is reasonably expected to exceed, in the aggregate, $10,000,000. All other Investors shall have piggybacks rights in connection with such Underwritten

Offering, provided, that the Investor exercising its demand registration right pursuant to this section 11.3.1 shall have priority in the event of any underwriter's cutback. The piggyback registration rights provided for herein may be waived with the approval of the Preferred Majority;

11.3.2 in addition to the demand registration rights set forth in section 11.3.1, two demand registration rights for registration under the Securities Act of all or any portion of the Shares held by such Investor on Form S-1 or similar long-form registration, which are not to be Underwritten Offerings.

11.3.3 If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Investors) any of its Common Shares under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Investor notice of such registration. Upon the request of each Investor given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of subsection 11.3.4, cause to be registered all of the Shares that each such Investor has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this subsection 11.3.3 before the effective date of such registration, whether or not any Investor has elected to include Shares in such registration. The piggyback registration rights provided for under this subsection 11.3.3 may be waived with the approval of the Preferred Majority.

11.3.4 In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to subsection 11.3.3, the Company shall not be required to include any of the Investors' Shares in such underwriting unless the Investors accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities requested by Shareholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Shares requested to be registered hereunder, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Shares requested to be registered can be included in such offering, then the Shares that are included in such offering shall be allocated among the selling Investors in proportion (as nearly as practicable to) the number of Shares owned by each selling Investor or in such other proportions as shall mutually be agreed to by all such selling Investors. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Investor to the nearest one hundred (100) shares. Notwithstanding the foregoing, in no event shall (i) the number of Shares included in the offering be reduced unless all other securities (other

than securities to be sold by the Company) are first entirely excluded from the offering, or (ii) the number of Shares included in the offering be reduced below twenty percent (20%) of the total number of securities included in such offering, unless such offering is the IPO, in which case the selling Investors may be excluded further if the underwriters make the determination described above and no other Shareholder's securities are included in such offering. For purposes of the provision in this subsection 11.3.4 concerning apportionment, for any selling Investor that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Investor, or the estates and immediate family members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Investor," and any pro rata reduction with respect to such "selling Investor" shall be based upon the aggregate number of Shares owned by all Persons included in such "selling Investor," as defined in this sentence.

11.4 Upon such time as the Company shall have qualified for the use of Form S-3 (or F-3) promulgated under the Securities Act or any successor form thereto, the Company shall file a Shelf Registration Statement on Form S-3 (or F-3) and the Company shall cause the Shelf Registration Statement to be declared as effective as promptly as reasonably practicable (subject to customary deadlines). The Shelf Registration Statement shall provide for the resale of Shares from time to time, and pursuant to any method or combination of methods legally available to, as requested by those Investors that would also be deemed "affiliates" (as such term is defined in Rule 144 under the Securities Act, as amended) of the Company at the time of such request. The Company shall maintain the Shelf Registration Statement and shall prepare and file with the Commission such amendments, including post-effective amendments, and supplements as may be necessary to keep such Shelf Registration Statement effective and in compliance with the provisions of the Securities Act for so long as such Investors remain "affiliates".

11.5 The Company will use its best efforts to effect such registration and the entering into the registration rights agreement to provide for the registration rights set forth in sections 11.3 and 11.4 as soon as reasonably possible following receipt of such request. To the extent permitted by law, the Company will indemnify the Investors and any underwriters in connection with the registration and sale of the Shares under the registration statement on a customary basis. All expenses of a registration referred to in sections 11.3 and 11.4 (other than underwriting discounts and selling concessions to be paid by the Investors selling under the related registration statement) will be payable by the Company including the legal costs of one professional firm appointed to act on behalf of the Company.

11.6 Registration rights according to sections 11.3 and 11.4 may be transferred to a transferee who acquires at least 5% of the Investor's Shares provided however, that no transfer will be made to a competitor of the Company. Transfer of registration rights to a partner or shareholder of any Investor will not be subject to the foregoing restriction as to minimum shareholding.

11.7 With respect to any IPO:

11.7.1 Subject to compliance at all times with all applicable securities laws and regulations, the Company will use commercially reasonable efforts (which must

include multiple attempts, on multiple dates, with multiple representatives of the underwriter, including the most senior underwriter personnel devoting time to such IPO, orally and in writing) to cause the managing underwriter(s) of such IPO to provide to BBA, on the same terms (including the price per share) and subject to the same conditions as are applicable to the public in such IPO, the opportunity to purchase that number of Common Shares being issued in such IPO equal to BBA's pro rata share of the total number of Shares outstanding before such IPO (the "**BBA New Shares**"). BBA may apportion such BBA New Shares in such proportion as it deems appropriate, among itself and any of its Affiliates.

11.7.2 BBA hereby acknowledges that, despite the Company's use of its commercially reasonable efforts, the underwriter(s) for an IPO may determine in its or their sole discretion that it is not advisable to designate the maximum number of shares being issued and sold in such IPO as BBA New Shares, in which case the number of BBA New Shares may be reduced or no BBA New Shares may be designated. BBA also acknowledges that notwithstanding the terms hereof, the sale of any BBA New Shares to any person will only be made in compliance with applicable federal, state, and local laws, rules, and regulations.

11.7.3 The rights of BBA to purchase shares in any IPO will be conditioned upon the completion of such IPO. The Company may withdraw its registration statement for an IPO at any time without incurring any liability under this Agreement to BBA or any of its Affiliates.

11.7.4 The rights of BBA described in this section 11.7 will terminate and be of no further force or effect as to such Investor upon a Liquidation Event.

11.8 With respect to a Qualified IPO consummated on or prior to December 31, 2021, Gilead commits to subscribe, subject to compliance at all times with all securities laws and regulations and Gilead's legal compliance policies and to entry into customary documentation reasonably satisfactory to Gilead, and on the same terms (including the offer price per share) and subject to the same conditions as are applicable to the public in the Qualified IPO, such number of Shares being newly issued in the Qualified IPO equal to Gilead's pro rata share of the total number of Shares outstanding before the Qualified IPO, but not less than a subscription amount of EUR 5,000,000.00, provided, however, that, notwithstanding the foregoing, Gilead shall have no obligation to purchase a total number of Shares having an aggregate subscription amount greater than EUR 10,000,000.00 or that would result in Gilead having a pro rata share of the total number of Shares outstanding immediately after the IPO in excess of 9.9%. For the avoidance of doubt, Gilead's obligation to subscribe for newly issued Shares in the Qualified IPO does not constitute any obligation of the Company or the underwriters in the Qualified IPO, to actually allocate any newly issued Shares to Gilead in the course of the Qualified IPO.

11.9 With respect to any IPO consummated at least one year following the Initial Closing (as defined in the Series D Investment Agreement):

11.9.1 Subject to compliance at all times with all applicable securities laws and regulations, the Company will use commercially reasonable efforts (which must include multiple attempts, on multiple dates, with multiple representatives of the underwriter, including the most senior underwriter personnel devoting time to such IPO, orally and in writing) to cause the managing underwriter(s) of such IPO to provide to each Series D Investor, on the same terms (including the price per share) and subject to the same conditions as are applicable

to the public in such IPO, the opportunity to purchase that number of Common Shares being issued in such IPO equal to such Series D Investor's pro rata share (based on the number of Series D Preferred Shares held by such Series D Investor) of the total number of Shares outstanding before such IPO (the "**Series D New Shares**"). Each Series D Investor may apportion such Series D New Shares in such proportion as it deems appropriate, among itself and any of its Affiliates.

11.9.2 Each Series D Investor hereby acknowledges that, despite the Company's use of its commercially reasonable efforts, the underwriter(s) for an IPO may determine in its or their sole discretion that it is not advisable to designate the maximum number of shares being issued and sold in such IPO as Series D New Shares, in which case the number of Series D New Shares may be reduced or no Series D New Shares may be designated. Each Series D Investor also acknowledges that notwithstanding the terms hereof, the sale of any Series D New Shares to any person will only be made in compliance with applicable federal, state, and local laws, rules, and regulations.

11.9.3 The rights of the Series D Investors to purchase shares in any IPO will be conditioned upon the completion of such IPO. The Company may withdraw its registration statement for an IPO at any time without incurring any liability under this Agreement to any Series D Investor or any of its Affiliates.

11.9.4 The rights of the Series D Investors described in this section 11.9 will terminate and be of no further force or effect as to such Investor upon a Liquidation Event.

11.10 With a view to making available to the Investors the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit an Investor to sell Shares to the public without registration or pursuant to a registration on Form S-3, the Company shall:

11.10.1 use commercially reasonable efforts to make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

11.10.2 use commercially reasonable efforts to file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

11.10.3 furnish to any Investor, so long as the Investor owns any Shares, forthwith upon request (a) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S 3 (at any time after the Company so qualifies); and (b) such other information as may be reasonably requested in availing any Investor of any rule or regulation of the SEC that permits the selling of any such Shares without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

12. Reporting and Information Rights

12.1 All information provided to the Board of Directors shall be provided to the Board Observers concurrently except as per section 12.2(ii)(b) and (c).

12.2 The Directors and any Board Observer shall have the right to provide all documents and information they receive in connection with their services as Directors or as a Board Observer, to the respective Investors having delegated/nominated such Director or Board Observer, as the case may be, provided, however, that such Director or Board Observer, as the case may be, shall not have the right to provide any such information to its respective Investors, whereby the Company has to mark such information accordingly, if (i) the Company considers, on the advice of counsel, such documents and information to be a trade secret or confidential information (unless covered by a customary confidentiality agreement entered into by the respective Investor with the Company in form and substance reasonably acceptable to the Company and the Investor) and (ii) the disclosure (a) might result in any damage to the Company, (b) would adversely affect the attorney-client privilege between the Company and its counsel or (c) would result in the Company breaching an obligation to maintain secrecy either under any agreement or by law, provided, further, that the foregoing shall in no way limit the right and/or duty, as the case may be, of the Company to disclose any information to any Director.

12.3 The Company shall provide to each Investor the annual financial statements after approval of such statements by the Board of Directors, in any case at the latest 28 days prior to the ordinary general assembly.

12.4 Furthermore, the Company shall provide to each Investor the following information:

12.4.1 unaudited quarterly written reports no later than 60 days after the end of each calendar quarter including balance sheet data, liquidity status as well as a comparison of such data with the respective figures in the budget; and

12.4.2 upon request by an Investor, monthly written reports no later than 45 days after the end of each calendar month including profit and loss statement as well as a comparison of such data with the respective figures in the budget.

12.5 In addition, the Company shall permit Investors holding, individually, or as a group, more than 5% of the Preferred Shares (or their authorized representatives), at the respective Investors' expense, to visit and inspect the properties of the Company, including its corporate and financial records, and to discuss its business and finances with officers of the Company during normal business hours following reasonable notice and as often as may be reasonably requested; provided, however, that the Company shall not be obliged pursuant to this section 12.5 to provide access to any information (i) that it reasonably considers to be a trade secret or confidential information (unless covered by an enforceable confidentiality agreement, in form reasonably acceptable to the Company) and (ii) the disclosure of which (A) might result in any damage to the Company, (B) would adversely affect the attorney-client privilege between the Company and its counsel or (C) would result in the Company breaching an obligation to maintain secrecy either under any agreement or by law.

12.6 Part of the monies invested by Forbion, BioMedInvest and HBM is coming from the EIF-ERP (European Investment Fund - European Recovery Programme) and the LfA-EIF (LfA *Förderbank Bayern* - European Investment Fund) facilities. In connection therewith,

the Company acknowledges and agrees that EIF (European Investment Fund), the German Ministry of Economic Affairs (*Bundesministerium für Wirtschaft und Technologie*), the German Federal Court of Auditors (*Bundesrechnungshof*), the LfA (LfA *Förderbank Bayern*) and any third party duly authorized by the LfA (LfA *Förderbank Bayern*) shall have the right to have unlimited access to the premises of the Company and to examine all relevant books and documents of the Company and the management of the Company. All Shareholders consent thereto.

12.7 The Company shall further comply with the obligations set out in the management rights letters of (i) Forbion in the form as attached as Schedule ./12.7-A hereto, (ii) Sofinnova in the form as attached as Schedule ./12.7-B hereto, (iii) Boehringer Ingelheim in the form as attached as Schedule ./12.7-C hereto, (iv) Redmile in the form as attached as Schedule ./12.7-D hereto, (v) Fynveur in the form as attached as Schedule ./12.7-E hereto and (vi) Samsara in the form as attached as Schedule ./12.7-F hereto. All Shareholders consent thereto.

13. Non-Competition

13.1 Each of the Founders and Cohen hereby covenants and undertakes with the Investors and as a separate covenant with the Company that he/she will **not,** whether directly or indirectly or whether on his/her own account or for the account of any other Person, or as agent, director, partner, manager, employee, consultant or shareholder of or in any other Person during the period starting from the Effective Date and expiring on the date on which he/she shall cease to be a Shareholder of the Company and any of its subsidiaries (the "**Restricted Period**"):

(i) carry on or be engaged in any business activity (beyond mere scientific research) in the area of Arenavirus vector based vaccines and Arenavirus vector based immunotherapies (the "**Competition Area**") or concerned or interested in any business entity which is or is likely to be engaged in the Competition Area in anywhere in the world, whereby with respect to Cohen the non-competition under this section 13.1(i) shall not apply;

(ii) seek in competition with the Company to procure orders from or solicit or do business with any Person, who is as of the Effective Date or becomes during the Restricted Period, a client of the Company;

(iii) solicit any person who is as of the Effective Date or has been at any time during the Restricted Period hired or employed by the Company;

other than with the written consent of the Company and the Investors.

13.2 Although the restrictions set out in section 13.1 are considered fair and reasonable, if any of the restrictions should be considered as void or as going beyond what is fair and reasonable in terms of geographical limit, period of time or range of activities, the Parties agree to substitute the void restriction by such next less extensive period of time and/or geographical limit and/or range of activities in order to render section 13.1 valid and enforceable.

13.3 The Parties acknowledge that a breach of section 13.1 by the Founders or Cohen could cause the other Parties substantial and irreparable damages and therefore, in the event of any such breach, in addition to any other remedies which may be available, each Party shall have the right to seek performance and all other injunctive and equitable relief, in

particular the right to enforce section 13.1 either by an action on the merits or through provisional measures.

13.4 Nothing herein shall prevent Zinkernagel to provide consultancy services to existing clients who may be engaged in business which may be in competition with the business of the Company, it being understood that Zinkernagel shall keep any Company information strictly confidential from such clients and shall use Company information exclusively for the benefit of the Company.

14. Employment Agreements

14.1 The Company shall ensure that each employee of the Company will enter into an employment agreement appropriate for the employee's position, status and responsibility, on terms and conditions reasonably acceptable to the Investors.

14.2 The Company shall ensure that each employee and consultant of the Company shall enter into an acceptable confidentiality, non-competition and intellectual property assignment agreement.

15. Stock Option Plan

15.1 The Company has established a stock option scheme for the benefit of employees, officers, Directors and advisors of the Company in the form as attached hereto as Schedule ./15.1 (the "**Stock Option Plan**"), pursuant to which options for the subscription of in total up to 183,237 Common Shares (the "**Option Pool**") have been or may be granted to the beneficiaries which shall vest, with regard to each beneficiary, over a four year vesting period, with the first 25% of the options vesting upon expiration of a twelve month period and the remaining options vesting in equal quarterly instalments over the next 36 months. Accelerated vesting provisions apply in case of an acquisition of the Company.

15.2 According to the provisions of the Stock Option Plan (i) any options granted under the Stock Option Plan shall be held by an escrow agent (the "**SOP Escrow Agent**") for and on behalf of the respective beneficiaries subject to the provisions of a separate escrow agreement, to be entered into by and between the SOP Escrow Agent, the respective beneficiaries and the Company (the "**SOP Escrow Agreement**"), and (ii) upon exercise of such options, the SOP Escrow Agent shall, subject *inter alia* to the condition precedent that the SOP Escrow Agent accedes to this Agreement, subscribe for Common Shares (the "**SOP Shares**") in accordance with the Stock Option Plan for and on behalf of the respective beneficiaries and shall comply with and shall be bound by all relevant provisions of this Agreement with regard to such SOP Shares.

15.3 Upon accession of the SOP Escrow Agent to this Agreement, the SOP Escrow Agent shall, with respect to the SOP Shares, be subject to the same rights and obligations as the Founders and Cohen with respect to their Common Shares held in the Company. Section 13 (Non-Compete) shall be applicable with respect to the beneficiaries only to the extent legally permissible but shall, in any case, not be applicable with respect to the SOP Escrow Agent.

15.4 Any change in the person of the SOP Escrow Agent shall be subject to the condition precedent that the successor SOP Escrow Agent accedes to this Agreement.

16. Duration

16.1 This Agreement shall become effective upon signing by all Parties to this Agreement and shall have effect as long as any of the Shareholders is holding any Share in the Company. The Agreement shall automatically cease to have effect (a) immediately prior to the consummation of an IPO or upon a Deemed Liquidation Event, whichever event occurs first, and (b) with respect to a particular Shareholder, upon such time as such Shareholder ceases to hold any Share in the Company. However, in case of any termination of this Agreement, its sections 17 (Confidential Information), 19.1 (Notices), 19.3 (Severability) and 20 (Jurisdiction and Governing Law) and in addition, in case of an IPO, sections 11.2 to 11.6 (Registration Rights), shall remain in force and in addition, in case of a Deemed Liquidation Event, sections 9 (Drag Along) and 10 (Remedies) shall remain in force to the extent necessary to enforce the provisions of sections 9 and 10 with respect to such Deemed Liquidation Event.

16.2 An ordinary termination of this Agreement by a Party shall not be possible. However, unless permitted under applicable law to generally and indefinitely exclude the ordinary termination right as provided in the preceding sentence, this Agreement shall cease to have effect on 31/12/2037 in any case, unless renewed by the Parties prior to such date.

17. Confidential Information

17.1 Unless otherwise provided in this Agreement, each Party undertakes to consider as strictly confidential and not to divulge, sell or transfer to any third party, this Agreement, the Series D Investment Agreement and any documents or information which it may acquire or to which it may have access in the course of its relationship with or responsibilities in the Company concerning, in particular, the activities, products, clients, the strategy, the development, the commercial or partnership agreements and the financial situation of the Company or its Affiliates unless made (i) with the prior written consent of the Parties (for this Agreement and the Series D Investment Agreement) and of the Company (for any document or information relating thereto), or (ii) as required by the applicable mandatory laws or regulations or by an alleged violation of these agreements by any other Party, or (iii) by an Institutional Investor to its directors, managers, members, officers, employees or professional advisers (including attorneys) or of its Institutional Investors' Affiliates, or (iv) by Boehringer Ingelheim to the persons listed in Schedule ./17.1-A or, subject to consent of the Company (such consent not to be unreasonably withheld, delayed or conditioned), any other persons (together the "**Permitted BI Recipients**"), who have been informed by Boehringer Ingelheim of the obligations set forth under this section 17.1, whereby Boehringer Ingelheim shall procure that such Permitted BI Recipients comply with the obligations set forth under this section 17.1 or (v) by Takeda Ventures to its directors, managers, employees or advisers or to its Affiliates (including its directors, employees and advisors), subject to such Affiliate entering into a separate confidentiality agreement with the Company or (vi) to a bona fide potential investor subject to a similar confidentiality agreement, which the Party concerned will make sure of or (vii) by Gilead to the persons listed in Schedule ./ 17.1-B or, subject to consent of the Company (such consent not to be unreasonably withheld, delayed or conditioned), any other persons (together the "**Permitted Gilead Recipients**"), who have been informed by Gilead of the obligations set forth under this subsection 17.1, whereby Gilead shall procure that such Permitted Gilead

Recipients comply with the obligations set forth under this subsection 17.1. Information will not be regarded as confidential however, (i) if already available to the recipient party on a non-confidential basis, (ii) which becomes generally available to the public other than as a result of a disclosure by or on behalf of the recipient party in violation of the terms of this section 17.1, (iii) which becomes available to the recipient party on a non-confidential basis from a source that is not a Party, provided that such source is not known by the recipient to be legally prohibited from disclosing, or contractually bound not to disclose, such information or (iv) which is independently developed by or on behalf of the recipient party or its Affiliates without referring to the confidential information, to be evidenced by written proof. All Parties acknowledge that the Investors and at least some of the Investors' Affiliates are in the business of venture capital and private equity investing and therefore review the business plans and related proprietary information of many enterprises, including enterprises which may have products or services which are adverse to or compete directly or indirectly with those of the Company. Nothing in this Agreement shall otherwise preclude or in any way restrict the Investors or any Investors' Affiliate from investing or participating in any particular enterprise whether or not such enterprise has products or services which are adverse to or compete, directly or indirectly, with those of the Company.

18. Amendments

18.1 Should Shareholders representing ninety percent (90%) or more of the voting share capital of the Company agree to amend this Agreement, the remaining Shareholders shall be bound by such amendment, provided, however, that any amendment or modification to the rights, privileges or obligations of any series of the Preferred Shares shall require, in addition to the consent of at least 75% of such series of Preferred Shares, the consent of the majority of each other series of Preferred Shares, voting separately as a class, provided, further, that any such amendment or modification shall require the consent of each Shareholder negatively and unequally affected if such amendment or modification does not apply to all Shareholders in the same fashion, and provided further that Section 3 shall not be amended or modified in any way with respect to the Board Observer nominated/delegated by an Investor without such Investor's prior written consent.

18.2 Ratification of this Agreement by Acquirer or new investors shall not be considered an amendment of this Agreement for the purposes of section 18.1 above but shall be made in writing.

18.3 The Shareholders hereby authorize the Company to adapt Schedule ./E in case of future share transfers and/or capital increases or decreases, so that such adapted schedule becomes an integral part of this Agreement. The adapted schedule has to be immediately circulated to all Shareholders by the Company.

19. Miscellaneous

19.1 Notices; Documents. All notices and other communications under this Agreement shall be in writing in the English language and shall be given or made by courier service or by registered mail or fax (and in each such case additionally by email) or by delivery in person, to the respective Parties at the addresses set out in Schedule ./19.1 (or at such other address for a Party as shall be specified in a notice given in accordance with this

subsection 19.1). Except as otherwise provided in this Agreement, each such notice shall be deemed given and receipt (i) at the time delivered by hand, if personally delivered or when receipt acknowledged, (ii) (at the latest) five (5) Business Days after being deposited in the mail, postage prepaid, if mailed; (iii) when receipt acknowledged, if faxed; and (iv) the next Business Day after timely delivery to the courier, if sent by overnight courier guaranteeing next-day delivery.

19.2 Entire Agreement. This Agreement together with schedules constitute the whole and only agreement between the Parties relating to shareholdings in the Company and supersedes and extinguishes any prior agreements, undertakings and arrangements of any nature, in each case with respect to the subject matter hereof, including, without limitation, the Shareholders Agreement by and among the Prior Parent and the Shareholders party thereto dated December 7, 2017 and the Prior Agreement.

19.3 Severability. If any provision or any portion of any provision contained in the Agreement is invalid, illegal or unenforceable, the remaining provisions, and if a portion of any provision is unenforceable, the remaining portion of such provision shall, nevertheless, remain in full force and effect. The Parties undertake to negotiate in good faith with a view to replace such invalid, illegal or unenforceable provision or part thereof with another provision not invalid, illegal or unenforceable with the most similar effect.

19.4 Obligation to give Effect to this Agreement. Each Party shall promptly take all necessary or desirable actions within his/her/its control (whether in his/her/its capacity as a Shareholder or otherwise, and including, without limitation, attendance at meetings in person or by proxy for purposes of obtaining a quorum and execution of written consents in lieu of meetings) in order to give effect to the provisions of this Agreement.

19.5 Conflict with Constitutional Documents. In the event of a conflict or inconsistencies between the provisions of this Agreement and the governing documents of the Company, this Agreement shall prevail in all matters among and regarding the Shareholders to the extent permitted by applicable law. The Shareholders shall, so far as they are legally able, exercise all voting and other rights and powers available to them to give effect to the provisions of this Agreement and procure any amendment, including any amendment to the Certificate, required to give effect to the provisions of this Agreement or any other constitutional documents.

19.6 No Waiver. The failure by any Party to this Agreement to enforce at any time or for any period of time any provision of this Agreement shall not be construed as a waiver of such provision or of the right of such Party thereafter to enforce each and every such provision of this Agreement.

19.7 Assignment. Except as specifically provided in this Agreement, any rights, obligations or liabilities hereunder shall not at any time be assigned by any of the Parties without the prior written consent of the other Parties; provided, that any Party may assign this Agreement to any of its Affiliates upon written notice to the other Parties.

19.8 Language. This Agreement has been drafted in English language. Translations thereof are for working purposes only and shall have no influence on the interpretation of the Agreement.

19.9 Counterparts. This Agreement may be executed in so many counterparts as there are parties to it, each of which shall constitute an original, and all counterparts shall constitute an original, and all counterparts shall together constitute one and the same instrument.

Execution copies may be delivered by telefax or electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com).

20. Jurisdiction, Governing Law

20.1 Jurisdiction. The Parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state and federal courts of the State of New York for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state or federal courts of the State of New York, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court.

20.2 Governing Law. This Agreement shall be governed by and interpreted and construed in accordance with the internal laws of the State of Delaware, United States, without giving effect to its conflict of laws provisions.

LIST OF SCHEDULES

Schedule ./E	Shareholder Structure Pre- and Post-Investment
Schedule ./12.7-A	Management Rights Letter Forbion
Schedule ./12.7-B	Management Rights Letter Sofinnova
Schedule ./12.7-C	Management Rights Letter Boehringer Ingelheim
Schedule ./12.7-D	Management Rights Letter Redmile
Schedule ./12.7-E	Management Rights Letter Fynveur
Schedule ./12.7-F	Management Rights Letter Samsara
Schedule ./15.1	Stock Option Plan
Schedule ./17.1-A	Permitted BI Recipients
Schedule ./17.1-B	Permitted Gilead Recipients
Schedule ./19.1	Addresses for Notices

The Shareholders

Prof. Dr. Daniel Pinschewer	Dr. Andreas Bergthaler
Dr. Lukas Flatz	Prof. Dr. Rudolf M. Zinkernagel
Dr. Katherine Cohen	Universität Zürich
Prof. Dr. Paul-Henri Lambert	Igor Matushansky
Sofinnova Capital VI FCPR	Forbion Capital Fund II Coöperatief U.A.
Boehringer Ingelheim Venture Fund GmbH	Takeda Ventures, Inc.
BioMedInvest II LP	667, L.P.
Baker Brothers Life Sciences, L.P.	HH HKP (HK) Limited

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Dr. Katherine Cohen

18.2.19

22.2.2019

i.V.

Universität Zürich
Prof. Dr. B. Beck Schimmer
Vice President
Stefan Schnyder
Director Finance & HR

Prof. Dr. Paul-Henri Lambert

Igor Matushansky

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Prof. Dr. Paul-Henri Lambert

Igor Matushansky

Sofinnova Capital VI FCPR

Forbion Capital Fund II Coöperatief U.A.

Boehringer Ingelheim Venture Fund GmbH

Takeda Ventures, Inc.

BioMedInvest II LP

By: Baker Bros. Advisors LP, Management Company and Investment Adviser to 667, L.P., pursuant to authority granted to it by Baker Biotech Capital, L.P., general partner to 667, L.P., and not as the general partner

DocuSigned by:
Scott L. Lessing
066C5A14141847F...

By: Scott L. Lessing, President

By: Baker Bros. Advisors LP, Management Company and Investment Adviser to BAKER BROTHERS LIFE SCIENCES, L.P., pursuant to authority granted to it by Baker Brothers Life Sciences Capital, L.P., general partner to BAKER BROTHERS LIFE SCIENCES, L.P., and not as the general partner

DocuSigned by:
Scott L. Lessing
066C5A14141847F...

By: Scott L. Lessing, President

HH HKP (HK) Limited

The Shareholders

Prof. Dr. Daniel Pinschewer	Dr. Andreas Bergthaler
Dr. Lukas Flatz	Prof. Dr. Rudolf M. Zinkernagel
Dr. Katherine Cohen	Universität Zürich
Prof. Dr. Paul-Henri Lambert	Igor Matushansky
Sofinnova Capital VI FCPR	Forbion Capital Fund II Coöperatief U.A.
Boehringer Ingelheim Venture Fund GmbH	Takeda Ventures, Inc.
BioMedInvest II LP	667, L.P.
Baker Brothers Life Sciences, L.P.	HH HKP (HK) Limited

ImmunVax Pte. Ltd.

HBM BioCapital II LP

Gilead Sciences Ireland UC

Redmile Biopharma Investments I, L.P.

Jeremy Green
Managing Member of the General Partner and the Management Company

RAF, L.P.

Jeremy Green
Managing Member of the General Partner and the Management Company

Fynveur SCA

Anne Goffard
Member of the Managing Board of Fynveur Management SàRL, the Managing Partner of Fynveur SCA

The Company

HOOKIPA Pharma Inc.

ImmunVax Pte. Ltd.

HBM BioCapital II LP represented by its General Partner HBM BioCapital II management Ltd

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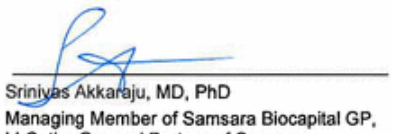
Samsara BioCapital, L.P.



Srinivas Akkaraju, MD, PhD
Managing Member of Samsara Biocapital GP, LLC, the General Partner of Samsara BioCapital, L.P

Shareholder Structure
(Pre- and Post-Series D Financing Round)

Management Rights Letter Forbion

Management Rights Letter Sofinnova

Management Rights Letter Boehringer Ingelheim

Management Rights Letter Redmile

Management Rights Letter Fynveur

Management Rights Letter Samsara

Stock Option Plan

Permitted BI Recipients

Permitted Gilead Recipients

Addresses for Notices