

**AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF ARÊTE THERAPEUTICS, INC.**

Arête Therapeutics, Inc. (the "*Corporation*"), a corporation organized and existing under the General Corporation Law of the State of Delaware, does hereby certify as follows:

1. The Corporation was originally incorporated pursuant to the original Certificate of Incorporation filed with the Secretary of on January 23, 2006.
2. This Amended and Restated Certificate of Incorporation has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law and restates, integrates and further amends the provisions of the Certificate of Incorporation of the Corporation.
3. The Corporation's Certificate of Incorporation is hereby amended and restated to read in its entirety as follows:

ARTICLE I

The name of the Corporation is Arête Therapeutics, Inc.

ARTICLE II

The address of its registered office in the State of Delaware is 3500 South DuPont Highway in the City of Dover, County of Kent. The name of its registered agent at such address is Incorporating Services, Ltd.

ARTICLE III

The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

ARTICLE IV

A. Classes of Stock. The Corporation is authorized to issue two classes of stock, designated "*Common Stock*" and "*Preferred Stock*," each with a par value of \$0.001 per share. The total number of shares of Common Stock that the Corporation is authorized to issue is 72,001,000 shares. The total number of shares of Preferred Stock that the Corporation is authorized to issue is 55,150,234 shares.

The Preferred Stock may be issued from time to time in one or more series. The first series of Preferred Stock shall be comprised of 55,150,234 shares, 16,000,000 shares of which shall be designated Series A Preferred, 22,373,194 shares of which shall be designated Series A-1 Preferred and 16,777,040 shares of which shall be designated Series A-2 Preferred (which, together with the Series A-1 Preferred and the Series A Preferred, shall be designated the "*Series A Preferred Stock*").

The Series A Preferred Stock is sometimes referred to as the "***Preferred Stock***." No person or entity may qualify as a Series A Preferred Stock stockholder unless such person or entity is a party to the Series A Preferred Stock Purchase Agreement (as defined below).

B. Rights, Preferences and Restrictions of Preferred Stock. The rights, preferences, privileges, and restrictions granted to and imposed on the Preferred Stock are as set forth below in this Section IV(B) as follows:

1. Dividend Provisions.

(a) The holders of shares of Preferred Stock shall be entitled to receive dividends, on a pari passu basis, out of any assets legally available therefor, prior and in preference to any declaration or payment of any dividend (payable other than in Common Stock or other securities and rights convertible into or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock of this Corporation) on the Common Stock of this Corporation, at the rate of \$0.08 per share per annum for the Series A Preferred Stock (as adjusted for any stock splits, stock dividends, combinations, recapitalizations or the like (collectively, "***Recapitalizations***")), payable when, as, and if declared by the Board of Directors. Such dividends shall not be cumulative. Any partial payment shall be made ratably among the holders of Preferred Stock in proportion to the payment each such holder would receive if the full amount of such dividends were paid.

(b) After payment of any dividends pursuant to Section IV(B)(1)(a), any additional dividends shall be distributed among all holders of Common Stock and all holders of Preferred Stock in proportion to the number of shares of Common Stock which would be held by each such holder if all shares of such series of Preferred Stock were converted to Common Stock at the then effective conversion rate for each such series of Preferred Stock.

(c) As authorized by Section 402.5(c) of the California Corporations Code, each holder of an outstanding share of Preferred Stock shall have deemed to have consented, for purposes of Sections 502 and 503 of the California Corporations Code, to distributions made by the Corporation in connection with (i) repurchases of Common Stock issued to or held by employees, officers, directors or consultants of this Corporation or its subsidiaries upon termination of their employment or services pursuant to agreements providing for the right of said repurchase, (ii) other repurchases from employees, officers, directors or consultants at the then deemed fair market value of the Common Stock, and (iii) repurchases of Common Stock pursuant to rights of first refusal contained in agreements providing for such rights (any repurchase under subsections (i), (ii) and (iii), a "***Permitted Repurchase***").

2. Liquidation Preference.

(a) In the event of any liquidation, dissolution or winding-up of this Corporation, either voluntary or involuntary, the holders of Series A Preferred Stock shall be entitled to receive, prior and in preference to any distribution of any of the assets of this Corporation to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the sum of (A) \$1.00 (the "***Original Series A Issue Price***") for each outstanding share of Series A Preferred Stock (subject to adjustment for Recapitalizations) and (B) an amount equal to all declared

but unpaid dividends on such share. If upon the occurrence of such event, the assets and funds available for distribution among the holders of the Series A Preferred Stock shall be insufficient to permit the payment to such holders of the full aforesaid preferential amounts, then the entire assets and funds of this Corporation legally available for distribution to stockholders shall be distributed ratably among the holders of the Series A Preferred Stock in proportion to the full preferential amount each such holder is otherwise entitled to receive under this Section IV(B)(2)(a).

(b) Upon completion of the distributions required by Section IV(B)(2)(a), all of the remaining assets of this Corporation available for distribution to stockholders shall be distributed among the holders of the Preferred Stock and Common Stock pro rata based on the number of shares of Common Stock held by each (assuming full conversion of all such Preferred Stock); provided, however, that at such time as the distribution of liquidation preferences with respect to shares of Series A Preferred Stock pursuant to Sections IV(B)(2)(a) and IV(B)(2)(b) shall equal three (3) times the Original Series A Issue Price (subject to adjustment for Recapitalizations), then no further distribution pursuant to this Section IV(B)(2)(a) shall be made with respect to shares of Series A Preferred Stock.

(c) After payment has been made to the holders of Preferred Stock and Common Stock pursuant to Sections IV(B)(2)(a) and IV(B)(2)(b), all of the remaining assets of this Corporation available for distribution to stockholders shall be distributed among the holders of Common Stock pro rata based on the number of shares of Common Stock held by each.

(d) For purposes herein, a liquidation, dissolution or winding up of this Corporation shall be deemed to be occasioned by, or to include (unless the holders of at least a majority of the voting power of the Preferred Stock then outstanding shall determine otherwise), (A) the acquisition of this Corporation by another entity by means of any reorganization, merger or consolidation (but excluding any reorganization, merger or consolidation effected exclusively for the purpose of changing the domicile of the Corporation), or any transaction or series of related transactions in which the Corporation's stockholders of record as constituted immediately prior to such transaction or series of related transactions will, immediately after such transaction or series of related transactions (by virtue of securities issued in such transaction or series of related transactions) fail to hold at least 50% of the voting stock of the resulting or surviving corporation following such transaction or series of related transactions; or (B) a sale of all or substantially all of the assets of this Corporation; provided, however, that the issuance and sale of the Series A Preferred Stock under that certain Series A Preferred Stock Purchase Agreement between the Corporation and certain purchasers of the Series A Preferred Stock, dated on or about February 10, 2005 (as amended, the "*Series A Preferred Stock Purchase Agreement*") shall not be deemed to be a liquidation, dissolution or winding up of this Corporation; or (C) the grant by the Corporation of an exclusive license of all or substantially all of the Corporation's intellectual property. In any of such events, if the consideration received by this Corporation is other than cash, its value will be deemed its fair market value as determined in good faith by the Board of Directors of this Corporation; provided, however, that any securities shall be valued as follows:

(i) The value of securities not subject to investment letter or other similar restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be:

(A) if traded on a securities exchange or through the Nasdaq National Market, the value shall be deemed to be the average of the closing prices of the securities on such exchange or system over the thirty (30) day period (or portion thereof) ending three (3) days prior to the closing;

(B) if actively traded over-the-counter, the value shall be deemed to be the average of the closing bid or sale prices (whichever is applicable) over the thirty (30) day period (or portion thereof) ending three (3) days prior to the closing; and

(C) if there is no active public market, the value shall be the fair market value thereof, as determined by the Board of Directors of this Corporation and approved by the holders of a majority of the voting power of all then outstanding shares of the Preferred Stock.

(ii) The method of valuation of securities subject to investment letter or other restrictions on free marketability (other than restrictions arising solely by virtue of a stockholder's status as an affiliate or former affiliate) shall be to make an appropriate discount from the value determined as above in Section IV(B)(2)(d)(i) to reflect the approximate fair market value thereof, as mutually determined by the Board of Directors of this Corporation and approved by the holders of a majority of the voting power of all then outstanding shares of the Preferred Stock.

(iii) In the event the requirements of this Section IV(B)(2)(d) are not complied with, this Corporation shall forthwith either:

(A) cause such closing to be postponed until such time as the requirements of this Section IV(B)(2)(d) have been complied with; or

(B) cancel such transaction, in which event the rights, preferences, and privileges of the holders of the Preferred Stock shall revert to and be the same as such rights, preferences and privileges existing immediately prior to the date of the first notice referred to in Section IV(B)(2)(d)(iv) hereof.

(iv) This Corporation shall give each holder of record of Preferred Stock written notice of such impending transaction not later than twenty (20) days prior to the stockholders' meeting called to approve such transaction, or twenty (20) days prior to the closing of such transaction, whichever is earlier, and shall also notify such holders in writing of the final approval of such transaction. The first of such notices shall describe the material terms and conditions of the impending transaction, and this Corporation shall thereafter give such holders prompt notice of any material changes to such material terms and conditions. The transaction shall in no event take place sooner than twenty (20) days after this Corporation has given the first notice provided for herein or sooner than ten (10) days after this Corporation has given notice of any material changes provided for herein; provided, however, that such periods may be shortened upon the written consent of the holders of Preferred Stock that are entitled to such notice rights or similar notice rights and that represent at least a majority of the voting power of all then outstanding shares of such Preferred Stock.

3. Redemption.

(a) Subject to the rights of Preferred Stock which may from time to time come into existence, after the receipt by this Corporation of a written request from the holders of not less than a majority of the then outstanding shares of Series A Preferred Stock that all shares of Series A Preferred Stock be redeemed (a "**Redemption Request**"), and concurrently with the surrender by such holders of the certificates representing such shares, this Corporation shall, to the extent it may lawfully do so and to the extent requested in writing in a Redemption Request, redeem all of the then outstanding and unconverted shares of Series A Preferred Stock by paying in cash in three (3) equal annual installments (the date of each of such installments, a "**Preferred Stock Redemption Date**"), in exchange for the shares of Series A Preferred Stock to be redeemed, a sum equal to the Original Series A Issue Price per share of Series A Preferred Stock (subject to adjustment for any Recapitalizations) plus all declared but unpaid dividends on such shares (the "**Preferred Stock Redemption Price**"). Notwithstanding the foregoing, (i) the first Preferred Stock Redemption Date shall be the later of the fifth (5th) anniversary of the Purchase Date (as defined below) applicable to the Series A Preferred Stock (the "**Series A Purchase Date**") or the date ninety (90) days after the receipt by this Corporation of the Redemption Request, (ii) the second and third Preferred Stock Redemption Dates shall occur on each anniversary of such first Preferred Stock Redemption Date, (iii) no Redemption Request may be delivered to the Company earlier than the date ninety (90) days before the fifth (5th) anniversary of the Series A Purchase Date, and (iv) the Corporation shall not be obligated to redeem any shares of Series A Preferred Stock that have been redeemed or converted prior to the applicable Preferred Stock Redemption Date. Any redemption effected pursuant to this Section IV(B)(3)(a) shall be made on a pro rata basis among the holders of the Series A Preferred Stock in proportion to the number of shares of Preferred Stock then held by such holders.

(b) As used in this Section IV(B)(3)(b) and in Sections IV(B)(3)(c) and IV(B)(3)(d) below, the term "**Redemption Date**" shall refer to each "Preferred Stock Redemption Date" and the term "**Redemption Price**" shall refer to each "Preferred Stock Redemption Price." At least fifteen (15) but no more than thirty (30) days prior to a Redemption Date, written notice shall be mailed, first class postage prepaid, to each holder of record (at the close of business on the business day next preceding the day on which notice is given) of the series of Preferred Stock to be redeemed and each other series of outstanding Preferred Stock having redemption rights under this Section IV(B)(3), at the address last shown on the records of this Corporation for such holder, (i) notifying such holder of the redemption to be effected on the applicable Redemption Date, specifying the number of shares to be redeemed from such holder, the Redemption Date, the Redemption Price, the place at which payment may be obtained and calling upon such holder to surrender to this Corporation, in the manner and at the place designated, his, her or its certificate or certificates representing the shares to be redeemed and (ii) instructing any holder not already participating in such redemption of its rights, subject to the requirements of this Section IV(B)(3), as applicable, to participate in such redemption (the "**Redemption Notice**"). In no event shall any redemption of any series of Preferred Stock be effected prior to the last date on which each other series of Preferred Stock may also be redeemed as specified in the Redemption Notice. Except as provided in Section IV(B)(3)(c), on or after a Redemption Date, each holder of Preferred Stock to be redeemed on such Redemption Date shall surrender to this Corporation the certificate or certificates representing such shares, in the manner and at the place designated in the Redemption Notice, and

thereupon the applicable Redemption Price of such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof and each surrendered certificate shall be cancelled. In the event that less than all the shares represented by any such certificate are redeemed, a new certificate shall be issued representing the unredeemed shares. No transfers of Preferred Stock shall be permitted during the five (5) day period prior to and including any Preferred Stock Redemption Date, and this Corporation shall not recognize any such prohibited transfer on its books and records.

(c) From and after each Redemption Date, unless there shall have been a default in payment of the applicable Redemption Price, all rights of the holders of shares of the series of Preferred Stock designated for redemption on such Redemption Date in the Redemption Notice (except the right to receive the applicable Redemption Price without interest upon surrender of their certificate or certificates) shall cease with respect to such shares, and such shares shall not thereafter be transferred on the books of this Corporation or be deemed to be outstanding for any purpose whatsoever. If the funds of this Corporation legally available for redemption of shares of Preferred Stock on a Redemption Date are insufficient to redeem the total number of such shares of Preferred Stock to be redeemed on such date, those funds that are legally available will be used to redeem the maximum possible number of such shares ratably among the holders of such shares to be redeemed such that each holder of a share of a particular series of Preferred Stock receives the same percentage of the applicable Redemption Price for each share of such series. The shares of Preferred Stock not redeemed shall remain outstanding and entitled to all the rights and preferences provided herein. At any time thereafter when additional funds of this Corporation are legally available for the redemption of shares of Preferred Stock, within ten (10) business days such funds will be used to redeem the balance of the shares that this Corporation has become obligated to redeem on any Redemption Date but that it has not redeemed.

(d) On or prior to each Redemption Date, this Corporation shall deposit the Redemption Price of all shares of Preferred Stock designated for redemption in the Redemption Notice, and not yet redeemed or converted, with a bank or trust corporation having aggregate capital and surplus in excess of \$100,000,000 as a trust fund for the benefit of the respective holders of the shares designated for redemption and not yet redeemed, with irrevocable instructions and authority to the bank or trust corporation to publish the notice of redemption thereof and pay the Redemption Price for such shares to their respective holders on or after the Redemption Date, upon receipt of notification from the Corporation that such holder has surrendered his, her or its share certificate to the Corporation pursuant to Section IV(B)(3)(b). As of the date of such deposit (even if prior to the Redemption Date), the deposit shall constitute full payment of the shares to their holders, and from and after the date of the deposit the shares so called for redemption shall be redeemed and shall be deemed to be no longer outstanding, and the holders thereof shall cease to be stockholders with respect to such shares and shall have no rights with respect thereto except the rights to receive from the bank or trust corporation payment of the Redemption Price of the shares, without interest, upon surrender of their certificates therefor, and the right to convert such shares as provided in Section IV(B)(4) hereof. Such instructions shall also provide that any moneys deposited by the Corporation pursuant to this Section IV(B)(3)(d) for the redemption of shares thereafter converted into shares of the Corporation's Common Stock pursuant to Section IV(B)(4) hereof prior to the Redemption Date shall be returned to the Corporation forthwith upon such conversion. The balance of any moneys deposited by this Corporation pursuant to this Section IV(B)(3)(d) remaining

unclaimed at the expiration of six (6) months following the Redemption Date shall thereafter be returned to this Corporation upon its request expressed by a resolution of its Board of Directors.

4. Conversion. The holders of the Preferred Stock shall have conversion rights as follows (the "*Conversion Rights*"):

(a) Right to Convert. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time after the date of issuance of such share on or prior to five (5) business days prior to the Redemption Date, if any, as may have been fixed in any Redemption Notice with respect to such shares, at the office of this Corporation or any transfer agent for such stock, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price for each such series of Preferred Stock by the "Conversion Price" applicable to such share, determined as hereafter provided, in effect on the date the certificate is surrendered for conversion. The initial Conversion Price per share for shares of Series A Preferred Stock shall be the Original Series A Issue Price; provided, however, that the Conversion Price for the Series A Preferred Stock shall be subject to adjustment as set forth in Section IV(B)(4)(d).

(b) Automatic Conversion. Each share of Preferred Stock shall automatically be converted into shares of Common Stock at the Conversion Price at the time in effect for such series of Preferred Stock immediately upon the earlier of (i) except as provided in Section IV(B)(4)(c), this Corporation's sale of its Common Stock in the first underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "*Act*"), covering the offer and sale of Common Stock (other than a registration on Form S-8, Form S-4 or comparable or successor forms), the public offering price of which is not less than five (5) times the Original Issue Price per share (as adjusted for any Recapitalizations) and with gross proceeds to the Company of at least \$50,000,000 or (ii) the date specified by written consent or agreement of the holders of at least a majority of the then outstanding shares of the Series A Preferred Stock, voting together as a single class.

(c) Mechanics of Conversion. Before any holder of Preferred Stock shall be entitled to convert the same into shares of Common Stock, he, she or it shall surrender the certificate or certificates therefor, duly endorsed, at the principal corporate office of this Corporation or of any transfer agent for the Preferred Stock, and shall give written notice to this Corporation at its principal corporate office, of the election to convert the same and shall state therein the name or names in which the certificate or certificates for shares of Common Stock are to be issued (except that no such written notice of election to convert shall be necessary in the event of an automatic conversion pursuant to Section IV(B)(4)(b)). This Corporation shall, as soon as practicable thereafter, issue and deliver at such office to such holder of Preferred Stock, or to the nominee or nominees of such holder, a certificate or certificates for the number of shares of Common Stock to which such holder shall be entitled as aforesaid. Such conversion shall be deemed to have been made immediately prior to the close of business on the date of such surrender of the shares of Preferred Stock to be converted, and the person or persons entitled to receive the shares of Common Stock issuable upon such conversion shall be treated for all purposes as the record holder or holders of such shares of Common Stock as of such date. Upon the occurrence of either of the events specified in Section IV(B)(4)(b) above, the outstanding shares of Preferred Stock shall be converted

automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that the Corporation shall not be obligated to issue certificates evidencing the shares of Common Stock issuable upon such conversion unless the certificates evidencing such shares of Preferred Stock are either delivered to the Corporation or its transfer agent as provided above, or the holder notifies the Corporation or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. Notwithstanding the foregoing, if the conversion is in connection with an underwritten offering of securities registered pursuant to the Act, the conversion may, at the option of any holder tendering Preferred Stock for conversion, be conditioned upon the closing with the underwriters of the sale of securities pursuant to such offering, in which event the persons entitled to receive the Common Stock upon conversion of the Preferred Stock shall not be deemed to have converted such Preferred Stock until immediately prior to the closing or such sale of securities.

(d) Conversion Price Adjustments of Preferred Stock.

(i) The Conversion Price of each series of the Preferred Stock shall be subject to adjustment from time to time as follows:

(A) If this Corporation shall issue, after the date upon which any shares of a particular series of Preferred Stock were first issued (each, the "**Purchase Date**" applicable to such series of Preferred Stock), any Additional Stock (as defined below) without consideration or for a consideration per share less than the Conversion Price for such series of Preferred Stock in effect immediately prior to the issuance of such Additional Stock, the Conversion Price for such series of Preferred Stock in effect immediately prior to each such issuance shall forthwith (except as otherwise provided in this Section IV(B)(4)(d)(i)) be adjusted to a price determined by multiplying such Conversion Price by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding and deemed issued pursuant to Section IV(B)(4)(d)(i)(E) immediately prior to such issuance, plus the number of shares of Common Stock that the aggregate consideration received by this Corporation for such issuance would purchase at such Conversion Price in effect immediately prior to such issuance; and the denominator of which shall be the number of shares of Common Stock outstanding and deemed issued pursuant to Section IV(B)(4)(i)(E) immediately prior to such issuance, plus the number of shares of such Additional Stock so issued.

(B) No adjustment of the Conversion Price for any series of Preferred Stock shall be made in an amount less than one cent per share, provided that any adjustments that are not required to be made by reason of this sentence shall be carried forward and shall be either taken into account in any subsequent adjustment made prior to three (3) years from the date of the event giving rise to the adjustment being carried forward, or shall be made at the end of three (3) years from the date of the event giving rise to the adjustment being carried forward. Except to the limited extent provided for in Sections IV(B)(4)(d)(i)(E)(3) and IV(B)(4)(d)(i)(E)(4), no adjustment of such Conversion Price pursuant to this Section IV(B)(4)(d)(i) shall have the effect of increasing the Conversion Price above the Conversion Price in effect immediately prior to such adjustment. No adjustment of the Conversion Price for any series of Preferred Stock shall be made

with respect to the issuance of Additional Stock unless the consideration per shares for such Additional Stock issued or deemed to be issued by the Corporation is less than the applicable Conversion Price in effect on the date of, and immediately prior to, such issue.

(C) In the case of the issuance of Additional Stock for cash, the consideration shall be deemed to be the amount of cash paid therefor before deducting any reasonable discounts, commissions or other expenses allowed, paid or incurred by this Corporation for any underwriting or otherwise in connection with the issuance and sale thereof.

(D) In the case of the issuance of the Additional Stock for a consideration in whole or in part other than cash, the consideration other than cash shall be deemed to be the fair value thereof as determined by the Board of Directors irrespective of any accounting treatment. In the case of the issuance of the Additional Stock together with other shares or securities or other assets of the Corporation for consideration which covers both, the consideration for the Additional Stock shall be deemed to be the proportion of such total consideration so received for the Additional Stock and other shares, securities or assets, computed as provided in Section IV(B)(4)(d)(i)(C) and the preceding sentence of this Section IV(B)(4)(d)(i)(D), as determined by the Board of Directors.

(E) In the case of the issuance (whether before, on or after the applicable Purchase Date) of options to purchase or rights to subscribe for Common Stock, securities by their terms convertible into or exchangeable for Common Stock or options to purchase or rights to subscribe for such convertible or exchangeable securities, the following provisions shall apply for all purposes of this Section IV(B)(4)(d)(i) and Section IV(B)(4)(d)(ii):

(1) The aggregate maximum number of shares (as set forth in the instrument relating thereto without regard to any provisions contained therein for a subsequent adjustment of such number) of Common Stock issuable upon exercise of such options to purchase or rights to subscribe for Common Stock shall be deemed to have been issued at the time such options or rights were issued and for a consideration equal to the consideration (determined in the manner provided in Sections IV(B)(4)(d)(i)(C) and IV(B)(4)(d)(i)(D)), if any, received by this Corporation upon the issuance of such options or rights plus the minimum aggregate amount of additional consideration (as set forth in the instrument relating thereto without taking into account any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such options or rights for the Common Stock covered thereby.

(2) The aggregate maximum number of shares of Common Stock issuable upon conversion of, or in exchange for any such convertible or exchangeable securities or upon the exercise of options to purchase or rights to subscribe for such convertible or exchangeable securities and subsequent conversion or exchange thereof shall be deemed to have been issued at the time such securities were issued or such options or rights were issued and for a consideration equal to the consideration (to be determined in the manner provided in Sections IV(B)(4)(d)(i)(C) and IV(B)(4)(d)(i)(D)), if any, received by this Corporation for the issuance of such securities and related options or rights (excluding any cash received on account of accrued interest or accrued dividends), plus the minimum aggregate amount of additional consideration (as set forth in the instrument relating thereto without taking into account any

provision contained therein for a subsequent adjustment of such consideration), if any, to be received by this Corporation upon the conversion or exchange of such securities or the exercise of any related options or rights.

(3) In the event of any change in the number of shares of Common Stock issuable or in the consideration payable to this Corporation upon exercise of such options or rights or upon conversion of or in exchange for such convertible or exchangeable securities, including, but not limited to, a change resulting from the antidilution provisions thereof (other than under or by reason of provisions designed to protect against dilution), the Conversion Price of each series of Preferred Stock, to the extent in any way affected by or computed using such options, rights or securities, shall be recomputed to reflect such change, but no further adjustment shall be made for the actual issuance of Common Stock or any payment of such consideration upon the exercise of any such options or rights or the conversion or exchange of such securities.

(4) Upon the expiration of any such options or rights, the termination of any such rights to convert or exchange or the expiration of any options or rights related to such convertible or exchangeable securities, the Conversion Price of each series of Preferred Stock, to the extent in any way affected by or computed using such options, rights or securities or options or rights related to such securities, shall be recomputed to reflect the issuance of only the number of shares of Common Stock (and convertible or exchangeable securities that remain in effect) actually issued upon the exercise of such options or rights, upon the conversion or exchange of such securities or upon the exercise of the options or rights related to such securities.

(5) The number of shares of Common Stock deemed issued and the consideration deemed paid therefor pursuant to Sections IV(B)(4)(d)(i)(E)(1) and IV(B)(4)(d)(i)(E)(2) shall be appropriately adjusted to reflect any change, termination or expiration of the type described in either Section IV(B)(4)(d)(i)(E)(3) or IV(B)(4)(d)(i)(E)(4).

(ii) "**Additional Stock**" shall mean any shares of Common Stock issued (or deemed to have been issued pursuant to Section IV(B)(4)(d)(i)(E)) by this Corporation after the applicable Purchase Date other than:

(A) shares of Common Stock issued pursuant to a transaction described in Section IV(B)(4)(d)(iii) hereof;

(B) shares of Common Stock issued or deemed issued to employees, consultants, officers, directors or vendors (if in transactions with primarily non-financing purposes) of this Corporation pursuant to a stock option plan or restricted stock purchase plan approved by the Board of Directors (any such shares, the "**Plan Carve-Out Shares**"), so long as the sum of the number of shares of Common Stock issued or deemed to have been issued directly after the applicable Purchase Date and the number of shares of Common Stock issued or deemed to have been issued pursuant to all such stock option plans or restricted stock purchase plans (whether issued or deemed to have been issued before or after the applicable Purchase Date), does not exceed an aggregate of 8,250,525 shares (appropriately adjusted for Recapitalizations and not including shares subject to options that expire unexercised and not including shares repurchased at cost by the

Corporation in connection with the termination of employment or other provision of services to the Corporation);

(C) shares of Common Stock issued or issuable in a bona fide, firmly underwritten public offering under the Act before which or in connection with which all outstanding shares of Preferred Stock will be automatically converted to Common Stock;

(D) shares of Common Stock issued pursuant to the conversion or exercise of convertible or exercisable securities outstanding as of the date hereof or subsequently issued pursuant to this Section IV(B)(4)(d)(ii);

(E) shares of Common Stock issued or issuable in connection with a bona fide business acquisition of or by this Corporation, whether by merger, consolidation, sale of assets, sale or exchange of stock or otherwise, each as approved by the Board of Directors of this Corporation;

(F) shares of Common Stock issued or issuable in connection with any transaction where such securities so issued are excepted from the definition of "Additional Stock" with the approval of the Board of Directors;

(G) shares of Common Stock issued or issuable upon conversion of the Series A Preferred Stock issued under the Series A Preferred Stock Purchase Agreement, whether issued on or after the Series A Purchase Date; and

(H) shares of Common Stock issued or issuable under that certain Restricted Stock Purchase Agreement among the Corporation, Shellwater & Company and certain other designated recipients of Common Stock, dated as of December 21, 2004.

(iii) In the event this Corporation should at any time or from time to time after the applicable Purchase Date fix a record date for the effectuation of a split or subdivision of the outstanding shares of Common Stock or the determination of holders of Common Stock entitled to receive a dividend or other distribution payable in additional shares of Common Stock or other securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly, additional shares of Common Stock (hereinafter referred to as "**Common Stock Equivalents**") without payment of any consideration by such holder for the additional shares of Common Stock or the Common Stock Equivalents (including the additional shares of Common Stock issuable upon conversion or exercise thereof), then, as of such record date (or the date of such dividend distribution, split or subdivision if no record date is fixed), the Conversion Prices of each series of Preferred Stock shall be appropriately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding and those issuable with respect to such Common Stock Equivalents.

(iv) If the number of shares of Common Stock outstanding at any time after the applicable Purchase Date is decreased by a combination of the outstanding shares of Common Stock or reverse stock split, then, following the record date of such combination or reverse

stock split, the Conversion Prices for each series of Preferred Stock shall be appropriately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in outstanding shares.

(e) Other Distributions. In the event this Corporation shall declare a distribution payable in securities of other persons, evidences of indebtedness issued by this Corporation or other persons, assets (excluding cash dividends) or options or rights not referred to in Section IV(B)(4)(d)(iii), then, in each such case for the purpose of this Section IV(B)(4)(e), the holders of each series of Preferred Stock shall be entitled to a proportionate share of any such distribution as though they were the holders of the number of shares of Common Stock of this Corporation into which their shares of such series of Preferred Stock are convertible as of the record date fixed for the determination of the holders of Common Stock of this Corporation entitled to receive such distribution.

(f) Recapitalizations. If at any time or from time to time there shall be recapitalization of the Common Stock (other than a subdivision, combination or merger or sale of assets transaction provided for elsewhere in Section IV(B)(2) or this Section IV(B)(4)) provision shall be made so that the holders of each series of the Preferred Stock shall thereafter be entitled to receive upon conversion of such series of Preferred Stock the number of shares of stock or other securities or property of this Corporation or otherwise, to which a holder of the number of shares of Common Stock issuable upon conversion of the Preferred Stock held by such holder would have been entitled on such recapitalization. In any such case, appropriate adjustment shall be made in the application of the provisions of this Section IV(B)(4) with respect to the rights of the holders of each series of Preferred Stock after the recapitalization to the end that the provisions of this Section IV(B)(4) (including adjustment of the Conversion Price then in effect and the number of shares purchasable upon conversion of each such series of Preferred Stock) shall be applicable after that event as nearly equivalent as may be practicable.

(g) No Impairment. Without the consent of the Preferred Stock in accordance with Section IV(B)(6), this Corporation will not, by amendment of this Amended and Restated Certificate of Incorporation or through any reorganization, recapitalization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by this Corporation, but will at all times in good faith assist in the carrying out of all the provisions of this Section IV(B)(4) and in the taking of all such action as may be necessary or appropriate in order to protect the Conversion Rights of the holders of Preferred Stock against impairment.

(h) No Fractional Shares and Certificate as to Adjustments.

(i) No fractional shares shall be issued upon the conversion of any share or shares of Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the then fair market value of a share of Common Stock as determined in good faith by the Board of Directors. The number of whole shares of Common Stock to be issued upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time

converting into Common Stock and the number of shares of Common Stock issuable upon such aggregate conversion.

(ii) Upon the occurrence of each adjustment or readjustment of the Conversion Price of any series of Preferred Stock pursuant to this Section IV(B)(4), this Corporation, at its expense, shall promptly compute such adjustment or readjustment in accordance with the terms hereof and prepare and furnish to each holder of such series of Preferred Stock a certificate setting forth such adjustment or readjustment and showing in detail the facts upon which such adjustment or readjustment is based. This Corporation shall, upon the written request at any time of any holder of Preferred Stock, furnish or cause to be furnished to such holder a like certificate setting forth (A) such adjustment and readjustment, (B) the Conversion Price for such series of Preferred Stock at the time in effect, and (C) the number of shares of Common Stock and the amount, if any, of other property that at the time would be received upon the conversion of a share of such series of Preferred Stock.

(i) Notices of Record Date. In the event of any taking by this Corporation of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend) or other distribution, any right to subscribe for, purchase or otherwise acquire any shares of stock of any class or any other securities or property, or to receive any other right, this Corporation shall mail to each holder of Preferred Stock, at least ten (10) days prior to the date specified therein, a notice specifying the date on which any such record is to be taken for the purpose of such dividend, distribution or right, and the amount and character of such dividend, distribution or right.

(j) Reservation of Stock Issuable Upon Conversion. This Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stocks solely for the purpose of effecting the conversion of the shares of Preferred Stock, such numbers of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of Preferred Stock, in addition to such other remedies as shall be available to the holder of such Preferred Stock, this Corporation will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in commercially reasonable efforts to obtain the requisite stockholder approval of any necessary amendment to this Amended and Restated Certificate of Incorporation.

(k) Notices. Any notice required by the provisions of this Section IV(B)(4) to be given to the holders of shares of Preferred Stock shall be deemed given if deposited in the United States mail, postage prepaid, and addressed to each holder of record at his address appearing on the books of this Corporation.

(l) Special Mandatory Conversion.

(i) At any time following the Series A Purchase Date, in the event that (a) all conditions to the obligation of the holders of shares of Series A Preferred Stock to

purchase additional shares of Series A-2 Preferred at the Milestone Closing (as defined in the Series A Preferred Stock Purchase Agreement) have been met, and (b) any holder of shares of Series A-1 Preferred shall fail to purchase in the Milestone Closing all of the shares of Series A-2 Preferred that such holder has committed to purchase under the Series A Preferred Stock Purchase Agreement, then all of such holder's shares of Series A-1 Preferred purchased in the Second Tranche Closing (as defined in the Series A Preferred Stock Purchase Agreement) shall automatically and without further action on the part of such holder be converted effective upon, subject to, and concurrently with, the consummation of the Milestone Closing into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Original Issue Price for such Series A-1 Preferred by the Conversion Price applicable to such shares, determined as herein provided, in effect on the date the Milestone Closing shall occur (the provisions set forth in this sentence to be deemed the "***Pay-to-Play***"). Upon conversion pursuant to this Section IV(B)(4)(l)(i), the shares of Series A Preferred Stock so converted shall be cancelled and not subject to reissuance. Notwithstanding the foregoing, the Pay-to-Play shall not be effected if the Milestone Closing was initiated by the holders of Series A Preferred Stock holding in aggregate more than fifty percent (50%) of the Shares (as defined in the Series A Preferred Stock Purchase Agreement) pursuant to Section 1.3(d) of the Series A Preferred Stock Purchase Agreement.

(ii) The holder of any shares of Series A-1 Preferred converted pursuant to this Section IV(B)(4)(l) shall deliver to this Corporation during regular business hours at the office of any transfer agent of the Corporation for the Series A-1 Preferred, or at such other place as may be designated by the Corporation, the certificate or certificates for the shares so converted, duly endorsed or assigned in blank or to this Corporation. As promptly as practicable thereafter, this Corporation shall issue and deliver to such holder, at the place designated by such holder, a certificate or certificates for the number of full shares of Common Stock to be issued and such holder shall be deemed to have become a stockholder of record of Common Stock on the date of the Milestone Closing unless the transfer books of this Corporation are closed on that date, in which event he, she or it shall be deemed to have become a stockholder of record of Common Stock on the next succeeding date on which the transfer books are open. In the event that the holder of any shares of Series A-1 Preferred converted pursuant to this Section IV(B)(4)(l) fails to surrender for conversion any certificates for the Series A-1 Preferred being converted into Common Stock hereunder, at and after the time of such conversion, the shares of Series A-1 Preferred evidenced thereby shall be deemed to be no longer outstanding, and all rights with respect thereto shall forthwith cease and terminate, except only the rights of the holder (i) to receive certificates for the shares of Common Stock, to which the holder thereof shall be entitled upon conversion thereof, and (ii) with respect to dividends accrued or declared but unpaid on such Series A-1 Preferred prior to such date.

5. Voting Rights.

(a) General. The holder of each share of Preferred Stock shall have the right to one vote for each share of Common Stock into which such share of Preferred Stock could then be converted. With respect to such vote and except as otherwise expressly provided herein or as required by applicable law, such holder shall have full voting rights and powers equal to the voting rights and powers of the holders of Common Stock, and shall be entitled, notwithstanding any provision hereof, to notice of any stockholders' meeting in accordance with the Bylaws of this

Corporation, and shall be entitled to vote, together with holders of Common Stock as a single class except as provided by law or as provided herein, with respect to any matter upon which holders of Common Stock have the right to vote. Fractional votes shall not, however, be permitted and any fractional voting rights available on an as-converted basis (after aggregating all shares into which shares of Preferred Stock held by each holder could be converted) shall be rounded to the nearest whole number (with one-half being rounded upward).

(b) Election of Directors.

(i) Before the six month anniversary of the Series A Purchase

Date:

(A) the holders of shares of the Series A Preferred Stock shall be entitled, voting separately as a single class on an as-converted basis, to elect three (3) directors of the Corporation at or pursuant to each meeting or consent of the Corporation's stockholders for the election of directors, to remove from office such directors, to fill any vacancy (by unanimous consent if done in writing, or by majority vote otherwise) caused by the resignation, death or removal of any such directors; and

(B) the holders of shares of Common Stock shall be entitled, voting separately as a single class, to elect four (4) directors of the Corporation at or pursuant to each meeting or consent of the Corporation's stockholders for the election of directors, and to remove from office such directors, to fill any vacancy (by unanimous consent if done in writing, or by majority vote otherwise) caused by the resignation, death or removal of any such directors.

(ii) On and after the six-month anniversary of the Series A

Purchase Date:

(A) the holders of shares of the Series A Preferred Stock shall be entitled, voting separately as a single class on an as-converted basis, to elect three (3) directors of the Corporation at or pursuant to each meeting or consent of the Corporation's stockholders for the election of directors, to remove from office such directors, to fill any vacancy (by unanimous consent if done in writing, or by majority vote otherwise) caused by the resignation, death or removal of any such directors;

(B) the holders of shares of Common Stock and Series A Preferred Stock shall be entitled, each voting as a separate class on an as-converted basis, to elect one (1) director of the Corporation at or pursuant to each meeting or consent of the Corporation's stockholders for the election of directors, and to remove from office such director, to fill any vacancy (by unanimous consent if done in writing, or by majority vote otherwise) caused by the resignation, death or removal of any such director; and

(C) the holders of shares of Common Stock and Series A Preferred Stock, shall be entitled, voting together as a single class on an as-converted basis, to elect three (3) directors of the Corporation at or pursuant to each meeting or consent of the Corporation's

stockholders for the election of directors, and to remove from office such director, to fill any vacancy (by unanimous consent if done in writing, or by majority vote otherwise) caused by the resignation, death or removal of any such director.

(iii) In the event that no more than Twenty-Five Percent (25%) of the number of shares of Series A Preferred Stock ever issued on or after the Series A Purchase Date (subject to adjustment for Recapitalizations) remains outstanding, whether due to conversion or repurchase of such shares of Series A Preferred Stock or otherwise, then notwithstanding the provisions of Sections IV(B)(5)(b)(i) and IV(B)(5)(b)(ii), the holders of shares of Series A Preferred Stock and Common Stock shall be entitled thereafter, voting together as a single class, to elect all directors of the Corporation at or pursuant to each meeting or consent of the Corporation's stockholders for the election of directors, and to remove from office such directors, to fill any vacancy (by unanimous consent if done in writing, or by majority vote otherwise) caused by the resignation, death or removal of any such directors.

(c) No Series Voting. Other than as provided herein or required by law, there shall be no series voting.

(d) Adjustment in Authorized Common Stock. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares of Common Stock then outstanding) by an affirmative vote of the holders of a majority of the stock of the Corporation.

6. Protective Provisions. In addition to any other rights provided by law and subject to the rights of series of Preferred Stock which may from time to time come into existence, so long as at least Twenty-Five Percent (25%) of the number of shares of Series A Preferred Stock ever issued on or after the Series A Purchase Date (subject to adjustment for Recapitalizations) are outstanding, this Corporation shall not, without first obtaining the approval (by vote or written consent, as provided by law) of the holders of at least a majority of the then outstanding shares of Series A Preferred Stock voting on an as-converted basis as a single class:

(a) alter or change, whether by amendment of this Certificate of Incorporation, merger, consolidation, combination or otherwise, the rights, preferences or privileges of the shares of Series A Preferred Stock so as to affect adversely such shares of Series A Preferred Stock;

(b) increase or decrease (other than by redemption or conversion), whether by amendment of this Certificate of Incorporation, merger, consolidation, combination or otherwise, the total number of authorized shares of Series A Preferred Stock;

(c) authorize, create or issue, or obligate itself to issue, whether by amendment of this Certificate of Incorporation, merger, consolidation, combination or otherwise, any equity security (other than Series A Preferred Stock), including any other security convertible into or exercisable for any equity security, having a preference superior to or on parity with, the Series A Preferred Stock with respect to dividends, liquidation, redemption or voting;

(d) effect the acquisition of this Corporation by another entity by means of any reorganization, merger or consolidation (but excluding any reorganization, merger or consolidation effected exclusively for the purpose of changing the domicile of the Corporation), or any transaction or series of related transactions in which the Corporation's stockholders of record as constituted immediately prior to such transaction or series of related transactions will, immediately after such transaction or series of related transactions (by virtue of securities issued in such transaction or series of related transactions) fail to hold at least 50% of the voting stock of the resulting or surviving corporation following such transaction or series of related transactions (other than that the issuance and sale of the Series A Preferred Stock under the Series A Preferred Stock Purchase Agreement);

(e) license all, or any material portion, of this Corporation's intellectual property on an exclusive basis, if the proposed transaction involving such license will be consummated on or before the six-month anniversary of the Series A Purchase Date;

(f) sell all or substantially all of this Corporation's assets;

(g) incur any indebtedness in excess of \$500,000, individually or in the aggregate, before the one-year anniversary of the Series A Purchase Date, or incur any indebtedness in excess of \$1,000,000, individually or in the aggregate, on or after the one-year anniversary of the Series A Purchase Date;

(h) effect, whether by amendment of this Certificate of Incorporation, merger, consolidation, combination or otherwise, any reclassification or recapitalization of the Series A Preferred Stock;

(i) change the size of the Board of Directors of the Corporation, whether by amendment of this Certificate of Incorporation, merger, consolidation, combination or otherwise;

(j) declare or pay any cash or stock dividends or make other distributions on the capital stock of the Corporation;

(k) redeem, purchase or otherwise acquire (or pay into or set aside for a sinking fund for such purpose) any share or shares of Preferred Stock or Common Stock; provided, however, that this restriction shall not apply to (i) any Permitted Repurchase or (ii) the redemption of any share or shares of Preferred Stock in accordance with Section IV(B)(3); or

(l) liquidate, dissolve or wind-up the Corporation.

7. Status of Redeemed or Converted Stock. In the event any shares of Preferred Stock shall be redeemed or converted pursuant to Sections IV(B)(3) or IV(B)(4) or otherwise repurchased or acquired by this Corporation after the original issuance thereof, the shares so redeemed, converted, repurchased or acquired shall be cancelled on the books of the Corporation, shall be restored to the status of authorized but unissued Preferred Stock of the Corporation, undesignated as to series, and shall not be reissued by this Corporation ever again.

C. Common Stock. The rights, preferences, privileges and restrictions granted to and imposed on the Common Stock are as set forth below in this Section IV(C).

1. Dividend Rights. Subject to the prior rights of holders of all classes of stock at the time outstanding having prior rights as to dividends, the holders of the Common Stock shall be entitled to receive, when and as declared by the Board of Directors, out of any assets of this Corporation legally available therefor, such dividends as may be declared from time to time by the Board of Directors.

2. Liquidation Rights. Upon the liquidation, dissolution or winding of this Corporation, the assets of this Corporation shall be distributed as provided in Section IV(B)(2).

3. Redemption. The Common Stock is not redeemable.

4. Voting Rights. The holder of each share of Common Stock shall have the right to one vote for each such share, and shall be entitled to notice of any stockholders' meeting in accordance with the Bylaws of this Corporation, and shall be entitled to vote upon such matters and in such manner as may be provided by law.

ARTICLE V

The business and affairs of the Corporation shall be managed by or under the direction of the Board of Directors. In addition to the powers and authority expressly conferred upon them by statute or by this Certificate of Incorporation or the Bylaws of the Corporation, the directors are hereby empowered to exercise all such powers and do all such acts and things as may be exercised or done by the Corporation. Election of directors need not be by written ballot, unless the Bylaws so provide.

ARTICLE VI

Except as otherwise provided in this Amended and Restated Certificate of Incorporation, the Board of Directors is authorized to make, adopt, amend, alter or repeal the Bylaws of the Corporation. Except as otherwise provided in this Amended and Restated Certificate of Incorporation, the stockholders shall also have power to make, adopt, amend, alter or repeal the Bylaws of the Corporation. The number of directors of the Corporation shall be fixed from time to time by a bylaw or amendment thereof duly adopted by the Board of Directors or by the stockholders. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation.

ARTICLE VII

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

ARTICLE VIII

To the fullest extent permitted by the Delaware General Corporation Law, as the same exists or may hereafter be amended, a director of the Corporation shall be indemnified by the Corporation in accordance with the Bylaws and shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers, employees and other agents of the Corporation (and any other persons to which Delaware law permits the Corporation to provide indemnification), through Bylaw provisions, agreements with any such director, officer, employee or other agent or other person, vote of stockholders or disinterested directors, or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the Delaware General Corporation Law and Sections 204 and 317 of the California Corporations Code (to the extent the Corporation is subject to those provisions pursuant to Section 2115 of the California Corporations Code), subject only to limits created by applicable Delaware law (statutory or nonstatutory), with respect to actions for breach of duty to a corporation, its stockholders and others.

Any repeal or modification of the foregoing provisions of this Article VIII by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the Liability of any director of the Corporation with respect to any acts or omissions of such director, officer or agent occurring prior to, such repeal or modification.

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IN WITNESS WHEREOF, the Corporation has caused this Amended and Restated Certificate to be signed by a duly authorized officer on this 1st day of May, 2007.

ARÊTE THERAPEUTICS, INC.

/s/ Dinesh V. Patel

Dinesh Patel

President and Chief Executive Officer