

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 3)

ASTERIAS BIOTHERAPEUTICS, INC.

Series A Common Stock, par value \$0.0001 per share
(Title of class of securities)

(Name of Issuer)

04624N 10 7
(CUSIP number)

Russell Skibsted
Chief Financial Officer
BioTime, Inc.
1010 Atlantic Avenue
Suite 102
Alameda, California 94501
(510) 521-3390

(Name, address and telephone number of person authorized to receive notices and communications)

February 16, 2016

(Date of event which requires filing of this statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition which is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(b)(3) or (4), check the following box .

Note: When filing this statement in paper format, six copies of this statement, including exhibits, should be filed with the Commission. See Rule 13d-1(a) for other parties to whom copies are to be sent.

(Continued on following page(s))

1	NAMES OF REPORTING PERSONS BioTime, Inc. S.S. OR I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) 94-3127919	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) OO	
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(D) OR 2(E) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION California	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 24,973,340(1)(2)
	8	SHARED VOTING POWER 0
	9	SOLE DISPOSITIVE POWER 24,973,340(1)(2)
	10	SHARED DISPOSITIVE POWER 0
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 24,973,340(1)(2)	
12	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 60.2%(3)	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) CO	

(1) Consists of (i) 21,823,340 shares of the Series A common stock, par value \$0.0001 per share ("Series A Shares"), of Asterias Biotherapeutics, Inc., a Delaware corporation (the "Company") and (ii) warrants to subscribe for and purchase 3,150,000 Series A Shares at an exercise price of \$5.00 per share ("Warrants")

(2) Based on the aggregate number of Series A Shares beneficially owned by the Reporting Person assuming the exercise of the Warrants.

(3) Based on 38,348,297 Series A Shares outstanding at the close of business on February 15, 2016, based upon the Company's share register, plus the number of Series A Shares that could be acquired by the Reporting Person by exercising the Warrants.

This Amendment No. 3 ("Amendment No. 3") amends and supplements the Statement on Schedule 13D, dated October 1, 2013, as amended by Amendment No.1, dated April 11, 2014, and by Amendment No. 2, dated May 29, 2015 (the "Schedule 13D"), relating to the Series A Shares of Asterias Biotherapeutics, Inc., a Delaware corporation (the "Company"), and is filed by and on behalf of BioTime, Inc. (the "Reporting Person"). Unless otherwise defined herein, all capitalized terms used herein shall have the meanings previously ascribed to them in the previous filing of the Schedule 13D.

ITEM 1. SECURITY AND ISSUER

This Amendment No. 3 relates to the Series A Shares of the Company and is being filed pursuant to Rule 13d-1 under the Exchange Act. The address of the principal executive offices of the Company is 6300 Dumbarton Circle, Fremont, California 94555.

ITEM 2. IDENTITY AND BACKGROUND

- (a) This Amendment No. 3 is being filed on behalf of BioTime, Inc., a California corporation as the Reporting Person.
- (b) The address of the principal office of the Reporting Person is BioTime, Inc., 1010 Atlantic Avenue, Suite 102, Alameda, California 94501.
- (c) The Reporting Person is a biotechnology company focused on the emerging field of regenerative medicine.
- (d) The Reporting Person has not during the last five years been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).
- (e) The Reporting Person has not during the last five years been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
- (f) The Reporting Person is organized under the laws of the state of California.

ITEM 3. SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION

The information on the Reporting Person's cover sheet to this Amendment No. 3 and the information presented in response to Item 5 in the Schedule 13D prior to this Amendment No. 3 is incorporated by reference herein. There has been no material change from the information last reported in Item 3 of the Schedule 13D.

ITEM 4. PURPOSE OF TRANSACTION

On February 16, 2016, the Company entered into certain agreements with the Reporting Person and the Reporting Person's wholly owned subsidiary ES Cell International Pte Ltd ("ESI") described below. A summary of each of the agreements is set forth in this Item 4. The summaries of the agreements do not purport to be complete and are qualified in their entirety by reference to the full text of the agreements, which are filed as Exhibits 1 and 2 hereto and are incorporated herein by reference.

Under the terms of a Cross-License Agreement (the "Cross-License") entered into by the Company, the Reporting Person and ESI, the Company will receive a fully-paid, non-royalty-bearing, world-wide, non-exclusive, sub-licensable license under certain patents and related patent rights of the Reporting Person and certain patents and related patent rights of ESI specified in the Cross-License, for all purposes in the Asterias Licensed Field during the term of the license. The Asterias Licensed Field includes all therapeutic applications of use for certain the patents licensed to the Company by the Reporting Person and ESI except all therapeutic applications of use involving pluripotent stem cell-derived cells of the following lineages: (a) bone and orthopedic soft tissues, including but not limited to ligament, tendon, meniscus, cartilage, and intervertebral disc; (b) vascular endothelium and perivascular cells including vascular smooth muscle and vascular pericytes; (c) adipose tissue; and (d) retinal pigment epithelium. The Asterias Licensed Field also includes all applications of use for certain other licensed patents involving live human pluripotent stem cell-derived cell therapies directed to the neural spinal cord (excluding cartilage and bone of the spine) and the myocardium; and also live human pluripotent stem cell-derived glial cell therapies directed to the central nervous system.

Under the terms of the Cross-License, the Reporting Person and ESI will receive a fully-paid, non-royalty-bearing, world-wide, non-exclusive, sub-licensable license in, to, and under the certain patents and related patent rights of the Company for all purposes in the BioTime/ESI Licensed Field during the term of the license. The BioTime/ESI Licensed Field includes all fields of use except any and all applications (a) to treat disorders of the nervous system, and (b) utilizing the immune system to prevent, treat, or cure cancer, and (c) involving the use of cells comprising, derived from, or manufactured using, human embryonic stem cells or human induced pluripotent stem cells for in vitro assay applications, including but not limited to drug discovery and development, drug monitoring, drug toxicology testing, and consumer products testing.

The term of the Cross-License shall expire on the expiration of the last claim within the Company's patents rights or the Reporting Person's patent rights, as applicable, unless terminated earlier for a material breach by a party.

Share Transfer Agreement between the Company and the Reporting Person

The Reporting Person and the Company have entered into a Share Transfer Agreement ("Share Transfer Agreement") pursuant to which (a) the Company will transfer to the Reporting Person the 2,100,000 shares of common stock of OrthoCyte Corporation ("OrthoCyte") and 21,925 ordinary shares of Cell Cure Neurosciences Ltd ("Cell Cure"), each a majority-owned subsidiary of the Reporting Person, held by the Company, and (b) the Reporting Person will transfer to the Company 75,771 shares of Series A Common Stock of the Company ("Series A Shares") and 3,150,000 Series A Share purchase warrants expiring September 30, 2016 ("Warrants") presently held by the Reporting Person as additional consideration for the license of Company patents and patent rights from the Company under the Cross License and as consideration for the transfer of the shares of OrthoCyte and Cell Cure capital stock by the Company to the Reporting Person. As additional consideration, the Reporting Person also agreed that if the Company distributes Series A Share purchase warrants to the Company's stockholders, the Reporting Person will waive its right to receive its pro rata share of those warrants based on the number of Series A Shares it then owns. The value of the Series A Shares, used to determine the number of Series A Shares to be transferred to the Company by the Reporting Person, was determined based on the volume weighted average price of the Series A Shares on the NYSE MKT for the twenty trading days prior to the date of the Share Transfer Agreement. The value of the Warrants was determined by application of the Black-Scholes formula. The values of the cross-licensed patent rights and the OrthoCyte stock and Cell Cure stock being transferred by the Company to the Reporting Person were determined with reference to prices established by an independent valuation obtained from an investment banker.

The Share Transfer Agreement also provides that the Reporting Person shall have, upon prior notice, the right to inspect, review, copy, and audit such financial books and other corporate records to the extent necessary to comply with United States generally accepted accounting principles ("GAAP"), until six years after the Reporting Person is no longer required to consolidate the Company's financial statements with the Reporting Person's financial statements for financial reporting purposes in accordance with GAAP.

The Cross-License Agreement and the Share Transfer Agreement, and the transactions to be effected thereunder, were approved, in the case of the Company, directors of the Company who are not directors, officers, or employees of the Reporting Person or a subsidiary of the Reporting Person, and in the case of the Reporting Person, directors of the Reporting Person who are not also directors, officers, or employees of the Company.

No Other Present Plans or Proposals Regarding the Company

Except as described above in this Item 4, the Board of Directors of the Reporting Person has not approved any plans or proposals that relate to or would result in: (a) the acquisition by any person of additional securities of the Company, or the disposition of securities of the Company; (b) an extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Company or any of its subsidiaries; (c) a sale or transfer of a material amount of assets of the Company or any of its subsidiaries; (d) any change in the present Board of Directors or management of the Company, including any plans or proposals to change the number or term of directors; (e) any material change in the present capitalization or dividend policy of the Company; (f) any other material change in the Company's business or corporate structure; (g) changes in the Company's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Company by any person; (h) causing a class of securities of the Company to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association; (i) a class of equity securities of the Company becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Exchange Act; or (j) any action similar to any of those enumerated above.

As previously reported in the Schedule 13D, the Reporting Person is the controlling stockholder of the Company, and three of the members of the Board of Directors of the Company are members of the Reporting Person's Board of Directors, one of the directors of the Company who is not a director of the Reporting Person is an executive officer of a subsidiary of the Reporting Person, and another director of the Company who is not a director of the Reporting Person may be deemed an affiliate of a shareholder that beneficially owns more than 5% of the common shares of the Reporting Person. The Reporting Person may, as a stockholder or through the action of persons who serve on the Board of Directors of the Company, from time to time cause the Company to engage in any or all of the kinds of transactions described in the immediately preceding paragraph. Without limiting the generality of the immediately preceding sentence, the Reporting Person, acting alone or in conjunction with other stockholders of the Company, may, directly or through the action of the Board of Directors of the Company, (1) cause the Company to expand the size of the Company's Board of Directors and to elect additional directors, (2) cause the Company to reduce the size of the Company's Board of Directors, (3) nominate persons to stand for election as directors at any annual or special meeting of stockholders of the Company at which directors are to be elected, (4) cause any incumbent director not to be nominated to stand for election as a director at any annual or special meeting of stockholders of the Company at which directors are to be elected, (5) remove any director with or without cause by a vote at any annual or special meeting of stockholders of the Company at which directors are to be elected, or by written consent without a vote, (6) in the event of the death or resignation or removal of a director of the Company, elect a replacement director, and (7) further amend the Bylaws of the Company. Any such newly elected directors may be officers, directors, or affiliates of the Reporting Person or may be "independent" directors (under Section 8.03(A) of the NYSE MKT Company Guide or the rules of any other national securities exchange).

The Reporting Person may also, from time to time, through the action of persons who serve on the Board of Directors of the Company, cause or enable the Company to (i) offer and sell additional securities in order to raise capital for the Company's operations or to acquire one or more businesses or assets for use in the Company's business, or for other purposes, (ii) acquire Series A Shares from the Reporting Person in exchange for cash, common shares of the Company, other assets of the Company, or a combination of the foregoing, (iii) license patents and other intellectual property to, or cross license patents and other intellectual property or exchange other assets with, and acquire other assets from, and sell assets to, the Reporting Person or one or more other subsidiaries of the Reporting Person, and (iv) if and when opportunities present themselves, cause the Company to enter into one or more merger agreements or other agreements to acquire other business or assets, or merger or consolidation agreements in which the Company is not the surviving corporation.

ITEM 5. INTEREST IN SECURITIES OF THE ISSUER

(a) As of the date of this Amendment No. 3, the Reporting Person beneficially owns 21,823,340 Series A Shares and 3,150,000 Warrants. Based on a total of 38,348,297 Series A Shares outstanding as of the close of business on February 15, 2016, based on the Company's share register, plus the number of Series A Shares that could be acquired by the Reporting Person through the exercise of the Warrants, the Reporting Person beneficially owns approximately 60.2% of the outstanding Series A Shares. Upon completion of the transfer of 75,771 Series A Shares and the Warrants to the Company under the Share Transfer Agreement, the Reporting Person will beneficially own 21,747,569 Series A Shares representing approximately 56.82% of the outstanding Series A Shares.

(b) As of the date of this Amendment No. 3, the Reporting Person has sole power to vote or to direct the vote and sold power to dispose or direct the disposition the Series A Shares it beneficially owns.

(c) None.

(d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the Series A Shares beneficially owned by the Reporting Person.

(e) Not applicable.

ITEM 6. CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO SECURITIES OF THE ISSUER.

None

ITEM 7. MATERIAL TO BE FILED AS EXHIBITS.

- 1 Cross License Agreement by and among Asterias Biotherapeutics, Inc., BioTime, Inc. and ES Cell International Pte Ltd
- 2 Share Transfer Agreement by and among Asterias Biotherapeutics, Inc., BioTime, Inc. and ES Cell International Pte Ltd

SIGNATURES

After reasonable inquiry and to the best of its knowledge and belief, the undersigned certifies that the information contained in this statement is true, complete and correct.

Dated: February 16, 2016

BIOTIME, INC.
a California corporation

By: s/Russell Skibsted
Russell Skibsted,
Chief Financial Officer

CROSS LICENSE AGREEMENT

between

ASTERIAS

and

BIOTIME

and

ESI

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CROSS-LICENSE AGREEMENT

This **CROSS-LICENSE AGREEMENT** (the “**Agreement**”) is entered into on February 16, 2016 (the “**Effective Date**”) by and between Asterias Biotherapeutics, Inc., a Delaware corporation, having a place of business at 6300 Dumbarton Circle, Fremont, CA 94555 (“**Asterias**”), BioTime, Inc., a California corporation, having a place of business at 1301 Harbor Bay Parkway, Alameda, CA 94502 (“**BioTime**”), and ES Cell International Pte Ltd., a corporation wholly owned by BioTime organized under the laws of Singapore and having a place of business at 1301 Harbor Bay Parkway, Alameda, CA 94502 (“**ESI**”) (each individually referred to as “**Party**” and collectively as the “**Parties**”).

RECITALS

WHEREAS, Asterias owns or controls certain patents and patent applications as provided herein in Schedule A;

WHEREAS, BioTime wishes to obtain a non-exclusive license under the Asterias Patent Rights;

WHEREAS, ESI wishes to obtain a sublicense under the Asterias Patent Rights as a Named Affiliate of BioTime;

WHEREAS, the Parties have entered into that certain Share Exchange Agreement dated November 2, 2015 that will form part of the consideration for this Agreement;

WHEREAS, BioTime owns or controls certain patents and patent applications as provided herein in Schedules B and C;

WHEREAS, ESI owns or controls certain patents and patent applications as provided herein in Schedule D;

WHEREAS, Asterias wishes to obtain a non-exclusive license under the BioTime Patent Rights and ESI Patent Rights;

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein and in that certain Share Transfer Agreement, and other good and valuable consideration, the receipt and the legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

ARTICLE 1. DEFINITIONS

The terms, as defined herein, shall have the same meanings in both their singular and plural forms.

- 1.1 “**Affiliate**” means any corporation or other business entity which is bound in writing by a Party to the terms set forth in this Agreement and in which a Party owns or controls, directly or indirectly, at least fifty percent (50%) of the outstanding stock or other voting rights entitled to elect directors, or in which a Party is owned or controlled directly or indirectly by at least fifty percent (50%) of the outstanding stock or other voting rights entitled to elect directors; but in any country where the local law does not permit foreign equity participation of at least fifty percent (50%), then an “Affiliate” includes any company in which a Party owns or controls or is owned or controlled by, directly or indirectly, the maximum percentage of outstanding stock or voting rights permitted by local law.

1.2 “**Asterias Excluded Field**” means

- (i) with respect to the BioTime’s First Set of Patent Rights and ESI Patent Rights, all therapeutic applications of use involving pluripotent stem cell-derived cells of the following lineages:
 - a. bone and orthopedic soft tissues, including but not limited to ligament, tendon, meniscus, cartilage, and intervertebral disc;
 - b. vascular endothelium and perivascular cells including vascular smooth muscle and vascular pericytes;
 - c. adipose tissue; and
 - d. retinal pigment epithelium.
- (ii) with respect to the BioTime’s Second Set of Patent Rights, all therapeutic applications except those identified in Section 1.3(ii) of this Agreement.

1.3 “**Asterias Licensed Field**” means

- (i) with respect to the BioTime’s First Set of Patent Rights and ESI’s Patent Rights, all therapeutic applications of use except those identified in Section 1.2(i) of this Agreement; and
- (ii) with respect to the BioTime’s Second Set of Patent Rights, all applications involving:
 - a. live human pluripotent stem cell-derived cell therapies directed to the neural spinal cord (excluding cartilage and bone of the spine);
 - b. live human pluripotent stem cell-derived cell therapies directed to the myocardium; and
 - c. live human pluripotent stem cell-derived glial cell therapies directed to the central nervous system.

1.4 “**Asterias Patent Rights**” means (a) all patents and patent applications identified in Schedule A, (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, and continued prosecution applications in any jurisdiction, (c) any and all patents that have issued or in the future issue from the foregoing patent applications ((a) and (b)), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of the foregoing patents or patent applications ((a), (b) and (c)), and (e) any similar rights, including so-called pipeline protection, or any importation, revalidation, confirmation or introduction patent or registration patent or patent of additions to any such foregoing patent applications and patents. Asterias Patent Rights shall not include orphan drug rights or any other form of data or regulatory exclusivity.

- 1.5 **“Asterias Product”** means a product that, as of the time a sublicense is awarded by Asterias under the BioTime Patent Rights or the ESI Patent Rights, has been the subject of a diligent development and commercialization program at Asterias with total expenditures of greater than one million dollars.
- 1.6 **“BioTime/ESI Excluded Field”** means
- (a) any and all applications to treat disorders of the nervous system,
 - (b) any and all applications utilizing the immune system to prevent, treat, or cure cancer, and
 - (c) the use of cells comprising, derived from, or manufactured using, human embryonic stem cells or human induced pluripotent stem cells for in vitro assay applications, including but not limited to drug discovery and development, drug monitoring, drug toxicology testing, and consumer products testing.
- 1.7 **“BioTime/ESI Licensed Field”** means all fields of use except those identified in Section 1.6 of this Agreement.
- 1.8 **“BioTime Patent Rights”** means BioTime’s First Set of Patent Rights and BioTime’s Second Set of Patent Rights.
- 1.9 **“BioTime Product”** means a product that, as of the time a sublicense is awarded by BioTime under the Asterias Patent Rights, has been the subject of a diligent development and commercialization program at BioTime with total expenditures of greater than one million dollars.
- 1.10 **“BioTime’s First Set of Patent Rights”** means (a) all patents and patent applications identified in Schedule B (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, and continued prosecution applications in any jurisdiction, (c) any and all patents that have issued or in the future issue from the foregoing patent applications ((a) and (b)), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of the foregoing patents or patent applications ((a), (b) and (c)), and (e) any similar rights, including so-called pipeline protection, or any importation, revalidation, confirmation or introduction patent or registration patent or patent of additions to any such foregoing patent applications and patents. BioTime’s First Set of Patent Rights shall not include orphan drug rights or any other form of data or regulatory exclusivity.

- 1.11 **“BioTime’s Second Set of Patent Rights”** means (a) all patents and patent applications identified in Schedule C, (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, and continued prosecution applications in any jurisdiction, (c) any and all patents that have issued or in the future issue from the foregoing patent applications ((a) and (b)), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of the foregoing patents or patent applications ((a), (b) and (c)), and (e) any similar rights, including so-called pipeline protection, or any importation, revalidation, confirmation or introduction patent or registration patent or patent of additions to any such foregoing patent applications and patents. BioTime’s Second Set of Patent Rights shall not include orphan drug rights or any other form of data or regulatory exclusivity.
- 1.12 **“Confidential Information”** means (i) information relating to the contents of this Agreement, and (ii) information which have been disclosed by one Party to another Party during the term of this Agreement, which if disclosed in writing shall be marked “Confidential”, or if first disclosed otherwise, shall within thirty (30) days of such disclosure be reduced to writing by the disclosing Party and sent to the receiving Party.
- 1.13 **“ESI Patent Rights”** means (a) all of the patents and patent applications identified in Schedule D, (b) all patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, and continued prosecution applications in any jurisdiction, (c) any and all patents that have issued or in the future issue from the foregoing patent applications ((a) and (b)), including utility models, petty patents and design patents and certificates of invention, (d) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, re-examinations and extensions (including any supplementary protection certificates and the like) of the foregoing patents or patent applications ((a), (b) and (c)), and (e) any similar rights, including so-called pipeline protection, or any importation, revalidation, confirmation or introduction patent or registration patent or patent of additions to any such foregoing patent applications and patents. The ESI Patent Rights shall not include orphan drug rights or any other form of data or regulatory exclusivity.
- 1.14 **“Named Affiliate Product”** means a product that, as of the time a sublicense is awarded by Named Affiliate under the Asterias Patent Rights, has been the subject of a diligent development and commercialization program at a Named Affiliate with total expenditures of greater than one million dollars.

1.15 “**Sublicense**” means an agreement into which a Party enters with a Third Party for the purpose of (i) granting certain rights; (ii) granting an option to certain rights; or (iii) forbearing the exercise of any rights, granted to such Party under this Agreement.

1.16 “**Third Party**” means any party other than Asterias, BioTime, or ESI.

ARTICLE 2. GRANT OF LICENSES

2.1 **By Asterias.** Subject to the limitations set forth in this Agreement, Asterias hereby grants to BioTime and ESI, and BioTime and ESI hereby accept a fully-paid, perpetual (subject to Article 7), non-royalty-bearing, world-wide, non-exclusive, sub-licensable (to the extent permitted in Section 2.4(a)) license in, to, and under the Asterias Patent Rights for all purposes in the BioTime/ESI Licensed Field during the Term.

2.2 **By BioTime.** Subject to the limitations set forth in this Agreement, BioTime hereby grants to Asterias, and Asterias hereby accepts, a fully-paid, perpetual (subject to Article 7), non-royalty-bearing, world-wide, non-exclusive, sub-licensable (to the extent permitted in Section 2.4(c)) license in, to, and, under the BioTime Patent Rights for all purposes in the Asterias Licensed Field during the Term.

2.3 **By ESI.** Subject to the limitations set forth in this Agreement, ESI hereby grants to Asterias, and Asterias hereby accepts, a fully-paid, perpetual (subject to Article 7), non-royalty-bearing, world-wide, non-exclusive, sub-licensable (to the extent permitted in Section 2.4(c)) license in, to, and, under the ESI Patent Rights for all purposes in the Asterias Licensed Field during the Term.

2.4 **Limited Sublicense Rights.**

- (a) BioTime and ESI shall have the right to grant Sublicenses under the Asterias Patent Rights to a Third Party only in conjunction with the granting of substantial intellectual property rights that are (i) controlled by BioTime or ESI, as applicable, such as patents, copyrights, trademarks, trade secrets and know-how, other than under the Asterias Patent Rights, and (ii) solely to make, have made, use, sell, offer for sale, and import a BioTime Product or an ESI product. BioTime and ESI shall have no right to grant Sublicenses in the event that no other substantial intellectual property rights controlled by BioTime or ESI are included in a sublicense of the Asterias Patent Rights (“a **BioTime/ESI Naked Sublicense**”), except as provided in Section 2.4(b). BioTime and ESI shall advise Asterias of all Sublicenses granted to Third Parties under this Section 2.4(a). If BioTime or ESI grants a Sublicense, all of the terms and conditions of this Agreement shall apply to the sublicensee to the same extent as they apply to BioTime and ESI for all purposes. BioTime and ESI guarantee and assume responsibility for the performance of all obligations so imposed on such sublicensee by reason of operation of any such Sublicense.

- (b) BioTime and ESI shall have the right, only for a period of one year following the Effective Date of this Agreement, to grant BioTime/ESI Naked Sublicenses solely to the Affiliates identified in Schedule E (the “Named Affiliates”). For the avoidance of doubt, such BioTime/ESI Naked Sublicenses shall not be required to relate to a BioTime Product or an ESI product., nor shall they be required to contain a grant to additional rights controlled by BioTime or ESI. BioTime and ESI shall advise Asterias of all Sublicenses granted to Named Affiliates under this Section 2.4(b). If BioTime or ESI grants a Sublicense to a Named Affiliate, all of the terms and conditions of this Agreement shall apply to the Named Affiliate to the same extent as they apply to BioTime and ESI for all purposes. BioTime and ESI guarantee and assume responsibility for the performance of all obligations so imposed on such Named Affiliate by reason of operation of any such sublicense. Any BioTime/ESI Naked Sublicense granted to a Named Affiliate during the one-year period following the Effective Date shall remain in effect notwithstanding whether the Named Affiliate subsequently (i.e., after the one-year period following the Effective Date) is no longer a Named Affiliate. Any BioTime/ESI Naked Sublicenses shall provide that the Named Affiliate sublicensee may grant further sublicenses under the Asterias Patent Rights to a Third Party only in conjunction with the granting of substantial intellectual property rights that are (i) controlled by such Named Affiliate, as applicable, such as patents, copyrights, trademarks, trade secrets and know-how, other than under the Asterias Patent Rights, and (ii) solely to make, have made, use, sell, offer for sale, and import a Named Affiliate Product. Named Affiliates shall have no right to grant licenses in the event that no other substantial intellectual property rights controlled by such Named Affiliate are included in a sublicense of the Asterias Patent Rights.
- (c) Asterias shall have the right to grant Sublicenses under the BioTime Patent Rights and/or the ESI Patent Rights to a Third Party only in conjunction with the granting of substantial intellectual property rights that are (i) controlled by Asterias, such as patents, copyrights, trademarks, trade secrets and know-how, other than under the BioTime Patent Rights and (ii) solely to make, have made, use, sell, offer for sale, and import Asterias Product. Asterias shall have no right to grant licenses in the event that no other substantial intellectual property rights controlled by Asterias are included in a sublicense of the BioTime Patent Rights. Asterias shall advise BioTime of all Sublicenses granted to Third Parties under this Section 2.4(c). If Asterias grants a Sublicense, all of the terms and conditions of this Agreement shall apply to the sublicensee to the same extent as they apply to Asterias for all purposes. Asterias guarantees and assumes responsibility for the performance of all obligations so imposed on such sublicensee by reason of operation of any such Sublicense.
- (d) Notwithstanding the limitations on sublicensing included in Sections 2.4(a) and (b), BioTime and ESI shall have the right to grant rights to use the Asterias Patent Rights to Third Parties in connection with contracting with such Third Parties to (i) provide product marketing and distribution services to BioTime or ESI, or (ii) manufacture for BioTime or ESI products for sale by BioTime, ESI, or a Third Party pursuant to the foregoing clause (i).

(e) Notwithstanding the limitations on sublicensing included in Sections 2.4(c), Asterias shall have the right, to grant rights to use the BioTime Patent Rights to Third Parties in connection with contracting with such Third Parties to (i) provide product marketing and distribution services to Asterias, or (ii) manufacture for Asterias products for sale by Asterias or a Third Party pursuant to the foregoing clause (i).

2.5 **Exclusive Option.** Subject to the limitations set forth in this Agreement, Asterias hereby grants to BioTime, and BioTime hereby accepts, a fully-paid exclusive option, exercisable within ninety (90) days of notice from Asterias that the applicable Asterias Patent Rights have become available, to enter into an exclusive license in, to, and under the Asterias Patent Rights in that BioTime/ESI Excluded Field described in Section 1.6(c) for all purposes during the Term. Asterias and BioTime shall negotiate in good faith and agree upon commercially reasonable terms for such license.

2.6 **Limitations.** Except as expressly set forth in this Agreement, nothing contained in this Agreement shall be deemed to restrict in any manner whatsoever the right of: (a) Asterias to exercise its rights under the Asterias Patents and to grant licenses or sublicenses to third parties for any purpose, including in the BioTime/ESI Licensed Field, under the Asterias Patent Rights; (b) BioTime and ESI to exercise their rights under the BioTime Patents and ESI Patents, as applicable, and to grant licenses or sublicenses to Third Parties for any purpose, including in the Asterias Licensed Field, under the BioTime Patents and the ESI Patents; (c) Asterias to enforce Asterias Patents against infringing activities by Third Parties; and (d) BioTime and ESI to enforce BioTime Patents and ESI patents against infringing activities by Third Parties.

2.7 **No Implied Licenses.** Except as explicitly set forth in this Agreement, neither Party grants under its intellectual property (including patents) any license, express or implied, to the other Party. All other rights not explicitly granted herein from a Party to another are retained by such Party.

ARTICLE 3. OBLIGATIONS UNDER CERTAIN PRIOR AGREEMENTS

3.1 **Agreements Associated with Asterias Patent Rights.** Asterias owns or controls certain patents and patent applications as provided herein in Schedule A through a certain Asset Contribution Agreement with BioTime, Inc., and Geron Corporation, dated January 4, 2013 (the “**Asset Contribution Agreement**”), and is subject to certain obligations relating to those patents and patent applications under a certain Royalty Agreement with Geron Corporation, dated October 1, 2013 (the “**Royalty Agreement**”).

Copies of the Asset Contribution Agreement and the Royalty Agreement have been provided to BioTime. As a condition to the grant of rights in Section 2.1 of this Agreement, BioTime hereby agrees to be and is bound by all the terms and conditions of the Asset Contribution Agreement and the Royalty Agreement, as imposed upon or required of or applicable to a sublicensee under the Asset Contribution Agreement and the Royalty Agreement, including without limitation Article 2 (Royalties) of the Royalty Agreement (for so long as BioTime remains an Affiliate of Asterias).

- 3.2 **Further Considerations.** None of the Parties shall have any obligation to the other Parties with respect to any license fees, milestone payments, royalties, or any other financial consideration received by a Party pursuant to a sublicense or license.

ARTICLE 4. CONSIDERATION

The consideration for the rights and licenses granted herein under Articles 2 and 3 consists of (i) the substantial benefits derived by BioTime, ESI and Asterias through the cross-licenses provided in this Agreement, and (ii) the consummation of the stock true-up transactions by and among the Parties and their parent entity as provided by certain Share Exchange Agreement dated February 16, 2016.

ARTICLE 5. PATENT MATTERS

5.1 Patent Prosecution and Maintenance by Asterias.

- (a) Subject to Section 5.1(c), Asterias shall be solely responsible for filing, prosecuting, and maintaining all Asterias Patent Rights. Asterias shall be responsible for all costs associated with filing, prosecuting, and maintaining such Asterias Patent Rights.
- (b) BioTime and its sublicensees under this Agreement, including ESI, shall reasonably cooperate with Asterias with respect to providing such information or taking such other actions as may be mutually agreed by the Parties in writing in order to protect each Party's rights in the Asterias Patent Rights in connection with requirements or provisions of applicable laws in local jurisdictions.
- (c) To the extent permitted by Asterias's contractual obligations to Third Parties, including without limitations obligations under the certain Exclusive License and Alliance Agreement to GE Healthcare UK Limited, dated June 29, 2009, and all its subsequent amendments, in the event that Asterias decides to forego prosecution or maintenance of a patent or patent application included in Asterias Patent Rights, Asterias shall use commercially reasonable efforts to provide written notice to BioTime at least thirty (30) days prior to the final deadline for taking a necessary step to continue to prosecute or maintain the applicable Patent (such notice, the "Assumption Notice"). Upon receipt of such Assumption Notice, BioTime will have the option of assuming responsibility for such prosecution and maintenance at its sole expense. If BioTime elects to assume responsibility for prosecution and maintenance pursuant to this Section 5.1(c), BioTime shall notify Asterias in writing of such election within thirty (30) days (or such shorter period requested where the final deadline is in less than thirty (30) days or Asterias will be required to incur significant expense to continue or maintain a Patent) following such Assumption Notice from Asterias, and Asterias shall either:

- (i) withdraw its decision to abandon and continue prosecuting or maintaining such patent at its expense; or
- (ii) assign its entire right, title, and interest in such patent to BioTime; provided that Asterias shall:
 - (A) retain (and is hereby granted) a license with respect to the applicable patent consistent with Section 2.2, and
 - (B) have no other obligation thereby to assign any related patents or patent applications, including any patents or patent applications in such assigned patent's family.

For avoidance of doubt, if BioTime does not notify Asterias of its election in writing within thirty (30) days following the applicable Assumption Notice from Asterias (or such shorter period as specified in Section 5.1(c)), BioTime shall be deemed to have elected to not assume responsibility for prosecution and maintenance pursuant to this Section 5.1 and Asterias may abandon such patent or decide not to abandon such patent.

5.2 **Patent Prosecution and Maintenance by BioTime.**

- (a) Subject to Section 5.2(c), BioTime shall be solely responsible for filing, prosecuting, and maintaining all BioTime Patent Rights. BioTime shall be responsible for all costs associated with filing, prosecuting, and maintaining such BioTime Patent Rights.
- (b) Asterias and its sublicensees under this Agreement shall reasonably cooperate with BioTime with respect to providing such information or taking such other actions as may be mutually agreed by the Parties in writing in order to protect each Party's rights in the BioTime Patent Rights in connection with requirements or provisions of applicable laws in local jurisdictions.
- (c) To the extent permitted by BioTime's contractual obligations to Third Parties, and in the event that BioTime decides to forego prosecution or maintenance of a patent or patent application included in BioTime Patent Rights, BioTime shall use commercially reasonable efforts to provide an Assumption Notice to Asterias. Upon receipt of such Assumption Notice, Asterias will have the option of assuming responsibility for such prosecution and maintenance at its sole expense. If Asterias elects to assume responsibility for prosecution and maintenance pursuant to this Section 5.2(c), Asterias shall notify BioTime in writing of such election within thirty (30) days (or such shorter period requested where the final deadline is in less than thirty (30) days or BioTime will be required to incur significant expense to continue or maintain a Patent) following such Assumption Notice from BioTime, and BioTime shall either:

- (i) withdraw its decision to abandon and continue prosecuting or maintaining such patent at its expense; or
- (ii) assign its entire right, title, and interest in such patent to Asterias; provided that BioTime shall:
 - (A) retain (and is hereby granted) a license with respect to the applicable patent consistent with Section 2.1, and
 - (B) have no other obligation thereby to assign any related patents or patent applications, including any patents or patent applications in such assigned patent's family.

For avoidance of doubt, if Asterias does not notify BioTime of its election in writing within thirty (30) days following the applicable Assumption Notice from BioTime (or such shorter period as specified in Section 5.2(c)), Asterias shall be deemed to have elected to not assume responsibility for prosecution and maintenance pursuant to this Section 5.2 and BioTime may abandon such patent or decide not to abandon such patent.

5.3 Patent Prosecution and Maintenance by ESI.

- (a) Subject to Section 5.3(c), ESI shall be solely responsible for filing, prosecuting, and maintaining all ESI Patent Rights. ESI shall be responsible for all costs associated with filing, prosecuting, and maintaining such ESI Patent Rights.
- (b) Asterias and its sublicensees under this Agreement shall reasonably cooperate with ESI with respect to providing such information or taking such other actions as may be mutually agreed by the Parties in writing in order to protect each Party's rights in the ESI Patent Rights in connection with requirements or provisions of applicable laws in local jurisdictions.
- (c) To the extent permitted by ESI's contractual obligations to Third Parties, and in the event that ESI decides to forego prosecution or maintenance of a patent or patent application included in ESI Patent Rights, ESI shall use commercially reasonable efforts to provide an Assumption Notice to Asterias. Upon receipt of such Assumption Notice, Asterias will have the option of assuming responsibility for such prosecution and maintenance at its sole expense. If Asterias elects to assume responsibility for prosecution and maintenance pursuant to this Section 5.3(c), Asterias shall notify ESI in writing of such election within thirty (30) days (or such shorter period requested where the final deadline is in less than thirty (30) days or ESI will be required to incur significant expense to continue or maintain a Patent) following such Assumption Notice from ESI, and ESI shall either:
 - (i) withdraw its decision to abandon and continue prosecuting or maintaining such patent at its expense; or

- (ii) assign its entire right, title, and interest in such patent to Asterias; provided that ESI shall:
 - (A) retain (and is hereby granted) a license with respect to the applicable patent consistent with Section 2.1, and
 - (B) have no other obligation thereby to assign any related patents or patent applications, including any patents or patent applications in such assigned patent's family.

For avoidance of doubt, if Asterias does not notify ESI of its election in writing within thirty (30) days following the applicable Assumption Notice from ESI (or such shorter period as specified in Section 5.3(c)), Asterias shall be deemed to have elected to not assume responsibility for prosecution and maintenance pursuant to this Section 5.3 and ESI may abandon such patent or decide not to abandon such patent.

5.4 **Patent Infringement by Third Parties.**

- (a) If a Party learns of any infringement of any patent licensed under this Agreement, then that Party shall promptly provide the other Parties with reasonable evidence of infringement in writing.
- (b) As among Asterias, BioTime, and ESI with regard to Asterias Patent Rights, Asterias will have the right, but not the obligation to bring a patent infringement suit. BioTime and ESI shall cooperate with Asterias in litigation proceedings instituted hereunder but at the expense of Asterias. Asterias will control litigation, except that BioTime or ESI may at its own expense join in the suit. BioTime and ESI may be represented by counsel of their choice and at their sole expense in any suit brought by Asterias. Any recovery or settlement received in connection with any suit with regard to Asterias Patent Rights will be awarded to Asterias and may be shared in accordance with any future agreement entered into by the Parties. Without limiting the foregoing, BioTime will have the right, but not the obligation, to request for Asterias to commence and prosecute patent infringement lawsuits with respect to certain Asterias Patent Rights pursuant to subsection (e) of this Section 5.4.
- (c) As among BioTime, ESI, and Asterias with regard to BioTime Patent Rights, BioTime will have the right, but not the obligation to bring a patent infringement suit. Asterias shall cooperate with BioTime in litigation proceedings instituted hereunder but at the expense of BioTime. BioTime will control litigation, except that Asterias may at its own expense join in the suit. Asterias may be represented by counsel of its choice and at Asterias's sole expense in any suit brought by BioTime. Any recovery or settlement received in connection with any suit with regard to BioTime Patent Rights will be awarded to BioTime and may be shared in accordance with any future agreement entered into by the Parties.
- (d) As among BioTime, ESI, and Asterias with regard to ESI Patent Rights, ESI will have the right, but not the obligation to bring a patent infringement suit. Asterias shall cooperate with ESI in litigation proceedings instituted hereunder but at the expense of ESI. ESI will control litigation, except that Asterias may at its own expense join in the suit. Asterias may be represented by counsel of its choice and at Asterias's sole expense in any suit brought by ESI. Any recovery or settlement received in connection with any suit with regard to ESI Patent Rights will be awarded to ESI and may be shared in accordance with any future agreement entered into by the Parties.

(e) Subject to Section 5.4(f) below, BioTime will have the right, but not the obligation, to request for Asterias to commence and prosecute one or more patent infringement lawsuits or administrative proceedings against one or more third parties with respect to the Asterias Patent Rights identified in Schedule F (“Request For Mandatory Enforcement”). BioTime may exercise such right by submitting to Asterias a written request identifying the alleged infringing party or parties and the basis for the infringement claim. BioTime shall also provide Asterias with such additional information concerning the basis for the claim of infringement as Asterias may reasonably request, provided that such information (i) is in BioTime’s possession or control or can be obtained by BioTime without unreasonable cost, expense, or delay, and (ii) is necessary for the initiation or prosecution of the case. Upon BioTime’s Request For Mandatory Enforcement, Asterias agrees that it shall, pursuant to the terms of this paragraph and subject to Section 5.4(f), commence and prosecute one or more patent infringement lawsuits against the alleged infringing party or parties identified by BioTime based on the infringement claim provided by BioTime. BioTime shall also have the right to request for Asterias to commence and prosecute an appeal, or to respond to any appeal filed by any third party, of any court order or judgment arising from any lawsuit instituted at BioTime’s Request For Mandatory Enforcement or by Asterias pursuant to this Agreement with respect to the Asterias Patent Rights identified in Schedule F (“Request For Mandatory Appeal”). Upon BioTime’s Request For Mandatory Appeal, Asterias agrees that it shall, pursuant to the terms of this paragraph and subject to Section 5.4(f), commence, prosecute or otherwise respond to an appeal so requested by BioTime. Such litigations and appeals will be conducted by counsel selected by Asterias after reasonable consultation with BioTime. If mutually agreed by the Parties, and provided that no conflict of interest exists that cannot be resolved or waived, such counsel may jointly represent BioTime and Asterias in connection with such litigations and appeals. In the alternative, BioTime may be separately represented by another counsel of BioTime’s choice. BioTime and Asterias shall cooperate in a prompt and timely manner, at BioTime’s expense, in any litigations and appeal proceedings initiated pursuant to this subsection (e), including, without limitation, cooperating in good faith in prosecuting, defending, and settling such litigations and appeal proceedings. BioTime shall provide reimbursement for all costs and expenses incurred by Asterias in connection with any lawsuit brought pursuant to this subsection (e), and any appeal thereof to the extent that BioTime has first provided a Request for Mandatory Appeal. Costs and expenses that are reimbursable pursuant to this subsection (e) shall include, without limitation, all court costs, litigation expenses, legal fees, costs of litigation support services, reimbursement for reasonable lost management productivity, and any other incidental costs incurred by Asterias as a result of such legal proceedings. Any recovery or settlement received in connection with any such proceedings will belong entirely to BioTime and Asterias will pay over or otherwise assign to BioTime all of Asterias’ right, title and interest thereto. Asterias shall not, without BioTime’s prior written consent, enter into any settlement or compromise of any claim, or release any third party from any claim or counterclaim, brought at BioTime’s request pursuant to this subsection (e). For clarity, nothing herein shall limit the rights of Asterias pursuant to subsection (b) of this Section 5.4, and Asterias expressly reserves the right to, at any time and in its sole discretion and expense, initiate patent infringement suits with respect to any of the Asterias Patent Rights identified in Schedule F without the prior request or involvement of BioTime.

(f) Following a Request For Mandatory Enforcement or a Request For Mandatory Appeal by BioTime pursuant to Section 5.4(e), Asterias may, in its sole discretion and in lieu of initiating and carrying out the legal proceedings contemplated by Section 5.4(e), or in lieu of defending against any counterclaims or counter lawsuits brought against Asterias as a result of any lawsuit or appeal proceeding contemplated by Section 5.4(e), elect to assign ownership of any or all of the Asterias Patent Rights identified in Schedule F to BioTime. Any such assignment would be subject to a retained license by Asterias (and its licensees) to continue using and practicing the applicable Asterias Patent Rights in the same manner in which they were using and practicing such Asterias Patent Rights prior to the assignment. In the event that Asterias elects to carry out such an assignment, the Parties would diligently and in good faith negotiate commercially reasonable assignment documentation. Following the assignment, Asterias would have no further responsibility for initiating and carrying out legal proceedings involving the assigned Asterias Patent Rights, unless otherwise agreed in the applicable assignment documentation.

5.5 **Allegation of Infringement by Third Parties.** Each Party shall promptly notify the other in writing upon receipt of a written allegation of infringement of any Third Party patent where that allegation is based solely and directly based on the exercise of either Party or their permitted licensees of any rights pursuant to this Agreement. Each Party shall be solely responsible for responding to any claim or allegation of infringement made by a Third Party against such Party based on its post-Effective-Date actions or activities.

5.6 **Patent Marking.** Each Party shall mark all products made, used or sold under the licenses granted under terms of this Agreement, or their containers, in accordance with the applicable patent marking laws.

ARTICLE 6. REPRESENTATIONS AND WARRANTIES

6.1 **By Asterias.** Asterias represents, warrants and covenants that, as of the Effective Date:

(a) Asterias has delivered a true and complete copy of each of the Asset Contribution Agreement and the Royalty Agreement to BioTime;

- (b) The execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate action on the part of Asterias;
- (c) Asterias is, to its knowledge, the true and lawful exclusive owner of the Asterias Patent Rights set forth on Schedule A, including all rights and interests herein granted;
- (d) Asterias has the right and authority to grant the rights and licenses granted to BioTime under this Agreement;
- (e) Asterias has not granted any right, license or interest in, to or under the Asterias Patent Rights inconsistent with the rights, license and interests granted to BioTime in this Agreement, and Asterias shall not grant during the term of this Agreement any right, license or interest in, to or under the Asterias Patent Rights that is inconsistent with the rights, licenses and interests granted to BioTime hereunder; and
- (f) There is no pending or, to Asterias's knowledge, threatened Third Party lawsuit, claim, action or demand against Asterias that relates to the use of any product or practice of any method under the Asterias Patent Rights.

6.2 **By BioTime.** BioTime represents, warrants and covenants that, as of the Effective Date:

- (a) BioTime is the true and lawful exclusive owner of the BioTime Patent Rights set forth on Schedules B and C, including all rights and interests herein granted;
- (b) The execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate action on the part of BioTime;
- (c) BioTime has the right and authority to grant the rights and licenses granted to Asterias under this Agreement;
- (d) BioTime has not granted any right, license or interest in, to or under the BioTime Patent Rights inconsistent with the rights, license and interests granted to Asterias in this Agreement, and BioTime shall not grant during the term of this Agreement any right, license or interest in, to or under the BioTime Patent Rights that is inconsistent with the rights, licenses and interests granted to Asterias hereunder; and
- (e) There is no pending or, to BioTime's knowledge, threatened third party lawsuit, claim, action or demand against BioTime that relates to the use of any product or practice of any method under the BioTime Patent Rights.

6.3 **By ESI.** ESI represents, warrants and covenants that, as of the Effective Date:

- (a) ESI is the true and lawful exclusive owner of the ESI Patent Rights set forth on Schedule D, including all rights and interests herein granted;

- (b) The execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate action on the part of ESI;
- (c) ESI has the right and authority to grant the rights and licenses granted to Asterias under this Agreement;
- (d) ESI has not granted any right, license or interest in, to or under the ESI Patent Rights inconsistent with the rights, license and interests granted to Asterias in this Agreement; and
- (e) There is no pending or, to ESI's knowledge, threatened third party lawsuit, claim, action or demand against ESI that relates to the use of any product or practice of any method under the ESI Patent Rights.

6.4 **No Implied Warranties.** Nothing in this Agreement is or shall be construed as:

- (a) a warranty or representation as to the validity or scope of the Asterias Patent Rights, the BioTime Patent Rights, or the ESI Patent Rights;
- (b) an obligation to bring or prosecute actions or suits against third parties for infringement of the Asterias Patent Rights, the BioTime Patent Rights, or the ESI Patent Rights; or
- (c) granting by implication, estoppel, or otherwise any licenses or rights under patents or other rights of Asterias, BioTime, ESI, or Third Parties other than expressly provided herein.

6.5 **Disclaimer of Warranty; Limitation of Liability.** Except as explicitly, set for the herein, no party makes any warranty, express or implied, with respect to the patents licensed hereunder; including any warranty of merchantability or fitness for any particular purpose or that the licensed patents do not infringe any patents or as to the scope of protection that may be afforded by any patent rights licensed hereunder. Under no circumstances shall any party be liable for special, incidental or consequential damages of any kind, even if advised of the possibility of such damages.

ARTICLE 7. TERM AND TERMINATION OF LICENSE

7.1 **Term.** The term of this Agreement shall begin on the Effective Date and shall expire on the expiration of the last claim within the Asterias Patents Rights or BioTime Patent Rights licensed or sublicensed hereunder, unless earlier terminated in accordance with this [Article 7](#).

7.2 **Termination by Asterias.**

- (a) Asterias shall have the right to terminate the license granted to BioTime and ESI under [Article 2](#) and its associated obligations, if BioTime, ESI, or sublicensees/licensees materially breach this Agreement, and fail to cure such breach within thirty (30) days after written notice from Asterias specifying the nature of such breach.

- (b) Asterias shall have the right to terminate the license granted to it under Article 2, and its associated rights, in whole or as to any portion of the BioTime Patent Rights or the ESI Patent Rights upon written notice to BioTime and/or ESI.

7.3 **Termination by BioTime or ESI.**

- (a) BioTime or ESI shall have the right to terminate the license granted to Asterias under Article 2 and its associated obligations, if Asterias or sublicensees/licensees materially breach this Agreement, and fail to cure such breach within thirty (30) days after written notice from BioTime or ESI, as applicable, specifying the nature of such breach.
- (b) BioTime shall have the right to terminate the license granted to it under Article 2, and its associated rights, in whole or as to any portion of the Asterias Patent Rights upon written notice to Asterias.

7.4 **Equitable Relief.** The Parties acknowledge that monetary damages may not be a sufficient remedy for material breach of this Agreement and that the non-breaching Party shall be entitled, without waiving any other rights or remedies, to such injunctive or equitable relief as may be deemed proper by a court of competent jurisdiction including specific performance of the other Party's obligations hereunder.

7.5 **Sublicenses/Licenses.** Unless terminated pursuant to Sections 7.2 or 7.3, the licenses granted to the non-breaching Party under this Agreement, including any sublicensees/licensees provided for under this Agreement entered into by such Party, shall run to the end of the enforceable term of the relevant patents licensed pursuant to this Agreement. The sublicenses/licenses provided for under this Agreement entered into by the breaching Party may be either terminated or allowed to survive termination of the breaching Party's licenses hereunder at the sole discretion of the non-breaching Party; provided however, that any BioTime/ESI Naked Sublicenses granted by BioTime to a Named Affiliate pursuant to Section 2.4(b) of this Agreement shall survive termination of this Agreement.

7.6 **Survival on Expiration.** The following shall survive the expiration of this Agreement – Articles 1, 8, 9, and Sections 2.4(b)(as applicable), 7.5, 7.6, 10.1-10.4, and 10.6-10.9. Termination or expiration of this Agreement for any reason shall be without prejudice to any rights that shall have accrued to the benefit of a Party prior to such termination or expiration. Such termination or expiration shall not relieve a Party from obligations that are expressly indicated to survive the termination or expiration of this Agreement.

ARTICLE 8. NOTICES

8.1 **Correspondence.** Any notice or payment required to be given to either Party under this Agreement shall be deemed to have been properly given and effective: (a) on the date of delivery if delivered in person, or (b) three (3) days after mailing if mailed by first-class or certified mail, postage paid, to the respective addresses given below, or to such other address as is designated by written notice given to the other party.

If sent to Asterias:

Asterias Biotherapeutics, Inc.
6300 Dumbarton Circle
Fremont, CA 94555
Attention: Pedro Lichtinger, President and CEO

With a copy to:

Dentons US LLP,
1221 Avenue of the Americas,
New York, NY 10020-1089
Attention: Jeffrey A. Baumel

If sent to BioTime:

BioTime, Inc.
1301 Harbor Bay Parkway
Alameda, California 94502
Attention:Mr. Adi Mohanty, CEO

If sent to ESI:

ES Cell International Pte Ltd
1301 Harbor Bay Parkway
Alameda, California 94502
Attention:Dr. Michael D. West, CEO

ARTICLE 9. CONFIDENTIALITY AND PUBLICATION

9.1 **Treatment of Confidential Information.** Each Party agrees that it will keep the Confidential Information of the other Party in strict confidence, applying the same degree of care that it applies to protect its own Confidential Information from disclosure to others, and that it will not deliberately disclose, communicate or publish any of the Confidential Information to any person or entity, nor use any of the Confidential Information it receives, acquires, or obtains from the disclosing Party except as specifically provided for in this Agreement without first obtaining the written consent of the disclosing Party. The Parties shall employ all reasonable efforts to maintain as confidential and not reveal or disclose to any third party any Confidential Information disclosed for the purposes of this Agreement without first obtaining the written consent of the disclosing Party. In addition, the parties agree not to use, except as needed for the purposes of this Agreement, any Confidential Information without first obtaining the written consent of the disclosing Party.

- 9.2 **Term of Obligation.** The obligation to maintain the Confidential Information of the disclosing Party shall continue for a period ending five (5) years from the termination or expiration date of this Agreement, unless otherwise agreed to by the Parties.
- 9.3 **Exceptions.** The foregoing restriction shall not apply to such of the Confidential Information that the receiving Party can document: (i) at the time of the disclosure was publicly available, or after the disclosure becomes a part of the public domain through no act or omission by the receiving Party; (ii) was, prior to the time of the disclosure, in the receiving Party's possession and not subject to any obligation to a third party of non-disclosure, as shown by the receiving Party's written records; (iii) was subsequently received by the receiving Party from a Third Party free of any obligation of non-disclosure imposed on or by the Third Party; or (iv) was developed by the receiving Party independently of, and without reference to Confidential Information.
- 9.4 **Permitted Disclosures.** (a) Each Party may disclose Confidential Information received from the other Party to Third Parties having a need to know the Confidential Information for a legitimate business purpose of the receiving Party, provided any such Third Party executes a non-disclosure agreement with terms at least as restrictive as those herein. Each Party shall immediately advise their employees, and others to whom the other Party's Confidential Information is disclosed, of their strict obligations under this Agreement. Each Party shall take all reasonably necessary steps to insure that the confidentiality of the Confidential Information is securely maintained and that the Confidential Information is used only as permitted under this Agreement. Each Party may disclose Confidential Information received from the other Party as is required by a valid court order to be disclosed, provided, however, that the receiving Party has provided prompt written notice to the disclosing Party, made a reasonable effort to obtain a protective or other order maintaining the confidentiality of disclosing Party's Confidential Information, and taken reasonable steps to enable the disclosing Party to seek a protective order or otherwise prevent disclosure of such Confidential Information. Any mutually agreed public statement as permitted in Section 10.2 below that may include Confidential Information shall constitute a permitted disclosure.
- (b) Notwithstanding anything to the contrary in this Agreement, including, without limitation the terms and conditions included in Sections 9.1 through 9.4(a), (i) a Party shall be entitled to disclose to end users of products and services any non-confidential technical, scientific and other information reasonably necessary for the end user to use such products and services; and (2) the Parties may disclose the non-confidential terms of this Agreement to investors or potential investors, potential business partners, potential sublicensees and assignees, potential co-developers, manufacturers, marketers, or distributors of products and processes, and in any prospectus, offering, memorandum, or other document or filing required by applicable securities laws or other applicable law or regulation.

(c) Each Party shall provide the other Party with reasonable advance written notice of any other press release or other public disclosure of this Agreement; provided, that the Parties acknowledge that a Party may be required to make immediate or prompt disclosure of the occurrence of material events concerning the Agreement, such as (by way of example only) an action, order, or determination by the FDA or other regulatory agency or authority. A Party may summarize this Agreement, excluding confidential portions in any registration statement, prospectus, or report filed with the Securities and Exchange Commission ("SEC") or any other securities regulatory agency or authority. If a Party determines that it is required to file a copy of this Agreement or any portion of this Agreement with the SEC or any other securities regulatory agency or authority, the Parties shall confer and determine which portions, if any, of this Agreement should be subject to an application requesting confidential treatment, and a Party shall file this Agreement or any relevant portion subject to such application in accordance with the applicable rules and regulations of the SEC or such other agency or authority; provided, that any portion of this Agreement that is initially redacted from such filing under such application may be filed in its entirety and otherwise disclosed in a registration statement, prospectus, or report if so required by the SEC or other agency or authority.

(d) This Agreement may be disclosed by a Party under a confidentiality agreement, without the prior consent of the other Party, to any actual or prospective investor, lender, underwriter, or acquirer of the Party or any parent or subsidiary of the Party, or any actual or potential acquirer of the portion of the business to which this Agreement relates. Additionally, the text of any press release, shareholders' report or other communication to be published or disclosed in any way by or on behalf of a Party by or in the media concerning the other Party, the subject matter of this Agreement or concerning this Agreement itself, other than as required by law or by any regulatory or government authority or the rules of the SEC or any other regulatory agency or authority, or any securities exchange, shall be submitted to the other Party at least five (5) business days in advance of publication or disclosure for approval. Such approval not to be unreasonably withheld; provided, that disclosure that repeats or restates prior public disclosure permitted by this Agreement need not be submitted to a Party for approval.

9.5 **Injunctive Relief.** The Parties acknowledge and agree that any breach of the confidentiality obligations imposed by this Article 9 will constitute immediate and irreparable harm to the disclosing Party and/or its successors and assigns, which cannot adequately and fully be compensated by money damages and will warrant, in addition to all other rights and remedies afforded by law, injunctive relief, specific performance, and/or other equitable relief. The disclosing Party's rights and remedies hereunder are cumulative and not exclusive. The disclosing Party shall also be entitled to receive from the receiving Party the costs of enforcing this Article 9, including reasonable attorneys' fees and expenses of litigation.

9.6 **Effect of Termination.** Upon termination or expiration of this Agreement, or upon the request of the disclosing Party at any time, the receiving Party shall promptly return to the disclosing Party, at its request, all copies of Confidential Information received from the disclosing Party, and shall return or destroy, and document the destruction of, all summaries, abstracts, extracts, or other documents which contain any Confidential Information of the disclosing Party in any form.

9.7 **Survival.** The obligations of the Parties under this Article 9 shall survive any expiration or termination of this Agreement.

ARTICLE 10. MISCELLANEOUS PROVISIONS

- 10.1 **Assignability.** No Party shall assign this Agreement or the licenses granted herein except (i) with the prior written consent of the other Parties; (ii) as part of a sale or transfer of all or substantially all of the entire business of the Party relating to this Agreement, or (iii) to an Affiliate; and in each case of any assignment under subsections (ii) and (iii) in this paragraph, provided that the acquirers of rights in this Agreement and the assigning Party shall notify the other Parties to this Agreement no later than thirty days after any such assignment of this Agreement.
- 10.2 **Use of Names.** No Party shall use the name, trade name, trademark, or the logo of any other Party in any publicity, news release, or other announcement or comment without the prior written consent of the other Party, except as required by law.
- 10.3 **No Waiver.** No waiver by any Party of any breach or default of any covenant or agreement set forth in this Agreement shall be deemed a waiver as to any subsequent and/or similar breach or default.
- 10.4 **Governing Laws.** This agreement shall be interpreted and construed in accordance with the laws of the state of Delaware, but the scope and validity of any patent or patent application shall be governed by the applicable laws of the country of the patent or patent application.
- 10.5 **Force Majeure.** A Party to this Agreement may be excused from any performance required herein if such performance is rendered impossible or unfeasible due to any catastrophe or other major event beyond its reasonable control, including, without limitation, war, riot, and insurrection; laws, proclamations, edicts, ordinances, or regulations; strikes, lockouts, or other serious labor disputes; and floods, fires, explosions, or other natural disasters. When such events have abated, the non-performing Party's obligations herein shall resume.
- 10.6 **Headings.** The headings of the several 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.
- 10.7 **Entire Agreement.** This Agreement and the certain Share Transfer Agreement dated February 16, 2016 embodies the entire understanding of the parties and supersedes all previous communications, representations or understandings, either oral or written, between the parties relating to the subject matter hereof.

- 10.8 **Amendments.** No amendment or modification of this Agreement shall be valid or binding on the parties unless made in writing and signed on behalf of each Party.
- 10.9 **Severability.** In the event that any of the provisions contained in this Agreement is held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement, and this Agreement shall be construed as if the invalid, illegal, or unenforceable provisions had never been contained in it.

[The next page is the signature page.]

IN WITNESS WHEREOF, Asterias, BioTime and ESI have executed this Agreement, in triplicate originals, by their respective and duly authorized officers on the day and year written.

Asterias Biotherapeutics, Inc.

By: /s/Pedro Lichtinger
Pedro Lichtinger

Title: President and Chief Executive Office

BioTime, Inc.

By: /s/Michael D. West
Michael D. West

Title: Co-Chief Executive Officer

By: /s/Aditya Mohanty
Aditya Mohanty

Title: Co-Chief Executive Officer

ES Cell International Pte Ltd

By: /s/Aditya Mohanty

Title: CEO

Schedule A

List of Patents and Patent Application - Asterias Patent Rights

FILE #	TITLE	COUNTRY	STATUS	APPLICATION #	DATE FILED
061/005	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	United States of America	Issued	09/530,346	29-Aug-00
061/006D	Feeder-Free Culture Method for Embryonic Stem Cells	United States of America	Issued	10/330,873	24-Dec-02
061/235AU	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	Australia	Issued	1277199	23-Oct-98
061/236CA	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	Canada	Issued	2,307,807	23-Oct-98
061/238JP	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	Japan	Issued	2000517062	23-Oct-98
061/239JP D	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	Japan	Issued	2000185486	23-Oct-98
090/004D	Use of TGF Beta Superfamily Antagonists to Make Dopaminergic Neurons from Embryonic Stem Cells	United States of America	Issued	11/010,230	10-Dec-04
090/005C	Neural Cell Populations from Primate Pluripotent Stem Cells	United States of America	Issued	12/477,726	3-Jun-09
090/006C	Use of TGF Beta Superfamily Antagonists and Neurotrophins to Make Neurons from Embryonic Stem Cells	United States of America	Issued	12/500,998	10-Jul-09

090/007C	Neural Cell Populations from Primate Pluripotent Stem Cells	United States of America	Pending	13/561,296	30-Jul-12
091/004	cDNA Libraries Reflecting Gene Expression During Growth and Differentiation of Human Pluripotent Stem Cells	United States of America	Issued	09/688,031	10-Oct-00
091/009C	Use of Human Embryonic Stem Cells for Drug Screening and Toxicity Testing	United States of America	Issued	10/039,956	23-Oct-01
091/011P	Embryonic Stem Cells Having Genetic Modifications	United States of America	Issued	10/948,956	24-Sep-04
091/030P	Culture System for Rapid Expansion of Human Embryonic Stem Cells	United States of America	Issued	10/235,094	4-Sep-02
091/031D	Medium for Growing Human Embryonic Stem Cells	United States of America	Issued	10/873,922	21-Jun-04
091/033P	Medium for Growing Human Embryonic Stem Cells	United States of America	Issued	10/949,181	24-Sep-04
091/037C	Culture System for Rapid Expansion of Human Embryonic Stem Cells	United States of America	Issued	12/170,219	9-Jul-08
091/038C	Culture System for Rapid Expansion of Human Embryonic Stem Cells	United States of America	Issued	12/710,078	22-Feb-10
091/039C	Culture System for Rapid Expansion of Human Embryonic Stem Cells	United States of America	Issued	12/763,884	20-Apr-10
091/040C	Culture System for Rapid Expansion of Human Embryonic Stem Cells	United States of America	Pending	13/323,567	12-Dec-11
091/051	Suspension Culture of Human Embryonic Stem Cells	United States of America	Allowed	11/917,993	4-Mar-08
091/201AU	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	Australia	Issued	11128/01	11-Jan-01
091/202IL	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	Israel	Issued	141742	10-Jan-01

091/204JP D	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	Japan	Issued	2001138021	10-Jan-01
091/205SG	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	Singapore	Issued	2001014133	10-Jan-01
091/206IN	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	India	Issued	00361CHENP2001	10-Jan-01
091/207CA	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	Canada	Issued	2,388,811	10-Jan-01
091/212IL D	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	Israel	Issued	177324	10-Jan-01
091/217IN D2	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	India	Issued	4588CHENP2006	10-Jan-01
091/301AU	Culture System for Rapid Expansion of Human Embryonic Stem Cells	Australia	Issued	2002323593	5-Sep-02
091/302CA	Culture System for Rapid Expansion of Human Embryonic Stem Cells	Canada	Issued	2,459,957	5-Sep-02
091/303UK	Culture System for Rapid Expansion of Human Embryonic Stem Cells	United Kingdom	Issued	4049102	5-Sep-02
091/305IL	Culture System for Rapid Expansion of Human Embryonic Stem Cells	Israel	Issued	160403	5-Sep-02
091/306JP	Culture System for Rapid Expansion of Human Embryonic Stem Cells	Japan	Issued	2003525623	5-Sep-02
091/307SG	Culture System for Rapid Expansion of Human Embryonic Stem Cells	Singapore	Issued	2004009247	5-Sep-02
091/315IL D	Culture System for Rapid Expansion of Human Embryonic Stem Cells	Israel	Pending	204178	5-Sep-02
091/316JP D	Culture System for Rapid Expansion of Human Embryonic Stem Cells	Japan	Pending	2009271501	5-Sep-02
091/318JP D3	Culture System for Rapid Expansion of Human Embryonic Stem Cells	Japan	Pending	2015-003889	5-Sep-02

091/401CA	Medium for Growing Human Embryonic Stem Cells	Canada	Pending	2,573,437	13-Jul-05
091/402AT	Medium for Growing Human Embryonic Stem Cells	Austria	Issued	57752941	13-Jul-05
091/402CH	Medium for Growing Human Embryonic Stem Cells	Switzerland	Issued	57752941	13-Jul-05
091/402DE	Medium for Growing Human Embryonic Stem Cells	Germany	Issued	57752941	13-Jul-05
091/402EP	Medium for Growing Human Embryonic Stem Cells	European Patent Office	Issued	57752941	13-Jul-05
091/402FR	Medium for Growing Human Embryonic Stem Cells	France	Issued	57752941	13-Jul-05
091/402IE	Medium for Growing Human Embryonic Stem Cells	Ireland	Issued	57752941	13-Jul-05
091/402SE	Medium for Growing Human Embryonic Stem Cells	Sweden	Issued	57752941	13-Jul-05
091/403AU	Medium for Growing Human Embryonic Stem Cells	Australia	Issued	2005271723	13-Jul-05
091/404UK	Medium for Growing Human Embryonic Stem Cells	United Kingdom	Issued	7027931	13-Jul-05
091/405IL	Medium for Growing Human Embryonic Stem Cells	Israel	Issued	180447	13-Jul-05
091/406SG	Medium for Growing Human Embryonic Stem Cells	Singapore	Issued	2007001605	13-Jul-05
091/407HK	Medium for Growing Human Embryonic Stem Cells	Hong Kong	Issued	71109966	13-Jul-05
091/408EP D	Medium for Growing Human Embryonic Stem Cells	European Patent Office	Pending	101807592	13-Jul-05
091/501AU	Suspension Culture of Human Embryonic Stem Cells	Australia	Issued	2006262369	20-Jun-06

091/502CA	Suspension Culture of Human Embryonic Stem Cells	Canada	Pending	2,613,369	20-Jun-06
091/503EP	Suspension Culture of Human Embryonic Stem Cells	European Patent Office	Pending	67851857	20-Jun-06
091/504GB	Suspension Culture of Human Embryonic Stem Cells	United Kingdom	Issued	8003659	20-Jun-06
091/505IL	Suspension Culture of Human Embryonic Stem Cells	Israel	Issued	188264	20-Jun-06
091/506IN	Suspension Culture of Human Embryonic Stem Cells	India	Pending	81CHENP2008	20-Jun-06
091/507JP	Suspension Culture of Human Embryonic Stem Cells	Japan	Issued	2008518312	20-Jun-06
091/508KR	Suspension Culture of Human Embryonic Stem Cells	Republic of Korea	Pending	1.02E+12	20-Jun-06
091/509SG	Suspension Culture of Human Embryonic Stem Cells	Singapore	Issued	2007188667	20-Jun-06
091/510CN	Suspension Culture of Human Embryonic Stem Cells	China	Pending	2.01E+12	20-Jun-06
091/511HK	Suspension Culture of Human Embryonic Stem Cells	Hong Kong	Issued	81027198	20-Jun-06
091/512AU D	Suspension Culture of Human Embryonic Stem Cells	Australia	Pending	2012203350	20-Jun-06
091/513JP D	Suspension Culture of Human Embryonic Stem Cells	Japan	Allowed	2013035335	20-Jun-06
091/514KR D2	Suspension Culture of Human Embryonic Stem Cells	Republic of Korea	Pending	10-2015-7014388	20-Jun-06
092/002	Conditioned Media for Propagating Human Pluripotent Stem Cells	United States of America	Issued	09/900,752	6-Jul-01

094/004D	Making Neural Cells for Human Therapy or Drug Screening from Human Embryonic Stem Cells	United States of America	Issued	09/872,183	31-May-01
094/005C	Neural Progenitor Cell Populations	United States of America	Issued	11/281,040	16-Nov-05
094/006C	Neural Progenitor Cell Populations	United States of America	Issued	12/332,783	11-Dec-08
094/007C	Neural Progenitor Cell Populations	United States of America	Pending	13/558,078	25-Jul-12
094/008C	Neural Progenitor Cell Populations	United States of America	Pending	14/217,699	18-Mar-14
094/011P	Screening Small Molecule Drugs Using Neural Cells Differentiated from Human Embryonic Stem Cells	United States of America	Issued	10/157,288	28-May-02
094/013D	Use of Cyclic AMP and Ascorbic Acid to Produce Dopaminergic Neurons from Embryonic Stem Cells	United States of America	Issued	11/009,504	10-Dec-04
094/201IN	A Medical Composition Comprising Neural Cells	India	Issued	397MAS2001	16-May-01
094/202AU	Neural Progenitor Cell Populations	Australia	Issued	2001263199	16-May-01
094/203CA	Neural Progenitor Cell Populations	Canada	Issued	2,409,698	16-May-01
094/204CN	Neural Progenitor Cell Populations	China	Issued	01809662X	16-May-01
094/205EP	Neural Progenitor Cell Populations	European Patent Office	Pending	19374636	16-May-01
094/206IL	Neural Progenitor Cell Populations	Israel	Issued	152741	16-May-01
094/207JP	Neural Progenitor Cell Populations	Japan	Pending	2001585312	16-May-01
094/208KR	Neural Progenitor Cell Populations	Republic of Korea	Issued	20027015192	16-May-01
094/209SG	Neural Progenitor Cell Populations	Singapore	Issued	2002066777	16-May-01
094/210GB	Neural Progenitor Cell Populations	United Kingdom	Issued	2293694	16-May-01
094/211HK	Neural Progenitor Cell Populations	Hong Kong	Issued	31081542	16-May-01
094/212JP D	Neural Progenitor Cell Populations	Japan	Issued	2012260896	16-May-01
094/221AU D	Neural Progenitor Cell Populations	Australia	Issued	2004214542	16-May-01

094/222D JP	Neural Progenitor Cell Populations	Japan	Pending	2013-268201	16-May-01
094/301AU	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Australia	Issued	2002322270	20-Jun-02
094/302CA	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Canada	Pending	2,451,486	20-Jun-02
094/303CN	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	China	Issued	28151445	20-Jun-02
094/304EP	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	European Patent Office	Pending	27562487	20-Jun-02
094/305GB	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	United Kingdom	Issued	4001673	20-Jun-02
094/306IN	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	India	Issued	2018CHENP2003	20-Jun-02
094/307IL	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Israel	Issued	159324	20-Jun-02
094/308JP	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Japan	Issued	2003507255	20-Jun-02
094/309KR	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Republic of Korea	Issued	20037016718	20-Jun-02

094/310SG	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Singapore	Issued	2003076015	20-Jun-02
094/311HK	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Hong Kong	Issued	51078082	20-Jun-02
094/312CN D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	China	Issued	2.01E+12	20-Jun-02
094/316IN D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	India	Issued	5529CHENP2007	20-Jun-02
094/318JP D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Japan	Issued	2010009966	20-Jun-02
094/319JP D2	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Japan	Pending	2012246396	20-Jun-02
094/319JP D3	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Japan	Pending	2015-105256	20-Jun-02
096/003	Differentiated Cells Suitable For Human Therapy	United States of America	Issued	09/783,203	13-Feb-01
096/004	Selective Antibody Targeting of Undifferentiated Stem Cells	United States of America	Issued	09/995,419	26-Nov-01
096/007C	Differentiated Cells Suitable For Human Therapy	United States of America	Issued	11/359,341	21-Feb-06
096/009C	Differentiated Cells Suitable For Human Therapy	United States of America	Issued	13/837,522	15-Mar-13

096/201AU	Differentiated Stem Cells Suitable for Human Therapy	Australia	Issued	2002237681	26-Nov-01
096/202CA	Differentiated Stem Cells Suitable for Human Therapy	Canada	Issued	2,434,760	26-Nov-01
096/204CH	Differentiated Stem Cells Suitable for Human Therapy	Switzerland	Issued	19864883	26-Nov-01
096/204DE	Differentiated Stem Cells Suitable for Human Therapy	Germany	Issued	19864883	26-Nov-01
096/204EP	Differentiated Stem Cells Suitable for Human Therapy	European Patent Office	Issued	19864883	26-Nov-01
096/204ES	Differentiated Stem Cells Suitable for Human Therapy	Spain	Issued	19864883	26-Nov-01
096/204FR	Differentiated Stem Cells Suitable for Human Therapy	France	Issued	19864883	26-Nov-01
096/204GB	Differentiated Stem Cells Suitable for Human Therapy	United Kingdom	Issued	19864883	26-Nov-01
096/204IE	Differentiated Stem Cells Suitable for Human Therapy	Ireland	Issued	19864883	26-Nov-01
096/204IT	Differentiated Stem Cells Suitable for Human Therapy	Italy	Issued	19864883	26-Nov-01
096/205GB	Differentiated Stem Cells Suitable for Human Therapy	United Kingdom	Issued	3133899	26-Nov-01
096/207IL	Differentiated Cells Suitable for Human Therapy	Israel	Issued	155695	26-Nov-01
096/208IN	Differentiated Stem Cells Suitable for Human Therapy	India	Issued	00782CHENP2003	26-Nov-01
096/211SG	Differentiated Stem Cells Suitable for Human Therapy	Singapore	Issued	2003024254	26-Nov-01
096/213CN D	Differentiated Stem Cells Suitable for Human Therapy	China	Pending	2.01E+12	26-Nov-01

096/218IN D	A Modified Population of Cells Differentiated from Primate Pluripotent Stem (pPS) Cells	India	Pending	1873CHENP2008	26-Nov-01
096/300GB	Selective Antibody Targeting of Undifferentiated Stem Cells	United Kingdom	Issued	1284090	27-Nov-01
097/201AU	Tolerizing Allografts of Pluripotent Stem Cells	Australia	Issued	2002239294	21-Nov-01
097/205GB	Tolerizing Allografts of Pluripotent Stem Cells	United Kingdom	Issued	3133873	21-Nov-01
097/211SG	Tolerizing Allografts of Pluripotent Stem Cells	Singapore	Issued	2003024197	21-Nov-01
098/201AU	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Australia	Issued	2002322379	3-Jul-02
098/202CA	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Canada	Pending	2,453,068	3-Jul-02
098/204CH	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Switzerland	Issued	27563675	3-Jul-02
098/204DE	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Germany	Issued	27563675	3-Jul-02
098/204EP	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	European Patent Office	Issued	27563675	3-Jul-02
098/204ES	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Spain	Issued	27563675	3-Jul-02
098/204FR	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	France	Issued	27563675	3-Jul-02
098/204GB	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	United Kingdom	Issued	27563675	3-Jul-02
098/204IE	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Ireland	Issued	27563675	3-Jul-02
098/204IT	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Italy	Issued	27563675	3-Jul-02
098/205GB	Osteoblasts Derived from Human Embryonic Stem Cells	United Kingdom	Issued	4004818	3-Jul-02

098/206IL	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Israel	Issued	159578	3-Jul-02
098/209SG	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Singapore	Issued	200400102	3-Jul-02
098/213CN D	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	China	Allowed	200910152133X	10-Jul-09
098/214HK D	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	Hong Kong	Pending	101078156	3-Jul-02
098/217IN D	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	India	Issued	2634CHENP2005	3-Jul-02
099/003	Cardiomyocyte Precursors from Human Embryonic Stem Cells	United States of America	Issued	10/193,884	12-Jul-02
099/004P	Process for Making Transplantable Cardiomyocytes from Human Embryonic Stem Cells	United States of America	Issued	10/805,099	19-Mar-04
099/006D	Differentiation Protocol for Making Human Cardiomyocytes	United States of America	Issued	11/040,691	21-Jan-05
099/031	Direct Differentiation Method for Making Cardiomyocytes from Human Embryonic Stem Cells	United States of America	Issued	11/086,709	21-Mar-05
099/032C	Direct Differentiation Method for Making Cardiomyocytes from Human Embryonic Stem Cells	United States of America	Issued	12/210,779	15-Sep-08
099/033C	Differentiation Protocol for Making Human Cardiomyocytes	United States of America	Issued	12/234,916	22-Sep-08
099/041	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	United States of America	Allowed	11/471,916	20-Jun-06
099/201AU	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Australia	Issued	2002313670	12-Jul-02

099/202CA	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Canada	Pending	2,453,438	12-Jul-02
099/203CN	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	China	Issued	28139275	12-Jul-02
099/205GB	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	United Kingdom	Issued	4005708	12-Jul-02
099/206IL	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Israel	Issued	159580	12-Jul-02
099/207IN	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	India	Issued	00033CHENP2004	12-Jul-02
099/208JP	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Japan	Pending	2003512669	12-Jul-02
099/209SG	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Singapore	Issued	2004000964	12-Jul-02
099/211HK	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Hong Kong	Issued	51000183	12-Jul-02
099/212KR D	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Republic of Korea	Issued	20107000243	12-Jul-02
099/214JP D	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Japan	Allowed	2010219095	12-Jul-02
099/215IN D	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	India	Pending	7542CHENP2011	12-Jul-02
099/216JP D2	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	Japan	Pending	2013045770	12-Jul-02
099/301AU	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	Australia	Issued	2005224670	18-Mar-05
099/302CA	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	Canada	Issued	2,559,854	18-Mar-05

099/303CN	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	China	Issued	2.01E+12	18-Mar-05
099/304EP	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	European Patent Office	Pending	57326621	18-Mar-05
099/305GB	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	United Kingdom	Issued	6197198	18-Mar-05
099/306IL	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	Israel	Issued	178006	18-Mar-05
099/307IN	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	India	Pending	5842DELNP2006	18-Mar-05
099/308JP	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	Japan	Issued	2007504142	18-Mar-05
099/309SG	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	Singapore	Issued	2006064778	18-Mar-05
099/401AU	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	Australia	Issued	2006262329	20-Jun-06
099/402CA	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	Canada	Pending	2,611,809	20-Jun-06
099/403CN	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	China	Pending	2.01E+12	20-Jun-06
099/404EP	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	European Patent Office	Pending	67852293	20-Jun-06

099/405GB	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	United Kingdom	Issued	8002644	20-Jun-06
099/406IL	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	Israel	Issued	187611	20-Jun-06
099/407IN	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	India	Pending	9175DELNP2007	20-Jun-06
099/408JP	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	Japan	Issued	2008518339	20-Jun-06
099/409KR	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	Republic of Korea	Allowed	1.02E+12	20-Jun-06
099/410SG	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	Singapore	Issued	2007188675	20-Jun-06
099/411HK	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	Hong Kong	Issued	81039050	20-Jun-06
099/413KR D	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	Republic of Korea	Pending	1.02E+12	20-Jun-06
133/003C	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	United States of America	Issued	11/345,878	1-Feb-06
133/004C	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	United States of America	Issued	13/021,497	4-Feb-11
133/005C	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	United States of America	Pending	14/015,040	30-Aug-13
133/201AU	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	Australia	Issued	2002366602	6-Dec-02
133/202CA	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	Canada	Issued	2,468,335	6-Dec-02
133/206IL	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	Israel	Issued	162132	6-Dec-02
133/207IN	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	India	Pending	1794DELNP2004	6-Dec-02

133/209KR	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	Republic of Korea	Issued	20047008714	6-Dec-02
133/210SG	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	Singapore	Issued	2004032611	6-Dec-02
135/002	A Marker System for Preparing and Characterizing High-Quality Human Embryonic Stem Cells	United States of America	Issued	10/389,431	13-Mar-03
135/202SG	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	Singapore	Issued	2005058763	13-Mar-04
135/203GB	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	United Kingdom	Issued	5208475	13-Mar-04
135/212SG D	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	Singapore	Issued	2007084197	13-Mar-04
135/213GB D	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	United Kingdom	Issued	7087075	13-Mar-04
151/003	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	United States of America	Issued	12/412,183	26-Mar-09
151/004C	Systems for Differentiating Pluripotent Stem Cells into Hematopoietic Lineage Cells	United States of America	Pending	13/312,349	6-Dec-11
151/201AU	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	Australia	Pending	2009228215	26-Mar-09
151/202CA	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	Canada	Pending	2,718,438	26-Mar-09
151/203CN	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	China	Pending	2.01E+12	26-Mar-09

151/204EP	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	European Patent Office	Pending	97240527	26-Mar-09
151/206IL	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	Israel	Issued	208116	26-Mar-09
151/208JP	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	Japan	Issued	2011502069	26-Mar-09
151/208JP D	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	Japan	Pending	2015-083475	26-Mar-09
151/209KR	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	Republic of Korea	Pending	20107021271	26-Mar-09
151/211HK	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	Hong Kong	Pending	111055287	26-Mar-09
151/212SG D	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	Singapore	Pending	2013050216	27-Jun-13
161/002	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	United States of America	Issued	12/362,190	29-Jan-09
161/003C	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	United States of America	Issued	13/546,381	11-Jul-12
161/004C	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	United States of America	Pending	14/028,808	17-Sep-13
161/201AU	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	Australia	Pending	2009209157	29-Jan-09
161/202CA	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	Canada	Pending	2,712,891	29-Jan-09
161/203CN	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	China	Pending	2.01E+12	29-Jan-09
161/204EP	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	European Patent Office	Pending	97059232	29-Jan-09
161/205IL	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	Israel	Pending	207083	29-Jan-09

161/206IN	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	India	Pending	5135CHENP2010	29-Jan-09
161/208KR	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	Republic of Korea	Pending	20107019066	29-Jan-09
161/210HK	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	Hong Kong	Pending	111067434	29-Jan-09
161/211SG D	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	Singapore	Issued	2013007612	30-Jan-13
161/212 JPD	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	Japan	Pending	2014-158599	29-Jan-09
164/003C	Synthetic Surfaces for Differentiating Stem Cells into Cardiomyocytes (amended)	United States of America	Pending	12/701,731	8-Feb-10
165/002	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	United States of America	Issued	12/823,739	25-Jun-10
165/003C	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	United States of America	Allowed	13/679,663	16-Nov-12
165/201AU	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	Australia	Pending	2010266016	25-Jun-10
165/202CA	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	Canada	Pending	2,766,164	25-Jun-10
165/203CN	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	China	Issued	2.01E+12	25-Jun-10
165/204IL	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	Israel	Pending	217061	25-Jun-10
165/205IN	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	India	Pending	47CHENP2012	25-Jun-10
165/206JP	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	Japan	Pending	2012517776	25-Jun-10
165/207KR	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	Republic of Korea	Pending	20127001572	25-Jun-10

165/208SG	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	Singapore	Issued	2011095221	25-Jun-10
165/209GB	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	United Kingdom	Pending	12010476	25-Jun-10
165/210EP	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	European Patent Office	Pending	107927337	25-Jun-10
165/211HK	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	Hong Kong	Pending	131054099	25-Jun-10
166/002	Enriched Populations of Cardiomyocyte Lineage Cells from Pluripotent Stem Cells	United States of America	Pending	14/005,844	28-Mar-12
166/201AU	Enriched Populations of Cardiomyocyte Lineage Cells from Pluripotent Stem Cells	Australia	Pending	2012236707	28-Mar-12
166/202CA	Enriched Populations of Cardiomyocyte Lineage Cells from Pluripotent Stem Cells	Canada	Pending	2,829,804	28-Mar-12
166/203EP	Enriched Populations of Cardiomyocyte Lineage Cells from Pluripotent Stem Cells	European Patent Office	Pending	127636694	28-Mar-12

Schedule B

List of Patents and Patent Application - BioTime's First Set of Patent Rights

DOCKET #	TITLE	COUNTRY	STATUS	APPLICATION #	DATE FILED
BIOT-013	Methods to Accelerate the Isolation of Novel Cell Strains from Pluripotent Stem Cells and Cells Obtained Thereby	United States of America	Pending	12/504,630	16-Jul-09
BIOT-025CON1	Methods for Telomere Length and Genomic DNA Quality Control Analysis in Pluripotent Stem Cells	United States of America	Pending	14/876,779	06-Oct-15
BIOT-025AU	Methods for Telomere Length and Genomic DNA Quality Control Analysis in Pluripotent Stem Cells	Australia	Pending	2011218041	17-Feb-11
BIOT-025CA	Methods for Telomere Length and Genomic DNA Quality Control Analysis in Pluripotent Stem Cells	Canada	Pending	2,789,774	17-Feb-11
BIOT-065PCT	Compositions and Methods for Induced Tissue Regeneration	PCT	Pending	PCT/US14/40601	3-Jun-14

Schedule C

List of Patents and Patent Application - BioTime's Second Set of Patent Rights

DOCKET #	TITLE	COUNTRY	STATUS	APPLICATION #	DATE FILED
BIOT-064	Thiolated Hyaluronan-Based Hydrogels Cross-linked Using Oxidized Glutathione	United States of America	Pending	14/275,795	12-May-14
BIOT-071	Hydrogel Foams and Methods of Making and Using the Same	United States of America	Pending	14/820,497	6-Aug-15

Schedule D

List of Patents and Patent Application - ESI Patent Rights

DOCKET #	TITLE	COUNTRY	STATUS	APPLICATION #	DATE FILED
BIOT-035	Method for Stem Cell Culture and Cells Derived Therefrom	United States of America	Issued	12/307,684	6-Jan-09
BIOT-035AU	Method for Stem Cell Culture and Cells Derived Therefrom	Australia	Issued	2007270069	6-Jul-07
BIOT-035CON1	Method for Stem Cell Culture and Cells Derived Therefrom	United States of America	Pending	14/631,816	25-Feb-15
BIOT-035GB	Method for Stem Cell Culture and Cells Derived Therefrom	United Kingdom	Issued	0901623.9	6-Jul-07
BIOT-035IL	Method for Stem Cell Culture and Cells Derived Therefrom	Israel	Issued	196137	6-Jul-07
BIOT-035SG	Method for Stem Cell Culture and Cells Derived Therefrom	Singapore	Issued	2008094690	6-Jul-07
BIOT-036	Methods of Identifying and Selecting Cardiomyocytes	United States of America	Pending	12/671,274	31-Jul-07
BIOT-036AU	Method for Identifying and Selecting Cardiomyocytes	Australia	Issued	2007357127	31-Jul-07
BIOT-036GB	Method for Identifying and Selecting Cardiomyocytes	United Kingdom	Issued	1002084.0	31-Jul-07
BIOT-036IL	Method for Identifying and Selecting Cardiomyocytes	Israel	Pending	203575	31-Jul-07
BIOT-036SG DIV	Method for Identifying and Selecting Cardiomyocytes	Singapore	Pending	2012054565	31-Jul-07
BIOT-037	Method of Differentiating Stem Cells	United States of America	Pending	12/865,454	30-Jul-10
BIOT-050	Cardiomyocyte Production	United States of America	Allowed	12/066,624	8-Apr-08
BIOT-050AU	Cardiomyocyte Production	Australia	Issued	2006292021	12-Sep-06
BIOT-050GB	Cardiomyocyte Production	United Kingdom	Issued	0806557.5	10-Apr-08
BIOT-050IL	Cardiomyocyte Production	Israel	Issued	190016	12-Sep-06
BIOT-050SG	Cardiomyocyte Production	Singapore	Issued	2009017146	11-Mar-09

BIOT-052	Direct Differentiation of Cardiomyocytes From Human Embryonic Stem Cells	United States of America	Pending	11/644,790	22-Dec-06
BIOT-053	Direct Differentiation of Cardiomyocytes from Human Embryonic Stem Cells	United States of America	Issued	12/158,521	7-Nov-08
BIOT-053AU	Direct Differentiation of Cardiomyocytes from Human Embryonic Stem Cells	Australia	Issued	2006326853	22-Dec-06
BIOT-053CON	Direct Differentiation of Cardiomyocytes from Embryonic Stem Cells	United States of America	Pending	13/651,151	12-Oct-12
BIOT-053GB	Direct differentiation of cardiomyocytes from human embryonic stem cells	United Kingdom	Issued	08122228	22-Dec-06
BIOT-059AU	Method of transducing ES cells	Australia	Issued	2002351884	24-Dec-02
BIOT-059EP	METHODS OF TRANSDUCING CELLS	European Patent Office	Pending	02787213.4	24-Dec-02
BIOT-059GB	Method and lentiviral vector for transducing human embryonic stem cells	United Kingdom	Issued	4165163	24-Dec-02
BIOT-059SG	METHOD OF TRANSDUCING ES CELLS	Singapore	Issued	2004035341	24-Dec-02

Schedule E

List of BioTime Named Affiliates

Recyte Therapeutics, Inc.

OrthoCyte Corporation

ES Cell International Pte Ltd.

Ascendance Biotechnology, Inc.

BioTime Asia Ltd.

Schedule F

Asterias Patent Rights With BioTime Enforcement Rights

094/004D	Making Neural Cells for Human Therapy or Drug Screening from Human Embryonic Stem Cells	United States of America	Issued	09/872,183	31-May-01
094/005C	Neural Progenitor Cell Populations	United States of America	Issued	11/281,040	16-Nov-05
094/006C	Neural Progenitor Cell Populations	United States of America	Issued	12/332,783	11-Dec-08
094/007C	Neural Progenitor Cell Populations	United States of America	Pending	13/558,078	25-Jul-12
094/008C	Neural Progenitor Cell Populations	United States of America	Pending	14/217,699	18-Mar-14
094/011P	Screening Small Molecule Drugs Using Neural Cells Differentiated from Human Embryonic Stem Cells	United States of America	Issued	10/157,288	28-May-02
094/013D	Use of Cyclic AMP and Ascorbic Acid to Produce Dopaminergic Neurons from Embryonic Stem Cells	United States of America	Issued	11/009,504	10-Dec-04
094/201IN	A Medical Composition Comprising Neural Cells	India	Issued	397MAS2001	16-May-01
094/202AU	Neural Progenitor Cell Populations	Australia	Issued	2001263199	16-May-01
094/203CA	Neural Progenitor Cell Populations	Canada	Issued	2,409,698	16-May-01
094/204CN	Neural Progenitor Cell Populations	China	Issued	01809662X	16-May-01
094/205EP	Neural Progenitor Cell Populations	European Patent Office	Pending	19374636	16-May-01

094/206IL	Neural Progenitor Cell Populations	Israel	Issued	152741	16-May-01
094/207JP	Neural Progenitor Cell Populations	Japan	Pending	2001585312	16-May-01
094/208KR	Neural Progenitor Cell Populations	Republic of Korea	Issued	20027015192	16-May-01
094/209SG	Neural Progenitor Cell Populations	Singapore	Issued	2002066777	16-May-01
094/210GB	Neural Progenitor Cell Populations	United Kingdom	Issued	2293694	16-May-01
094/211HK	Neural Progenitor Cell Populations	Hong Kong	Issued	31081542	16-May-01
094/212JP D	Neural Progenitor Cell Populations	Japan	Issued	2012260896	16-May-01
094/221AU D	Neural Progenitor Cell Populations	Australia	Issued	2004214542	16-May-01
094/222D JP	Neural Progenitor Cell Populations	Japan	Pending	2013-268201	16-May-01
094/301AU	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Australia	Issued	2002322270	20-Jun-02
094/302CA	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Canada	Pending	2,451,486	20-Jun-02
094/303CN	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	China	Issued	28151445	20-Jun-02
094/304EP	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	European Patent Office	Pending	27562487	20-Jun-02
094/305GB	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	United Kingdom	Issued	4001673	20-Jun-02
094/306IN	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	India	Issued	2018CHENP2003	20-Jun-02
094/307IL	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Israel	Issued	159324	20-Jun-02

094/308JP	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Japan	Issued	2003507255	20-Jun-02
094/309KR	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Republic of Korea	Issued	20037016718	20-Jun-02
094/310SG	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Singapore	Issued	2003076015	20-Jun-02
094/311HK	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Hong Kong	Issued	51078082	20-Jun-02
094/312CN D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	China	Issued	2.01E+12	20-Jun-02
094/316IN D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	India	Issued	5529CHENP2007	20-Jun-02
094/318JP D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Japan	Issued	2010009966	20-Jun-02
094/319JP D2	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Japan	Pending	2012246396	20-Jun-02
094/319JP D3	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	Japan	Pending	2015-105256	20-Jun-02

SHARE TRANSFER AGREEMENT

BY AND AMONG

ASTERIAS BIOTHERAPEUTICS, INC.,

BIOTIME, INC.

AND

ES CELL INTERNATIONAL PTE LTD

SHARE TRANSFER AGREEMENT

This **SHARE TRANSFER AGREEMENT** (the “**Agreement**”) is entered into on February 16, 2016 (the “**Effective Date**”) by and among Asterias Biotherapeutics, Inc., a Delaware corporation having a place of business at 6300 Dumbarton Circle, Fremont, CA 94555 (“**Asterias**”), BioTime, Corp., a Delaware corporation having a place of business at 1301 Harbor Bay Parkway, Alameda, California 94502 (“**BioTime**”), and ES Cell International Pte Ltd, a Singapore corporation having a place of business at 11 Biopolis Way, #05-06 Helios, Singapore 138667 (“**ESI**”). Each of Asterias, BioTime and ESI is individually referred to as “**Party**” and collectively as the “**Parties**.”

RECITALS

WHEREAS, BioTime, Asterias and ESI have agreed to enter into a cross-license agreement on the Closing Date in the form attached hereto as Exhibit A (the “**Cross License Agreement**”) pursuant to which BioTime will receive a non-exclusive license from Asterias under the Asterias Patent Rights, Asterias will receive a non-exclusive license from BioTime under the BioTime Patent Rights and Asterias will receive a non-exclusive license from ESI under the ESI Patent Rights; and

WHEREAS, BioTime and Asterias have agreed to enter into a sub-license agreement on the Closing Date in the form attached hereto as Exhibit B (the “**Sublicense Agreement**”) pursuant to which Asterias will receive a non-exclusive sublicense from BioTime under the Sublicense Patent Rights;

WHEREAS, BioTime currently holds 21,823,340 shares of Asterias Series A Common Stock (the “**Asterias Common Stock**”), par value \$0.0001 per share (the “**Asterias Shares**”);

WHEREAS, BioTime currently holds warrants to purchase 3,150,000 shares of Asterias Common Stock at an exercise price of \$5.00 per share of Asterias Common Stock (the “**Asterias Warrants**”);

WHEREAS, Asterias currently holds 21,925 shares of common stock, which is the entirety of Asterias’ entire ownership, of Cell Cure Neurosciences Ltd. (the “**Cell Cure Interests**”);

WHEREAS, Asterias currently holds 2,100,000, which is the entirety of Asterias’ ownership, of the outstanding shares of Common Stock, no par value per share (the “**OrthoCyte Shares**”) of OrthoCyte Corporation (“**OrthoCyte**”);

WHEREAS, ESI is a wholly-owned subsidiary of BioTime;

WHEREAS, Asterias has engaged Lake Street Capital Markets to conduct an independent valuation analysis with respect to each of the licenses, transfers and assignments being effected pursuant to the Applicable Agreements;

WHEREAS, the Parties desire to enter into this Agreement to agree upon the consideration to be paid by each of Asterias, BioTime and ESI on the Closing Date for the licenses, transfers and assignments contemplated by the Cross License Agreement and the Sublicense Agreement and to effect the payments from each of Asterias, BioTime and ESI on the Closing Date for such licenses, transfers and assignments through the transfer of a portion of the Cell Cure Interests and the OrthoCyte Shares from Asterias to BioTime and the Asterias Warrants and a portion of the Asterias Shares from BioTime to Asterias;

WHEREAS, Asterias and BioTime desire to enter into this Agreement to effect the transfer on the Closing Date of the Cell Cure Interests and the OrthoCyte Shares to BioTime by Asterias in exchange for the transfer of BioTime's entire ownership in the Asterias Warrants and a portion of BioTime's ownership of Asterias Shares to Asterias by BioTime.

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein, and other good and valuable consideration, the receipt and the legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

ARTICLE 1. DEFINITIONS

The terms, as defined herein, shall have the same meanings in both their singular and plural forms.

- 1.1 **"Applicable Agreements"** means the Cross-License Agreement and the Sublicense Agreement.
- 1.2 **"Asterias Patent Rights"** has the meaning ascribed to such term in the Cross License Agreement.
- 1.3 **"BioTime Patent Rights"** has the meaning ascribed to such term in the Cross License Agreement.
- 1.4 **"ESI Patent Rights"** has the meaning ascribed to such term in the Cross License Agreement.
- 1.5 **"Sublicense Patent Rights"** shall mean the Patent Rights licensed to Asterias in the Sublicense Agreement.
- 1.6 **"Warrant Agreement"** means the Warrant Agreement dated October 1, 2013, between Asterias and BioTime, in the form attached hereto as Exhibit B-1.

ARTICLE 2. FAIR MARKET VALUE OF THE LICENSES, TRANSFERS AND ASSIGNMENTS CONTEMPLATED BY THE APPLICABLE AGREEMENTS

- 2.1 **Fair Market Value of the licenses to Asterias from BioTime and ESI Pursuant to the Cross License Agreement and the Sublicense Agreement.** The fair market value of the licenses being granted to Asterias by BioTime and ESI pursuant to the Cross License Agreement and the Sublicense Agreement is hereby deemed by each of BioTime, ESI and Asterias to be approximately \$1,158,000.
- 2.2 **Fair Market Value of the license to BioTime Pursuant to the Cross License Agreement.** The fair market value of the license being granted to BioTime pursuant to the Cross License Agreement is hereby deemed by each of Asterias and BioTime to be approximately \$2,747,500.

2.3 **Net Difference in Value of the licenses awarded under the Cross License and Sublicense Agreements.** The Parties hereby agree that the difference in value of the licenses referred to in Section 2.1 and 2.2 shall be \$1,589,500, in favor of Asterias.

ARTICLE 3. VALUE OF THE SECURITIES HELD BY BIOTIME AND ASTERIAS

3.1 **Fair Market Value of the OrthoCyte Shares.** The fair market value of the OrthoCyte Shares is hereby deemed by each of the Parties to be \$785,000.

3.2 **Fair Market Value of the Cell Cure Interests.** The fair market value of the Cell Cure Interests is hereby deemed by each of the Parties to be \$765,000.

3.3 **Fair Market Value of the Asterias Warrants.** The fair market value of the Asterias Warrants, including the value of foregone distribution rights as described in Section 7.1 of this Agreement, is hereby deemed by each of the Parties to be \$2,906,883.

3.4 **Fair Market Value of each Asterias Share.** The fair market value of each Asterias Share, which was derived from the volume weighted 20 day average trading price of Asterias Series A Common Stock on the NYSE MKT, during the period from December 30, 2015 to January 28, 2016, is hereby deemed by each of the Parties to be \$3.07.

ARTICLE 4. ASSETS AS CONSIDERATION FOR THE LICENSES, TRANSFERS AND ASSIGNMENTS CONTEMPLATED BY THE APPLICABLE AGREEMENTS

4.1 **Consideration to Asterias from BioTime.** As consideration for the rights and licenses to the Asterias assets specified in Section 4.2, (a) BioTime and ESI, agree to enter into the Cross License Agreement on the Closing Date to provide Asterias with a non-exclusive license under the BioTime Patent Rights and the ESI Patent Rights, and (b) BioTime agrees to (i) enter into the Sublicense Agreement on the Closing Date to provide Asterias with a non-exclusive license under the Sublicense Patent Rights, (ii) deliver on the Closing Date to Asterias all of the Asterias Warrants, (iii) deliver on the Closing Date to Asterias a stock certificate for 75,771 of the Asterias Shares accompanied by a stock power duly signed by BioTime with respect to such shares, or in the alternative, BioTime is agreeing to direct its agents to effectuate such transfer via book entry on the Closing Date, and (iv) forego its rights to receive warrants distributed by Asterias to its shareholders, as described in Section 7.1 of this Agreement

4.2 **Consideration to BioTime from Asterias.** As consideration for the rights and licenses to the BioTime assets specified in Section 4.1, Asterias agrees to (a) enter into the Cross License Agreement on the Closing Date to provide BioTime with a non-exclusive license under the Asterias Patent Rights, (b) transfer to BioTime, and BioTime agrees to accept from Asterias, in each case on the Closing Date, all of Asterias' interest in and to all of the OrthoCyte Shares and all of the Cell Cure Interests.

ARTICLE 5. CLOSING

- 5.1 Subject to the satisfaction or waiver of the conditions set forth in Section 5.2 and Section 5.3, the closing of all of the transactions contemplated by Article 4 and Section 7.1 of this Agreement, in each case pursuant to the terms of this Agreement (the “**Closing**”), shall take place at the offices of counsel to Asterias, at a time to be agreed upon by Asterias and BioTime, on a date (which shall be no later than the second Business Day after the satisfaction or waiver of all of the conditions set forth in Section 5.2 and Section 5.3) to be agreed upon by Asterias and BioTime. For purposes of this Agreement, “**Closing Date**” shall mean the date on which the Closing actually takes place.
- 5.2 Asterias’ obligation to take the actions required to be taken by Asterias at the Closing are subject to the satisfaction, at or prior to the Closing, of the following condition (which may be waived by Asterias, in whole or in part, in writing):
- (a) BioTime shall not have taken any action which would prevent or impair BioTime’s ability to enter into and consummate (i) the Cross License Agreement, (ii) the Sublicense Agreement, and (iii) each of the transfers to be effected by BioTime pursuant to this Agreement.
- 5.3 BioTime’s obligation to take the actions required to be taken by BioTime at the Closing are subject to the satisfaction, at or prior to the Closing, of the following condition (which may be waived by BioTime, in whole or in part, in writing):
- (a) Asterias shall not have taken any action which would prevent or impair Asterias’ ability to enter into and consummate (i) the Cross License Agreement, (ii) the Sublicense Agreement, and (iii) each of the transfers to be effected by Asterias pursuant to this Agreement.

ARTICLE 6. REPRESENTATIONS AND WARRANTIES

- 6.1 **By Asterias.** Asterias represents, warrants and covenants that, as of the Effective Date and the Closing Date:
- (a) **Organization.** Asterias is a corporation, duly organized, validly existing, and in good standing under the Laws of the State of Delaware.
 - (b) **Authorization of Transaction.** Asterias has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby have been duly authorized by all requisite corporate action on the part of Asterias. This Agreement has been duly and validly executed and delivered by Asterias and (assuming the due authorization, execution and delivery by the other parties hereto) this Agreement constitutes legal, valid and binding obligations of Asterias, enforceable against Asterias in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium and similar laws affecting creditors’ rights and remedies generally, and subject, as to enforceability, to general principles of equity, including principles of commercial reasonableness, good faith and fair dealing (regardless of whether enforcement is sought in a proceeding at law or in equity). No consent, waiver, approval, order, permit or authorization of, or declaration or filing with, or notification to, any person is required on the part of Asterias in connection with the execution and delivery of this Agreement or the compliance by Asterias with any of the provisions hereof.

- (c) **Noncontravention.** Neither the execution and the delivery of this Agreement, nor the consummation of the transactions contemplated hereby will (i) violate any law to which Asterias is subject or any provision of the organizational documents of Asterias or (ii) conflict with, result in a breach of, constitute a default under, result in the acceleration of, create in any party the right to accelerate, terminate, modify, or cancel, or require any notice under any contract, lease, sublease, license, sublicense, franchise, permit, indenture, agreement or mortgage for borrowed money, or other agreement to which Asterias is a party or by which it is bound or to which any of its assets are subject.
- (d) **Title to Assets; No Liens.** Asterias holds title to the OrthoCyte Shares and Cell Cure Interests free and clear of all security interests and other monetary liens and encumbrances, and has not entered into any contract or agreement to transfer, sell, or assign, or granting to any third party any right or option to purchase, any of the OrthoCyte Shares or Cell Cure Interests.
- (e) **Brokers' Fees.** Asterias has no liability or obligation to pay any fees or commissions to any broker, finder, or agent with respect to the transactions contemplated by this Agreement for which any other Party could become liable or obligated.

6.2 **By BioTime.** BioTime represents, warrants and covenants that, as of the Effective Date and the Closing Date:

- (a) **Organization.** BioTime is a corporation, duly organized, validly existing, and in good standing under the Laws of the State of Delaware.
- (b) **Authorization of Transaction.** BioTime has full power and authority to execute and deliver this Agreement and to perform its obligations hereunder. The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby have been duly authorized by all requisite corporate action on the part of BioTime. This Agreement has been duly and validly executed and delivered by BioTime and (assuming the due authorization, execution and delivery by the other parties hereto) this Agreement constitutes legal, valid and binding obligations of BioTime, enforceable against BioTime in accordance with its terms, subject to applicable bankruptcy, insolvency, reorganization, moratorium and similar laws affecting creditors' rights and remedies generally, and subject, as to enforceability, to general principles of equity, including principles of commercial reasonableness, good faith and fair dealing (regardless of whether enforcement is sought in a proceeding at law or in equity). No consent, waiver, approval, order, permit or authorization of, or declaration or filing with, or notification to, any person is required on the part of BioTime in connection with the execution and delivery of this Agreement or the compliance by BioTime with any of the provisions hereof.

- (c) **Noncontravention.** Neither the execution and the delivery of this Agreement, nor the consummation of the transactions contemplated hereby will (i) violate any law to which BioTime is subject or any provision of the organizational documents of BioTime or (ii) conflict with, result in a breach of, constitute a default under, result in the acceleration of, create in any party the right to accelerate, terminate, modify, or cancel, or require any notice under any contract, lease, sublease, license, sublicense, franchise, permit, indenture, agreement or mortgage for borrowed money, or other agreement to which BioTime is a party or by which it is bound or to which any of its assets are subject.
- (d) **Brokers' Fees.** BioTime has no liability or obligation to pay any fees or commissions to any broker, finder, or agent with respect to the transactions contemplated by this Agreement for which any other Party could become liable or obligated.

ARTICLE 7. COVENANTS

- 7.1 **Cancellation of the Warrant Agreement.** On the Closing Date, upon the transfer of the Asterias Warrants from BioTime to Asterias, the Warrant Agreement shall be deemed cancelled and shall have no further effect. Furthermore, BioTime acknowledges that Asterias plans to issue certain warrants to purchase common stock of Asterias to its shareholders on a pro-rata basis, and in consideration for the assets to be received by BioTime set forth in Section 4.2, BioTime hereby irrevocably waives its right to receive such warrants and acknowledges that it has received sufficient consideration for its foregone right to receive such warrants.
- 7.2 **Access to Books and Records; Financial Reporting.** For as long as the financial statements of Asterias are required to be consolidated with BioTime's financial statements for financial reporting purposes in accordance with United States generally accepted accounting principles ("GAAP"), and, in the case of paragraph (a) for a period of six years thereafter, the provisions of this Section 7.2 shall apply.
 - (a) BioTime and its employee and employees of BioTime's independent registered public accountants, in each case who sign a customary confidentiality agreement requiring such person and BioTime to keep all confidential or proprietary information of Asterias confidential, shall at all times during regular business hours (which shall be 9:00 a.m. to 5:30 p.m. Monday through Friday other than federal holidays in which banks in San Francisco, California are required or permitted to close) have the right, upon five (5) business days prior notice to Asterias, to enter any and all offices of Asterias where Asterias' books and records are kept and to inspect, review, copy, and audit such financial books and records, minutes of the proceedings of the directors and stockholders of Asterias, stockholder records, and contracts, instruments, and agreements, in each case solely to the extent necessary to comply with GAAP and in a manner that does not interfere with the day to day operations of Asterias, at BioTime's expense. Asterias shall make its relevant officers and employees available to, and shall otherwise reasonably cooperate with, BioTime and BioTime's independent registered public accountants, in connection with their inspection, copying, review, and audit of such books and records of Asterias. The provisions of this Section 7.1(a) shall not apply to documents not in the public domain, embodying or disclosing Asterias' proprietary technology or confidential information.

- (b) Subject to the terms and conditions of Section 7.2(a), Asterias shall make its relevant officers and employees available to, and shall otherwise reasonably cooperate with, including providing answers to questions asked by BioTime and BioTime's independent registered public accountants, in connection with BioTime's preparation of the Management's Discussion and Analysis of Financial Condition and Results of Operations, or any similar portion, of BioTime's quarterly reports on Form 10-Q and annual reports on Form 10-K, to the extent related to the results of operations, revenues, expenses, and other financial results of Asterias for the applicable financial reporting period.
- (c) BioTime and Asterias shall consult with each other, in good faith, with respect to the financial accounting for, and reporting of, transactions to which Asterias is a party or which otherwise are required to be reported or reflected in the financial statements and notes thereto of Asterias and BioTime, for the purpose of maintaining consistency in such reporting in conformity with GAAP.
- (d) If an event occurs that is required to be disclosed by Asterias on Form 8-K (a "**Reportable Event**"), regardless of whether Asterias elects to report such event on a Form 10-Q or Form 10-K rather than on Form 8-K, Asterias will notify BioTime's Chief Financial Officer of the Reportable Event promptly after the occurrence of such Reportable Event and shall provide BioTime's Chief Financial Officer with the information that Asterias intends to include in a current report on Form 8-K, a quarterly report on Form 10-Q or annual report on Form 10-K, whichever shall first be filed, reporting such event, in sufficient time prior to the required date for reporting such event to permit BioTime, to the extent it determines the Reportable Event to be material to BioTime, to so report the Reportable Event in such time and in such manner as required by the rules and regulations of the Securities and Exchange Commission. If the Reportable Event pertains to Asterias' entry into or amendment or modification of any contract or agreement that constitutes a material contract required to be reported in response to Item 1.01 of Form 8-K, Asterias shall provide BioTime with a complete copy of such contract or agreement, including all exhibits and schedules thereto. If Asterias plans to submit an application to the SEC seeking an order for confidential treatment of any portion of a material contract or agreement, Asterias shall so notify BioTime, and if BioTime determines that it is required by applicable law or regulation to file such contract or agreement as an exhibit to any report or registration statement filed with the SEC, BioTime shall file the same version of such contract or report as is filed by Asterias and BioTime and Asterias shall cooperate in the preparation and submission of the applications by BioTime and Asterias for an order permitting confidential treatment such portions of the contract or agreement as they may determine.

7.3 **Reporting this Agreement and Agreements Referenced Herein.** BioTime and Asterias shall cooperate in preparing for timely filing consistent current reports on Form 8-K and a joint press release reporting the execution of this Agreement and the Cross License Agreement by the parties and the consummation of the transactions described herein and therein.

ARTICLE 8. MISCELLANEOUS PROVISIONS

8.1 **Assignability.** No Party may assign this Agreement or the rights granted herein except with the prior written consent of the other Parties.

8.2 **No Waiver.** No waiver by any Party of any breach or default of any covenant or agreement set forth in this Agreement shall be deemed a waiver as to any subsequent and/or similar breach or default.

8.3 **No Third Party Beneficiaries.** This Agreement shall not confer any rights or remedies upon any person other than the Parties and their respective successors and permitted assigns.

8.1 **Governing Laws.** The validity, construction and effect of this Agreement shall be determined exclusively in accordance with the laws of the State of Delaware, without regard to its provisions concerning the applicability of laws of other jurisdictions. Any suit with respect hereto will be brought in courts of the State of Delaware and the Parties hereby agree and submit to the personal jurisdiction and venue thereof.

8.2 **Waiver of Jury Trial.** WITH RESPECT TO ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY, EACH PARTY HEREBY IRREVOCABLY, TO THE EXTENT NOT PROHIBITED BY APPLICABLE LAW THAT CANNOT BE WAIVED, WAIVES, AND COVENANTS THAT IT WILL NOT ASSERT (WHETHER AS PLAINTIFF, DEFENDANT OR OTHERWISE), ANY RIGHT TO TRIAL BY JURY IN ANY ACTION ARISING IN WHOLE OR IN PART UNDER OR IN CONNECTION WITH THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY, WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE, AND AGREES THAT ANY OF THEM MAY FILE A COPY OF THIS PARAGRAPH WITH ANY COURT AS WRITTEN EVIDENCE OF THE KNOWING, VOLUNTARY AND BARGAINED-FOR AGREEMENT AMONG THE PARTIES IRREVOCABLY TO WAIVE ITS RIGHT TO TRIAL BY JURY IN ANY ACTION OR PROCEEDING WHATSOEVER BETWEEN THEM RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

- 8.3 **Entire Agreement.** This Agreement embodies the entire understanding of the Parties and supersedes all previous communications, representations or understandings, either oral or written, between the Parties relating to the subject matter hereof.
- 8.4 **Amendments.** No amendment or modification of this Agreement shall be valid or binding on the Parties unless made in writing and signed on behalf of each Party.
- 8.5 **Severability.** In the event that any of the provisions contained in this Agreement is held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement, and this Agreement shall be construed as if the invalid, illegal, or unenforceable provisions had never been contained in it.
- 8.6 **Counterparts; Facsimile Transmission.** This Agreement may be executed simultaneously in two or more counterparts, any one of which need not contain the signatures of more than one Party, but all such counterparts taken together will constitute one and the same Agreement. Delivery of executed signature pages hereof by facsimile transmission or portable document format (PDF) shall constitute effective and binding execution and delivery of this Agreement.
- 8.7 **Headings.** The headings of the several 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.

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IN WITNESS WHEREOF, Asterias, BioTime and ESI have executed this Agreement, in duplicate originals, by their respective and duly authorized officers on the day and year written.

Asterias Biotherapeutics, Inc.

By: /s/Pedro Lichtinger
Pedro Lichtinger

Title: President and Chief Executive Office

BioTime, Inc.

By: /s/Michael D. West
Michael D. West

Title: Co-Chief Executive Officer

By: /s/Aditya Mohanty
Aditya Mohanty

Title: Co-Chief Executive Officer

ES Cell International Pte Ltd

By: /s/Aditya Mohanty

Title: CEO