FORM 10-Q

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

(Mark One)

x **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended September 30, 2013

OR

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number **1-12830**

BioTime, Inc.

(Exact name of registrant as specified in its charter)

California	**94-3127919**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

1301 Harbor Bay Parkway, Suite 100
Alameda, California 94502
(Address of principal executive offices)

(510) 521-3390
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. T Yes o No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). x Yes o No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer,” and “smaller reporting company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer	o		Accelerated filer	T
Non-accelerated filer	o	(Do not check if a smaller reporting company)	Smaller reporting company	o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). o Yes T No

APPLICABLE ONLY TO CORPORATE ISSUERS:

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: 67,202,678 common shares, no par value, as of November 8, 2013**.**

PART 1--FINANCIAL INFORMATION

Statements made in this Report that are not historical facts may constitute forward-looking statements that are subject to risks and uncertainties that could cause actual results to differ materially from those discussed. Such risks and uncertainties include but are not limited to those discussed in this report under Item 1 of the Notes to Financial Statements, and in BioTime's Annual Report on Form 10-K filed with the Securities and Exchange Commission. Words such as "expects," "may," "will," "anticipates," "intends," "plans," "believes," "seeks," "estimates," and similar expressions identify forward-looking statements.

References to "we" means BioTime, Inc. and its subsidiaries unless the context otherwise indicates.

The description or discussion, in this Form 10-Q, of any contract or agreement is a summary only and is qualified in all respects by reference to the full text of the applicable contract or agreement.

Item 1. Financial Statements

BIOTIME, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS

	September 30, 2013 (UNAUDITED)	December 31, 2012
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 6,717,343	$ 4,349,967
Inventory	61,132	55,316
Prepaid expenses and other current assets	1,900,913	2,774,196
Total current assets	8,679,388	7,179,479
Equipment, net	2,905,842	1,348,554
Deferred license and consulting fees	583,208	669,326
Deposits	126,152	64,442
Intangible assets, net	18,559,074	20,486,792
TOTAL ASSETS	$ 30,853,664	$ 29,748,593
LIABILITIES AND EQUITY		
CURRENT LIABILITIES		
Accounts payable and accrued liabilities	$ 4,201,098	$ 3,989,962
Deferred grant income	47,349	—
Deferred license and subscription revenue, current portion	349,849	400,870
Total current liabilities	4,598,296	4,390,832
LONG-TERM LIABILITIES		
Deferred license revenue, net of current portion	644,273	768,678
Deferred rent, net of current portion	42,095	57,214
Other long-term liabilities	200,582	237,496
Total long-term liabilities	886,950	1,063,388
Commitments and contingencies		
EQUITY		
Preferred Shares, no par value, authorized 2,000,000 and 1,000,000 shares respectively, as of September 30, 2013 and December 31, 2012; none issued	—	—
Common shares, no par value, authorized 125,000,000 and 75,000,000 shares respectively, as of September 30, 2013 and December 31, 2012; 57,938,220 issued and 55,622,934 outstanding at September 30, 2013 and 51,183,318 issued and 49,383,209 outstanding as of December 31, 2012	149,008,287	119,821,243
Contributed capital	93,972	93,972
Accumulated other comprehensive income/(loss)	124,740	(59,570)
Accumulated deficit	(126,166,233)	(101,895,712)
Treasury stock at cost: 2,315,286 and 1,800,109 shares at September 30, 2013 and at December 31, 2012, respectively	(10,120,653)	(8,375,397)
Total shareholders' equity	12,940,113	9,584,536
Non-controlling interest	12,428,305	14,709,837
Total equity	25,368,418	24,294,373
TOTAL LIABILITIES AND EQUITY	$ 30,853,664	$ 29,748,593

See accompanying notes to the condensed consolidated interim financial statements.

BIOTIME, INC.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(UNAUDITED)

	Three Months Ended		Nine Months Ended	
	September 30, 2013	September 30, 2012	September 30, 2013	September 30, 2012
REVENUES:				
License fees	$ 382,767	$ 337,633	$ 1,094,843	$ 549,521
Royalties from product sales	80,592	133,946	291,505	407,803
Grant income	160,431	441,630	941,226	1,518,086
Sale of research products	90,272	90,342	214,277	217,380
Total revenues	714,062	1,003,551	2,541,851	2,692,790
Cost of sales	(206,678)	(169,734)	(570,237)	(273,916)
Total revenues, net	507,384	833,817	1,971,614	2,418,874
EXPENSES:				
Research and development	(6,441,462)	(4,545,470)	(17,389,409)	(13,323,410)
General and administrative	(4,267,875)	(2,234,905)	(11,273,948)	(7,037,807)
Total expenses	(10,709,337)	(6,780,375)	(28,663,357)	(20,361,217)
Loss from operations	(10,201,953)	(5,946,558)	(26,691,743)	(17,942,343)
OTHER INCOME/(EXPENSES):				
Interest income, net	509	5,624	2,033	17,321
Gain/(loss) on sale of fixed assets	5,830	(1,451)	5,120	(4,997)
Other income/(expense), net	(60,704)	18,766	(169,512)	(223,899)
Total other income/(expenses), net	(54,365)	22,939	(162,359)	(211,575)
NET LOSS	(10,256,318)	(5,923,619)	(26,854,102)	(18,153,918)
Less: Net loss attributable to the non-controlling interest	1,253,150	965,605	2,583,581	2,763,169
NET LOSS ATTRIBUTABLE TO BIOTIME, INC.	$ (9,003,168)	$ (4,958,014)	$ (24,270,521)	$ (15,390,749)
Foreign currency translation gain/(loss)	7,016	(15,777)	184,310	(74,635)
COMPREHENSIVE NET LOSS	$ (8,996,152)	$ (4,973,791)	$ (24,086,211)	$ (15,465,384)
BASIC AND DILUTED LOSS PER COMMON SHARE	$ (0.16)	$ (0.10)	$ (0.45)	$ (0.31)
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING: BASIC AND DILUTED	55,621,564	49,291,177	53,545,834	49,196,804

See accompanying notes to the condensed consolidated interim financial statements.

BIOTIME, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	Nine Months Ended	
	September 30, 2013	September 30, 2012
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss attributable to BioTime, Inc.	$ (24,270,521)	$ (15,390,749)
Adjustments to reconcile net loss attributable to BioTime, Inc. to net cash used in operating activities:		
Depreciation expense	419,630	283,637
Amortization of intangible asset	1,927,718	1,764,382
Amortization of deferred license and royalty revenues	(124,882)	(112,708)
Amortization of deferred grant income	—	(261,777)
Amortization of deferred consulting fees	48,838	582,186
Amortization of deferred license and royalty fees	82,125	82,129
Amortization of deferred rent	(6,669)	(8,143)
Stock-based compensation	2,375,354	1,441,135
Reduction in receivables from the reversal of revenues	—	205,926
Write-off of security deposit	—	(3,634)
(Gain)/loss on sale/write-off of fixed assets, net	(5,120)	4,997
Net loss allocable to non-controlling interest	(2,583,581)	(2,763,169)
Changes in operating assets and liabilities:		
Accounts receivable, net	(66,310)	(459,555)
Grant receivable	932,925	584,744
Inventory	(5,816)	(5,794)
Prepaid expenses and other current assets	284,785	140,220
Other long term assets	(15,000)	—
Accounts payable and accrued liabilities	177,631	(699,155)
Other long term liabilities	(48,322)	(16,686)
Deferred subscription revenues	(50,544)	(108,056)
Deferred grant income	46,080	56,630
Net cash used in operating activities	(20,881,679)	(14,683,440)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of equipment	(1,976,042)	(205,135)
Cash acquired in connection with merger	—	292,387
Proceeds from the sale of fixed assets	30,900	4,500
Security deposit paid	(61,923)	(529)
Net cash provided by/(used) in investing activities	(2,007,065)	91,223
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from the exercise of stock options from employees	—	286,552
Financing fees paid upon issuance of common shares	(748,072)	—
Proceeds from the issuance of common shares	23,810,421	—
Proceeds from the sale of treasury stock	1,819,500	—
Proceeds from the sale of common shares of subsidiary	255,502	—
Net cash provided by financing activities	25,137,351	286,552
Effect of exchange rate changes on cash and cash equivalents	118,769	(75,885)
NET CHANGE IN CASH AND CASH EQUIVALENTS:	2,367,376	(14,381,550)
Cash and cash equivalents at beginning of period	4,349,967	22,211,897
Cash and cash equivalents at end of period	$ 6,717,343	$ 7,830,347
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid during the period for interest	$ 61	$ 315
SUPPLEMENTAL SCHEDULE OF NON-CASH FINANCING AND INVESTING ACTIVITIES:		
Common shares acquired in connection with investment in subsidiary as part of Share Exchange and Contribution Agreement	$ —	$ 2,001,762
Common shares issued for consulting services	$ 173,100	$ —
Common shares issued for rent	$ 253,758	$ —
Common shares issued as part of merger	$ —	$ 1,802,684

See accompanying notes to the condensed consolidated interim financial statements.

1. Organization, Basis of Presentation, and Summary of Select Significant Accounting Policies

General – BioTime is a biotechnology company engaged in two areas of biomedical research and product development. BioTime's primary focus is in the field of regenerative medicine; specifically human embryonic stem ("hES") cell and induced pluripotent stem ("iPS") cell technology. Regenerative medicine refers to therapies based on stem cell technology that are designed to rebuild cell and tissue function lost due to degenerative disease or injury. hES and iPS cells provide a means of manufacturing every cell type in the human body and therefore show considerable promise for the development of a number of new therapeutic products. BioTime and its subsidiaries plan to develop stem cell products for research and therapeutic use. Asterias Biotherapeutics, Inc. ("Asterias," formerly known as BioTime Acquisition Corporation) entered into an Asset Contribution Agreement with us and Geron Corporation to acquire certain assets from Geron Corporation that had been used in Geron's human embryonic stem cell research and development programs, and to acquire certain assets from us. See Notes 9 and 12. The contributed assets will provide Asterias with cell lines from which Asterias expects to select product candidates for development as products for human therapeutic use in one or more of the following fields: neurology, oncology, orthopedics, and heart failure and myocardial infarction. OncoCyte Corporation ("OncoCyte") is developing products and technologies to diagnose and treat cancer. ES Cell International Pte Ltd. ("ESI"), a Singapore private limited company, developed hES cell lines and may market those cell lines and other BioTime research products in over-seas markets as part of BioTime's ESI BIO division. OrthoCyte Corporation ("OrthoCyte") is developing therapies to treat orthopedic disorders, diseases and injuries. ReCyte Therapeutics, Inc., formerly known as Embryome Sciences, Inc. ("ReCyte Therapeutics"), is developing therapies to treat a variety of cardiovascular and related ischemic disorders, as well as products for research using cell reprogramming technology. Cell Cure Neurosciences Ltd. ("Cell Cure Neurosciences"), is an Israel-based biotechnology company focused on developing stem cell-based therapies for retinal and neurological disorders, including the development of retinal pigment epithelial cells for the treatment of macular degeneration, and treatments for multiple sclerosis. LifeMap Sciences, Inc. ("LifeMap Sciences") markets, sells and distributes *GeneCards*®, the leading human gene database, and is developing an integrated database suite to complement *GeneCards*® that will also include the *LifeMap*™ database of embryonic development, stem cell research and regenerative medicine, and *MalaCards*, the human disease database. LifeMap Sciences will also market BioTime research products and PanDaTox, a database that can be used to identify genes and intergenic regions that are unclonable in E. coli, to aid in the discovery of new antibiotics and biotechnologically beneficial functional genes. LifeMap Sciences plans to commence research into the identification and development of novel cell lines for therapeutic products, including research on *PureStem*™ human embryonic progenitor cells ("hEPC") using the LifeMap Sciences proprietary discovery platform, with the goal of identifying those hEPC that have greatest potential for use in the development of cell-based therapies for degenerative diseases. Asterias Biotherapeutics, Inc. ("Asterias," formerly known as BioTime Acquisition Corporation) was incorporated on September 24, 2012. Asterias was incorporated to explore opportunities to acquire assets and businesses in the field of stem cells and regenerative medicine.

BioTime is focusing a portion of its efforts in the field of regenerative medicine on the development and sale of advanced human stem cell products and technology that can be used by researchers at universities and other institutions, at companies in the bioscience and biopharmaceutical industries, and at other companies that provide research products to companies in those industries. Products for the research market generally can be sold without approval from the United States Food and Drug Administration (the "FDA") and comparable foreign regulatory agencies, and are therefore relatively near-term business opportunities when compared to therapeutic products.

BioTime previously developed blood plasma volume expanders and related technology for use in surgery, emergency trauma treatment and other applications.

BioTime's operating revenues are derived primarily from licensing fees and advertising from the marketing of the LifeMap Sciences database products, from royalties and licensing fees related to the sale of its plasma volume expander product, *Hextend*®, and from the sale of products for research.

The unaudited condensed consolidated interim balance sheet as of September 30, 2013, the unaudited condensed consolidated interim statements of operations and comprehensive loss for the three and nine months ended September 30, 2013 and 2012, and the unaudited condensed consolidated interim statements of cash flows for the nine months ended September 30, 2013 and 2012 have been prepared by BioTime's management in accordance with the instructions from Form 10-Q and Regulation S-X. In the opinion of management, all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the financial position, results of operations, and cash flows at September 30, 2013 have been made. The condensed consolidated balance sheet as of December 31, 2012 is derived from BioTime's annual audited financial statements as of that date. The results of operations for the three and nine months ended September 30, 2013 are not necessarily indicative of the operating results anticipated for the full year of 2013.

Certain information and footnote disclosures normally included in consolidated financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted as permitted by regulations of the Securities and Exchange Commission ("SEC") except for the condensed consolidated balance sheet as of December 31, 2012, which was derived from audited financial statements. Certain previously furnished amounts have been reclassified to conform with presentations made during the current periods. These condensed consolidated interim financial statements should be read in conjunction with the annual audited consolidated financial statements and notes thereto included in BioTime's Form 10-K for the year ended December 31, 2012.

Principles of consolidation – BioTime's consolidated financial statements include the accounts of its subsidiaries. The following table reflects BioTime's ownership of the outstanding shares of its subsidiaries.

Subsidiary	BioTime Ownership	Country
Asterias Biotherapeutics, Inc.	96.7%(1)	USA
ReCyte Therapeutics, Inc. (formerly Embryome Sciences, Inc.)	94.8%	USA
OncoCyte Corporation	75.3%	USA
OrthoCyte Corporation	100%	USA
ES Cell International Pte Ltd.	100%	Singapore
BioTime Asia, Limited	81%	Hong Kong
Cell Cure Neurosciences Ltd.	62.5%	Israel
LifeMap Sciences, Inc.	73.2%	USA
LifeMap Sciences, Ltd.	(2)	Israel

(1) BioTime's percentage ownership was reduced to approximately 71.6% when Asterias issued common stock to BioTime and Geron Corporation upon consummation of the asset contribution transaction under the Asset Contribution Agreement, and sold common stock and warrants to a private investor for cash in a related transaction, on October 1, 2013. See Notes 9 and 12 to financial statements.

(2) LifeMap Sciences, Ltd. is a wholly-owned subsidiary of LifeMap Sciences, Inc.

All material intercompany accounts and transactions have been eliminated in consolidation. As of September 30, 2013 and as of December 31, 2012, we consolidated the financial results of Asterias, ReCyte Therapeutics, OncoCyte, BioTime Asia, OrthoCyte, LifeMap, ESI, and Cell Cure Neurosciences as we have the ability to control their operating and financial decisions and policies through our ownership. We reflect the non-controlling interest as a separate element of equity on our condensed consolidated balance sheet.

Certain significant risks and uncertainties – The operations of BioTime and its subsidiaries are subject to a number of factors that can affect their operating results and financial condition. Such factors include but are not limited to, the following: the results of clinical trials of their respective therapeutic product and medical device candidates; their ability to obtain FDA and foreign regulatory approval to market their respective therapeutic and medical device product candidates; their ability to develop new stem cell research products and technologies; competition from products manufactured and sold or being developed by other companies; the price and demand for their products; their ability to obtain additional financing and the terms of any such financing that may be obtained; their ability to negotiate favorable licensing or other manufacturing and marketing agreements for its products; the availability of ingredients used in their products; and the availability of reimbursement for the cost of their therapeutic products and medical devices (and related treatment) from government health administration authorities, private health coverage insurers, and other organizations.

Use of estimates – The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Revenue recognition – BioTime complies with SEC Staff Accounting Bulletin guidance on revenue recognition. Royalty revenues consist of product royalty payments. License fee revenues consist of fees under license agreements and are recognized when earned and reasonably estimable and also include subscription and advertising revenue from our online databases based upon respective subscription and advertising periods. BioTime recognizes revenue in the quarter in which the royalty reports are received, rather than the quarter in which the sales took place. When BioTime is entitled to receive up- front nonrefundable licensing or similar fees pursuant to agreements under which BioTime has no continuing performance obligations, the fees are recognized as revenues when collection is reasonably assured. When BioTime receives up-front nonrefundable licensing or similar fees pursuant to agreements under which BioTime does have continuing performance obligations, the fees are deferred and amortized ratably over the performance period. If the performance period cannot be reasonably estimated, BioTime amortizes nonrefundable fees over the life of the contract until such time that the performance period can be more reasonably estimated. Milestone payments, if any, related to scientific or technical achievements are recognized in income when the milestone is accomplished if (a) substantive effort was required to achieve the milestone, (b) the amount of the milestone payment appears reasonably commensurate with the effort expended, and (c) collection of the payment is reasonably assured. Grant income and the sale of research products are recognized as revenue when earned. Revenues from the sale of research products are primarily derived from the sale of hydrogels and stem cell products.

Cash and cash equivalents – BioTime considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Accounts receivable and allowance for doubtful accounts – Trade accounts receivable and grants receivable are presented in the prepaid expenses and other current assets line item of the consolidated balance sheet. Total trade receivables amounted to approximately $461,000 and $395,000 and grants receivable amounted to approximately $143,000 and $1,062,000 as of September 30, 2013 and December 31, 2012, respectively. Some of these amounts are deemed uncollectible; as such BioTime recognized allowance for doubtful accounts in the amount of $116,816 as of September 30, 2013 and December 31, 2012. BioTime evaluates the collectability of its receivables based on a variety of factors, including the length of time receivables are past due and significant one- time events and historical experience. An additional reserve for individual accounts will be recorded if BioTime becomes aware of a customer's inability to meet its financial obligations, such as in the case of bankruptcy filings or deterioration in the customer's operating results or financial position. If circumstances related to customers change, estimates of the recoverability of receivables would be further adjusted.

Concentrations of credit risk – Financial instruments that potentially subject BioTime to significant concentrations of credit risk consist primarily of cash and cash equivalents. BioTime limits the amount of credit exposure of cash balances by maintaining its accounts in high credit quality financial institutions. Cash equivalent deposits with financial institutions may occasionally exceed the limits of insurance on bank deposits; however, BioTime has not experienced any losses on such accounts.

Equipment – Equipment is stated at cost. Equipment is being depreciated using the straight-line method over a period of 36 to 120 months. See Note 3.

Inventory – Inventories are stated at the lower of cost or market. Cost, which includes amounts related to materials, labor, and overhead, is determined in a manner which approximates the first-in, first-out ("FIFO") method.

Treasury stock – BioTime accounts for BioTime common shares issued to subsidiaries for future potential working capital needs as treasury stock on the consolidated balance sheet. BioTime has the intent and ability to register any unregistered shares to support the marketability of the shares.

Patent costs – Costs associated with obtaining patents on products or technology developed are expensed as general and administrative expenses when incurred. This accounting is in compliance with guidance promulgated by the Financial Accounting Standards Board (the "FASB") regarding goodwill and other intangible assets.

Reclassification – Certain prior year amounts have been reclassified to conform to the current year presentation.

Research and development – BioTime complies with FASB requirements governing accounting for research and development costs. Research and development costs are expensed when incurred, and consist principally of salaries, payroll taxes, consulting fees, research and laboratory fees, and license fees paid to acquire patents or licenses to use patents and other technology from third parties.

Foreign currency translation gain/loss and Comprehensive net loss – In countries in which BioTime operates, and the functional currency is other than the U.S. dollar, assets and liabilities are translated using published exchange rates in effect at the consolidated balance sheet date. Revenues and expenses and cash flows are translated using an approximate weighted average exchange rate for the period. Resulting translation adjustments are recorded as a component of accumulated other comprehensive income/(loss) on the consolidated balance sheet. For the three and nine months ended September 30, 2013, comprehensive net loss includes foreign currency translation gain of $7,016 and $184,310, respectively. Comprehensive net loss in the same periods in 2012 includes foreign currency translation loss of $15,777 and $74,635, respectively.

Income taxes – BioTime accounts for income taxes in accordance with the accounting principles generally accepted in the United States of America ("GAAP") requirements, which prescribe the use of the asset and liability method, whereby deferred tax asset or liability account balances are calculated at the balance sheet date using current tax laws and rates in effect. Valuation allowances are established when necessary to reduce deferred tax assets when it is more likely than not that a portion or all of the deferred tax assets will not be realized. The FASB guidance also prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not sustainable upon examination by taxing authorities. BioTime recognizes accrued interest and penalties related to unrecognized tax benefits as income tax expense. No amounts were accrued for the payment of interest and penalties as of September 30, 2013 and December 31, 2012. BioTime files its income tax returns in the U.S. federal and various state and local and foreign jurisdictions. Generally, BioTime is no longer subject to income tax examinations by major taxing authorities for years before 2009. Any potential examinations may include questioning the timing and amount of deductions, the nexus of income among various tax jurisdictions and compliance with U.S. federal, state and local and foreign tax laws. Management does not expect that the total amount of unrecognized tax benefits will materially change over the next twelve months.

Stock-based compensation – BioTime adopted accounting standards governing share-based payments, which require the measurement and recognition of compensation expense for all share-based payment awards made to directors and employees, including employee stock options, based on estimated fair values. In March 2005, the SEC issued additional guidelines which provide supplemental implementation guidance for valuation of share-based payments. BioTime has applied the provisions of this guidance in such valuations as well. Consistent with those guidelines, BioTime utilizes the Black-Scholes Merton option pricing model. BioTime's determination of fair value of share-based payment awards on the date of grant using that option-pricing model is affected by BioTime's stock price as well as by assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, BioTime's expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. The expected term of options granted is derived from historical data on employee exercises and post-vesting employment termination behavior. The risk-free rate is based on the U.S. Treasury rates in effect during the corresponding period of grant. Although the fair value of employee stock options is determined in accordance with recent FASB guidance, changes in the subjective assumptions can materially affect the estimated value.

Impairment of long-lived assets – BioTime's long-lived assets, including intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. If an impairment indicator is present, BioTime will evaluate recoverability by a comparison of the carrying amount of the assets to future undiscounted net cash flows expected to be generated by the assets. If the assets are impaired, the impairment will be recognized is measured by the amount by which the carrying amount exceeds the estimated fair value of the assets.

Deferred license and consulting fees – Deferred license and consulting fees consist of the value of warrants issued to third parties for services and to the minority shareholder in BioTime Asia for consulting services, and deferred license fees paid to acquire rights to use the proprietary technologies of third parties. The value of the warrants is being amortized over the period the services are being provided, and the license fees are being amortized over the estimated useful lives of the licensed technologies or licensed research products. See Note 5.

Loss per share – Basic net loss per share is computed by dividing net loss attributable to BioTime, Inc. by the weighted-average number of common shares outstanding for the period. Diluted net loss per share reflects the weighted-average number of common shares outstanding plus the potential effect of dilutive securities or contracts which are convertible to common shares, such as options and warrants (using the treasury stock method) and shares issuable in future periods, except in cases where the effect would be anti-dilutive. Diluted loss per share for the three and nine months ended September 30, 2013 and 2012 excludes any effect from 4,655,884 options and 1,751,615 warrants, and 3,492,135 options and 556,613 warrants, respectively, as the inclusion of those options and warrants would be antidilutive.

Fair value of financial instruments – The fair value of BioTime's assets and liabilities, which qualify as financial instruments under FASB guidance regarding disclosures about fair value of financial instruments, approximate the carrying amounts presented in the accompanying consolidated balance sheets.

2. Inventory

BioTime held $48,209 and $41,494 of inventory of finished products on-site at its corporate headquarters in Alameda, California at September 30, 2013 and December 31, 2012, respectively. Finished goods products of $12,923 and $13,822 were held by a third party on consignment at September 30, 2013 and December 31, 2012, respectively.

3. Equipment

At September 30, 2013 and December 31, 2012, equipment, furniture and fixtures were comprised of the following:

	September 30, 2013 (unaudited)	December 31, 2012
Equipment, furniture and fixtures	$ 4,093,517	$ 2,098,812
Accumulated depreciation	(1,187,675)	(750,258)
Equipment, net	$ 2,905,842	$ 1,348,554

Depreciation expense amounted to $419,630 and $283,637 for the nine months ended September 30, 2013 and 2012, respectively. The difference of $17,787 between the depreciation expense recognized in the condensed consolidated statement of operations and the increase in accumulated depreciation of $437,417 per the condensed consolidated balance sheet is primarily attributable to the impact of foreign currency conversion rates for the depreciation of assets held by foreign subsidiaries.

4. Intangible assets

At September 30, 2013 and December 31, 2012, intangible assets and intangible assets net of amortization were comprised of the following:

	September 30, 2013 (unaudited)	December 31, 2012
Intangible assets	$ 25,702,909	$ 25,702,909
Accumulated amortization	(7,143,835)	(5,216,117)
Intangible assets, net	$ 18,559,074	$ 20,486,792

BioTime amortizes its intangible assets over an estimated period of 10 years on a straight line basis. BioTime recognized $1,927,718 and $1,764,382 in amortization expense of intangible assets during the nine months ended September 30, 2013 and 2012, respectively.

5. Royalty Obligation and Deferred License Fees

BioTime amortizes deferred license fees over the estimated useful lives of the licensed technologies or licensed research products. BioTime is applying a 10 year estimated useful life to the technologies and products that it is currently licensing. The estimation of the useful life any technology or product involves a significant degree of inherent uncertainty, since the outcome of research and development or the commercial life a new product cannot be known with certainty at the time that the right to use the technology or product is acquired. BioTime will review its amortization schedules for impairments that might occur earlier than the original expected useful lives.

On January 3, 2008, BioTime entered into a Commercial License and Option Agreement with Wisconsin Alumni Research Foundation ("WARF"). The WARF license permits BioTime to use certain patented and patent pending technology belonging to WARF, as well as certain stem cell materials, for research and development purposes, and for the production and marketing of products used as research tools, including in drug discovery and development. BioTime or ReCyte Therapeutics will pay WARF royalties on the sale of products and services using the technology or stem cells licensed from WARF. The royalty will range from 2% to 4%, depending on the kind of products sold. The royalty rate is subject to certain reductions if BioTime also becomes obligated to pay royalties to a third party in order to sell a product. BioTime paid licensing fees, totaling $295,000 in cash and BioTime stock, and reimbursed WARF for certain costs associated with preparing, filing, and maintaining the licensed patents. In addition, BioTime pays WARF $25,000 annually as a license maintenance fee. The licensing fees less the amortized portion were included in deferred license fees in BioTime's condensed consolidated balance sheet as of September 30, 2013 and December 31, 2012.

On July 10, 2008, ReCyte Therapeutics entered into a License Agreement with Advanced Cell Technology, Inc. ("ACT"), under which ReCyte Therapeutics acquired exclusive worldwide rights to use ACT's "ACTCellerate" technology for methods to accelerate the isolation of novel cell strains from pluripotent stem cells. ReCyte Therapeutics paid ACT a $250,000 license fee. ReCyte Therapeutics has assigned its rights under the License Agreement to BioTime. BioTime will pay an 8% royalty on sales of products, services, and processes that utilize the licensed technology. Once a total of $1,000,000 of royalties has been paid, no further royalties will be due. The license will expire in twenty years or upon the expiration of the last to expire of the licensed patents, whichever is later. The $250,000 license fee less the amortized portion is included in deferred license fees in BioTime's condensed consolidated balance sheet as of September 30, 2013 and December 31, 2012.

On August 15, 2008, ReCyte Therapeutics entered into a License Agreement and a Sublicense Agreement with ACT under which ReCyte Therapeutics acquired world-wide rights to use an array of ACT technology (the "ACT License") and technology licensed by ACT from affiliates of Kirin Pharma Company, Limited (the "Kirin Sublicense"). The ACT License and Kirin Sublicense permit the commercialization of products in human therapeutic and diagnostic product markets.

The technology licensed by ReCyte Therapeutics covers methods to transform cells of the human body, such as skin cells, into an embryonic state in which the cells will be pluripotent. Under the ACT License, ReCyte Therapeutics paid ACT a $200,000 license fee and will pay a 5% royalty on sales of products, services, and processes that utilize the licensed ACT technology, and 20% of any fees or other payments (other than equity investments, research and development costs, loans and royalties) received by ReCyte Therapeutics from sublicensing the ACT technology to third parties. Once a total of $600,000 of royalties has been paid, no further royalties will be due. The license will expire in twenty years or upon the expiration of the last-to-expire of the licensed patents, whichever is later. The $200,000 license fee payment less the amortized portion is included in deferred license fees in BioTime's condensed consolidated balance sheet as of September 30, 2013 and December 31, 2012.

Under the Kirin Sublicense, ReCyte Therapeutics has paid ACT a $50,000 license fee and will pay a 3.5% royalty on sales of products, services, and processes that utilize the licensed ACT technology, and 20% of any fees or other payments (other than equity investments, research and development costs, loans and royalties) received by ReCyte Therapeutics from sublicensing the Kirin Technology to third parties. ReCyte Therapeutics will also pay to ACT or to an affiliate of Kirin Pharma Company, Limited ("Kirin"), annually, the amount, if any, by which royalties payable by ACT under its license agreement with Kirin are less than the $50,000 annual minimum royalty due. Those payments by ReCyte Therapeutics will be credited against other royalties payable to ACT under the Kirin Sublicense. The license will expire upon the expiration of the last to expire of the licensed patents, or May 9, 2016 if no patents are issued. The $50,000 license fee payment less the amortized portion is included in deferred license fees in BioTime's condensed consolidated balance sheet as of September 30, 2013 and December 31, 2012.

On February 29, 2009, ReCyte Therapeutics entered into a Stem Cell Agreement with Reproductive Genetics Institute ("RGI"). In partial consideration of the rights and licenses granted to ReCyte Therapeutics by RGI, BioTime issued to RGI 32,259 common shares, having a market value of $50,000 on the effective date of the Stem Cell Agreement. This $50,000 payment less the amortized portion is included in deferred license fees in BioTime's condensed consolidated balance sheet as of September 30, 2013 and December 31, 2012.

As of September 30, 2013, future amortization of deferred license fees described above was as follows:

Year Ended December 31,	Deferred License Fees
2013	$ 27,375
2014	109,500
2015	109,500
2016	109,500
2017	109,500
Thereafter	101,333
Total	$ 566,708

6. Accounts Payable and Accrued Liabilities

At September 30, 2013 and December 31, 2012, accounts payable and accrued liabilities consisted of the following:

	September 30, 2013 (unaudited)	December 31, 2012
Accounts payable	$ 2,202,410	$ 1,168,077
Accrued bonuses	250,000	497,843
Other accrued liabilities	1,748,688	2,324,042
	$ 4,201,098	$ 3,989,962

7. Equity

Warrants

BioTime has issued warrants to purchase its common shares as payments for services and in connection to certain business acquisitions. At September 30, 2013, 1,751,615 warrants to purchase common shares with a weighted average exercise price of $6.59 and a weighted average remaining contractual life of 1.87 years were outstanding. At December 31, 2012, warrants to purchase 556,613 common shares with a weighted average exercise price of $10.00 and a weighted average remaining contractual life of 1.32 years were outstanding.

Preferred Shares

BioTime is authorized to issue 2,000,000 preferred shares. The shareholders approved the increase in the number of authorized preferred shares from 1,000,000 to 2,000,000 in May 2013. The preferred shares may be issued in one or more series as the board of directors may by resolution determine. The board of directors is authorized to fix the number of shares of any series of preferred shares and to determine or alter the rights, references, privileges, and restrictions granted to or imposed on the preferred shares as a class, or upon any wholly unissued series of any preferred shares. The board of directors may, by resolution, increase or decrease (but not below the number of shares of such series then outstanding) the number of shares of any series of preferred shares subsequent to the issue of shares of that series.

As of September 30, 2013 BioTime has no issued and outstanding preferred shares.

Common Shares

BioTime is authorized to issue 125,000,000 common shares with no par value. The shareholders approved the increase in the number of authorized common shares from 75,000,000 to 125,000,000 in May 2013. As of September 30, 2013, BioTime had issued 57,938,220 common shares and had 55,622,934 common shares outstanding. The difference between the issued and outstanding number of common shares reflects the treasury stock treatment, for financial reporting purposes, of BioTime common shares held by its subsidiaries.

During the nine months ended September 30, 2013, BioTime raised gross proceeds of $11,571,953 from the sale of 2,594,156 BioTime common shares at a weighted average price of $4.46 per share in the open market through our Controlled Equity Offering facility with Cantor Fitzgerald & Co. and through the sale of BioTime shares held by BioTime's majority owned subsidiaries, LifeMap Sciences and Cell Cure Neurosciences. The proceeds of the sale of BioTime shares by its subsidiaries belong to those subsidiaries.

In January 2013, BioTime and a private investor entered into a Stock and Warrant Purchase Agreement under which the investor agreed to invest $5,000,000 in BioTime by purchasing, in two tranches, an aggregate of 1,350,000 BioTime common shares and warrants to purchase approximately 650,000 additional BioTime common shares. The first tranche of $2,000,000 was funded on January 14, 2013, and BioTime issued to the investor 540,000 common shares and 259,999 warrants. BioTime received the second tranche of $3,000,000 on April 10, 2013 at which time BioTime issued to the investor 810,000 common shares, and warrants to purchase an additional 389,999 common shares at an exercise price of $5.00 per share.

In June 2013, BioTime sold 2,180,016 common shares and 545,004 warrants to purchase common shares for gross proceeds of $9,057,967 under the Stock and Warrant Purchase Agreement entered between BioTime and certain investors. The common shares and warrants to purchase common shares were sold in "units" with each unit consisting of one common share and one-quarter of a warrant, at an offering price of $4.155 per unit. The warrants have an initial exercise price of $5.00 per share and are exercisable during the three year period beginning on the date of issuance, June 6, 2013.

During the nine months ended September 30, 2013, no options or warrants were exercised.

During the nine months ended September 30, 2013 and 2012, BioTime recognized stock-based compensation expenses of $2,375,354 and $1,441,135, respectively, due to stock options granted to employees, directors, and outside consultants. During the nine months ended September 30, 2013 and 2012, BioTime granted 1,575,000 and 280,000 options, respectively, under its 2012 Equity Incentive Plan and its 2002 Stock Option Plan. Asterias granted 2,880,000 and nil options, respectively under its 2013 Equity Incentive Plan; OrthoCyte granted nil and 300,000 options, respectively under its 2010 Stock Option Plan; OncoCyte granted 80,000 and nil options, respectively under its 2011 Stock Option Plan; ReCyte granted 200,000 and 550,000 options, respectively under its 2011 Stock Option Plan; LifeMap Sciences granted nil and 217,143 options, respectively under its 2011 Stock Option Plan; and BioTime Asia did not grant any options in either periods.

Option on LifeMap Sciences Common Stock Held by BioTime

As a condition to the sale of BioTime shares and warrants under the terms of a Stock and Warrant Purchase Agreement during June 2013, BioTime entered into an Option Agreement with certain investors. Under the Option Agreement, each investor has an option to purchase a number of shares of common stock that BioTime holds in its subsidiary LifeMap Sciences, initially equal to the number of warrants that the investors purchased from BioTime. The options to purchase shares of LifeMap Sciences common stock may be exercised at a price of $4.00 per share in lieu of exercising the warrants to purchase BioTime common shares. The exercise of an option by an investor will require the cancellation of one BioTime warrant for each share of LifeMap Sciences common stock (as adjusted to reflect any stock dividend, stock split, reverse stock split or other certain other transactions) purchased by the investor, so that an investor will have to choose between purchasing BioTime common shares and LifeMap Sciences common stock when they exercise either the warrants or the options. The right of a holder of an option to exercise its option is subject to the availability of an exemption from registration under the Securities Act of 1933, as amended.

8. Merger with XenneX, Inc.

On May 18, 2012, BioTime completed the acquisition of XenneX, Inc. ("XenneX") through a merger of XenneX into LifeMap Sciences. Through the merger, XenneX stockholders received, in the aggregate, 1,429,380 shares of LifeMap Sciences common stock, which represented approximately 13.7% of the LifeMap Sciences common stock outstanding upon the closing of the transaction. XenneX shareholders also received approximately 448,429 BioTime common shares as part of the transaction. Through the merger, LifeMap Sciences acquired all of XenneX's assets, including cash, accounts receivables, prepaid assets, licenses, and assumed XenneX's obligations, which at May 18, 2012 totaled approximately $572,826 and primarily consisted of trade payables, deferred subscription revenues, and distributions due to former XenneX shareholders.

The merger is being accounted for under the acquisition method of accounting. In accordance with ASC 805, the total purchase consideration is allocated to the net tangible and identifiable intangible assets acquired and liabilities assumed based on their estimated fair values as of May 18, 2012. BioTime amortizes intangibles over their useful lives, which BioTime estimates to be 10 years. In accordance with ASC 805, BioTime does not amortize goodwill. The purchase price was allocated using the information currently available, and may be adjusted after obtaining more information regarding, among other things, asset valuations, liabilities assumed, and revisions of preliminary estimates.

The total purchase price of $4,304,099 is being allocated as indicated:

Components of the purchase price:		
BioTime common shares	$	1,802,684
LifeMap Sciences common shares		2,501,415
Total purchase price	$	4,304,099
Preliminary allocation of purchase price:		
Assets acquired and liabilities assumed:		
Cash	$	292,387
Other current assets		311,118
Intangible assets		4,273,420
Current liabilities		(294,572)
Cash distributable to sellers		(278,254)
Net assets acquired	$	4,304,099

The fair value of the BioTime shares issued was $4.02, the closing price as reported on the NYSE MKT on May 18, 2012, the date the merger was finalized. The fair value of the LifeMap Sciences shares issued was $1.75 as determined by negotiation between BioTime, LifeMap Sciences and XenneX and its stockholders and is consistent with an internal valuation analysis completed by BioTime.

9. Asset Contribution Agreement

On January 4, 2013, BioTime and Asterias entered into an Asset Contribution Agreement with Geron Corporation ("Geron") pursuant to which BioTime and Geron will concurrently contribute certain assets to Asterias in exchange for shares of Asterias common stock. Closing of the asset contribution transaction occurred on October 1, 2013.

Pursuant to the Asset Contribution Agreement, Geron agreed to contribute certain assets related to its discontinued stem cell research and development programs, including certain patents and know-how related to human embryonic stem cells; certain biological materials and reagents; certain laboratory equipment; certain contracts; and certain product clinical trials, in exchange for shares of Asterias common stock, and BioTime has agreed to contribute 8,902,077 common shares; warrants to subscribe for and purchase 8,000,000 additional common shares; $5,000,000 in cash; 10% of the shares of common stock of OrthoCyte Corporation issued and outstanding on the date of the Asset Contribution Agreement; 6% of the ordinary shares of our subsidiary Cell Cure Neurosciences issued and outstanding on the date of the Asset Contribution Agreement; and a quantity of certain human hES cell lines produced under cGMP, and a non-exclusive, world-wide, royalty-free license to use those hES cell lines and certain patents pertaining to stem cell differentiation technology, in exchange for Asterias common stock and warrants to purchase Asterias common stock.

Asterias also entered into a Stock and Warrant Purchase Agreement with a private investor, pursuant to which the investor agreed to contribute $5,000,000 in cash to Asterias for 2,136,000 shares of Asterias Series B common stock, and warrants to purchase 350,000 additional shares of Asterias Series B common stock, in conjunction with the closing of the asset contribution transaction under the Asset Contribution Agreement.

Asterias agreed to assume all obligations and liabilities in connection with the assets contributed by Geron, to the extent such obligations and liabilities arise after the closing date of the Asset Contribution Agreement, including certain obligations and liabilities to provide follow-up procedures with patients who participated in Geron's clinical trials.

Geron has agreed to distribute to its stockholders on a pro rata basis the shares of Asterias Series A common stock received in the asset contribution transaction following the closing under the Asset Contribution Agreement. Following that distribution by Geron, Asterias will distribute to the holders of its Series A common stock on a pro rata basis the 8,000,000 BioTime warrants t received under the Asset Contribution Agreement.

Asterias also agreed to issue to BioTime warrants to purchase 3,150,000 shares of Asterias Series B common stock, and to issue to the private investor warrants to purchase 350,000 shares of Asterias Series B common stock (the "Asterias Warrants"). The Asterias Warrants will have an exercise price of $5.00 per share and a term of three years. The exercise price per share and number of shares that may be purchased upon the exercise of the Asterias Warrants will be subject to adjustment in the event of any Asterias stock split, reverse stock split, stock dividend, reclassification of shares and certain other transactions.

The Asterias Series A and Series B common stock will be identical in most respects, however, Asterias will be entitled to make certain distributions or pay dividends, other than stock dividends, on its Series A common stock, without making a distribution or paying a dividend on its Series B common stock. The Asterias Series B common stock may be converted into Asterias Series A common stock, on a share for share basis, at Asterias' election, only after Geron distributes to its stockholders the Asterias Series A common stock issued under the Asset Contribution Agreement and Asterias subsequently distributes to the Asterias Series A common stock holders the 8,000,000 BioTime warrants contributed by BioTime under the Asset Contribution Agreement.

10. Segment Information

BioTime's executive management team represents its chief decision maker. To date, BioTime's management has viewed BioTime's operations as one segment that includes, the research and development of therapeutic products for oncology, orthopedics, retinal and neurological diseases and disorders, blood and vascular system diseases and disorders, blood plasma volume expansion, diagnostic products for the early detection of cancer, and hydrogel products that may be used in surgery, and products for human embryonic stem cell research. As a result, the financial information disclosed materially represents all of the financial information related to BioTime's sole operating segment.

11. Unaudited Pro Forma Interim Financial Information – Nine Months Ended September 30, 2013 and 2012

The following unaudited pro forma information gives effect to the merger with XenneX as if the merger took place on January 1, 2012. The pro forma information does not necessarily reflect the results of operations that would have occurred had the entities been a single company during the periods presented.

	Nine Months Ended September 30,	
	2013 (Unaudited)	2012 (Unaudited)
Revenues	$ 2,541,851	$ 2,984,436
Net loss available to common shareholders	$ (24,270,521)	$ (15,288,233)
Net loss per common share – basic and diluted	$ (0.45)	$ (0.31)

12. Subsequent Events

Asset Contribution Agreement

The contribution of assets to Asterias by BioTime and Geron under the Asset Contribution Agreement was completed on October 1, 2013. See Note 9. Asterias issued 6,537,779 shares of its Series A common stock to Geron and 21,773,340 shares of Asterias Series B common stock and warrants to purchase an additional 3,150,000 shares of Asterias Series B common stock to BioTime.

Concurrently with the close of the asset contribution under the Asset Contribution Agreement, Asterias issued 2,136,000 shares of its Series B Common Stock and warrants to purchase 350,000 additional shares of Series B common stock to the private investor for $5,000,000 in cash pursuant to the Stock and Warrant Purchase Agreement.

As a result of the consummation of the asset contribution transaction and the sale of Series B common stock and warrants to the private investor on October 1, 2013, BioTime now owns approximately 71.6% of the outstanding Asterias common stock, Geron now owns approximately 21.4% of the outstanding Asterias common stock, and the private investor now owns approximately 7.0%, of the outstanding Asterias common stock. Pursuant to the Asset Contribution Agreement, Geron has agreed to distribute its shares of Asterias Series A common stock to its stockholders on a pro rata basis.

In connection with its acquisition of the stem cell assets from Geron on October 1, 2013, Asterias entered into a Royalty Agreement with Geron pursuant to which Asterias agreed to pay Geron a 4% royalty on net sales (as defined in the Royalty Agreement), by Asterias or any of its affiliates or sales agents, of any products that are developed and commercialized covered by the patents contributed by Geron. In the case of sales of such products by a person other than Asterias or one of its affiliates or sales agents, Asterias will be required to pay Geron 50% of all royalties and cash payments received by Asterias or by its affiliate in respect of a product sale.

In addition, on October 1, 2013, Asterias received from Geron an exclusive sublicense of certain patents owned by the University of Colorado; University License Equity Holdings, Inc. relating to telomerase (the "Telomerase Sublicense"). The Telomerase Sublicense entitles Asterias to use the sublicensed patents in the development of certain immunological treatments for cancer. Under the Telomerase Sublicense, Asterias paid Geron an up-front license fee and will pay a small annual license maintenance fee, and a small royalty on sales of any products that Asterias may develop and commercialize covered by the sublicensed patents

Non-Exclusive License Agreement

On October 7, 2013, Asterias entered into a Non-Exclusive License Agreement with the Wisconsin Alumni Research Foundation ("WARF") under which Asterias was granted a worldwide non-exclusive license to use certain WARF patents and WARF-owned embryonic stem cell lines in the development and commercialization of therapeutic, diagnostic and research products. The licensed patents include patents covering primate embryonic stem cells as compositions of matter, as well as methods for growth and differentiation of primate embryonic stem cells. In consideration of the rights licensed to Asterias, Asterias has agreed to pay WARF an upfront license fee, payments upon the attainment of specified clinical development milestones, royalties on sales of commercialized products, and, subject to certain exclusions, a percentage of any payments that Asterias may receive from any sublicenses that it may grant to use the licensed patents or stem cell lines.

Sales of Common Shares

Subsequent to September 30, 2013 BioTime raised approximately $3.2 million of additional equity through the sale of 840,267 common shares through a Controlled Equity Offering sales agreement with Cantor Fitzgerald & Co.

These condensed consolidated financial statements were approved by management and the Board of Directors, and were issued on November 12, 2013. Subsequent events have been evaluated through that date.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following Management's Discussion and Analysis of Financial Condition and Results of Operations is intended to provide information necessary to understand our condensed consolidated financial statements for the three and nine months ended September 30, 2013 and 2012, and highlight certain other information which, in the opinion of management, will enhance a reader's understanding of our financial condition, changes in financial condition and results of operations. In particular, the discussion is intended to provide an analysis of significant trends and material changes in our financial position and the operating results of our business during the quarter ended September 30, 2013 as compared to the quarter ended September 30, 2012. This discussion should be read in conjunction with our Condensed Consolidated Financial Statements for the three and nine months ended September 30, 2013 and 2012 and related notes included elsewhere in this Quarterly Report on Form 10-Q. These historical financial statements may not be indicative of our future performance. This Management's Discussion and Analysis of Financial Condition and Results of Operations contains a number of forward-looking statements, all of which are based on our current expectations and could be affected by the uncertainties and risks described throughout this filing, particularly in "Item 1A. Risk Factors."

Overview

We are a biotechnology company focused on the emerging field of regenerative medicine. Our core technologies center on stem cells capable of becoming all of the cell types in the human body, a property called pluripotency. Products made from these "pluripotent" stem cells are being developed by us and our subsidiaries, for use in a variety of fields of medicine, including: neuroscience, oncology, orthopedics, and blood and vascular diseases.

“Regenerative medicine” refers to an emerging field of therapeutic product development that may allow all human cell and tissue types to be manufactured on an industrial scale. This new technology is made possible by the isolation of human embryonic stem (“hES”) cells, and by the development of “induced pluripotent stem (“iPS”) cells” which are created from regular cells of the human body using technology that allows adult cells to be “reprogrammed” into cells with pluripotency like young hES-like cells. These pluripotent hES and iPS cells have the unique property of being able to branch out into each and every kind of cell in the human body, including the cell types that make up the brain, the blood, the heart, the lungs, the liver, and other tissues. Unlike adult-derived stem cells that have limited potential to become different cell types, pluripotent stem cells may have vast potential to supply an array of new regenerative therapeutic products, especially those targeting the large and growing markets associated with age-related degenerative disease. Unlike pharmaceuticals that require a molecular target, therapeutic strategies in regenerative medicine are generally aimed at regenerating affected cells and tissues, and therefore may have broader applicability. Regenerative medicine represents a revolution in the field of biotechnology with the promise of providing therapies for diseases previously considered incurable.

On October 1, 2013, our subsidiary, Asterias Biotherapeutics, Inc. (“Asterias”) acquired the stem cell assets of Geron Corporation, including patents and other intellectual property, biological materials, reagents and equipment for the development of new therapeutic products for regenerative medicine. The assets were contributed to Asterias under the Asset Contribution Agreement described in Notes 9 and 12 to the condensed consolidated interim financial statements, and provide Asterias with four cell lines, each with animal proof of concept, from which multiple therapeutic product candidates may be selected for development as summarized below.

- Neurology – An initial Phase 1 safety study in spinal cord injury has been completed with follow-on opportunities in larger indications in Multiple Sclerosis and stroke.

- Oncology – A Phase 2/3 ready cancer vaccine (VAC1) with an opportunity to continue the development of a second approach using dendritic cells derived from hESCs (VAC2) .

- Orthopedics – Opportunity to continue the development of hESC derived chondrocytes to regenerate articular cartilage to address osteoarthritis and degenerative disk disease.

- Cardiovascular – Opportunity to continue the development of hESC-derived cardiomyocytes for heart failure and myocardial infarction.

Our commercial efforts in regenerative medicine include the development and sale of products designed for research applications in the near term as well as products designed for diagnostic and therapeutic applications in the medium and long term. Through our ESI BIO division, we offer advanced human stem cell products and technology that can be used by researchers at universities and at companies in the bioscience and biopharmaceutical industries. We have developed research and clinical grade hES cell lines that we market for both basic research and therapeutic product development. Our subsidiary, ES Cell International Pte Ltd (“ESI”), has developed six hES cell lines that are among the best characterized and documented cell lines available today. Developed in compliance with the principles of current Good Manufacturing Practices (“cGMP”) that facilitate transition into the clinic, these hES cell lines are extensively characterized and five of the six cell lines currently have documented and publicly-available genomic sequences. The ESI hES cell lines are now included in the Stem Cell Registry of the National Institutes of Health (“NIH”), making them eligible for use in federally funded research, and all are available for purchase through our ESI BIO division at http://bioreagents.lifemapsc.com. We are working with several collaborators to enable the use of these lines for production of cell therapy products for IND enabling studies. ESI BIO also markets human embryonic progenitor cell (“hEPCs”), which are called *PureStem*™ progenitors and were developed using *ACTCellerate*™ technology. These hEPCs are purified lineages of cells that are intermediate in the developmental process between embryonic stem cells and fully differentiated cells. We expect that hEPCs will simplify the scalable manufacture of highly purified and identified cell types and will possess the ability to become a wide array of cell types with potential applications in research, drug discovery, and human regenerative stem cell therapies. The *PureStem*™ progenitors are also available for purchase through http://bioreagents.lifemapsc.com.

Research products can be marketed without regulatory or other governmental approval, and thus offer relatively near-term business opportunities, especially when compared to therapeutic products. Certain research products, such as ESI hES lines and *HyStem*® hydrogels, have the advantage of being "translatable to the clinic" meaning that these products are available as economic research grade or clinical grade; allowing researchers more assurance that they will be acceptable for use in future clinical trials. The medical devices and diagnostics that we and our subsidiaries are developing will require regulatory approval for marketing, but the clinical trial and approval process for medical devices is often faster and less expensive than the process for the approval of new drugs and biological therapeutics. Our current and near-term product opportunities, combined with expected long-term revenues from the potentially very large revenue that could be derived from cell-based therapeutic products under development at our subsidiaries, provide us with a balanced commercial strategy. The value of this balance is apparent in the commercial field of regenerative medicine as competitors whose sole focus is on long-term therapeutic products have found it challenging to raise the requisite capital to fund clinical development.

Our *HyStem*® hydrogel product line is one of the components in our near-term revenue strategy. *HyStem*® is a patented biomaterial that mimics the human extracellular matrix, which is the network of molecules surrounding cells in organs and tissues that is essential to cellular function. Many tissue engineering and regenerative cell-based therapies will require the delivery of therapeutic cells in a matrix or scaffold to sustain cell survival after transplantation and to maintain proper cellular function. *HyStem*® is a unique hydrogel that has been shown to support cellular attachment and proliferation *in vivo.*

Renevia™ is a clinical grade formulation of our *HyStem*®-*C*, a biocompatible, implantable hyaluronan and collagen- based matrix for cell delivery in human clinical applications. As an injectable product, *Renevia*™ may address an immediate need in cosmetic and reconstructive surgeries and other procedures by improving the process of transplanting adipose derived cells, mesenchymal stem cells, or other adult stem cells. We will need to obtain approval by the FDA and comparable regulatory agencies in foreign countries in order to market *Renevia*™ as a medical device. We recently conducted our first European clinical trial of *Renevia*™ without cells to determine the safety, tolerability, and acceptance of *Renevia*™ after subcutaneous injection. Examinations of the subjects after they received *Renevia*™ injections have shown that *Renevia*™ was well-tolerated by all subjects with no serious adverse events or subject withdrawals. A final check of the enrolled subjects for adverse events will be made four weeks after the injection. Subsequent clinical studies are planned to document the efficacy of *Renevia*™ as a delivery matrix for adipose cells to restore normal skin contours in patients where the subcutaneous adipose tissue has been lost to lipoatrophy, beginning with HIV related facial lipoatrophy. Lipoatrophy is a localized loss of fat beneath the skin. Lipoatrophy is often a consequence of the normal aging process where the loss of fat in the cheeks or the back of the hands contributes to an aged appearance, but lipoatrophy can also be associated with trauma, surgery, and diseases, and is frequently suffered by HIV patients being treated with anti-viral drugs.

We have commenced development of two new products based on our *HyStem*® technology platform. The new products are unique formulations utilizing some of the same cGMP components that we using in our clinical trials of *Renevia*™. The first of these new products is *ReGlyde*™, a cross-linked thiol-modified hyaluronan hydrogel for the management and protection of tendon injuries following surgical repair of the digital flexor or extensor tendons of the hand. The product is intended to be applied to the repaired tendon area via a syringe or similar device immediately prior to closing of the surgical area. Separation of the tendon from surrounding tissue has been shown to significantly reduce post-surgical adhesions that can lead to complications such as restricted finger mobility and flexibility. The second new product, *Premvia*™, is a *HyStem*® hydrogel formulation of cross-linked thiol-modified hyaluronan and thiol-modified gelatin for the management of wounds including partial and full-thickness wounds, ulcers, tunneled/undermined wounds, surgical wounds, and burns.

Our *HyStem*® hydrogels may have other applications when combined with the diverse and scalable cell types our scientists have isolated from hES cells. Other *HyStem*® products are also currently being used by researchers at a number of leading medical schools in pre-clinical studies of stem cell therapies, including research that we are funding at UCLA for the treatment of ischemic stroke. Other researchers are conducting work with *HyStem*® in research to facilitate wound healing, to treat brain cancer, vocal fold scarring, and for myocardial infarct repair. Recent publications have highlighted the combined use of *HyStem*® hydrogels with *PureStem*™ progenitors resulting in a combined product that produces cartilage- producing cell masses known as chondrocytes. We call this experimental product *HyStem*®-4D. In collaboration with William Marsh Rice University, we are also using *HyStem*® technology to develop 3D cell culture platforms for improved methods of screening new anti-cancer drug candidates in a project funded by a $285,423 Small Business Innovation Research (SBIR) grant awarded by the National Institutes of Health on September 20, 2013.

On September 19, 2013, BioTime, Inc. entered into an Exclusive Sublicense Agreement with Jade Therapeutics, Inc., which supersedes prior sublicense and supply agreements and expanded the "field of use" to include uses of *HyStem*® hydrogel technology as an ophthalmic sustained-release drug delivery platform for the delivery of all potential therapeutic molecules to the human eye. Excluded from the licensed field of use is the use of the *HyStem*® technology for the delivery of cells with or without any molecules necessary for the therapeutic benefit of those cells, for use in making punctal plugs, for diagnostic and research reagents, and for non-human applications.

Our subsidiary, OncoCyte Corporation, is developing *PanC-Dx*™ tests, novel non-invasive cancer diagnostics designed to detect the presence of various human cancers, including cancers of the breast, lung, bladder, uterus, stomach, and colon, during routine check -ups. OncoCyte intends to initially develop *PanC-Dx*™ diagnostics for breast and bladder cancer and may initially seek regulatory approval to market *PanC-Dx*™ in Europe for one or both of those cancers before seeking regulatory approvals required to market the product in the U.S. and other countries. OncoCyte is also evaluating markers that may be used in a *PanC-Dx*™ screen for lung cancer.

Our subsidiary, LifeMap Sciences markets, sells and distributes *GeneCards*®, the leading human gene database, as part of an integrated database suite that includes *LifeMap Discovery*™, the database of embryonic development, stem cell research and regenerative medicine; and *MalaCards*, the human disease database. LifeMap Sciences also markets *PanDaTox*, a database that can be used to identify genes and intergenic regions that are unclonable in E. coli, to aid in the discovery of new antibiotics and biotechnologically beneficial functional genes

The following table shows our subsidiaries, their respective principal fields of business, our percentage ownership as at September 30, 2013, and the country where their principal business is located:

Subsidiary	Field of Business	BioTime Ownership	Country
Asterias Biotherapeutics, Inc.	Research, development and commercialization of human therapeutic products from stem cells potentially in the fields of neurology, oncology, orthopedics, and heart failure and myocardial infarction	96.7%(1)	USA
ES Cell International Pte Ltd	Stem cell products for research, including clinical grade cell lines produced under cGMP	100%	Singapore
OncoCyte Corporation	Diagnosis and treatment of cancer	75.3%	USA
OrthoCyte Corporation	Orthopedic diseases, including chronic back pain and osteoarthritis	100%	USA
Cell Cure Neurosciences Ltd.	Age-related macular degeneration Multiple sclerosis Parkinson's disease	62.5%	Israel
ReCyte Therapeutics, Inc.	Vascular disorders, including cardiovascular-related diseases, ischemic conditions, vascular injuries. Stem cell-derived endothelial and cardiovascular related progenitor cells for research, drug testing, and therapeutics.	94.8%	USA
BioTime Asia, Limited	Stem cell products for research	81%	Hong Kong
LifeMap Sciences, Inc.	Genetic, disease, and stem cell databases; sale of stem cell products for research	73.2%	USA
LifeMap Sciences, Ltd.	Stem cell database	(2)	Israel

(1) BioTime's percentage ownership was reduced to approximately 71.6% when Asterias issued common stock to BioTime and Geron upon consummation of the asset contribution transaction under Asset Contribution Agreement, and sold common stock and warrants to a private investor for cash in a related transaction, on October 1, 2013. See Notes 9 and 12 to the condensed consolidated interim financial statements.

(2) LifeMap Sciences, Ltd. is a wholly-owned subsidiary of LifeMap Sciences, Inc.

Initially, we developed blood plasma volume expanders and related technology for use in surgery, emergency trauma treatment, and other applications. Our lead blood plasma expander product, *Hextend*®, is a physiologically balanced intravenous solution used in the treatment of hypovolemia, a condition caused by low blood volume, often from blood loss during surgery or injury. *Hextend*® maintains circulatory system fluid volume and blood pressure, and keeps vital organs perfused during surgery and trauma care. *Hextend*® is manufactured and distributed in the U.S. by Hospira, Inc., and in South Korea by CJ CheilJedang ("CJ"), under license from us.

Additional Information

HyStem®, *Hextend*® and *PentaLyte*® are registered trademarks of BioTime, Inc., and *Renevia*™, *Premvia*™, *ReGlyde*™, *PureStem*™, *ESpan*™, and *ESpy*® are trademarks of BioTime, Inc. *ACTCellerate*™ is a trademark licensed to us by Advanced Cell Technology, Inc. *ReCyte*™ is a trademark of ReCyte Therapeutics, Inc. *PanC-Dx*™ is a trademark of OncoCyte Corporation. *GeneCards*® is a registered trademark of Yeda Research and Development Co. Ltd.

We were incorporated in 1990 in the state of California. Our principal executive offices are located at 1301 Harbor Bay Parkway, Alameda, California 94502. Our telephone number is (510) 521-3390.

Research and Development Expenses

The following table shows the approximate percentages of our total research and development expenses of $6,441,462 and $17,389,409 allocated to our primary research and development projects during the three and nine months ended September 30, 2013, respectively and $4,545,470 and $13,323,410 for the same periods in 2012, respectively.

		Three Months Ended September 30,		Nine Months Ended September 30,	
Company	**Program**	**2013**	**2012**	**2013**	**2012**
BioTime and ESI	*ACTCellerate*™ hPECs, GMP hES cell lines, and related research products	8.7%	13.7%	11.5%	15.4%
BioTime	*ACTCellerate*™ technology	0.4%	6.6%	1.3%	6.0%
BioTime	Hydrogel products and *HyStem*® research	23.4%	25.8%	22.0%	19.2%
OncoCyte	Cancer therapy and diagnosis	8.7%	12.7%	11.3%	16.9%
OrthoCyte	Orthopedic therapy	1.8%	5.7%	4.1%	5.1%
ReCyte Therapeutics	Cardiovascular therapy and iPS	1.3%	6.5%	4.1%	7.3%
BioTime	*Hextend*®	0.5%	0.7%	0.4%	2.0%
BioTime Asia	Stem cell products for research	0.1%	0.6%	0.1%	0.8%
Cell Cure Neurosciences	*OpRegen*®, *OpRegen-Plus*®, and neurological disease therapies	26.6%	17.7%	23.0%	18.1%
LifeMap	Stem cell database	9.9%	10.0%	10.8%	9.2%
Asterias	hESC-based cell therapy	17.9%	–%	11.1%	–%
BioTime	3D-Culture for cancer drug screening	0.7%	–%	0.3%	–%

Critical Accounting Policies

Revenue recognition – We comply with SEC Staff Accounting Bulletin guidance on revenue recognition. Royalty revenues consist of product royalty payments. License fee revenues consist of fees under license agreements and are recognized when earned and reasonably estimable and also include subscription and advertising revenue from our online databases based upon respective subscription or advertising periods. We recognize revenue in the quarter in which the royalty reports are received rather than the quarter in which the sales took place. When we are entitled to receive up-front nonrefundable licensing or similar fees pursuant to agreements under which we have no continuing performance obligations, the fees are recognized as revenues when collection is reasonably assured. When we receive up-front nonrefundable licensing or similar fees pursuant to agreements under which we do have continuing performance obligations, the fees are deferred and amortized ratably over the performance period. If the performance period cannot be reasonably estimated, we amortize nonrefundable fees over the life of the contract until such time that the performance period can be more reasonably estimated. Milestone payments, if any, related to scientific or technical achievements are recognized in income when the milestone is accomplished if (a) substantive effort was required to achieve the milestone, (b) the amount of the milestone payment appears reasonably commensurate with the effort expended, and (c) collection of the payment is reasonably assured. Grant income and the sale of research products are recognized as revenue when earned. Revenues from the sale of research products are primarily derived from the sale of hydrogels and stem cell products.

Patent costs – Costs associated with obtaining patents on products or technology are expensed as general and administrative expenses when incurred. This accounting is in compliance with guidance promulgated by the Financial Accounting Standards Board ("FASB") regarding goodwill and other intangible assets.

Research and development – We comply with FASB requirements governing accounting for research and development costs. Research and development costs are expensed when incurred, and consist principally of salaries, payroll taxes, consulting fees, research and laboratory fees, and license fees paid to acquire patents or licenses to use patents and other technology from third parties.

Stock-based compensation – We have adopted accounting standards governing share-based payments, which require the measurement and recognition of compensation expense for all share-based payment awards made to directors and employees, including employee stock options, based on estimated fair values. We utilize the Black-Scholes Merton option pricing model. Our determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. The expected term of options granted is derived from historical data on employee exercises and post-vesting employment termination behavior. The risk-free rate is based on the U.S. Treasury rates in effect during the corresponding period of grant. Although the fair value of employee stock options is determined in accordance with recent FASB guidance, changes in the subjective assumptions can materially affect the estimated value. In management's opinion, the existing valuation models may not provide an accurate measure of the fair value of employee stock options because the option-pricing model value may not be indicative of the fair value that would be established in a willing buyer/willing seller market transaction.

Treasury stock – We account for BioTime common shares issued to subsidiaries for future potential working capital needs as treasury stock on the consolidated balance sheet. We have the intent and ability to register any unregistered shares to support the marketability of the shares.

Impairment of long-lived assets – Our long-lived assets, including intangible assets, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. If an impairment indicator is present, we evaluate recoverability by a comparison of the carrying amount of the assets to future undiscounted net cash flows expected to be generated by the assets. If the assets are impaired, the impairment recognized is measured by the amount by which the carrying amount exceeds the estimated fair value of the assets.

Deferred license and consulting fees – Deferred license and consulting fees consist of the value of warrants issued to third parties for services and to the minority shareholder in BioTime Asia for its participation in the organization of that company, and deferred license fees paid to acquire rights to use the proprietary technologies of third parties. The value of the warrants is being amortized over the lives of the warrants, and deferred license fees over the estimated useful lives of the licensed technologies or licensed research products. The estimation of the useful life any technology or product involves a significant degree of inherent uncertainty, since the outcome of research and development or the commercial life of a new product cannot be known with certainty at the time that the right to use the technology or product is acquired. We will review its amortization schedules for impairments that might occur earlier than the original expected useful lives. See also Note 5 to the condensed consolidated interim financial statements.

Principles of consolidation – Our consolidated financial statements include the accounts of our wholly-owned subsidiaries, OrthoCyte, and ESI, the accounts of ReCyte Therapeutics, a subsidiary of which we owned approximately 94.8% of the outstanding shares of common stock as of September 30, 2013; the accounts of OncoCyte, a subsidiary of which we owned approximately 75.3% of the outstanding shares of common stock as of September 30, 2013; the accounts of BioTime Asia, a subsidiary of which we owned approximately 81.0% of the outstanding shares as of September 30, 2013, the accounts of Cell Cure Neurosciences, a subsidiary of which we owned approximately 62.5% of the outstanding shares as of September 30, 2013, the accounts of LifeMap Sciences, a subsidiary of which we owned approximately 73.2% of the outstanding shares as of September 30, 2013, and the accounts of Asterias Biotherapeutics, a subsidiary of which we owned 96.7% of the outstanding shares as of September 30, 2013. All material intercompany accounts and transactions have been eliminated in consolidation. The consolidated financial statements are presented in accordance with accounting principles generally accepted in the U.S. and with the accounting and reporting requirements of Regulation S-X of the SEC.

Results of Operations

	Three Months Ended September 30,		$ Increase/	% Increase/
	2013	2012	Decrease	Decrease
License fees	$ 382,767	$ 337,633	$ +45,134	+13.4%
Royalties from product sales	80,592	133,946	-53,354	-39.8%
Grant income	160,431	441,630	-281,199	-63.7%
Sales of research products and services	90,272	90,342	-70	-0.1%
Total revenues	714,062	1,003,551	-289,489	-28.8%
Cost of sales	(206,678)	(169,734)	+36,944	+21.8%
Total revenues, net	507,384	833,817	-326,433	-39.1%

	Nine Months Ended September 30,		$ Increase/	% Increase/
	2013	2012	Decrease	Decrease
License fees	$ 1,094,843	$ 549,521	$ +545,322	+99.2%
Royalties from product sales	291,505	407,803	-116,298	-28.5%
Grant income	941,226	1,518,086	-576,860	-38.0%
Sales of research products and services	214,277	217,380	-3,103	-1.4%
Total revenues	2,541,851	2,692,790	-150,939	-5.6%
Cost of sales	(570,237)	(273,916)	+296,321	+108.2%
Total revenues, net	1,971,614	2,418,874	-447,260	-18.5%

Our license fee revenues for the three and nine months ended September 30, 2013 amounted to $382,767 and $1,094,843, respectively. License fee revenues for the same periods in 2012 amounted to $337,633 and $549,521, respectively. License fee revenues for the nine months ended September 30, 2013 and 2012 include subscription and advertising revenues of $984,133 and $438,889, respectively, from LifeMap Sciences' online database business primarily related to its *GeneCards*® database which LifeMap Sciences began marketing, selling and distributing after its acquisition of XenneX, Inc. during May 2012. The 124% increases in license fee revenue during the nine months ended September 30, 2013 is entirely attributed to subscription and advertising revenue.

License fee revenues also include amortization of license fees from Summit which we received during December 2004 and April and October of 2005. Full recognition of those license fees were deferred and is being recognized over the lives of the contracts, which have been estimated to last until approximately 2019 based on the current expected lives of the governing patents covering our products in Japan. Amortization of such license fees during the three and nine months ended September 30, 2013 and 2012 amounted to $36,468 and $109,405, respectively.

Under our license agreements with Hospira and CJ, our licensees report sales of *Hextend*® and pay us the royalties due on account of such sales within 90 days after the end of each calendar quarter. We recognize those revenues in the quarter in which the sales report is received, rather than the quarter in which the sales took place. For example, royalties on sales made during the second quarter of 2013 were not recognized until the third quarter of fiscal year 2013.

Our royalty revenues from product sales for the three months ended September 30, 2013 primarily consist of royalties on sales of *Hextend*® made by Hospira and CJ during the period beginning April 1, 2013 and ending June 30, 2013. Royalty revenues recognized in the third quarter of 2013 were $60,920 from Hospira and $19,672 from CJ. Total royalties of $80,592 for the quarter decreased by $53,354 or 40% from royalties of $133,946 received during the same period last year. Total royalties of $291,505 for the nine month period ended September 30, 2013 decreased by $116,298 or 29% from royalties of $407,803 during the same period last year.

The decrease in royalties is attributable to a decrease in *Hextend*® sales in the U.S. and in the Republic of Korea. The decrease in royalties received from Hospira is primarily due to the decline in the price of hetastarch-based products in the market. The blood volume expander market continues to contract as hospitals continue to shift their purchases to albumin products. Hospira has reported that they have seen a rapid decline in the price of hetastarch-based plasma expanders in the market that could continue to have a negative impact on revenues from the sale of *Hextend*®. Hospira has implemented price reductions for *Hextend*® in an attempt to maintain market share. We expect royalty revenues from product sales to continue to decline as a percentage of total revenue.

In addition to price competition, sales of *Hextend*® could be adversely affected if certain safety labeling changes proposed by the FDA go into effect. During June 2013, the FDA notified us that they believe that new safety labeling should be required for the entire class of hydroxyethyl starch products, including *Hextend*®. The proposed labeling change would include a boxed warning that would state that that the use of *Hextend*® increases the risk of mortality and renal injury requiring renal replacement therapy in critically ill adult patients, including patients with sepsis and those admitted to the ICU, and that *Hextend*® should not be used in critically ill adult patients, including patients with sepsis and those admitted to the ICU. New warning and precaution information would also be required along with new information about contraindications, adverse reactions, and information about certain recent studies. The warning and precautions would state that the use of *Hextend*® should be avoided in patients with pre-existing renal dysfunction and in patients undergoing open heart surgery in association with cardiopulmonary bypass due to the risk of excessive bleeding.

We submitted a rebuttal to the FDA requesting that their proposed labeling changes not apply to *Hextend*® because the data on which the FDA based its request studied the effects of hydroxyethyl starches in saline solutions and not *Hextend*®, while other studies that did evaluate the use of *Hextend*® suggest that *Hextend*® does not cause increased mortality and bleeding or severe renal injury, especially when used in volumes less than 1,500 ml. Moreover, FDA safety database information reveals that since the use of *Hextend*® began in 1999, based on approximately 5.7 million units of *Hextend*® distributed in the United States, there were only 10 reports of patients that experienced product related adverse events.

Based on our correspondence with the FDA, we have submitted an amendment containing the latest labeling proposed by the FDA that modifies certain warnings. Consistent with prior labeling, the proposed labeling would not warn against the use of *Hextend*® in patients undergoing open heart surgery in association with cardiopulmonary bypass, but instead would caution that such patients should be monitored for signs of excess bleeding. The FDA has not yet approved the proposed labeling change. The resulting revised label may adversely affect *Hextend*® sales since some users of plasma volume expanders might elect to abandon the use of all hydroxyethyl starch products, including *Hextend*®.

Based on sales of *Hextend*® that occurred during the third quarter of 2013, we will receive royalties of $57,691 from Hospira and have received $17,578 from CJ during the fourth quarter of 2013. Total royalties of $75,269, which will be recognized during the fourth quarter, decreased 44% from royalties of $133,879 received during the same period last year.

Total grant revenue for the three months ended September 30, 2013 decreased by $281,199 or 64%, and by $576,860 or 38% for the nine months ended September 30, 2013, primarily due to the completion of a research grant from the California Institute of Regenerative Medicine ("CIRM") on August 31, 2012, offset by an additional $406,682 of grant revenue recognized through Cell Cure Neurosciences in 2013 compared to the same period in 2012. We received no CIRM grant revenue in 2013. Grant revenue in the three and nine months ended September 30, 2013 also included nil and $3,995 recognized through ESI, and $3,239 and $38,535, respectively of a $335,900 grant awarded to us by the NIH that will expire on September 29, 2014.

Operating Expenses

	Three Months Ended September 30,		$ Increase/	% Increase/
	2013	2012	Decrease	Decrease
Research and development expenses	$ (6,441,462)	$ (4,545,470)	$ +1,895,992	+41.7%
General and administrative expenses	(4,267,875)	(2,234,905)	+2,032,970	+91.0%
Interest income, net	509	5,624	-5,115	-90.9%
Other expense, net	(60,704)	18,766	-79,470	-423.5%

	Nine Months Ended September 30,		$ Increase/	% Increase/
	2013	2012	Decrease	Decrease
Research and development expenses	$ (17,389,409)	$ (13,323,410)	$ +4,065,999	+30.5%
General and administrative expenses	(11,273,948)	(7,037,807)	+4,236,141	+60.2%
Interest income, net	2,033	17,321	-15,288	-88.3%
Other expense, net	(169,512)	(223,899)	-54,387	-24.3%

Research and development expenses – Research and development expenses for the three and nine months ended September 30, 2013 increased to $6,441,462 and $17,389,409, respectively from $4,545,470 and $13,323,410 for the same periods in 2012. Research and development expenses during the three and nine months ended September 30, 2013 include $642,572 and $1,927,718, respectively, derived from the amortization of patent technology related to our acquisition of ESI and Cell Cure Neurosciences in May and October 2010, respectively, from our acquisition of assets from Cell Targeting, Inc., and the merger of Glycosan BioSystems, Inc. into OrthoCyte in January and March 2011, respectively, and the merger of XenneX, Inc. into LifeMap Sciences in May 2012. Those amortization expenses increased by $1,622 and $163,336 during the three and nine months ended September 30, 2013, respectively, compared to the same periods in 2012. Research and development expenses also include laboratory study expenses, patent and technology license fees, employee compensation, rent, insurance, and science-related consultants' fees which are allocated to research and development expenses.

The increase in research and development expenses of $1,895,992 during three months ended September 30, 2013 compared to the same period in 2012 is also attributable to an increase of $731,257 in employee compensation and related costs allocated to research and development expenses, an increase of $171,235 in our *HyStem*® program related research expenses, including the clinical development of *Renevia*™, an increase of $131,931 in rent and facilities maintenance related expenses allocated to research and development expenses primarily attributed to Asterias' new facility effective January 2013, an increase of $101,416 in stock based compensation allocated to research and development expenses, and an increase of $923,706 in Cell Cure Neurosciences research and development expenses. These increases were offset in part by a decrease of $78,729 in patent related legal expenses and a decrease of $19,138 in ESI research and development expenses. Of the total increase in research and development expenses for the three months ended September 30, 2013, $1,149,059 is attributable to Asterias.

The increase in research and development expenses of $4,065,999 for the nine months ended September 30, 2013 compared to the same period in 2012, is also attributable to an increase of $1,412,012 in employee compensation and related costs allocated to research and development expenses, an increase of $484,403 in *HyStem*® program expenses, an increase of $327,802 in rent and facilities maintenance related expenses allocated to research and development expenses primarily attributed to Asterias' office and research facility, an increase of $147,092 in laboratory expenses and supplies, an increase of $163,337 in amortization of patent technology due to the merger of XenneX, Inc. into LifeMap Sciences in May 2012, an increase of $142,148 in stock based compensation allocated to research and development expenses, an increase of $80,056 in depreciation expenses allocated to research and development expenses, and an increase of $1,577,695 in Cell Cure Neurosciences research and development expenses. These increases were offset in part by a decrease of $236,900 in licenses, patent and trademark related fees and legal fees, and $117,212 in ESI research and development expenses. Of the total increase in research and development expenses for the nine months ended September 30, 2013, $1,931,048 is attributable to Asterias.

The increase in *HyStem*® program related expenses for the three and nine month periods referenced above include expenses related solely to our *HyStem*® program, including certain laboratory, clinical trial, and quality control costs.

The following table shows the amount of our total research and development expenses allocated to our primary research and development projects during the nine months ended September 30, 2013 and 2012.

		Nine Months Ended September 30,	
Company	**Program**	**2013**	**2012**
BioTime and ESI	*ACTCellerate*™ hPECs, GMP hES cell lines, and related research products	$ 2,001,047	$ 2,057,849
BioTime	*ACTCellerate*™ technology	$ 227,429	$ 794,632
BioTime	Hydrogel products and *HyStem*® research	$ 3,813,417	$ 2,560,964
OncoCyte	Cancer therapy and diagnosis	$ 1,964,173	$ 2,252,071
OrthoCyte	Orthopedic therapy	$ 718,874	$ 679,166
ReCyte Therapeutics	Cardiovascular therapy and iPS	$ 720,870	$ 971,572
BioTime	*Hextend*®	$ 72,894	$ 266,652
BioTime Asia	Stem cell products for research	$ 23,787	$ 109,807
Cell Cure Neurosciences	*OpRegen*®, *OpRegen-Plus*®, and neurological disease therapies	$ 3,986,790	$ 2,409,095
LifeMap	Stem cell database	$ 1,881,822	$ 1,221,592
Asterias	hESC-based cell therapy	$ 1,931,048	$ –
BioTime	3-D Culture	$ 47,017	$ –
Total research and development expenses		$ 17,389,409	$ 13,323,410

General and administrative expenses – General and administrative expenses for the three and nine months ended September 30, 2013 increased to $4,267,875 and $11,273,948, respectively, from $2,234,905 and $7,037,807 for the same periods in 2012. General and administrative expenses include employee and director compensation allocated to general and administrative expenses, consulting fees other than those paid for science-related consulting, insurance costs allocated to general and administrative expenses, stock exchange-related costs, depreciation expense, shipping expenses, marketing costs, and other miscellaneous expenses which are allocated to general and administrative expenses.

The increase in general and administrative expenses of $2,032,970 for the three months ended September 30, 2013 compared to the same period in 2012 is primarily attributable to an increase of $342,438 in employee compensation and related costs allocated to general and administrative expenses, $250,000 accrual for year-end employee bonuses in 2013, an increase of $374,909 in legal fees, an increase of $351,552 in stock based comp to our employees, consultants and independent directors, an increase of $161,307 in accounting and tax related services, an increase of $145,521 in rent and facilities maintenance related expenses allocated to general and administrative expenses, an increase of $128,506 in investor and public relations expenses, transfer agent, stock listing and registration fees, an increase of $116,629 in general office supplies and expenses, an increase of $91,952 in travel, lodging and meals allocated to general and administrative expenses, and an increase of $50,250 in cash compensation paid to our independent directors. Of the total increase in general and administrative expenses for the three months ended September 30, 2013, $1,523,732 is attributable to Asterias.

The increase in general and administrative expenses of $4,236,141 for the nine months ended September 30, 2013 compared to the same period in 2012 is generally attributable to an increase of $902,458 in employee compensation and related costs allocated to general and administrative expenses, $250,000 accrual for year-end employee bonuses in 2013, an increase of $1,101,072 in legal fees, an increase of $486,049 in stock-based compensation to employees, consultants and independent directors, an increase of $328,585 in investor and public relations expenses, transfer agent, stock listing and registration fees, an increase of $316,350 in accounting and tax services, an increase of $261,344 in rent and facilities maintenance related expenses allocated to general and administrative expenses, an increase of $195,895 in general office supplies and expenses, an increase of $163,500 in cash compensation paid to our independent directors, an increase of $130,888 in marketing and advertisement related expenses, an increase of $122,459 in recruiting service expenses, and an increase of $95,409 in travel, lodging and meals allocated to general and administrative expenses. These increases are in part offset by a decrease of $70,761 in general outside services, and a decrease of $88,903 in ESI general and administrative expenses due to a reduction in ESI staffing.

The increase in legal and accounting expenses during both the three month and nine month periods ended September 30, 2013 are primarily due to the start-up and transaction related expenses and the fees incurred in connection with the preparation and filing of certain registration statements under the Securities Act of 1933, as amended, with the Securities and Exchange Commission related to the contribution of assets to Asterias by us and Geron under the Asset Contribution Agreement, and costs associated with the special meeting of our shareholders held during May 2013 to approve certain matters related that asset contribution transaction. Of the total increase in general and administrative expenses for the nine months ended September 30, 2013, $2,855,720 is attributable to Asterias.

The following table shows the amount of our general and administrative expenses and those related to our subsidiaries during the nine months ended September 30, 2013 and 2012.

	Nine Months Ended September 30,	
Company	**2013**	**2012**
BioTime	$ 5,292,735	$ 3,264,697
Asterias	$ 2,888,028	$ 32,308
BioTime Asia	$ 127,920	$ 799,098
Cell Cure Neurosciences	$ 549,233	$ 525,450
ES Cell International Pte Ltd	$ 209,214	$ 392,411
LifeMap	$ 1,302,827	$ 909,518
OncoCyte	$ 310,809	$ 511,614
OrthoCyte	$ 296,820	$ 304,867
ReCyte Therapeutics	$ 296,362	$ 297,842
Total general and administrative expenses	$ 11,273,948	$ 7,037,807

Other expense/income – Other expense/income for the three and nine months ended September 30, 2013 consists primarily of $9,145 and $124,298, respectively of foreign currency transaction loss compared to $30,802 and $36,109, respectively of foreign currency transaction gain in the same periods in 2012.

Income Taxes

During the three and nine months ended September 30, 2013 and 2012, we had no Federal and state income tax obligations because we have substantial net operating loss carryovers and have provided a 100% valuation allowance for any deferred taxes.

Liquidity and Capital Resources

At September 30, 2013, we had $6,717,343 of cash and cash equivalents on hand. Subsequent to September 30, we raised approximately $8,241,164 of additional equity capital, including approximately $3,241,164 through the sale of our common shares through our Controlled Equity Offering sales agreement with Cantor Fitzgerald & Co. ("Cantor"), and the $5,000,000 in cash that Asterias received from an investor on October 1, 2013 under a Stock and Warrant Purchase Agreement in connection with the consummation of the asset contribution transaction under the Asset Contribution Agreement. See Notes 9 and 12 to the condensed consolidated interim financial statements.

Since January 1, 2013, we have raised approximately approximately $11.2 million through the sale of our common shares through Cantor acting as our sales agent. The offer and sale of our shares through Cantor has been registered pursuant to a registration statement filed under the Securities Act of 1933, as amended (the "Securities Act"). Under the sales agreement, Cantor may sell our common shares by any method permitted by law deemed to be an "at-the-market" offering as defined in Rule 415 under the Securities Act, including, but not limited to, sales made directly on NYSE MKT, on any other existing trading market for our common shares or to or through a market maker. Cantor may also sell our shares under the sales agreement by any other method permitted by law, including in privately negotiated transactions. Cantor has agreed in the sales agreement to use its commercially reasonable efforts to sell shares in accordance with our instructions (including any price, time or size limit or other customary parameters or conditions we may impose). The offering pursuant to the sales agreement will terminate upon the sale of all shares subject to the sales agreement or the earlier termination of the sales agreement as permitted by its terms. Cantor has also acted as a sales agent for certain of our subsidiaries that have sold BioTime common shares to raise capital for their operations. We contributed the BioTime common shares to the subsidiaries in exchange for subsidiary capital stock. The proceeds of the sale of BioTime shares by our subsidiaries belong to those subsidiaries. There is no assurance that we or our subsidiaries will be able to sell additional common shares through Cantor at prices acceptable to us, but we believe that our existing cash and cash equivalents, should be sufficient to fund our operations at least into the first quarter of 2014. See "Cash generated by financing activities" for additional information about sales of our equity securities through the Controlled Equity Offering and other transactions during the three and nine months ended September 30, 2013.

We presently have issued and outstanding 9,751,615 common share purchase warrants, 50,000 of which are exercisable at a price of $10.00 per share and will expire in April 2014, 506,613 of which are exercisable at a price of $10.00 per share and will expire in May 2014, 649,998 of which are exercisable at a price of $5 per share and will expire in January 2016, and 545,004 which are exercisable at a price of $5.00 per share and will expire in June 2016, and 8,000,000 of which are exercisable at a price of $5.00 per share and will expire on October 1, 2018. None of the warrants are presently publicly traded but we expect that the 8,000,000 warrants that we issued to Asterias under the Asset Contribution Agreement will be publicly traded upon Asterias' distribution of those warrants to the holders of its Series A common stock.

Asterias has announced its plan to conduct an underwritten public offering of shares of underwritten public offering of its common stock in "units" that will consist of one share of common stock and one redemption right. The shares of common stock and redemption rights will immediately be freely tradable as separate securities. Asterias plans to use the net proceeds of the offering, expected to be between $10,000,000 and $15,000,000, to fund its product development programs and for working capital. However, there can be no assurance that the planned public offering will be consummated.

Asterias is also seeking funding from third parties in the form of research and development grants or cooperative arrangements for the development of certain of Asterias' product candidates.

Asterias has applied for a Strategic Partnership 3 Track "A" Award from the California Institute for Regenerative Medicine (CIRM) which is intended to support a Phase 1/2a clinical trial of our OPC1 product candidate in subjects with neurologically complete cervical spinal cord injury. The grant would also help support Asterias' efforts to develop a commercial process to manufacture OPC1. The purpose of the Strategic Partnership Award Initiative is to create incentives for industry to advance the development of stem cell-based therapeutics. As part of a Strategic Partnership 3 Track "A" Award, CIRM will provide up to $10,000,000 ($15,000,000 in extraordinary cases) to support an approved project. We expect that CIRM will notify applicants of the decision on their applications during the first half of 2014. Geron was granted a non-recourse loan for its thoracic spinal cord injury study of OPC1 in 2011 from CIRM, but returned the loan funds after announcing the termination of its human embryonic stem cell programs.

Asterias is in the process of applying for a grant from a large United Kingdom based charitable organization to fund Phase 1/2a clinical development of our VAC2 product candidate. The proposed grant would fund both the Phase 1/2a clinical trial of VAC2 in cancer patients and the cGMP manufacturing costs of VAC2. The terms under which funding may be provided by the charitable organization are currently under discussion. Asterias anticipates that it will receive notification of whether the grant has been approved during the first half of 2014. This same charitable organization had awarded a similar grant for VAC2 to Geron but that grant was withdrawn after Geron terminated the program in November 2011.

Asterias is in early-stage discussions with a United Kingdom based technology innovation center seeking their support for the development of advanced manufacturing processes for CHND1. Methods developed at the technology innovation center would be incorporated in future commercial manufacturing processes for the product. An alliance with the technology innovation center would be on a specific project basis and would require multiple approvals from different committees and boards at the center.

Asterias is also in early stage discussions with an academic institution to form a collaboration to develop hES cell derived cardiomyocytes for the treatment of heart failure and acute myocardial infarction. The academic institution has received funding to develop the project through the IND filing stage. Asterias would either fund the Phase I study itself, to the extent that it has sufficient capital resources for that purpose or would seek funding for the study from a third party. In a collaboration, Asterias might contribute assistance in preparing and filing the IND, materials for use in the project such as GMP hES cell banks, and a license of relevant patents and know-how relating to the development of hES cell-derived cardiomyocytes and hES cell-derived therapeutics generally, in exchange for which it would acquire an ownership interest in the resulting therapeutic products or in a joint venture company to be formed and co-owned with the academic institution for the purpose of developing the product.

There can be no assurance that Asterias will receive any of grants that it is seeking or that Asterias will reach an agreement for support in the manufacture of CHNDI or the development of hES cell derived cardiomyocytes.

Because our revenues are not presently sufficient to cover our operating expenses, we will continue to need to obtain additional equity capital or debt in order to finance our operations. The future availability and terms of equity or debt financing are uncertain. The unavailability or inadequacy of financing or revenues to meet future capital needs could force us to modify, curtail, delay, or suspend some or all aspects of our planned operations. Sales of additional equity securities could result in the dilution of the interests of present shareholders.

Cash generated by operations

During the nine months ended September 30, 2013, we received $3,280,659 of cash in our operations. Our sources of that cash primarily consisted of $231,964 of royalty revenues from Hospira, $59,259 of royalty revenues from CJ, our final quarterly research grant payment of $392,664 from CIRM, a $85,207 research grant payment from the NIH, $1,429,932 in foreign research grants, and $1,080,328 from the sale of research products and subscription and advertisement revenues. During the same nine month period in 2012, we received $2,336,820 of cash in our operations. Our sources of that cash were $319,683 of royalty revenues from Hospira, $87,731 of royalty revenues from CJ, $392,665 of research grant payment from CIRM, $35,296 research grant payment from the NIH, $133,483 from subscription and advertising revenues, $124,585 collected against receivables assumed from the merger with XenneX in May 2012, $207,444 from the sale of research products and services, and $15,588 and $1,019,345 grant income from LifeMap Sciences, Ltd and Cell Cure Neurosciences, respectively.

Cash used in operations

During the nine months ended September 30, 2013, our total research and development expenditures were $17,389,409 and our general and administrative expenditures were $11,273,948. Net loss attributable to BioTime for the nine months ended September 30, 2013, amounted to $24,270,521. Net cash used in operating activities during the nine months ended September 30, 2013 amounted to $20,881,679. The difference between the net loss and net cash used in operating activities during the period was primarily attributable to non-cash expenses and accrued revenues, including $2,375,354 in stock-based compensation, amortization of $1,927,718 in intangible assets, $932,925 grant receivables, $419,630 in depreciation expense, $284,785 in prepaid expenses and other current assets, $177,631 in accounts payable and accrued liabilities, $82,125 amortization of deferred license fees, $48,838 amortization of deferred consulting fees, and $46,080 in deferred grant income. This overall difference was offset to some extent by net loss of $2,583,581 allocable to the non-controlling interest in our subsidiaries, amortization of $124,882 in deferred license and royalty revenues, $66,310 in accounts receivables, $50,544 in deferred subscription revenues, and $48,322 in other long-term liabilities.

Cash flows from investing activities

During the nine months ended September 30, 2013, $2,007,065 was used for investing activities. The components of this cash were $1,976,042 used in the purchase of equipment and $61,923 paid for security deposits offset by $30,900 in proceeds from the sale of equipment.

Cash generated by financing activities

During the nine months ended September 30, 2013, we raised gross proceeds of $11,571,953 from the sale of 2,594,156 BioTime common shares at a weighted average price of $4.46 per share in the open market through our Controlled Equity Offering facility with Cantor and through the sale of BioTime common shares held by our majority owned subsidiaries, LifeMap Sciences and Cell Cure Neurosciences. The proceeds of the sale of BioTime shares by our subsidiaries belong to those subsidiaries.

On January 4, 2013, BioTime and a private investor entered into a Stock and Warrant Purchase Agreement under which the investor agreed to invest $5,000,000 in BioTime by purchasing, in two tranches, an aggregate of 1,350,000 BioTime common shares and warrants to purchase approximately 650,000 additional BioTime common shares. The first tranche of $2,000,000 was funded on January 14, 2013, and we issued to the investor 540,000 common shares and 259,999 warrants. We received the second tranche of $3,000,000 on April 10, 2013 at which time we issued to the investor 810,000 common shares, and warrants to purchase an additional 389,999 common shares at an exercise price of $5 per share.

On March 14, 2013, ReCyte Therapeutics and one of its shareholders entered into a Stock Purchase Agreement under which the shareholder agreed to purchase 81,169 additional ReCyte Therapeutics common shares for approximately $250,000, reflecting a purchase price of $3.08 per share. In March 2013, ReCyte Therapeutics received $125,000 for which 40,584 ReCyte Therapeutics common shares were issued. ReCyte Therapeutics received the remaining $125,000 in May 2013 at which time it issued the remaining 40,585 common shares.

On June 6, 2013, we sold an aggregate of 2,180,016 common shares and 545,004 warrants to purchase common shares, in "units" with each unit consisting of one common share and one-quarter of a warrant, at an offering price of $4.155 per unit, to certain investors through an offering registered under the Securities Act. We received gross proceeds of $9,057,967 from the sale of the common shares and warrants. The warrants have an initial exercise price of $5.00 per share and are exercisable during the five year period beginning on the date of issuance, June 6, 2013. We paid certain participating broker-dealers fees of $121,209 representing 5% of the aggregate purchase price of the units purchased by investors introduced to us by them.

Contractual Obligations

As of September 30, 2013, our contractual obligations for the next five years and thereafter were as follows:

Contractual Obligations [1]	Principal Payments Due by Period				
	Total	Less Than 1 Year	1-3 Years	4-5 Years	After 5 Years
Operating leases [2]	$ 2,174,323	$ 355,781	$ 1,785,917	$ 32,625	$ -

(1) This table does not include payments to key employees that could arise if they were involuntary terminated or if their employment terminated following a change in control.

(2) Includes the lease of our principal office and laboratory facilities in Alameda, California, and leases of the offices and laboratory facilities of our subsidiaries Asterias, ESI, LifeMap Sciences, and Cell Cure Neurosciences.

Future capital needs

The completion of the acquisition of Geron's stem cell related assets by our subsidiary Asterias will result in an increase in our operating expenses and losses on a consolidated basis, and will increase our need for additional capital. Asterias will use the acquired stem cell assets for the research and development of products for regenerative medicine. Asterias' research and development efforts will involve substantial expense, including but not limited to hiring additional research and management personnel, and possibly the rent of additional research or manufacturing space that will add to our losses on a consolidated basis for the near future.

Also, Asterias is now a public company. As a public company, Asterias will incur costs associated with audits of its financial statements, filing annual, quarterly, and other periodic reports with the SEC, holding annual shareholder meetings, listing its common stock for trading, and public relations and investor relations. These costs will be in addition to those incurred by us for similar purposes.

As discussed above, Asterias plans to seek to raise $10,000,000 to $15,000,000 of capital through a public offering of its common stock and certain redemption rights, but there is no assurance that it will be able to do so. We will need to continue to sell common shares from time to time through our Controlled Equity Offering sales agreement with Cantor, and our other subsidiaries may also seek to raise capital through the sale of their capital stock. We and our subsidiaries will also seek funding for our research and development programs from other sources such as research grants and other arrangements with third parties.

We are consolidating the sales and marketing of our research products in a new ESI BIO division. As part of this plan, we expect to shift our sales and marketing efforts from a website based effort to one that utilizes more sales personnel who may be employees or independent sales representatives. We also plan to expand our product offerings. This effort will require additional expenditures for the development of new research products and the addition of assets and personnel for sales and marketing purposes.

The amount and pace of research and development work that we and our subsidiaries can do or sponsor, and our ability to commence and complete the clinical trials that are required in order for us to obtain FDA and foreign regulatory approval of products, depend upon the amount of money we and our subsidiaries have. Future research and clinical study costs are not presently determinable due to many factors, including the inherent uncertainty of these costs and the uncertainty as to timing, source, and amount of capital that will become available for our projects.

The market value and the volatility of our stock price, as well as general market conditions, could impact our ability to raise capital on favorable terms, or at all. Any equity financing that we or our subsidiaries obtain may further dilute or otherwise impair the ownership interests of our current shareholders. If we and our subsidiaries fail to generate positive cash flows or fail to obtain additional capital when required, we and our subsidiaries could modify, delay or abandon some or all of our respective research and development programs.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Foreign Currency Exchange Risk

We are exposed to some foreign exchange currency risks because we have subsidiaries that are located in foreign countries. We do not engage in foreign currency hedging activities. Because we translate foreign currencies into United States dollars for reporting purposes, currency fluctuations have an impact on our financial results. We believe that our exposure to currency exchange fluctuation risk is mitigated by the fact that our foreign subsidiaries pay their financial obligations almost exclusively in their local currency. As of September 30, 2013, currency exchange rates did not have a material impact on our intercompany transactions with our foreign subsidiaries. However, a weakening of the dollar against the foreign exchange used in the home countries of our foreign subsidiaries could increase our cost of providing additional financing to our foreign subsidiaries in the future. Conversely, a strengthening of the dollar would decrease our cost of making additional investments in those subsidiaries.

Credit Risk

We place some of our cash in U.S. banks and invest most of our cash in money market funds. Deposits with banks may temporarily exceed the amount of insurance provided on such deposits. We will monitor the cash balances in the accounts and adjust the cash balances as appropriate, but if the amount of a deposit at any time exceeds the federally insured amount at a bank, the uninsured portion of the deposit could be lost, in whole or in part, if the bank were to fail. Our investments in money market funds are not insured or guaranteed by the United States government or any of its agencies.

Interest Rate Risk

We invest most of our cash in money market funds. The primary objective of our investments will be to preserve principal and liquidity while earning a return on our invested capital, without incurring significant risks. Our future investment income is not guaranteed and may fall short of expectations due to changes in prevailing interest rates, or we may suffer losses in principal if the net asset value of a money market fund falls below $1 per share.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

It is management's responsibility to establish and maintain adequate internal control over all financial reporting pursuant to Rule 13a-15 under the Securities Exchange Act of 1934 (the "Exchange Act"). Our management, including our principal executive officer, our principal operations officer, and our principal financial officer, have reviewed and evaluated the effectiveness of our disclosure controls and procedures as of a date within ninety (90) days of the filing date of this Quarterly Report on Form 10-Q. Following this review and evaluation, management collectively determined that our disclosure controls and procedures are effective to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act (i) is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms, and (ii) is accumulated and communicated to management, including our chief executive officer, our chief operations officer, and our chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

Changes in Internal Controls

There were no changes in our internal control over financial reporting that occurred during the period covered by this Quarterly Report on Form 10-Q that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings.

Geron was the appellant in an appeal filed by Geron in the United States District Court for the Northern District of California, appealing two adverse rulings in favor of ViaCyte, Inc. by the United States Patent and Trademark Office's Board of Patent Appeals and Interferences. These rulings related to interference proceedings involving patent filings relating to definitive endoderm cells. Geron had requested that the Board of Patent Appeals and Interferences declare this interference after ViaCyte was granted patent claims that conflicted with subject matter Geron filed in a patent application having an earlier priority date. Those Geron patent applications are among the patent assets that Geron has contributed to Asterias. Following the consummation of the asset acquisition transaction under the Asset Contribution Agreement, Asterias was substituted for Geron in the appeal proceeding. Asterias has also assumed the PTO interferences upon which the appeal is based, as well as certain oppositions filed by Geron against certain ViaCyte patent filings in Australia and in the European Patent Office.

The appeal proceeding is still in the discovery phase. Appeals of this nature may involve costly and time-consuming legal proceedings. If Asterias is not successful in the ViaCyte appeal, ViaCyte would retain its patent claims directed to definitive endoderm. Definitive endoderm is an early pre-cursor of numerous cell types including liver and β-cells of the pancreas that could potentially treat diabetes, and it is likely that the derivation of any of the endodermal lineage cells from embryonic stem cells would necessarily pass through the definitive endoderm stage. As a result, Asterias would be unable to develop and commercialize those cell types without a license from ViaCyte, and Asterias may be unable to realize value from the Geron patent applications at issue in the appeal.

We are not presently involved in any other material litigation or proceedings, and to our knowledge no such litigation or proceedings are contemplated.

Item 1A. Risk Factors

Our business is subject to various risks, including those described below. You should consider the following risk factors, together with all of the other information included in this report, which could materially adversely affect our proposed operations, our business prospects, and financial condition, and the value of an investment in our business. There may be other factors that are not mentioned here or of which we are not presently aware that could also affect our business operations and prospects.

Risks Related to Our Business Operations

We have incurred operating losses since inception and we do not know if we will attain profitability

Our comprehensive net losses for the nine months ended September 30, 2013 and for the fiscal years ended December 31, 2012, 2011, and 2010 were $24,086,211, $21,362,524, $17,535,587, and $10,287,280, respectively, and we had an accumulated deficit of $126,166,233 as of September 30, 2013 and $101,895,712, $80,470,009, and $63,954,509, as of December 31, 2012, 2011, and 2010, respectively. Since inception, we have primarily financed our operations through the sale of equity securities, licensing fees, royalties on product sales by our licensees, and borrowings. More recently, we have financed a portion of our operations with research grants and subscription fees for the database products marketed by our subsidiary LifeMap Sciences. Ultimately, our ability to generate sufficient operating revenue to earn a profit depends upon our success in developing and marketing or licensing our products and technology.

We will spend a substantial amount of our capital on research and development but we might not succeed in developing products and technologies that are useful in medicine

- We are attempting to develop new medical products and technologies.

- Many of our experimental products and technologies have not been applied in human medicine and have only been used in laboratory studies *in vitro* or in animals. These new products and technologies might not prove to be safe and efficacious in the human medical applications for which they were developed.

- The experimentation we are doing is costly, time consuming, and uncertain as to its results. We incurred research and development expenses amounting to $17,389,409 during the nine months ended September 30, 2013, and $18,116,688, $13,699,691, and $8,191,314 during the fiscal years ended December 31, 2012, 2011, and 2010, respectively.

- If we are successful in developing a new technology or product, refinement of the new technology or product and definition of the practical applications and limitations of the technology or product may take years and require the expenditure of large sums of money. Future clinical trials of new therapeutic products, particularly those products that are regulated as drugs or biological, will be very expensive and will take years to complete. We may not have the financial resources to fund clinical trials on our own and we may have to enter into licensing or collaborative arrangements with larger, well-capitalized pharmaceutical companies in order to bear the cost. Any such arrangements may be dilutive to our ownership or economic interest in the products we develop, and we might have to accept a royalty payment on the sale of the product rather than receiving the gross revenues from product sales.

Completion of the acquisition of stem cell related assets by our subsidiary Asterias from Geron will result in an increase in our operating expenses and losses on a consolidated basis

- Asterias will use the stem cell assets that it has acquired from Geron for the research and development of products for regenerative medicine. Asterias' research and development efforts will involve substantial expense, including but not limited to hiring additional research and management personnel, and possibly the rent of additional research or manufacturing space that will add to our losses on a consolidated basis for the near future.

- Asterias has become a public company. As a public company, Asterias will incur costs associated with audits of its financial statements, filing annual, quarterly, and other periodic reports with the SEC, holding annual shareholder meetings, listing its common shares for trading, and public relations and investor relations. These costs will be in addition to those incurred by BioTime for similar purposes.

- As a developer of therapeutic products derived from hES or iPS cells, Asterias will face substantially the same kind of risks that affect our business, as well as the risks related to our industry generally.

Our success depends in part on the uncertain growth of the stem cell industry, which is still in its infancy

- The success of our business of selling products for use in stem cell research depends on the growth of stem cell research, without which there may be no market or only a very small market for our products and technology. The likelihood that stem cell research will grow depends upon the successful development of stem cell products that can be used to treat disease or injuries in people or that can be used to facilitate the development of other therapeutic products. The growth in stem cell research also depends upon the availability of funding through private investment and government research grants.

- There can be no assurance that any safe and efficacious human medical applications will be developed using stem cells or related technology.

- Government-imposed restrictions and religious, moral, and ethical concerns with respect to use of embryos or human embryonic stem ("hES") cells in research and development could have a material adverse effect on the growth of the stem cell industry, even if research proves that useful medical products can be developed using hES cells.

Sales of our products to date have not been sufficient to generate an amount of revenue sufficient to cover our operating expenses

- *Hextend*® is presently the only plasma expander product that we have on the market, and it is being sold only in the U.S. and South Korea. The royalty revenues that we have received from sales of *Hextend*® have not been sufficient to pay our operating expenses. This means that we need to successfully develop and market or license additional products and earn additional revenues in sufficient amounts to meet our operating expenses.

- We are also beginning to bring our first stem cell research products to the market, but there is no assurance that we will succeed in generating significant revenues from the sale of those products.

Sales of the products we may develop will be adversely impacted by the availability of competing products

- Sales of *Hextend*® have already been adversely impacted by the availability of other products that are commonly used in surgery and trauma care and sell at low prices.

- In order to compete with other products, particularly those that sell at lower prices, our products will have to provide medically significant advantages.

- Physicians and hospitals may be reluctant to try a new product due to the high degree of risk associated with the application of new technologies and products in the field of human medicine.

- Competing products are being manufactured and marketed by established pharmaceutical companies. For example, B. Braun/McGaw presently markets *Hespan*®, an artificial plasma volume expander, and Hospira and Baxter International, Inc. manufacture and sell a generic equivalent of *Hespan*®. Hospira also markets *Voluven*®, a plasma volume expander containing a 6% low molecular weight hydroxyethyl starch in saline solution.

- Competing products for the diagnosis and treatment of cancer are being manufactured and marketed by established pharmaceutical companies, and more cancer diagnostics and therapeutics are being developed by those companies and by other smaller biotechnology companies. Other companies, both large and small, are also working on the development of stem cell based therapies for the same diseases and disorders that are the focus of the research and development programs of our subsidiaries.

- There also is a risk that our competitors may succeed at developing safer or more effective products that could render our products and technologies obsolete or noncompetitive.

Sales of *Hextend*® could be adversely affected by a safety and use labeling change proposed by the FDA

Sales of *Hextend*® could be adversely affected if certain safety labeling changes proposed by the FDA go into effect. During June 2013, we were notified by the FDA that they believe that new safety labeling should be required for the entire class of hydroxyethyl starch products, including *Hextend*.® The proposed labeling change would include a boxed warning that would state that that the use of *Hextend*® increases the risk of mortality and renal injury requiring renal replacement therapy in critically ill adult patients, including patients with sepsis and those admitted to the ICU, and that *Hextend*® should not be used in critically ill adult patients, including patients with sepsis and those admitted to the ICU. New warning and precaution information would also be required along with new information about contraindications, adverse reactions, and information about certain recent studies. The warning and precautions would state that the use of *Hextend*® should be avoided in patients with pre-existing renal dysfunction and in patients undergoing open heart surgery in association with cardiopulmonary bypass due to the risk of excessive bleeding.

We submitted a rebuttal to the FDA requesting that their proposed labeling changes not apply to *Hextend*® because the data on which the FDA based its request studied the effects of hydroxyethyl starches in saline solutions and not *Hextend*®, while other studies that did evaluate the use of *Hextend*® suggest that *Hextend*® does not cause increased mortality and bleeding or severe renal injury, especially when used in volumes less than 1,500 ml. Moreover, FDA safety database information reveals that since the use of *Hextend*® began in 1999, based on approximately 5.7 million units of *Hextend*® distributed in the United States, there were only 10 reports of patients that experienced product related adverse events.

Based on our correspondence with the FDA, we have submitted an amendment containing the latest labeling proposed by the FDA that modifies certain warnings. Consistent with prior labeling, the proposed labeling would not warn against the use of *Hextend*® in patients undergoing open heart surgery in association with cardiopulmonary bypass, but instead would caution that such patients should be monitored for signs of excess bleeding. The FDA has not yet approved the proposed labeling change. The resulting revised label may adversely affect *Hextend*® sales since some users of plasma volume expanders might elect to abandon the use of all hydroxyethyl starch products, including *Hextend*®.

We will need to issue additional equity or debt securities in order to raise additional capital needed to pay our operating expenses

- We plan to continue to incur substantial research and product development expenses, largely through our subsidiaries, and we and our subsidiaries will need to raise additional capital to pay operating expenses until we are able to generate sufficient revenues from product sales, royalties, and license fees.

- It is likely that additional sales of equity or debt securities will be required to meet our short-term capital needs, unless we receive substantial revenues from the sale of our new products or we are successful at licensing or sublicensing the technology that we develop or acquire from others and we receive substantial licensing fees and royalties.

- Sales of additional equity securities by us or our subsidiaries could result in the dilution of the interests of present shareholders.

The amount and pace of research and development work that we and our subsidiaries can do or sponsor, and our ability to commence and complete clinical trials required to obtain regulatory approval to market our therapeutic and medical device products, depends upon the amount of money we have

- At September 30, 2013, we had $6,717,343 of cash and cash equivalents on hand. Although we have raised approximately $26,000,000 of equity capital during the nine months period ended September 30, 2013, there can be no assurance that we or our subsidiaries will be able to raise additional funds on favorable terms or at all, or that any funds raised will be sufficient to permit us or our subsidiaries to develop and market our products and technology. Unless we and our subsidiaries are able to generate sufficient revenue or raise additional funds when needed, it is likely that we will be unable to continue our planned activities, even if we make progress in our research and development projects.

- We may have to postpone or limit the pace of our research and development work and planned clinical trials of our product candidates unless our cash resources increase through a growth in revenues or additional equity investment or borrowing.

The condition of the cells, cell lines and other biological materials that Asterias acquired from Geron could impact the time and cost of commencing Asterias' research and product development programs

The cells, cell lines and other biological materials that Asterias acquired are being stored under cryopreservation protocols intended to preserve their functionality. However, the functional condition of those materials cannot be certified until they are tested in an appropriate laboratory setting by qualified scientific personnel using validated equipment, which may not be completed for at least three to six months.

To the extent that cells are not sufficiently functional for Asterias' purposes, Asterias would need to incur the time and expense of regenerating cell lines from cell banks, or regenerating cell banks from feeder cells, which could delay and increase the cost of its research and development work.

Any cell-based products that receive regulatory approval may be difficult and expensive to manufacture on a commercial scale

- hES derived therapeutic cells have only been produced on a small scale and not in quantities and at levels of purity and viability that will be needed for wide scale commercialization. If we are successful in developing products that consist of hES cells or other cells or products derived from hES or other cells, we will need to develop, alone or in collaboration with one or more pharmaceutical companies or contract manufacturers, technology for the commercial production of those products.

- Our hES cell or other cell based products are likely to be more expensive to manufacture on a commercial scale than most other drugs on the market today. The high cost of manufacturing a product will require that we charge our customers a high price for the product in order to cover our costs and earn a profit. If the price of our products is too high, hospitals and physicians may be reluctant to purchase our products, especially if lower priced alternative products are available, and we may not be able to sell our products in sufficient volumes to recover our costs of development and manufacture or to earn a profit.

Asterias has assumed certain obligations and potential liabilities with regard to clinical trials conducted by Geron, and we do not yet know the scope of any resulting expense

Asterias has assumed Geron's obligations to obtain information and prepare reports about the health of patients who participated in clinical trials of Geron's GRNOPC1 cell replacement therapy for spinal cord damage and its GRNVAC1 immunological therapy for certain cancers. Although the future cost of patient health information gathering and reporting is not presently determinable, we do not expect that the cost will be material to our financial condition.

Asterias has also assumed any liabilities to those patients that might arise as result of any injuries they may have incurred as a result of their participation in the clinical trials. We are not aware of any claims by patients alleging injuries suffered as a result of the Geron clinical trials, but if any claims are made and if liability can be established, the amount of any liability that Asterias may incur, depending upon the nature and extent of any provable injuries incurred, could exceed any insurance coverage that we or Asterias may obtain and the amount of the liability could be material to our financial condition.

Our business could be adversely affected if we lose the services of the key personnel upon whom we depend

BioTime stem cell research programs are directed primarily by our Chief Executive Officer, Dr. Michael West, and Asterias' stem cell research programs are directed primarily by its Chief Executive Officer, Dr. Thomas Okarma, and by its President of Research and Development, Dr. Jane Lebkowski. The loss of the services of Dr. West, Dr. Okarma or Dr. Lebkowski could have a material adverse effect on us.

If we make strategic acquisitions, we will incur a variety of costs and might never realize the anticipated benefits

Our experience identifying acquisition candidates and integrating their operations with our company is limited to our acquisitions of ESI in 2010, Glycosan BioSystems, Inc. and Cell Targeting, Inc. in 2011, and XenneX, Inc. in 2012. In addition, Asterias acquired stem cell related assets from Geron on October 1, 2013. If appropriate opportunities become available, we might attempt to acquire approved products, additional drug candidates, technologies or businesses that we believe are a strategic fit with our business. If we pursue any transaction of that sort, the process of negotiating the acquisition and integrating an acquired product, drug candidate, technology or business might result in operating difficulties and expenditures and might require significant management attention that would otherwise be available for ongoing development of our business, whether or not any such transaction is ever consummated. Moreover, we might never realize the anticipated benefits of any acquisition. Future acquisitions could result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities, or impairment expenses related to goodwill, and impairment or amortization expenses related to other intangible assets, which could harm our financial condition.

Failure of our internal control over financial reporting could harm our business and financial results

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process to provide reasonable assurance regarding the reliability of financial reporting for external purposes in accordance with accounting principles generally accepted in the U.S. Internal control over financial reporting includes maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for preparation of the financial statements; providing reasonable assurance that receipts and expenditures of our assets are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of our assets that could have a material effect on the financial statements would be prevented or detected on a timely basis. Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our financial statements would be prevented or detected. Our growth and entry into new products, technologies and markets will place significant additional pressure on our system of internal control over financial reporting. Any failure to maintain an effective system of internal control over financial reporting could limit our ability to report our financial results accurately and timely or to detect and prevent fraud.

Operating our business through subsidiaries, some of which are located in foreign countries, also adds to the complexity of our internal control over financial reporting and adds to the risk of a system failure, an undetected improper use or expenditure of funds or other resources by a subsidiary, or a failure to properly report a transaction or financial results of a subsidiary. We allocate certain expenses among BioTime itself and one or more of our subsidiaries, which creates a risk that the allocations we make may not accurately reflect the benefit of an expenditure or use of financial or other recourses by BioTime as the parent company and the subsidiaries among which the allocations are made. An inaccurate allocation may impact our consolidated financial results, particularly in the case of subsidiaries that we do not wholly own since our financial statements include adjustments to reflect the minority ownership interests in our subsidiaries held by others.

Our business and operations could suffer in the event of system failures

Despite the implementation of security measures, our internal computer systems and those of our contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Such events could cause interruption of our operations. For example, the loss of data for our product candidates could result in delays in our regulatory filings and development efforts and significantly increase our costs. To the extent that any disruption or security breach was to result in a loss of or damage to our data, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the development of our product candidates could be delayed.

Risks Related to Our Industry

We will face certain risks arising from regulatory, legal, and economic factors that affect our business and the business of other biotechnology and pharmaceutical development companies. Because we are a small company with limited revenues and limited capital resources, we may be less able to bear the financial impact of these risks than is the case with larger companies possessing substantial income and available capital.

If we do not receive regulatory approvals we will not be permitted to sell our therapeutic and medical device products

The therapeutic and medical device products that we and our subsidiaries develop cannot be sold until the FDA and corresponding foreign regulatory authorities approve the products for medical use. The need to obtain regulatory approval to market a new product means that:

- We will have to conduct expensive and time-consuming clinical trials of new products. The full cost of conducting and completing clinical trials necessary to obtain FDA and foreign regulatory approval of a new product cannot be presently determined, but could exceed our current financial resources.

- Clinical trials and the regulatory approval process for a pharmaceutical or cell-based product can take several years to complete. As a result, we will incur the expense and delay inherent in seeking FDA and foreign regulatory approval of new products, even if the results of clinical trials are favorable.

- Data obtained from preclinical and clinical studies is susceptible to varying interpretations that could delay, limit, or prevent regulatory agency approvals. Delays in the regulatory approval process or rejections of an application for approval of a new product may be encountered as a result of changes in regulatory agency policy.

- Because the therapeutic products we are developing with hES and iPS technology involve the application of new technologies and approaches to medicine, the FDA or foreign regulatory agencies may subject those products to additional or more stringent review than drugs or biologicals derived from other technologies.

- A product that is approved may be subject to restrictions on use.

- The FDA can recall or withdraw approval of a product if problems arise.

- We will face similar regulatory issues in foreign countries.

Clinical trial failures can occur at any stage of the testing and we may experience numerous unforeseen events during, or as a result of, the clinical trial process that could delay or prevent commercialization of our current or future product candidates

Clinical trial failures or delays can occur at any stage of the trials, and may be directly or indirectly caused by a variety of factors, including but not limited to:

- delays in securing clinical investigators or trial sites for our clinical trials;

- delays in obtaining Institutional Review Board (“IRB”) and other regulatory approvals to commence a clinical trial;

- slower than anticipated rates of patient recruitment and enrollment, or failing to reach the targeted number of patients due to competition for patients from other trial;

- limited or no availability of coverage, reimbursement and adequate payment from health maintenance organizations and other third party payers for the use of agents used in our clinical trials;

- negative or inconclusive results from clinical trials;

- unforeseen side effects interrupting, delaying or halting clinical trials of our product candidates and possibly resulting in the FDA or other regulatory authorities denying approval of our product candidates;

- unforeseen safety issues;

- uncertain dosing issues;

- approval and intro introduction of new therapies or changes in standards of practice or regulatory guidance that render our clinical trial endpoints or the targeting of our proposed indications obsolete;

- inability to monitor patients adequately during or after treatment or problems with investigator or patient compliance with the trial protocols;

- inability to replicate in large controlled studies safety and efficacy data obtained from a limited number of patients in uncontrolled trials;

- inability or unwillingness of medical investigators to follow our clinical protocols; and

- unavailability of clinical trial supplies.

Government-imposed bans or restrictions and religious, moral, and ethical concerns about the use of hES cells could prevent us from developing and successfully marketing stem cell products

- Government-imposed bans or restrictions on the use of embryos or hES cells in research and development in the U.S. and abroad could generally constrain stem cell research, thereby limiting the market and demand for our products. During March 2009, President Obama lifted certain restrictions on federal funding of research involving the use of hES cells, and in accordance with President Obama's Executive Order, the NIH has adopted new guidelines for determining the eligibility of hES cell lines for use in federally funded research. The central focus of the proposed guidelines is to assure that hES cells used in federally funded research were derived from human embryos that were created for reproductive purposes, were no longer needed for this purpose, and were voluntarily donated for research purposes with the informed written consent of the donors. The hES cells that were derived from embryos created for research purposes rather than reproductive purposes, and other hES cells that were not derived in compliance with the guidelines, are not eligible for use in federally funded research.

- California law requires that stem cell research be conducted under the oversight of a stem cell research oversight committee ("SCRO"). Many kinds of stem cell research, including the derivation of new hES cell lines, may only be conducted in California with the prior written approval of the SCRO. A SCRO could prohibit or impose restrictions on the research that we plan to do.

- The use of hES cells gives rise to religious, moral, and ethical issues regarding the appropriate means of obtaining the cells and the appropriate use and disposal of the cells. These considerations could lead to more restrictive government regulations or could generally constrain stem cell research, thereby limiting the market and demand for our products.

If we are unable to obtain and enforce patents and to protect our trade secrets, others could use our technology to compete with us, which could limit opportunities for us to generate revenues by licensing our technology and selling products

- Our success will depend in part on our ability to obtain and enforce patents and maintain trade secrets in the United States and in other countries. If we are unsuccessful at obtaining and enforcing patents, our competitors could use our technology and create products that compete with our products, without paying license fees or royalties to us.

- The preparation, filing, and prosecution of patent applications can be costly and time consuming. Our limited financial resources may not permit us to pursue patent protection of all of our technology and products throughout the world.

- Even if we are able to obtain issued patents covering our technology or products, we may have to incur substantial legal fees and other expenses to enforce our patent rights in order to protect our technology and products from infringing uses. We may not have the financial resources to finance the litigation required to preserve our patent and trade secret rights.

There is no certainty that our pending or future patent applications will result in the issuance of patents

- We have filed patent applications for technology that we have developed, and we have obtained licenses for a number of patent applications covering technology developed by others, that we believe will be useful in producing new products, and which we believe may be of commercial interest to other companies that may be willing to sublicense the technology for fees or royalty payments. In the future, we may also file additional new patent applications seeking patent protection for new technology or products that we develop ourselves or jointly with others. However, there is no assurance that any of our licensed patent applications, or any patent applications that we have filed or that we may file in the future covering our own technology, either in the United States or abroad, will result in the issuance of patents.

- In Europe, the European Patent Convention prohibits the granting of European patents for inventions that concern "uses of human embryos for industrial or commercial purposes." The European Patent Office is presently interpreting this prohibition broadly, and is applying it to reject patent claims that pertain to human embryonic stem cells. However, this broad interpretation is being challenged through the European Patent Office appeals system. As a result, we do not yet know whether or to what extent we will be able to obtain patent protection for our human embryonic stem cell technologies in Europe.

- The recent Supreme Court decision in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, will need to be considered in determining whether certain diagnostic methods can be patented, since the Court denied patent protection for the use of a mathematical correlation of the presence of a well-known naturally occurring metabolite as a means of determining proper drug dosage. Our subsidiary OncoCyte is developing *PanC-Dx*™ as a cancer diagnostic test, based on the presence of certain genetic markers for a variety of cancers. Because *PanC-Dx*™ combines an innovative methodology with newly discovered compositions of matter, we are hopeful that this Supreme Court decision will not preclude the availability of patent protection for OncoCyte's new product. However, like other developers of diagnostic products, we are evaluating this new Supreme Court decision and new guidelines issued by the United States Patent and Trademark Office (the "PTO") for the patenting of products that test for biological substances.

The process of applying for and obtaining patents can be expensive and slow

- The preparation and filing of patent applications, and the maintenance of patents that are issued, may require substantial time and money.

- A patent interference proceeding may be instituted with the PTO for patents or applications filed before March 16, 2013 when more than one person files a patent application covering the same technology, or if someone wishes to challenge the validity of an issued patent. At the completion of the interference proceeding, the PTO may determine which competing applicant is entitled to the patent, or whether an issued patent is valid. Patent interference proceedings are complex, highly contested legal proceedings, and the PTO's decision is subject to appeal. This means that if an interference proceeding arises with respect to any of our patent applications, we may experience significant expenses and delay in obtaining a patent, and if the outcome of the proceeding is unfavorable to us, the patent could be issued to a competitor rather than to us.

- After March 16, 2013 a derivation proceeding may be instituted by the PTO or an inventor alleging that a patent or application was derived from the work of another inventor.

- Post Grant Review under the new America Invents Act will make available after March 16, 2013 opposition-like proceedings in the United States. As with the PTO interference proceedings, Post Grant Review proceedings will be very expensive to contest and can result in significant delays in obtaining patent protection or can result in a denial of a patent application.

- Oppositions to the issuance of patents may be filed under European patent law and the patent laws of certain other countries. As with the PTO interference proceedings, these foreign proceedings can be very expensive to contest and can result in significant delays in obtaining a patent or can result in a denial of a patent application

Our patents may not protect our products from competition

We or our subsidiaries have patents in the United States, Canada, the European Union countries, the United Kingdom, Australia, Israel, Russia, South Africa, India, China, South Korea, Japan, Hong Kong, and Singapore, and have filed patent applications in other foreign countries for our plasma volume expander, stem cell products, *HyStem*® and other hydrogels, certain genes related to the development of cancer, and other technologies.

- We might not be able to obtain any additional patents, and any patents that we do obtain might not be comprehensive enough to provide us with meaningful patent protection.

- There will always be a risk that our competitors might be able to successfully challenge the validity or enforceability of any patent issued to us.

- In addition to interference proceedings, the PTO can re-examine issued patents at the request of a third party seeking to have the patent invalidated. This means that patents owned or licensed by us may be subject to re-examination and may be lost if the outcome of the re-examination is unfavorable to us. As of September 16, 2012 our patents may be subject to inter partes review (replacing the inter partes reexamination proceeding), a proceeding in which a third party can challenge the validity of one of our patents.

We may be subject to patent infringement claims that could be costly to defend, which may limit our ability to use disputed technologies, and which could prevent us from pursuing research and development or commercialization of some of our products

The success of our business depends significantly on our ability to operate without infringing patents and other proprietary rights of others. If the technology that we use infringes a patent held by others, we could be sued for monetary damages by the patent holder or its licensee, or we could be prevented from continuing research, development, and commercialization of products that rely on that technology, unless we are able to obtain a license to use the patent. The cost and availability of a license to a patent cannot be predicted, and the likelihood of obtaining a license at an acceptable cost would be lower if the patent holder or any of its licensees is using the patent to develop or market a product with which our product would compete. If we could not obtain a necessary license, we would need to develop or obtain rights to alternative technologies, which could prove costly and could cause delays in product development, or we could be forced to discontinue the development or marketing of any products that were developed using the technology covered by the patent.

If we fail to meet our obligations under license agreements, we may lose our rights to key technologies on which our business depends

Our business depends on several critical technologies that are based in part on technology licensed from third parties. Those third-party license agreements impose obligations on us, including payment obligations and obligations to pursue development of commercial products under the licensed patents or technology. If a licensor believes that we have failed to meet our obligations under a license agreement, the licensor could seek to limit or terminate our license rights, which could lead to costly and time-consuming litigation and, potentially, a loss of the licensed rights. During the period of any such litigation, our ability to carry out the development and commercialization of potential products, and our ability to raise any capital that we might then need, could be significantly and negatively affected. If our license rights were restricted or ultimately lost, we would not be able to continue to use the licensed technology in our business.

The price and sale of our products may be limited by health insurance coverage and government regulation

Success in selling our pharmaceutical and cell-based products and medical devices may depend in part on the extent to which health insurance companies, HMOs, and government health administration authorities such as Medicare and Medicaid will pay for the cost of the products and related treatment. Presently, most health insurance plans and HMOs will pay for *Hextend*® when it is used in a surgical procedure that is covered by the plan. However, until we actually introduce a new product into the medical marketplace, we will not know with certainty whether adequate health insurance, HMO, and government coverage will be available to permit the product to be sold at a price high enough for us to generate a profit. In some foreign countries, pricing or profitability of health care products is subject to government control, which may result in low prices for our products. In the United States, there have been a number of federal and state proposals to implement similar government controls, and new proposals are likely to be made in the future.

Risks Related to our Dependence on Third Parties

If we fail to enter into and maintain successful strategic alliances for our therapeutic product candidates, we may have to reduce or delay our product development or increase our expenditures

An important element of our strategy for developing, manufacturing and commercializing our therapeutic product candidates will be entering into strategic alliances with pharmaceutical companies or other industry participants to advance our programs and enable us to maintain our financial and operational capacity. We will face significant competition in seeking appropriate alliances. We may not be able to negotiate alliances on acceptable terms, if at all. If we fail to create and maintain suitable alliances, we may have to limit the size or scope of, or delay, one or more of our product development or research programs, or we will have to increase our expenditures and will need to obtain additional funding, which may be unavailable or available only on unfavorable terms.

If we are able to enter into product development and marketing arrangements with pharmaceutical companies, we may license product development, manufacturing, and marketing rights to the pharmaceutical company or to a joint venture company formed with the pharmaceutical company. Under such arrangements we might receive only a royalty on sales of the products developed or an equity interest in a joint venture company that develops the product. As a result, our revenues from the sale of those products may be substantially less than the amount of revenues and gross profits that we might receive if we were to develop, manufacture, and market the products ourselves.

We may become dependent on possible future collaborations to develop and commercialize many of our product candidates and to provide the regulatory compliance, sales, marketing and distribution capabilities required for the success of our business.

We may enter into various kinds of collaborative research and development and product marketing agreements to develop and commercialize our products. The expected future milestone payments and cost reimbursements from collaboration agreements could provide an important source of financing for our research and development programs, thereby facilitating the application of our technology to the development and commercialization of our products, but there are risks associated with entering into collaboration arrangements.

There is a risk that we could become dependent upon one or more collaborative arrangements for product development or as a source of revenues from the sale of any products that may be developed by us alone or through one of the collaborative arrangements. A collaborative arrangement upon which we might depend might be terminated by our collaboration partner or they might determine not to actively pursue the development or commercialization of our products. A collaboration partner also may not be precluded from independently pursuing competing products and drug delivery approaches or technologies.

There is a risk that a collaboration partner might fail to perform its obligations under the collaborative arrangements or may be slow in performing its obligations. In addition, a collaboration partner may experience financial difficulties at any time that could prevent it from having available funds to contribute to the collaboration. If a collaboration partner fails to conduct its product development, commercialization, regulatory compliance, sales and marketing or distribution activities successfully and in a timely manner, or if it terminates or materially modifies its agreements with us, the development and commercialization of one or more product candidates could be delayed, curtailed or terminated because we may not have sufficient financial resources or capabilities to continue such development and commercialization on our own.

We have very limited experience in marketing, selling or distributing our products, and we may need to rely on marketing partners or contract sales companies.

Even if we are able to develop our products and obtain necessary regulatory approvals, we have very limited experience or capabilities in marketing, selling or distributing our products. We rely entirely on Hospira and CJ for the sale of *Hextend*®. We currently have only limited sales, marketing and distribution resources for selling our stem cell research products, and no marketing or distribution resources for selling any of the medical devices or therapeutic products that we are developing. Accordingly, we will be dependent on our ability to build our own marketing and distribution capability for our new products, which would require the investment of significant financial and management resources, or we will need to find collaborative marketing partners or sales representatives, or wholesale distributors for the commercial sale of our products.

If we market products through arrangements with third parties, we may pay sales commissions to sales representatives or we may sell or consign products to distributors at wholesale prices. As a result, our gross profit from product sales may be lower than it would be if we were to sell our products directly to end users at retail prices through our own sales force. There can be no assurance we will able to negotiate distribution or sales agreements with third parties on favorable terms to justify our investment in our products or achieve sufficient revenues to support our operations.

We do not have the ability to independently conduct clinical trials required to obtain regulatory approvals for our product candidates.

We will need to rely on third parties, such as contract research organizations, data management companies, contract clinical research associates, medical institutions, clinical investigators and contract laboratories to conduct any clinical trials that we may undertake for our products. We may also rely on third parties to assist with our preclinical development of product candidates. If we outsource clinical trial we may be unable to directly control the timing, conduct and expense of our clinical trials. If we enlist third parties to conduct clinical trials and they fail to successfully carry out their contractual duties or regulatory obligations or fail to meet expected deadlines, if the third parties need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our preclinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates.

Risks Related to the Asset Contribution Agreement

Asterias has been substituted for Geron in an appeal of two adverse patent rulings, and if the appeal is not successful, Asterias may not realize value from the Geron patent applications at issue in the appeal and might be precluded from developing therapies to treat certain diseases, such as diabetes.

Asterias has been substituted for Geron as a party in interest in an appeal filed by Geron in the United States District Court for the Northern District of California, appealing two adverse rulings in favor of ViaCyte, Inc. (formerly Novocell Inc.) by the United States Patent and Trademark Office's Board of Patent Appeals and Interferences. These rulings related to interference proceedings involving patent filings relating to definitive endoderm cells. Geron had requested that the Board of Patent Appeals and Interferences declare this interference after ViaCyte was granted patent claims that conflicted with subject matter Geron filed in a patent application having an earlier priority date. Those Geron patent applications are among the patent assets that Geron contributed to Asterias. Asterias will assume all liabilities arising with respect to the ViaCyte Appeal, other than expenses incurred by Geron relating to the ViaCyte Appeal prior to the closing of the asset contribution transaction. Appeals of this nature may involve costly and time-consuming legal proceedings and if Asterias is not successful in the appeal, these rulings may prevent or limit development of Asterias product candidates in certain fields such as diabetes treatment and Asterias may be unable to realize value from the patent applications at issue in the appeal.

We could be liable to indemnify Geron from certain liabilities.

We and Asterias have agreed to indemnify Geron from and against certain liabilities relating to (a) Geron's distribution of the Asterias Series A common stock to Geron's stockholders, (b) Asterias' distribution of the BioTime warrants, that we will contribute to Asterias under the Asset Purchase Agreement, to the holders of Asterias Series A common stock, and (c) any distribution of securities by Asterias to the holders of the Asterias Series A common stock within one year following the closing under the Asset Contribution Agreement, from the date of the first effective date of either of the registration statements filed by us and by Asterias with respect to the securities that we and Asterias issued in the asset contribution transaction, through the fifth anniversary of the earliest to occur of the date on which all of the BioTime warrants that we contributed to Asterias have either expired, or been exercised, cancelled or sold.

We and Asterias have also agreed to indemnify Geron, from and against certain expenses, losses, and liabilities arising from, among other things, breaches of our or Asterias' representations, warranties and covenants under the Asset Contribution Agreement. The maximum damages that may be recovered by either party for a loss under this indemnification related to representations, warranties and covenants, with limited exceptions, is limited to $2,000,000.

Completion of the asset contribution transaction may divert our management's attention away from ongoing operations and could adversely affect ongoing operations and business relationships.

As a result of the closing of the asset contribution transaction, our management will be required to provide more management attention to Asterias. The diversion of our management's attention away from our other operations could adversely affect our operations and business relationships that do not relate to Asterias.

Risks Pertaining to Our Common Shares

Ownership of our common shares will entail certain risks associated with the volatility of prices for our shares and the fact that we do not pay dividends on our common shares.

Because we are engaged in the development of pharmaceutical and stem cell products, the price of our stock may rise and fall rapidly

- The market price of our shares, like that of the shares of many biotechnology companies, has been highly volatile.
- The price of our shares may rise rapidly in response to certain events, such as the commencement of clinical trials of an experimental new product, even though the outcome of those trials and the likelihood of ultimate FDA approval remain uncertain.
- Similarly, prices of our shares may fall rapidly in response to certain events such as unfavorable results of clinical trials or a delay or failure to obtain FDA approval.
- The failure of our earnings to meet analysts' expectations could result in a significant rapid decline in the market price of our common shares.

Current economic and stock market conditions may adversely affect the price of our common shares

The stock market has been experiencing extreme price and volume fluctuations which have affected the market price of the equity securities without regard to the operating performance of the issuing companies. Broad market fluctuations, as well as general economic and political conditions, may adversely affect the market price of the common shares.

Because we do not pay dividends, our stock may not be a suitable investment for anyone who needs to earn dividend income

We do not pay cash dividends on our common shares. For the foreseeable future, we anticipate that any earnings generated in our business will be used to finance the growth of our business and will not be paid out as dividends to our shareholders. This means that our stock may not be a suitable investment for anyone who needs to earn income from their investments.

Securities analysts may not initiate coverage or continue to cover our common shares and this may have a negative impact on the market price of our shares

The trading market for our common shares will depend, in part, on the research and reports that securities analysts publish about our business and our common shares. We do not have any control over these analysts. There is no guarantee that securities analysts will cover our common shares. If securities analysts do not cover our common shares, the lack of research coverage may adversely affect the market price of those shares. If securities analysts do cover our shares, they could issue reports or recommendations that are unfavorable to the price of our shares, and they could downgrade a previously favorable report or recommendation, and in either case our share price could decline as a result of the report. If one or more of these analysts does not initiate coverage, ceases to cover our shares or fails to publish regular reports on our business, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

You may experience dilution of your ownership interests because of the future issuance of additional shares of common and preferred shares by us and our subsidiaries

In the future, we may issue our authorized but previously unissued equity securities, resulting in the dilution of the ownership interests of our present shareholders. We are currently authorized to issue an aggregate of 127,000,000 shares of capital stock consisting of 125,000,000 common shares and 2,000,000 "blank check" preferred shares. As of September 30, 2013, there were issued 57,938,220 common shares, 4,655,884 common shares reserved for issuance upon the exercise of outstanding options under our employee stock option plans; and 1,751,615 shares reserved for issuance upon the exercise of common share purchase warrants. We issued an additional 8,902,077 common shares common shares and 8,000,000 common share purchase warrants to Asterias on October 1, 2013 in connection with the closing of the asset contribution transaction under the Asset Contribution Agreement. No preferred shares are presently outstanding.

The operation of some of our subsidiaries has been financed in part through the sale of capital stock in those subsidiaries to private investors. Sales of additional subsidiary shares could reduce our ownership interest in the subsidiaries, and correspondingly dilute our shareholder's ownership interests in our consolidated enterprise. Our subsidiaries also have their own stock option plans and the exercise of subsidiary stock options or the sale of restricted stock under those plans would also reduce our ownership interest in the subsidiaries, with a resulting dilutive effect on the ownership interest of our shareholders in our consolidated enterprise.

We and our subsidiaries may issue additional common shares or other securities that are convertible into or exercisable for common shares in order to raise additional capital, or in connection with hiring or retaining employees or consultants, or in connection with future acquisitions of licenses to technology or rights to acquire products in connection with future business acquisitions, or for other business purposes. The future issuance of any such additional common shares or other securities may create downward pressure on the trading price of our common shares.

We may also issue preferred shares having rights, preferences, and privileges senior to the rights of our common shares with respect to dividends, rights to share in distributions of our assets if we liquidate our company, or voting rights. Any preferred shares may also be convertible into common shares on terms that would be dilutive to holders of common shares. Our subsidiaries may also issue their own preferred shares with a similar dilutive impact on our ownership of the subsidiaries.

The market price of our common shares could be impacted by the issuance of the common shares and warrants to Asterias

Under the Asset Contribution Agreement we issued to Asterias 8,902,077 common shares and 8,000,000 common share purchase warrants. Asterias may sell the common shares that it received from us. Those sales may take place from time to time on the NYSE MKT and may create downward pressure on the trading price of our common shares.

Asterias expects to distribute the warrants it received from us to the future holders of its Series A common stock. The warrants we issued to Asterias will be exercisable for a period of five years at an exercise price of $5.00 per share, subject to adjustment for certain stock splits, reverse stock splits, stock dividends, recapitalizations and other transactions. During the period that the warrants are outstanding, the actual or potential exercise of those warrants and sale of the underlying common shares may create downward pressure on the trading price of our common shares.

The market price of our common shares could be impacted by prices at which we sell shares in our subsidiaries

The operation of some our subsidiaries has been financed in part through the sale of capital stock in those subsidiaries, and our subsidiaries may sell shares of their capital stock in the future for financing purposes. The prices at which our subsidiaries may sell shares of their capital stock could impact the value of our company as a whole and could impact the price at which our common shares trade in the market. A sale of capital stock of any of our subsidiaries at a price that the market perceives as low could adversely impact the market price of our common shares. Even if our subsidiaries sell their capital stock at prices that reflect arm's length negotiation with investors, there is no assurance that those prices will reflect a true fair market value or that the ascribed value of the subsidiary based on those share prices will be fully reflected in the market value of our common shares.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

None.

Item 3. Default Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures

Not Applicable.

Item 5. Other Information.

None.

Item 6. Exhibits

Exhibit Numbers	Description
2.1	Asset Contribution Agreement, dated January 4, 2013, by and among BioTime, Inc., BioTime Acquisition Corporation, and Geron Corporation. (1)
3.1	Articles of Incorporation with all amendments. (2)
3.2	By-Laws, As Amended. (3)
4.1	Warrant Agreement between BioTime, Inc. and Romulus Films, Ltd. (4)
4.2	Form of Warrant. (included in Exhibit 4.1) (4)
4.3	Form of Warrant Issued June 2013. (5)
4.4	Warrant Agreement, dated as of October 1, 2013, between BioTime, Inc. and American Stock Transfer & Trust Company, LLC as Warrant Agent for the benefit of Asterias Biotherapeutics, Inc. (6)
4.5	Warrant Issued October 1, 2013 to Asterias Biotherapeutics, Inc. (included in Exhibit 4.4) (6)
10.1	Royalty Agreement, dated October 1, 2013, between Asterias Biotherapeutics, Inc. and Geron Corporation. *
10.2	Exclusive Sublicense Agreement, dated October 1, 2013, between Geron Corporation and Asterias Biotherapeutics, Inc.*
10.3	Exclusive License Agreement, dated February 20, 2003, and First Amendment thereto dated September 7, 2004, between The Regents of the University of California and Geron Corporation*
10.4	Non-Exclusive License Agreement, dated as of October 7, 2013, between the Wisconsin Alumni Research Foundation and Asterias Biotherapeutics, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment) *
10.5	Employment Agreement, dated August 15, 2013, between BioTime, Inc. and Lesley Stoltz*
10.6	Equity Incentive Plan*
10.7	Form of Employee Incentive Stock Option Agreement*
10.8	Form of Non-employee Director Stock Option Agreement*
31	Rule 13a-14(a)/15d-14(a) Certification.*
32	Section 1350 Certification.*
101	Interactive Data File
101.INS	XBRL Instance Document *
101.SCH	XBRL Taxonomy Extension Schema *
101.CAL	XBRL Taxonomy Extension Calculation Linkbase *
101.LAB	XBRL Taxonomy Extension Label Linkbase *
101.PRE	XBRL Taxonomy Extension Presentation Linkbase *
101.DEF	XBRL Taxonomy Extension Definition Document *

(1) Incorporated by reference to BioTime's Form 8-K filed with the Securities and Exchange Commission on January 8, 2013.

(2) Incorporated by reference to BioTime's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013.

(3) Incorporated by reference to Registration Statement on Form S-1, File Number 33-48717 and Post-Effective Amendment No. 1 thereto filed with the Securities and Exchange Commission on June 22, 1992, and August 27, 1992, respectively.

(4) Incorporated by reference to BioTime's Form 10-K for the year ended December 31, 2012

(5) Incorporated by reference to BioTime's Current Report on Form 8-K filed with the Securities and Exchange Commission on June 3, 2013.

(6) Incorporated by reference to BioTime's Current Report on Form 8-K filed with the Securities and Exchange Commission on October 1, 2013.

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BIOTIME, INC.

Date: November 12, 2013

/s/ Michael D. West

Michael D. West, Chief Executive Officer

Date: November 12, 2013

/s/ Robert W. Peabody

Robert W. Peabody, Chief Financial Officer

Exhibit Numbers	Description
2.1	Asset Contribution Agreement, dated January 4, 2013, by and among BioTime, Inc., BioTime Acquisition Corporation, and Geron Corporation. (1)
3.1	Articles of Incorporation with all amendments. (2)
3.2	By-Laws, As Amended. (3)
4.1	Warrant Agreement between BioTime, Inc. and Romulus Films, Ltd. (4)
4.2	Form of Warrant. (included in Exhibit 4.1) (4)
4.3	Form of Warrant Issued June 2013. (5)
4.4	Warrant Agreement, dated as of October 1, 2013, between BioTime, Inc. and American Stock Transfer & Trust Company, LLC as Warrant Agent for the benefit of Asterias Biotherapeutics, Inc. (6)
4.5	Warrant Issued October 1, 2013 to Asterias Biotherapeutics, Inc. (included in Exhibit 4.4) (6)
10.1	Royalty Agreement, dated October 1, 2013, between Asterias Biotherapeutics, Inc. and Geron Corporation. *
10.2	Exclusive Sublicense Agreement, dated October 1, 2013, between Geron Corporation and Asterias Biotherapeutics, Inc.*
10.3	Exclusive License Agreement, dated February 20, 2003, and First Amendment thereto dated September 7, 2004, between The Regents of the University of California and Geron Corporation*
10.4	Non-Exclusive License Agreement, dated as of October 7, 2013, between the Wisconsin Alumni Research Foundation and Asterias Biotherapeutics, Inc. (Portions of this exhibit have been omitted pursuant to a request for confidential treatment) *
10.5	Employment Agreement, dated August 15, 2013, between BioTime, Inc. and Lesley Stoltz*
10.6	Equity Incentive Plan*
10.7	Form of Employee Incentive Stock Option Agreement*
10.8	Form of Non-employee Director Stock Option Agreement*
31	Rule 13a-14(a)/15d-14(a) Certification.*
32	Section 1350 Certification.*
101	Interactive Data File
101.INS	XBRL Instance Document *
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* Filed herewith.

Exhibit 10.1

ROYALTY AGREEMENT

This Royalty Agreement ("Agreement") is made as of October 1, 2013 (“Effective Date”) by and between Asterias Biotherapeutics, Inc., a Delaware corporation (“Asterias”), and Geron Corp., a Delaware corporation (“Geron”).

RECITALS

WHEREAS, Asterias, BioTime, Inc. and Geron have entered into that certain Asset Contribution Agreement, dated January 4, 2013 (the “Asset Contribution Agreement”), pursuant to which Geron has transferred and assigned certain patents and patent applications to Asterias in exchange for shares of Asterias common stock; and

WHEREAS, Asterias has agreed to enter into this Agreement and pay to Geron royalties on product sales and a share of royalties received from third party licensees on the sale products covered by the Geron patents, on the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the premises and the mutual covenants contained herein, the Parties hereto agree as follows:

ARTICLE 1 - DEFINITIONS

Capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed to them in the Asset Contribution Agreement. The following defined terms shall have the meanings ascribed to them in this Article 1:

1.1 “Affiliate” means, with respect to Geron or Asterias, any corporation, limited liability company, limited partnership or other entity in control of, controlled by, or under common control with such party.

1.2 “Combination Product” means any Product which includes one or more active ingredients other than a Product in combination with a Product, including a fixed-dose combination product.

1.3 “Confidential Information” means any and all information that is contained in any report under Section 3.1, or disclosed by Asterias or any of its Affiliates to Geron or its Representatives in connection with any audit under Section 3.2.

1.4 "Contributed Patents" means all of the patents, patent applications and patent rights to inventions identified on Schedule 1 and all active prosecution cases related thereto.

1.5 “Excluded Product” means any Product covered by one or more patents licensed to or from Geron under the cross-license among Geron, ES Cell International Pte Ltd. and Cell Cure Neurosciences, Ltd.

1.6 “First Commercial Sale” means the first sale for end-use or consumption of a Product.

1.7 "Net Sales" means the total gross amount invoiced and paid to Asterias or any Affiliate of Asterias for sales or transfers of Products to an unrelated third party anywhere in the world,

(a) less deductions for:

(i) freight, postage and duties and transportation charges directly related to the Products sold (including handling and insurance with respect thereto);

(ii) sales, value added and excise taxes or customs paid, and any other similar governmental charges imposed upon the sale of the Products that are not recoverable;

(iii) allowances, chargebacks or credits actually granted by Asterias or its Affiliates to end-users not in excess of the selling price of Products, on account of rejection, outdating, recalls or return of Products; and

(iv) rebates, reimbursements, fees or similar payments: (1) to wholesalers and other distributors, pharmacies and other retailers, buying groups (including group purchasing organizations), health care insurance carriers, pharmacy benefit management companies, health maintenance organizations, hospitals, clinics, government agencies or authorities or other institutions or health care organizations; or (2) to patients and other third parties arising in connection with any program applicable to Products under which the Asterias or its Affiliates provide to low income, uninsured or other patients the opportunity to obtain one or more Products at a reduced cost.

For the avoidance of doubt, if a single item falls into more than one of the categories set forth in clauses “(a)(i)” through “(a)(iv)” above, such item may not be deducted more than once. For purposes of determining Net Sales, a Product shall be deemed to be sold when invoiced.

(b) Net Sales for any Combination Product in a country shall be calculated as follows:

(i) Where all active ingredients in such Combination Product are sold separately in the country, Net Sales shall be calculated by multiplying actual Net Sales of such Combination Product in such country as determined above by the fraction A/(A+B), where A is the net invoice price of the Product as sold separately in such country, and B is the sum of the net invoice prices of the other active ingredients in the combination.

(ii) If the Product component of the Combination Product is sold separately in the country, but none of such other active ingredient(s) is sold separately in such country, Net Sales for the purpose of determining royalties due hereunder for the Combination Product will be calculated by multiplying actual Net Sales of such Combination Product by the fraction A/C, where A is the net invoice price of such Product component as sold separately, and C is the net invoice price of the Combination Product.

(iii) If the Product component of the Combination Product is not sold separately in the country, but the other active ingredient(s) are sold separately in such country, Net Sales for the purpose of determining royalties due hereunder for the Combination Product will be calculated by multiplying actual Net Sales of such Combination Product by the fraction (C-D)/C, where: C is the net invoice price, in such country, for the Combination Product, and D is the sum of the net invoice prices charged for the other active ingredients in the Combination Product.

(iv) If none of the Product component and the other active ingredients are sold separately in the country, Net Sales for the purposes of determining royalties due hereunder for the Combination Product will be determined by mutual agreement of the parties, according to the formula D/(D+E), where D is the fair market value of the portion of the Combination Products that contains the Product, and E is the fair market value of the portion of the Combination Product containing the other active ingredients in such Combination Product. In applying the foregoing formulas, Asterias (or its Affiliate if the sale was by an Affiliate) shall act in good faith and accordance with Asterias' (or its Affiliate if the sale was by an Affiliate) regular accounting methods, consistently applied.

(c) If a Product is sold for consideration other than cash, the Net Sales from such sale shall be deemed the then fair market value of such Product.

1.8 "Partially Excluded Product" means any Product which includes one or more Products that are not Excluded Products in combination with one or more Excluded Products.

1.9 "Product" means any composition or product the manufacture, use, sale, offer for sale, or importation of which would constitute, but for ownership or licensed rights to use one or more of the Contributed Patents, an infringement of any Valid Claim under one or more Contributed Patents. The term "Product", as used herein, shall include Combination Products.

1.10 "Representatives" means, with respect to Geron or Asterias, such party's Affiliates and its and their respective officers, directors, employees, agents, attorneys, accountants and advisors.

1.11 "Sales Agent" means any distributor, independent sales representative, consignee or other agent retained in writing by Asterias or any Affiliate of Asterias for the purpose of selling Products on behalf of Asterias and Asterias' Affiliates. For the avoidance of doubt, the foregoing shall not include collaborators, partners or sublicensees of Asterias or Asterias' Affiliates who sell Products other than on behalf of Asterias or Asterias' Affiliates.

1.12 "Term" means the period of time beginning on the Effective Date and ending on the expiration or termination date of the last Valid Claim such that no Valid Claims remain in effect in any country.

1.13 "Valid Claim" shall mean a claim of an issued and unexpired patent included within the Contributed Patents, which has not been held permanently revoked, unenforceable or invalid by a decision of a court or other governmental agency of competent jurisdiction, unappealable or unappealed within the time allowed for appeal, and which has not been admitted to be invalid or unenforceable through reissue or disclaimer or otherwise.

For purposes of this Agreement, except as otherwise expressly provided herein or unless the context otherwise requires: (a) the use herein of the plural shall include the single and *vice versa* and the use of the masculine shall include the feminine; (b) unless otherwise set forth herein, the use of the terms "including," "includes," or "include" means "including but not limited to," "includes but is not limited to," or "include but not be limited to," respectively; and (c) the words "herein," "hereof," "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular provision. Additional terms may be defined throughout this Agreement.

ARTICLE 2- ROYALTIES

2.1 Royalties.

(a) Commencing on the First Commercial Sale of each Product by Asterias, an Affiliate of Asterias, or a Sales Agent, Asterias shall pay Geron a royalty in the amount of four percent (4%) of Net Sales of such Product.

(b) In the case of sales of Products by any individual or entity other than a Sales Agent, Asterias or any Affiliate of Asterias (any such individual or entity, a "non-Affiliate") where Asterias or any Affiliate of Asterias receives a royalty or other cash payment in respect of such Product sales, Asterias shall pay Geron fifty percent (50%) of all such royalties and other cash payments received by Asterias or such Affiliate of Asterias in respect to such Product sales; provided, however, that royalties or other such payments derived from the sales of Combination Products shall be calculated on the basis set forth for Net Sales for Combination Products specified in clauses "(b)(i)" to "(b)(iv)" of Section 1.7. The parties acknowledge and agree that in no event will Asterias pay Geron an amount in excess of any royalty or other cash payment received by Asterias or such Affiliate of Asterias, less all cash payments owed by Asterias or such Affiliate of Asterias to third parties, in each case, with respect to such Product sales.

(c) Geron will not be entitled to receive any royalties or other cash payments pursuant to this Agreement with respect to Excluded Products that are not Partially Excluded Products. With respect to Partially Excluded Products, any royalty on Net Sales pursuant to Section 2.1(a) or royalty or other cash payment derived from the sales of any Partially Excluded Products pursuant to Section 2.1(b) shall be calculated on the basis set forth for Net Sales for Combination Products specified in clauses "(b)(i)" to "(b)(iv)" of Section 1.7 as if the Excluded Product(s) (together with any other active ingredient(s) that are not Products in the event that such Partially Excluded Product also constitutes a Combination Product) were the active ingredients that are not Products.

(d) Asterias' obligation to pay royalties or other cash payments on Net Sales, or with respect to royalties or other cash payments received from any non-Affiliate with respect to any Product, shall expire on a country by country basis upon the expiration of the last to expire Valid Claim covering such Product in any country where the Product is sold.

(e) Geron will not be entitled to receive any payments under this Section 2 with respect to any payments or reimbursements received by Asterias, any Affiliate of Asterias or any Sales Agent for advertising or similar marketing and promotional expenses.

ARTICLE 3 – REPORTS, RECORDS AND PAYMENTS

3.1 Reports. After the First Commercial Sale of a Product, Asterias shall submit to Geron quarterly reports within sixty (60) days after the end of each calendar quarter. Each report shall set forth Product sales by Asterias and each of its Affiliates in the most recently completed calendar quarter, and shall show:

(a) the gross sales and Net Sales (including all deductions used to calculate Net Sales, and the amounts of each such deduction) during the most recently completed calendar quarter and the royalties, in US dollars, payable with respect thereto;

(b) the amount of each Product sold; and

(c) any amounts due and payable to Asterias during the most recently completed calendar quarter, in US dollars, on account of Products sold by non-Affiliates, where Asterias received a royalty or other cash payment on Product sales; and

(d) the exchange rates used to convert foreign currencies into US dollars.

If no Products have been sold by Asterias and its Affiliates and no royalties or other cash payments have been received by Asterias or its Affiliates with respect to Products sold by non-Affiliates during any reporting period, Asterias shall so report.

3.2 Records & Audits.

(a) Asterias shall keep, and shall require its Affiliates to keep, accurate and correct records of all Products sold. Asterias shall also keep accurate and correct records of all royalties received on account of Products sold by non-Affiliates where Asterias receives a royalty or other cash payment on Product sales. Such records shall be retained by Asterias for at least three (3) years following a given reporting period.

(b) All records described in Section 3.2(a) shall be available during normal business hours for inspection at the expense of Geron by a certified public accountant selected by Geron and in compliance with the other terms of this Agreement for the sole purpose of verifying reports and payments due. Such inspector shall not disclose to Geron any information other than information relating to the accuracy of reports and payments made under this Agreement, and shall sign a reasonably acceptable confidentiality agreement with Asterias obligating such inspector to retain such information in confidence pursuant to such confidentiality agreement. In the event that any such inspection shows an under reporting and underpayment in excess of five percent (5%) for any twelve-month (12-month) period, then Asterias shall pay the cost of the audit as well as any additional sum that would have been payable to Geron had the Asterias reported correctly, plus an interest charge at a rate of rate per annum 300 basis points over the "prime rate" (as announced by Bank of America or any successor thereto) in effect on the date such overdue amount was originally required to be paid. Such interest shall be calculated from the date the correct payment was due to Geron up to the date when such payment is actually made by Asterias or an Affiliate. For underpayment not in excess of five percent (5%) for any twelve-month (12-month) period, Asterias shall pay the difference within thirty (30) days without interest charge or inspection cost.

(c) Asterias acknowledges and agrees that, due to the unique nature of the records subject to audit under Section 3.2(b), Geron would be incapable of verifying reports and payments made by Asterias pursuant to this Agreement without access to such records, that there may be no adequate remedy at law for any breach of Asterias' obligations under Section 3.2(b), and therefore, that upon any breach thereof by Asterias, Geron shall be entitled to seek appropriate equitable relief in addition to whatever remedies it might have at law.

3.3 Payments.

(a) All royalties due Geron shall be paid in United States dollars. When Net Sales or royalties are denominated in currencies other than United States dollars, Asterias shall first determine the royalty in the currency of the country in which Products were sold or royalties were paid and then convert the amount into equivalent United States dollars, using the exchange rate published on Bloomberg at 5:00pm California time on the last business day of the applicable period in question or in the Wall Street Journal on such date if not so published on Bloomberg.

(b) Asterias shall pay all payments due hereunder quarterly within sixty (60) calendar days after the end of each calendar quarter. Each such payment shall be for earned payments accrued within Asterias 's most recently completed calendar quarter.

ARTICLE 4– TERM AND TERMINATION

This Agreement shall be effective on the Effective Date and shall terminate on the expiration of the Term. Asterias' obligation under this Article 4 shall survive termination of this Agreement as follows: (a) with respect to paying royalties and providing reports, until the last required quarterly report has been provided and all royalties due with respect to Net Sales or royalties received by Asterias from non-Affiliates with respect to sales of Products during the Term have been paid; (b) with respect to Geron's right to audit the books and records of Asterias and its Affiliates, for a period of one year, and (c) with respect to retaining books and records of Product sales and royalties received, for three years.

ARTICLE 5- CONFIDENTIALITY

5.1 During the Term and for a period of three (3) years thereafter, Geron shall not disclose any Confidential Information to any third party (other than Geron's Representatives who have a need to know such Confidential Information) or use such Confidential Information to compete with Asterias; provided, however, that this Section 5.1 shall not restrict Geron from performing any obligation or exercising any right under this Agreement and shall not restrict Geron's individual Representatives from using Residual Knowledge. For purposes of this Agreement, "Residual Knowledge" means ideas, concepts, know-how, or techniques related to the Confidential Information that are retained in the unaided memories of the Geron's individual Representatives who have had access to the Confidential Information. An individual Representative's memory is considered unaided if the employee has not intentionally memorized the relevant Confidential Information for the purpose of retaining and subsequently using or disclosing it. Geron shall not direct any of its individual Representatives to use or practice any Residual Knowledge. In protecting the Confidential Information from unauthorized disclosure to any third party, Geron shall use at least the same degree of care as it uses in preventing the unauthorized disclosure of its own confidential information.

5.2 Notwithstanding anything contained herein to the contrary, Confidential Information shall not include information that: (a) is or becomes publicly available (other than through a breach of this Agreement); (b) was known to or in the possession of Geron or any of its Representatives at the time of disclosure to Geron by any Representative of Asterias or by any Representative of any Affiliate of Asterias; (c) is independently developed or acquired by Geron or any of its Representatives without the use of Confidential Information; (d) is disclosed with the prior written approval of Asterias or any of its Representatives; or (e) becomes known to Geron or its Representatives from a third party (other than a former officer, director or employee of Geron or its Affiliates who knew such information during the term of their office, directorship or employment with Geron or its Affiliates) on a nonconfidential basis without breach of this Agreement by Geron.

5.3 Notwithstanding anything contained herein to the contrary, Geron shall be permitted to disclose Confidential Information to the extent required by law or pursuant to the order or legal process of a court, administrative agency, or other governmental body (including by deposition, interrogatory, request for documents, subpoena, civil investigation, demand or similar process), or any rule, regulation, policy statement or other formal demand of any national securities exchange, market or automated quotation system; provided, that, to the extent permitted by applicable law or any order or requirement of a court, administrative agency or other governmental body, Geron will, as promptly as practicable, provide Asterias with prior written notice of such requirement so that Asterias may seek a protective or other order at its sole expense, or waive compliance with the terms of this Agreement with respect to such disclosure. If such protective order is not timely obtained, or if Asterias waives compliance with the provisions hereof or fails to promptly respond to Geron's written notice, Asterias will, without liability under this Agreement, furnish only that portion of the Confidential Information that it is advised by its outside legal counsel is legally required and will exercise commercially reasonable efforts to obtain assurance that confidential treatment, if available, will be accorded such Confidential Information. Notwithstanding anything to the contrary contained herein, Geron may disclose Confidential Information to the extent required by federal or state securities laws or reporting obligations to the United States Securities and Exchange Commission.

5.4 Except as required by law, including but not limited to federal and state securities laws or reporting obligations to the United States Securities and Exchange Commission, or pursuant to the order or requirement of a court, administrative agency or other governmental body (including by deposition, interrogatory, request for documents, subpoena, civil investigation, demand or similar process), or any rule, regulation, policy statement or other formal demand of any national securities exchange, market or automated quotation system, neither Geron nor Asterias shall publicly disclose any terms and conditions of this Agreement unless expressly authorized to do so in writing by the other party, which authorization shall not be unreasonably withheld. This restriction shall not apply with respect to any terms and conditions of this Agreement that are or become publicly available (other than through a breach of this Agreement).

5.5 Each of Geron and Asterias acknowledge and agree that due to the unique nature of the Confidential Information and the terms and conditions of this Agreement, there may be no adequate remedy at law for any breach of its obligations under this Article 5, and therefore, that upon any breach thereof by the other party, Geron or Asterias shall be entitled to seek appropriate equitable relief in addition to whatever remedies it might have at law.

ARTICLE 6- NOTICES AND OTHER COMMUNICATIONS

Any notice or other communication required to be given to any party will be deemed to have been properly given and to be effective (a) on the date of delivery if delivered by hand, air courier delivery service, confirmed facsimile transmission, or confirmed electronic mail, or (b) four days after being deposited in the United States Mail, certified first class postage prepaid, in each case if sent to the respective addresses, FAX number or email address given below, or to another address as it shall designate by written notice given to the other party in the manner provided in this Article.

In the case of Asterias:	Asterias Biotherapeutics, Inc. 301 Harbor Bay Parkway, Suite 100 Alameda, California 94502 FAX: (510) 521-3389 Attention: Thomas Okarma, Chief Executive Officer
In the case of Geron:	Geron Corporation 149 Commonwealth Drive Menlo Park, CA 94024 FAX: (650) 473-7750 Attention: Vice President, Legal

ARTICLE 7 – GOVERNING LAW AND JURISDICTION

7.1 This Agreement and all claims or causes of action (whether in contract or tort or otherwise) based upon, arising out of or related to this Agreement or the transactions contemplated hereby shall be governed by and construed in accordance with the laws of the State of California without regard to conflict of laws principles that would result in the application of any law other than the laws of the State of California. Except as provided for in Section 7.2, each of Geron and Asterias: (a) consents to and submits to the exclusive jurisdiction and venue of the Superior Court of the State of California for the County of Santa Clara of the State of California or the United States District Court for the Northern District of California, in any Proceeding arising out of or relating to this Agreement or any of the transactions contemplated by this Agreement; (b) agrees that all claims in respect of any such Proceeding shall be heard and determined in any such court; (c) shall not attempt to deny or defeat such personal jurisdiction by motion or other request for leave from any such court; and (d) shall not bring any Proceeding arising out of or relating to this Agreement or any of the transactions contemplated by this Agreement in any other court. Each of Geron and Asterias waives any defense of inconvenient forum to the maintenance of any Proceeding so brought and waives any bond, surety or other security that might be required of any other Person with respect thereto. Each of Geron and Asterias hereby agrees that service of any process, summons, notice or document in accordance with the provisions of Article 6 shall be effective service of process for any Proceeding arising out of or relating to this Agreement or any of the transactions contemplated hereby. TO THE EXTENT PERMITTED BY APPLICABLE LAW, EACH OF THE PARTIES HERETO IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT OR OTHER LEGAL PROCEEDING ARISING OUT OF OR RELATED TO THIS AGREEMENT.

7.2 Notwithstanding anything to the contrary contained in this Agreement, any claim (other than a claim for injunctive or other equitable relief from a court of competent jurisdiction in accordance with Section 7.1) for any breach of Geron's or Asterias' obligations or covenants under this Agreement ("Claim") shall be brought and resolved exclusively in accordance with the provisions of Schedule 10.10(b) of the Asset Contribution Agreement and shall otherwise be governed by the applicable provisions of this Article 7 as if Geron or Asterias were bringing such Claim as a Geron Indemnitee or Asterias Indemnitee, respectively, thereunder; provided, however, that nothing in this Section 7.2 shall prevent any party from seeking injunctive and other equitable relief from a court of competent jurisdiction in compliance with Section 7.1 hereof.

7.3 In the event that any party to this Agreement becomes aware of any event or circumstance that would reasonably be expected to constitute or give rise to any Claim for Damages, the party having the right to bring such Claim ("Claimant") shall take all commercially reasonable efforts to mitigate and minimize all Damages that may result from the breach giving rise to the Claim (it being understood that nothing in this Agreement shall limit such Claimant's right to seek recovery from the other party with respect to any costs of such mitigation). Each Claimant shall use reasonable efforts to collect any amounts available under insurance coverage for any Damages for which a Claim may be brought under this Agreement. The amount of any Damages for which a Claim may be brought shall be net of any amounts recovered by the Claimant under insurance policies with respect to such Damages in excess of the sum of: (i) reasonable out-of-pocket costs and expenses relating to collection under such policies; and (ii) any deductible associated therewith to the extent paid or by which insurance proceeds were reduced. "Damages" shall mean any damage, loss, liability, cost, judgment, award, fee (including any legal fee, expert fee, accounting fee or advisory fee) or expense; provided, however, that in no event shall Damages include any special, indirect, incidental or consequential damages except in the case of a violation of Section 5.1.

7.4 Subject to any injunction or other equitable remedies that may be available to any party, a party shall not be liable or responsible in any manner whatsoever to the other party with respect to the matters contemplated by this Agreement other than for Claims brought as provided in this Article 7 and subject to the limitations contained therein; provided, however, that no Claim against a party for fraud by such party shall be subject to the limitations of this Article 7.

ARTICLE 8 - MISCELLANEOUS PROVISIONS

8.1 Nothing herein shall be deemed to constitute either party as the agent or representative of the other party.

8.2 The parties hereto acknowledge that this Agreement sets forth the entire Agreement and understanding of the parties hereto as to the subject matter hereof, and shall not be subject to any change or modification except by the execution of a written instrument subscribed to by the parties hereto.

8.3 The provisions of this Agreement are severable, and in the event that any provisions of this Agreement shall be determined to be invalid or unenforceable under any controlling body of the law, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining provisions hereof.

8.4 The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

8.5 This Agreement, and the rights and obligations of Asterias under this Agreement, may not be assigned by Asterias except: (a) with the prior written consent of Geron; (b) in connection with a merger or consolidation of Asterias; or (c) an assignment by Asterias in connection with a sale of all or substantially all of the Contributed Patents. Geron may freely assign this Agreement or any of its rights and obligations under this Agreement; provided, that Geron provides to Asterias a written agreement executed by the assignee agreeing to be bound by all of the terms and conditions of this Agreement in place of the assignor. Subject to the provisions of this Section 8.5, this Agreement shall inure to the benefit of Geron, Asterias and their respective successors and permitted assigns.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the parties have duly executed this Agreement as of the Effective Date set forth above.

ASTERIAS BIOTHERAPEUTICS, INC.

By: s/Thomas Okarma
Thomas Okarma, Chief Executive Officer

GERON CORPORATION

By: s/John Scarlett
John Scarlett, Chief Executive Officer

[SIGNATURE PAGE TO ROYALTY AGREEMENT]

SCHEDULE 1

CONTRIBUTED PATENTS

Notwithstanding anything contained in the Royalty Agreement to the contrary, patents and patent applications marked "(CONSENT REQUIRED)" in this Schedule shall be deemed included on this Schedule and shall be subject to the Royalty Agreement as Contributed Patents only if Geron shall have obtained the prior express written consent of the University of Edinburgh under that certain Research and License Agreement, dated as of May 3, 1999, by and among the Roslin Institute (as predecessor-in-interest to the University of Edinburgh), Geron and Roslin Bio-Med, Ltd. (as predecessor-in-interest to Geron), as amended on October 1, 2002, September 3, 2003 and July 1, 2005, to assign or otherwise transfer such patents and patent applications to Asterias.

Geron-Owned Stem Cell Status Report - Active Cases

	TITLE	**COUNTRY**	**APPLICATION NUMBER**	**FILING DATE**	**PATENT NUMBER**	**ISSUE DATE**	**STATUS**	**ADDL. ASSIGNEE / JOINT OWNER**
061/005	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	US	09/530,346	24-Apr-00	6,800,480	5-Oct-04	Issued	
061/006D	Feeder-Free Culture Method for Embryonic Stem Cells	US	10/330,873	24-Dec-02	7,413,902	19-Aug-08	Issued	
061/235AU	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	AU	12771/99	23-Oct-98	729377	17-May-01	Issued	
061/236CA	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	CA	2307807	23-Oct-98	2,307,807	2-Sep-08	Issued	

061/237EP	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	EP	98956192.3	23-Oct-98			Pending	
061/238JP	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	JP	2000-517062	23-Oct-98	3880795	17-Nov-06	Issued	
061/239JP D	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells in Feeder-Free Culture	JP	2000-185486	23-Oct-98	3880778	17-Nov-06	Issued	
061/241HK	Methods and Materials for the Growth of Primate-Derived Primordial Stem Cells	HK	01100775	23-Oct-98			Pending	
081/002C	Dendritic Cell Vaccine Containing Telomerase Reverse Transcriptase for the Treatment of Cancer	US	09/675,321	29-Sep-00	6,440,735	27-Aug-02	Issued	
081/003P	Method for Identifying and Killing Cancer Cells	US	10/208,243	30-Jul-02	7,402,307	22-Jul-08	Issued	
081/004D	Cellular Telomerase Vaccine and Its Use for Treating Cancer	US	11/413,838	27-Apr-06	7,824,849	2-Nov-10	Issued	
081/202CA	Dendritic Cell Vaccine Containing Telomerase Reverse Transcriptase for the Treatment of Cancer	CA	2347067	30-Mar-99			Pending	

081/206CH	Methods and Compositions for Eliciting an Immune Response to a Telomerase Antigen	CH	999161938	30-Mar-99	1068296	10-Aug-11	Issued	
081/207DE	Methods and Compositions for Eliciting an Immune Response to a Telomerase Antigen	DE	999161938	30-Mar-99	1068296	10-Aug-11	Issued	
081/208FR	Methods and Compositions for Eliciting an Immune Response to a Telomerase Antigen	FR	999161938	30-Mar-99	1068296	10-Aug-11	Issued	
081/209GB	Methods and Compositions for Eliciting an Immune Response to a Telomerase Antigen	GB	999161938	30-Mar-99	1068296	10-Aug-11	Issued	
081/210IT	Methods and Compositions for Eliciting an Immune Response to a Telomerase Antigen	IT	999161938	30-Mar-99	1068296	10-Aug-11	Issued	
090/004D	Use of TGF Beta Superfamily Antagonists to Make Dopaminergic Neurons from Embryonic Stem Cells	US	11/010,230	10-Dec-04	7,560,281	14-Jul-09	Issued	
090/005C	Neural Cell Populations from Primate Pluripotent Stem Cells	US	12/477,726	3-Jun-09	8,252,586	28-Aug-12	Issued	

090/006C	Use of TGF Beta Superfamily Antagonists and Neurotrophins to Make Neurons from Embryonic Stem Cells	US	12/500,998	10-Jul-09	8,153,428	10-Apr-12	Issued	
090/007C	Neural Cell Populations from Primate Pluripotent Stem Cells	US	13/561,296	30-Jul-12			Pending	
091/004	cDNA Libraries Reflecting Gene Expression During Growth and Differentiation of Human Pluripotent Stem Cells	US	09/688,031	10-Oct-00	6,667,176	23-Dec-03	Issued	
091/009C	Use of Human Embryonic Stem Cells for Drug Screening and Toxicity Testing	US	10/039,956	23-Oct-01	7,041,438	9-May-06	Issued	
091/011P	Embryonic Stem Cells Having Genetic Modifications	US	10/948,956	24-Sep-04	7,413,904	19-Aug-08	Issued	
091/030P	Culture System for Rapid Expansion of Human Embryonic Stem Cells	US	10/235,094	4-Sep-02	7,410,798	12-Aug-08	Issued	
091/031D	Medium for Growing Human Embryonic Stem Cells	US	10/873,922	21-Jun-04	7,297,539	20-Nov-07	Issued	
091/033P	Medium for Growing Human Embryonic Stem Cells	US	10/949,181	24-Sep-04	7,455,983	25-Nov-08	Issued	
091/037C	Culture System for Rapid Expansion of Human Embryonic Stem Cells	US	12/170,219	9-Jul-08			Pending	

091/038C	Culture System for Rapid Expansion of Human Embryonic Stem Cells	US	12/710,078	22-Feb-10			Pending	
091/039C	Culture System for Rapid Expansion of Human Embryonic Stem Cells	US	12/763,884	20-Apr-10	8,097,458	17-Jan-12	Issued	
091/040C	Culture System for Rapid Expansion of Human Embryonic Stem Cells	US	13/323,567	12-Dec-11			Pending	
091/051	Suspension Culture of Human Embryonic Stem Cells	US	11/917,993	18-Dec-07			Pending	
091/201AU	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	AU	11128/01	10-Jan-01	751321	5-Dec-02	Issued	
091/202IL	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	IL	141742	10-Jan-01	141742	10-Dec-06	Issued	
091/204JP D	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	JP	2001-138021	10-Jan-01	4919445	10-Feb-12	Issued	
091/205SG	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	SG	200101413-3	10-Jan-01	79595	31-Dec-08	Issued	
091/206IN	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	IN	00361/CHENP/2001	10-Jan-01	219103	25-Apr-08	Issued	

091/207CA	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	CA	2388811	10-Jan-01	2,388,811	6-Oct-09	Issued	
091/209EP	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	EP	01900997.6	10-Jan-01			Pending	
091/211HK	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	HK	03107166	10-Jan-01			Pending	
091/212IL D	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	IL	177324	10-Jan-01	177324	30-Mar-12	Issued	
091/217IN D2	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	IN	4588/CHENP/2006	10-Jan-01	238318	28-Jan-10	Issued	
091/218CN D	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	CN	200910129670.2	10-Jan-01			Pending	
091/219EP D	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	EP	10175090.9	10-Jan-01			Pending	
091/220HK	Techniques for Growth and Differentiation of Human Pluripotent Stem Cells	HK	11106881.6	10-Jan-01			Pending	
091/301AU	Culture System for Rapid Expansion of Human Embryonic Stem Cells	AU	2002323593	5-Sep-02	2002323593	11-Oct-07	Issued	

091/303UK	Culture System for Rapid Expansion of Human Embryonic Stem Cells	GB	0404910.2	5-Sep-02	2394723	20-Jul-05	Issued	
091/304EP	Culture System for Rapid Expansion of Human Embryonic Stem Cells	EP	02757586.9	5-Sep-02			Pending	
091/305IL	Culture System for Rapid Expansion of Human Embryonic Stem Cells	IL	160403	5-Sep-02	160403	17-Sep-10	Issued	
091/306JP	Culture System for Rapid Expansion of Human Embryonic Stem Cells	JP	2003-525623	5-Sep-02			Pending	
091/307SG	Culture System for Rapid Expansion of Human Embryonic Stem Cells	SG	200400924-7	5-Sep-02	102946	31-May-06	Issued	
091/314EP D	Culture System for Rapid Expansion of Human Embryonic Stem Cells	EP	10174954.7	5-Sep-02			Pending	
091/315IL D	Culture System for Rapid Expansion of Human Embryonic Stem Cells	IL	204178	5-Sep-02			Pending	
091/316JP D	Culture System for Rapid Expansion of Human Embryonic Stem Cells	JP	2009-271501	5-Sep-02			Pending	
091/317HK	Culture System for Rapid Expansion of Human Embryonic Stem Cells	HK	11106437.5	5-Sep-02			Pending	

091/402EP	Medium for Growing Human Embryonic Stem Cells	EP	05775294.1	13-Jul-05			Pending	
091/403AU	Medium for Growing Human Embryonic Stem Cells	AU	2005271723	13-Jul-05	2005271723	31-Mar-11	Issued	
091/404UK	Medium for Growing Human Embryonic Stem Cells	GB	0702793.1	13-Jul-05	2431165	1-Apr-09	Issued	
091/405IL	Medium for Growing Human Embryonic Stem Cells	IL	180447	13-Jul-05	180447	1-Feb-12	Issued	
091/406SG	Medium for Growing Human Embryonic Stem Cells	SG	200700160-5	13-Jul-05	128950	30-Jun-09	Issued	
091/407HK	Medium for Growing Human Embryonic Stem Cells	HK	07110996.6	13-Jul-05	1103106	17-Jul-09	Issued	
091/408EP D	Medium for Growing Human Embryonic Stem Cells	EP	10180759.2	13-Jul-05			Pending	
091/501AU	Suspension Culture of Human Embryonic Stem Cells	AU	2006262369	20-Jun-06	2006262369	18-Oct-12	Issued	
091/502CA	Suspension Culture of Human Embryonic Stem Cells	CA	2613369	20-Jun-06			Pending	
091/503EP	Suspension Culture of Human Embryonic Stem Cells	EP	06785185.7	20-Jun-06			Pending	
091/504GB	Suspension Culture of Human Embryonic Stem Cells	GB	0800365.9	20-Jun-06	2441488	29-Sep-10	Issued	

091/505IL	Suspension Culture of Human Embryonic Stem Cells	IL	188264	20-Jun-06	188264	30-Mar-12	Issued	
091/506IN	Suspension Culture of Human Embryonic Stem Cells	IN	81/CHENP/2008	20-Jun-06			Pending	
091/507JP	Suspension Culture of Human Embryonic Stem Cells	JP	2008-518312	20-Jun-06			Pending	
091/508KR	Suspension Culture of Human Embryonic Stem Cells	KR	10-2008-7001755	20-Jun-06			Pending	
091/509SG	Suspension Culture of Human Embryonic Stem Cells	SG	200718866-7	20-Jun-06	138384	30-Nov-10	Issued	
091/510CN	Suspension Culture of Human Embryonic Stem Cells	CN	200680027460.7	20-Jun-06			Pending	
091/511HK	Suspension Culture of Human Embryonic Stem Cells	HK	08102719.8	20-Jun-06	1122836	26-Nov-10	Issued	
091/512AU D	Suspension Culture of Human Embryonic Stem Cells	AU	2012203350	20-Jun-06			Pending	
092/002	Conditioned Media for Propagating Human Pluripotent Stem Cells	US	09/900,752	6-Jul-01	6,642,048	4-Nov-03	Issued	
093/002	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	US	09/718,308	20-Nov-00	6,458,589	1-Oct-02	Issued	

093/003D	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	US	09/872,182	31-May-01	6,506,574	14-Jan-03	Issued	
093/004P	Process for Making Hepatocytes from Pluripotent Stem Cells	US	10/001,267	31-Oct-01	7,256,042	14-Aug-07	Issued	
093/005P	Hepatocytes for Therapy and Drug Screening Made From Embryonic Stem Cells	US	10/087,142	1-Mar-02	7,282,366	16-Oct-07	Issued	
093/030P	Protocols for Making Hepatocytes from Embryonic Stem Cells	US	10/810,311	26-Mar-04	7,473,555	6-Jan-09	Issued	
093/032C	Protocols for Making Hepatocytes from Embryonic Stem Cells	US	12/277,136	24-Nov-08			Pending	
093/041	Differentiation of Primate Pluripotent Cells to Hepatocyte-Lineage Cells	US	12/303,104	1-Dec-08	8,148,151	3-Apr-12	Issued	Univ. Edinburgh (CONSENT REQUIRED)
093/201AU	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	AU	2001259170	26-Apr-01	2001259170	11-May-06	Issued	
093/202CA	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	CA	2407505	26-Apr-01	2,407,505	23-Oct-07	Issued	
093/204EP	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	EP	01932661	26-Apr-01			Pending	
093/205KR	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	KR	2002-7014467	26-Apr-01	10-0729971	13-Jun-07	Issued	

093/206IN	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	IN	IN/PCT/2002/01764/CHE	26-Apr-01	208929	16-Aug-07	Issued	
093/207IL	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	IL	152481	26-Apr-01	152481	1-Mar-11	Issued	
093/208JP	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	JP	2001-578620	26-Apr-01			Pending	
093/209SG	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	SG	200206520-9	26-Apr-01	92,561	31-Mar-05	Issued	
093/210GB	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	GB	0227573.3	26-Apr-01	2,380,490	29-Dec-04	Issued	
093/211AU D	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	AU	2004205306	26-Apr-01	2004205306	14-Apr-05	Issued	
093/211HK	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	HK	03108081	26-Apr-01			Pending	
093/213CN D	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	CN	201010528128.7	26-Apr-01			Pending	
093/214EP D	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	EP	010175113.9	26-Apr-01			Pending	
093/215KR D	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	KR	2007-7003241	26-Apr-01	10-0868473	6-Nov-08	Issued	
093/216IN D	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	IN	437/CHENP/2007	26-Apr-01	238673	17-Feb-10	Issued	

093/218JP D	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	JP	2012-139735	26-Apr-01			Pending	
093/221AU D	Hepatocyte Lineage Cells Derived from Pluripotent Stem Cells	AU	2004205307	26-Apr-01	2004205307	7-Apr-05	Issued	
093/401EP	Differentiation of Primate Pluripotent Cells to Hepatocyte-Lineage Cells	EP	07795625.8	1-Jun-07			Pending	Univ. Edinburgh (CONSENT REQUIRED)
093/402UK	Differentiation of Primate Pluripotent Cells to Hepatocyte-Lineage Cells	GB	0823060.9	1-Jun-07	2453074	22-Jun-11	Issued	Univ. Edinburgh (CONSENT REQUIRED)
094/004D	Making Neural Cells for Human Therapy or Drug Screening from Human Embryonic Stem Cells	US	09/872,183	31-May-01	6,833,269	21-Dec-04	Issued	
094/005C	Neural Progenitor Cell Populations	US	11/281,040	16-Nov-05	8,148,148	3-Apr-12	Issued	
094/006C	Neural Progenitor Cell Populations	US	12/332,783	11-Dec-08	8,252,585	28-Aug-12	Issued	
094/007C	Neural Progenitor Cell Populations	US	13/558,078	25-Jul-12			Pending	
094/011P	Screening Small Molecule Drugs Using Neural Cells Differentiated from Human Embryonic Stem Cells	US	10/157,288	28-May-02	7,250,294	31-Jul-07	Issued	
094/013D	Use of Cyclic AMP and Ascorbic Acid to Produce Dopaminergic Neurons from Embryonic Stem Cells	US	11/009,504	10-Dec-04	7,763,463	27-Jul-10	Issued	

094/201IN	A Medical Composition Comprising Neural Cells	IN	397/MAS/2001	16-May-01	231156	3-Mar-09	Issued	
094/202AU	Neural Progenitor Cell Populations	AU	2001263199	16-May-01	2001263199	16-Sep-04	Issued	
094/203CA	Neural Progenitor Cell Populations	CA	2409698	16-May-01	2,409,698	26-Oct-10	Issued	
094/204CN	Neural Progenitor Cell Populations	CN	01809662.X	16-May-01	100580079	13-Jan-10	Issued	
094/205EP	Neural Progenitor Cell Populations	EP	01937463.6	16-May-01			Pending	
094/206IL	Neural Progenitor Cell Populations	IL	152741	16-May-01	152741	1-May-11	Issued	
094/207JP	Neural Progenitor Cell Populations	JP	2001-585312	16-May-01			Pending	
094/208KR	Neural Progenitor Cell Populations	KR	2002-7015192	16-May-01	903755	12-Jun-09	Issued	
094/209SG	Neural Progenitor Cell Populations	SG	200206677-7	16-May-01	92,904	30-Dec-04	Issued	
094/210GB	Neural Progenitor Cell Populations	GB	0229369.4	16-May-01	2,379,447	29-Dec-04	Issued	
094/211HK	Neural Progenitor Cell Populations	HK	03108154.2	16-May-01	1055765	30-Sep-10	Issued	
094/212JP D	Neural Progenitor Cell Populations	JP	2012-260896	16-May-01			Pending	
094/221AU D	Neural Progenitor Cell Populations	AU	2004214542	16-May-01	2004214542	16-Aug-07	Issued	
094/301AU	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	AU	2002322270	20-Jun-02	2002322270	1-Oct-09	Issued	

094/303CN	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	CN	02815144.5	20-Jun-02	100384986	30-Apr-08	Issued	
094/304EP	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	EP	02756248.7	20-Jun-02			Pending	
094/305GB	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	GB	0400167.3	20-Jun-02	2,393,733	14-Sep-05	Issued	
094/306IN	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	IN	2018/CHENP/2003	20-Jun-02	224902	24-Oct-08	Issued	
094/307IL	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	IL	159324	20-Jun-02	159324	31-Jul-12	Issued	
094/308JP	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	JP	2003-507255	20-Jun-02	4526265	11-Jun-10	Issued	
094/309KR	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	KR	2003-7016718	20-Jun-02			Pending	

094/310SG	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	SG	200307601-5	20-Jun-02	101,708	30-Dec-05	Issued	
094/311HK	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	HK	05107808.2	20-Jun-02	1075673	6-Feb-09	Issued	
094/312CN D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	CN	200610101371.4	20-Jun-02	101029302	30-Mar-11	Issued	
094/316IN D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	IN	5529/CHENP/2007	20-Jun-02	247544	18-Apr-11	Issued	
094/318JP D	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	JP	2010-009966	20-Jun-02		10-Dec-12	Issued	
094/319JP D2	Dopaminergic Neurons and Proliferation-Competent Precursor Cells for Treating Parkinson's Disease	JP	2012-246396	20-Jun-02			Pending	

096/003	Differentiated Cells Suitable For Human Therapy	US	09/783,203	13-Feb-01	6,576,464	10-Jun-03	Issued	
096/004	Selective Antibody Targeting of Undifferentiated Stem Cells	US	09/995,419	26-Nov-01	6,921,665	26-Jul-05	Issued	Univ. Edinburgh (CONSENT REQUIRED)
096/007C	Differentiated Cells Suitable For Human Therapy	US	11/359,341	21-Feb-06			Pending	
096/201AU	Differentiated Stem Cells Suitable for Human Therapy	AU	2002237681	26-Nov-01	2002237681	22-Mar-07	Issued	
096/202CA	Differentiated Stem Cells Suitable for Human Therapy	CA	2434760	26-Nov-01			Pending	
096/204EP	Differentiated Stem Cells Suitable for Human Therapy	EP	01986488.3	26-Nov-01			Pending	
096/205GB	Differentiated Stem Cells Suitable for Human Therapy	GB	0313389.9	26-Nov-01	2,386,120	9-Mar-05	Issued	
096/207IL	Differentiated Cells Suitable for Human Therapy	IL	155695	26-Nov-01	155695	1-Feb-08	Issued	
096/208IN	Differentiated Stem Cells Suitable for Human Therapy	IN	00782/CHENP/2003	26-Nov-01	229151	13-Feb-09	Issued	
096/211SG	Differentiated Stem Cells Suitable for Human Therapy	SG	200302425-4	26-Nov-01	96,763	31-Jul-06	Issued	
096/213CN D	Differentiated Stem Cells Suitable for Human Therapy	CN	200910224980.2	26-Nov-01			Pending	
096/218IN D	A Modified Population of Cells Differentiated from Primate Pluripotent Stem (pPS) Cells	IN	1873/CHENP/2003	26-Nov-01			Pending	

096/300GB	Selective Antibody Targeting of Undifferentiated Stem Cells	GB	0128409	27-Nov-01	2,374,076	25-Feb-04	Issued	Univ. Edinburgh (CONSENT REQUIRED)
097/201AU	Tolerizing Allografts of Pluripotent Stem Cells	AU	2002239294	21-Nov-01	2002239294	28-Aug-06	Issued	
097/205GB	Tolerizing Allografts of Pluripotent Stem Cells	GB	0313387.3	21-Nov-01	2,386,125	23-Feb-05	Issued	
097/211SG	Tolerizing Allografts of Pluripotent Stem Cells	SG	200302419-7	21-Nov-01	96,450	31-Jul-07	Issued	
098/201AU	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	AU	2002322379	3-Jul-02	2002322379	15-Feb-07	Issued	
098/202CA	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	CA	2453068	3-Jul-02			Pending	
098/204EP	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	EP	02756367.5	3-Jul-02			Pending	
098/205GB	Osteoblasts Derived from Human Embryonic Stem Cells	GB	0400481.8	3-Jul-02	2,392,674	10-Aug-05	Issued	
098/206IL	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	IL	159578	3-Jul-02	159578	1-Mar-11	Issued	
098/209SG	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	SG	200400102	3-Jul-02	102,198	29-Sep-06	Issued	

098/213CN D	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	CN	200910152133.X	10-Jul-09			Pending	
098/214HK D	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	HK	10107815.6	3-Jul-02			Pending	
098/217IN D	Mesenchymal Cells and Osteoblasts from Human Embryonic Stem Cells	IN	2634/CHENP/2005	3-Jul-02	236883	25-Nov-09	Issued	
099/003	Cardiomyocyte Precursors from Human Embryonic Stem Cells	US	10/193,884	12-Jul-02	7,425,448	16-Sep-08	Issued	
099/004P	Process for Making Transplantable Cardiomyocytes from Human Embryonic Stem Cells	US	10/805,099	19-Mar-04	7,732,199	8-Jun-10	Issued	
099/006D	Differentiation Protocol for Making Human Cardiomyocytes	US	11/040,691	21-Jan-05	7,763,464	27-Jul-10	Issued	
099/031	Direct Differentiation Method for Making Cardiomyocytes from Human Embryonic Stem Cells	US	11/086,709	21-Mar-05	7,452,718	18-Nov-08	Issued	
099/032C	Direct Differentiation Method for Making Cardiomyocytes from Human Embryonic Stem Cells	US	12/210,779	15-Sep-08	7,897,389	1-Mar-11	Issued	
099/033C	Differentiation Protocol for Making Human Cardiomyocytes	US	12/234,916	22-Sep-08	7,851,167	14-Dec-10	Issued	

099/041	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	US	11/471,916	20-Jun-06			Pending	
099/201AU	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	AU	2002313670	12-Jul-02	2002313670	30-Jul-09	Issued	
099/202CA	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	CA	2453438	12-Jul-02			Pending	
099/203CN	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	CN	02813927.5	12-Jul-02			Pending	
099/204EP	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	EP	02753376.9	12-Jul-02			Pending	
099/205GB	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	GB	0400570.8	12-Jul-02	2,393,734	27-Jul-05	Issued	
099/206IL	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	IL	159580	12-Jul-02	159,580	8-Nov-08	Issued	

099/207IN	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	IN	00033/CHENP/2004	12-Jul-02	250850	1-Feb-12	Issued	
099/208JP	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	JP	2003-512669	12-Jul-02			Pending	
099/209SG	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	SG	200400096-4	12-Jul-02	101,797	27-Jan-06	Issued	
099/211HK	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	HK	05100018.3	12-Jul-02			Pending	
099/212KR D	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	KR	2010-7000243	12-Jul-02	10-0073411	7-Oct-11	Issued	
099/214JP D	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	JP	2010-219095	12-Jul-02			Pending	
099/215IN D	Cells of the Cardiomyocyte Lineage Produced from Human Pluripotent Stem Cells	IN	7542/CHENP/2011	12-Jul-02			Pending	
099/301AU	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	AU	2005224670	18-Mar-05	2005224670	11-Nov-10	Issued	

099/302CA	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	CA	2559854	18-Mar-05			Pending	
099/303CN	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	CN	200580008779	18-Mar-05			Pending	
099/304EP	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	EP	05732662.1	18-Mar-05			Pending	
099/305GB	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	GB	0619719.8	18-Mar-05	2,427,873	10-Sep-08	Issued	
099/306IL	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	IL	178006	18-Mar-05	178006	1-Dec-11	Issued	
099/307IN	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	IN	5842/DELNP/2006	18-Mar-05			Pending	

099/308JP	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	JP	2007-504142	18-Mar-05	4971131	13-Apr-12	Issued	
099/309SG	Method for Making High Purity Cardiomyocyte Preparations Suitable for Regenerative Medicine	SG	200606477-8	18-Mar-05	125692	31-Mar-09	Issued	
099/401AU	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	AU	2006262329	20-Jun-06	2006262329	7-Apr-11	Issued	
099/402CA	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	CA	2611809	20-Jun-06			Pending	
099/403CN	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	CN	200680022866.6	20-Jun-06			Pending	
099/404EP	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	EP	06785229.3	20-Jun-06			Pending	
099/405GB	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	GB	0800264.4	20-Jun-06	2441718	6-Oct-10	Issued	
099/406IL	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	IL	187611	20-Jun-06			Allowed	

099/407IN	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	IN	9175/DELNP/2007	20-Jun-06			Pending	
099/408JP	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	JP	2008-518339	20-Jun-06			Pending	
099/409KR	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	KR	10-2008-7001452	20-Jun-06			Pending	
099/410SG	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	SG	200718867-5	20-Jun-06	138693	30-Nov-10	Issued	
099/411HK	Differentiation of Primate Pluripotent Stem Cells to Cardiomyocyte-Lineage Cells	HK	08103905	20-Jun-06	1109913	3-Dec-10	Issued	
131/011P	Using Undifferentiated Embryonic Stem Cells to Control the Immune System	US	10/949,702	24-Sep-04	7,799,324	21-Sep-10	Issued	Univ. Western Ontario
131/201AU	Hematopoietic Cells from Human Embryonic Stem Cells	AU	2002366603	6-Dec-02	2002366603	15-Jan-09	Issued	Univ. Western Ontario
131/204EP	Hematopoietic Cells from Human Embryonic Stem Cells	EP	02804740.5	6-Dec-02			Pending	Univ. Western Ontario
131/205GB	Hematopoietic Cells from Human Embryonic Stem Cells	GB	0414957.1	6-Dec-02	2399572	7-Jun-06	Issued	Univ. Western Ontario

131/206IL	Hematopoietic Cells from Human Embryonic Stem Cells	IL	162130	6-Dec-02	162130	1-Sep-10	Issued	Univ. Western Ontario
131/208JP	Hematopoietic Cells from Human Embryonic Stem Cells	JP	2003-551273	6-Dec-02			Pending	Univ. Western Ontario
131/210SG	Hematopoietic Cells from Human Embryonic Stem Cells	SG	200403341-1	6-Dec-02	104768	31-Jul-06	Issued	Univ. Western Ontario
131/212AU D	Hematopoietic Cells from Human Embryonic Stem Cells	AU	2008243182	6-Dec-02			Pending	Univ. Western Ontario
131/213CN D	Hematopoietic Cells from Human Embryonic Stem Cells	CN	200910174800.4	6-Dec-02			Pending	Univ. Western Ontario
131/214EP D	Hematopoietic Cells from Human Embryonic Stem Cells	EP	10175120.4	6-Dec-02			Pending	Univ. Western Ontario
131/215GB D	Use of Undifferentiated Embryonic Stem Cells To Induce Immune Tolerance and Improve Allograft Acceptance	GB	0503865.8	6-Dec-02	2412379	29-Mar-06	Issued	Univ. Western Ontario
131/216IL D	Hematopoietic Cells from Human Embryonic Stem Cells	IL	200768	6-Dec-02	200768	1-Feb-12	Issued	Univ. Western Ontario
131/217KR D	Hematopoietic Cells from Human Embryonic Stem Cells	KR	2010-7024253	6-Dec-02			Pending	Univ. Western Ontario
131/218JP D	Hematopoietic Cells from Human Embryonic Stem Cells	JP	2009-265829	6-Dec-02			Pending	Univ. Western Ontario

131/219HK	Hematopoietic Cells from Human Embryonic Stem Cells	HK	11109490.3	6-Dec-02			Pending	Univ. Western Ontario
131/220AUD2	Hematopoietic Cells from Human Embryonic Stem Cells	AU		6-Dec-02			Pending	Univ. Western Ontario
132/002	Islet Cells from Human Embryonic Stem Cells	US	10/313,739	6-Dec-02	7,033,831	25-Apr-06	Issued	
132/003D	Endoderm Cells from Human Embryonic Stem Cells	US	11/262,633	31-Oct-05	7,326,572	5-Feb-08	Issued	
132/004C	Islet Cells from Human Embryonic Stem Cells	US	11/960,477	19-Dec-07			Pending	
132/005C	Islet Cells from Human Embryonic Stem Cells	US	12/262,536	31-Oct-08			Pending	
132/006C	Islet Cells from Human Embryonic Stem Cells	US	12/543,875	19-Aug-09			Pending	
132/007C	Drug Screening Using Islet Cells and Islet Cell Progenitors from Human Embryonic Stem Cells	US	12/762,676	19-Apr-10			Pending	
132/008C	Drug Screening Using Islet Cells and Islet Cell Progenitors from Human Embryonic Stem Cells	US	12/947,605	16-Nov-10			Pending	
132/031	Differentiation and Enrichment of Islet-Like Cells from Human Pluripotent Stem Cells	US	12/303,895	8-Dec-08			Allowed	

132/201AU	Islet Cells from Human Embryonic Stem Cells	AU	2002364143	6-Dec-02	2002364143	5-Jun-08	Issued	
132/202CA	Islet Cells from Human Embryonic Stem Cells	CA	2470539	6-Dec-02	2,470,539	4-Oct-11	Issued	
132/203CN	Islet Cells from Human Embryonic Stem Cells	CN	02824367.6	6-Dec-02	1602351	30-Mar-11	Issued	
132/204EP	Islet Cells from Human Embryonic Stem Cells	EP	02799217.1	6-Dec-02			Pending	
132/205GB	Islet Cells from Human Embryonic Stem Cells	GB	0414958.9	6-Dec-02	2,399,823	15-Feb-06	Issued	
132/206IL	Islet Cells from Human Embryonic Stem Cells	IL	162131	6-Dec-02	162131	31-Mar-11	Issued	
132/207IN	Islet Cells from Human Embryonic Stem Cells	IN	1795/DELNP/2004	6-Dec-02			Pending	
132/208JP	Islet Cells from Human Embryonic Stem Cells	JP	2003-551271	6-Dec-02	4666567	21-Jan-11	Issued	
132/209KR	Islet Cells from Human Embryonic Stem Cells	KR	2004-7008713	6-Dec-02	1089591	29-Nov-11	Issued	
132/210SG	Islet Cells from Human Embryonic Stem Cells	SG	200403559-8	6-Dec-02	104,854	31-Aug-06	Issued	
132/211GB D	Islet Cells from Human Embryonic Stem Cells	GB	0517624.3	6-Dec-02	2415432	6-Sep-06	Issued	
132/212HK	Islet Cells from Human Embryonic Stem Cells	HK	05106662.9	6-Dec-02	1074218	2-Dec-11	Issued	
132/213CN D	Islet Cells from Human Embryonic Stem Cells	CN	200710307353.6	6-Dec-02			Pending	

132/214HK	Islet Cells from Human Embryonic Stem Cells	HK	09100086.6	6-Dec-02			Pending	
132/215AU D	Islet Cells from Human Embryonic Stem Cells	AU	2007254644	6-Dec-02	2007254644	22-Apr-10	Issued	
132/216IL D	Islet Cells from Human Embryonic Stem Cells	IL	188472	6-Dec-02	188472	31-Mar-11	Issued	
132/217IN D	Islet Cells from Human Embryonic Stem Cells	IN	6576/DELNP/2009	6-Dec-02			Pending	
132/218JP D	Islet Cells from Human Embryonic Stem Cells	JP	2008-040781	6-Dec-02	4917559	3-Feb-12	Issued	
132/219KR D	Islet Cells from Human Embryonic Stem Cells	KR	2008-7002476	6-Dec-02	10-0008868	11-Jan-11	Issued	
132/220AU D2	Islet Cells from Human Embryonic Stem Cells	AU	2010200610	6-Dec-02			Pending	
132/221CA D	Islet Cells from Human Embryonic Stem Cells	CA	2692325	6-Dec-02			Pending	
132/222EP D	Islet Cells from Human Embryonic Stem Cells	EP	10174969.5	6-Dec-02			Pending	
132/223HK	Islet Cells from Human Embryonic Stem Cells	HK	11106412.4	6-Dec-02			Pending	
132/224JP D2	Islet Cells from Human Embryonic Stem Cells	JP	2011-258931	6-Dec-02			Pending	
132/225KR D2	Islet Cells from Human Embryonic Stem Cells	KR					Unfiled	
133/003C	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	US	11/345,878	1-Feb-06	7,906,330	15-Mar-11	Issued	

133/004C	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	US	13/021,497	4-Feb-11			Pending	
133/201AU	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	AU	2002366602	6-Dec-02	2002366602	16-Oct-08	Issued	
133/204EP	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	EP	02804739.7	6-Dec-02			Pending	
133/206IL	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	IL	162132	6-Dec-02	162132	29-Jun-10	Issued	
133/207IN	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	IN	1794/DELNP/2004	6-Dec-02			Pending	
133/209KR	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	KR	2004-7008714	6-Dec-02	10-0973453	27-Jul-10	Issued	
133/210SG	Chondrocyte Precursors Derived from Human Embryonic Stem Cells	SG	200403261-1	6-Dec-02	105,123	31-Aug-06	Issued	
135/002	A Marker System for Preparing and Characterizing High-Quality Human Embryonic Stem Cells	US	10/389,431	13-Mar-03	7,153,650	26-Dec-06	Issued	

135/201EP	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	EP	04757690.5	13-Mar-04			Pending	
135/202SG	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	SG	200505876-3	13-Mar-04	115,079	31-Oct-07	Issued	
135/203GB	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	GB	0520847.5	13-Mar-04	2415781	18-Jul-07	Issued	
135/212SG D	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	SG	200708419-7	13-Mar-04	151119	29-May-09	Issued	
135/213GB D	Genes That Are Up- or Down-Regulated During Differentiation of Human Embryonic Stem Cells	GB	0708707.5	13-Mar-04	2434867	7-Nov-07	Issued	
138/202GB	Dendritic Cell Vaccines Made from Embryonic Stem Cells for Treating Cancer	GB	0703122.2	10-Aug-05	2431582	23-Dec-09	Issued	
138/204HK	Dendritic Cell Vaccines for Treating Cancer Made from Embryonic Stem Cells	HK	07110697.8	10-Aug-05	1105429	23-Apr-10	Issued	
151/003	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	US	12/412,183	26-Mar-09	8,093,049	10-Jan-12	Issued	

151/004C	Systems for Differentiating Pluripotent Stem Cells into Hematopoietic Lineage Cells	US	13/312,349	6-Dec-11			Pending	
151/201AU	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	AU	2009228215	26-Mar-09			Pending	
151/202CA	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	CA	2718438	26-Mar-09			Pending	
151/203CN	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	CN	200980116566.8	26-Mar-09			Pending	
151/204EP	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	EP	09724052.7	26-Mar-09			Pending	
151/206IL	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	IL	208116	26-Mar-09			Pending	
151/207IN	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	IN	6087/CHENP/2010	26-Mar-09			Pending	
151/208JP	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	JP	2011-502069	26-Mar-09			Pending	

151/209KR	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	KR	2010-7021271	26-Mar-09			Pending	
151/210SG	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	SG	201006607-4	26-Mar-09			Pending	
151/211HK	Differentiation of Primate Pluripotent Stem Cells to Hematopoietic Lineage Cells	HK	11105528.7	26-Mar-09			Pending	
161/002	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	US	12/362,190	29-Jan-09	8,241,907	14-Aug-12	Issued	
161/003C	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	US	13/546,381	11-Jul-12			Pending	
161/201AU	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	AU	2009209157	29-Jan-09			Pending	
161/202CA	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	CA	2712891	29-Jan-09			Pending	
161/203CN	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	CN	200980103922.2	29-Jan-09			Pending	
161/204EP	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	EP	09705923.2	29-Jan-09			Pending	
161/205IL	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	IL	207083	29-Jan-09			Pending	

161/206IN	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	IN	5135/CHENP/2010	29-Jan-09			Pending	
161/207JP	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	JP	2010-545155	29-Jan-09			Pending	
161/208KR	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	KR	2010-7019066	29-Jan-09			Pending	
161/209SG	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	SG	201005466-6	29-Jan-09			Pending	
161/210HK	Synthetic Surfaces for Culturing Stem Cell Derived Cardiomyocytes	HK	11106743.4	29-Jan-09			Pending	
162/002	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	US	12/362,250	29-Jan-09			Pending	
162/201AU	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	AU	2009209167	29-Jan-09			Pending	
162/202CA	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	CA	2714010	29-Jan-09			Pending	
162/203CN	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	CN	200980103921.8	29-Jan-09			Pending	
162/204EP	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	EP	09705909.1	29-Jan-09			Pending	

162/205IL	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	IL	207085	29-Jan-09			Pending	
162/206IN	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	IN	5136/CHENP/2010	29-Jan-09			Pending	
162/207JP	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	JP	2010-545160	29-Jan-09			Pending	
162/208KR	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	KR	2010-7019153	29-Jan-09			Pending	
162/209SG	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	SG	201005462-5	29-Jan-09			Pending	
162/210HK	Synthetic Surfaces for Culturing Stem Cell Derived Oligodendrocyte Progenitor Cells	HK	11102599.8	29-Jan-09			Pending	
164/003C	Synthetic Surfaces for Differentiating Stem Cells into Cardiomyocytes (amended)	US	12/701,731	8-Feb-10			Pending	
165/002	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	US	12/823,739	25-Jun-10	8,323,966	4-Dec-12	Issued	

165/003C	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	US	13/679,663	16-Nov-12			Pending	
165/201AU	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	AU	2010266016	25-Jun-10			Pending	
165/202CA	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	CA	2766164	25-Jun-10			Pending	
165/203CN	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	CN	201080032011.8	25-Jun-10			Pending	
165/204IL	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	IL	217061	25-Jun-10			Pending	
165/205IN	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	IN	47/CHENP/2012	25-Jun-10			Pending	
165/206JP	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	JP	2012-517776	25-Jun-10			Pending	
165/207KR	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	KR	2012-7001572	25-Jun-10			Pending	

165/208SG	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	SG	201109522-1	25-Jun-10			Pending	
165/209GB	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	GB	1201047.6	25-Jun-10			Pending	
165/210EP	Differentiated Pluripotent Stem Cell Progeny Depleted of Extraneous Phenotypes	EP	10792733.7	25-Jun-10			Pending	
166/200PCT	Enriched Populations of Cardiomyocyte Lineage Cells from Pluripotent Stem Cells	WO	PCT/US2012/30799	28-Mar-12			Pending	

Geron-Licensed Stem Cell Status Report - Active Cases

FILE NO.	TITLE	COUNTRY	APPLICATION NUMBER	FILING DATE	PATENT NUMBER	ISSUE DATE	STATUS	ASSIGNEE
131/004C	Reconstructing Hematopoietic Cell Function Using Human Embryonic Stem Cells	US	10/862,625	7-Jun-04			Pending	Univ. Western Ontario
134/002	Method of Producing Oligodendrocytes from Human Embryonic Stem Cells for Drug Screening or Treatment of Spinal Cord Injury	US	10/406,817	4-Apr-03	7,285,415	23-Oct-07	Issued	Regents Univ. California

134/004C	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	US	11/637,632	11-Dec-06	7,579,188	25-Aug-09	Issued	Regents Univ. California
134/005D	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	US	12/357,244	21-Jan-09			Pending	Regents Univ. California
134/201AU	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	AU	2003250477	11-Jul-03	2003250477	3-Jul-08	Issued	Regents Univ. California
134/202CA	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	CA	2489203	11-Jul-03			Pending	Regents Univ. California
134/203CN	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	CN	03816184.2	11-Jul-03			Pending	Regents Univ. California
134/204EP	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	EP	03764084.4	11-Jul-03			Pending	Regents Univ. California

134/205GB	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	GB	0502774.3	11-Jul-03	2,407,822	22-Feb-06	Issued	Regents Univ. California
134/206IL	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	IL	165645	11-Jul-03	165645	1-Mar-11	Issued	Regents Univ. California
134/207IN	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	IN	4091/DELNP/2004	11-Jul-03			Pending	Regents Univ. California
134/208JP	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	JP	2005-505090	11-Jul-03	4823689	24-Nov-11	Issued	Regents Univ. California
134/209SG	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	SG	200407816-8	11-Jul-03	108,775	31-Jan-07	Issued	Regents Univ. California

134/210HK	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	HK	06113936.4	19-Dec-06			Pending	Regents Univ. California
134/211EP D	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	EP	10175854.8	11-Jul-03			Pending	Regents Univ. California
134/212JP D	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	JP	2011-047716	11-Jul-03			Pending	Regents Univ. California
134/213IN D	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	IN	4057/DELNP/2011	11-Jul-03			Pending	Regents Univ. California
134/214HK	Oligodendrocytes Derived from Human Embryonic Stem Cells for Remyelination and Treatment of Spinal Cord Injury	HK	11105339.6	11-Jul-03			Pending	Regents Univ. California
136/002	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	US	13/082,727	8-Apr-11			Pending	Univ. Edinburgh
136/201AU	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	AU		8-Apr-11			Pending	Univ. Edinburgh

136/202CA	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	CA		8-Apr-11			Unfiled	Univ. Edinburgh
136/203CN	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	CN		8-Apr-11			Pending	Univ. Edinburgh
136/204EP	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	EP	11718764.1	8-Apr-11			Pending	Univ. Edinburgh
136/205IN	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	IN	9325/CHENP/2012	8-Apr-11			Pending	Univ. Edinburgh
136/206IL	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	IL	222292	8-Apr-11			Pending	Univ. Edinburgh
136/207JP	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	JP		8-Apr-11			Pending	Univ. Edinburgh
136/208SG	Chondrogenic Progenitor Cells, Protocol for Derivation of Cells and Uses Thereof	SG	201207371-4	8-Apr-11			Pending	Univ. Edinburgh
150/001C	Method for Producing Dendritic Cells	US	09/849,499	4-May-01	7,247,480	24-Jul-07	Issued	Isis Innovation, Ltd.
150/003C	Method for Producing Dendritic Cells	US	11/789,669	24-Apr-07	7,473,556	6-Jan-09	Issued	Isis Innovation, Ltd.

150/004C	Method for Producing Dendritic Cells	US	12/326,831	2-Dec-08	7,781,213	24-Aug-10	Issued	Isis Innovation, Ltd.
150/005C	Method for Producing Dendritic Cells	US	12/841,064	21-Jul-10	8,232,100	31-Jul-12	Issued	Isis Innovation, Ltd.
150/006C	Method for Producing Dendritic Cells	US	13/538,995	29-Jun-12			Pending	Isis Innovation, Ltd.
150/201AU	Method for Producing Dendritic Cells	AU	200010584	5-Nov-99	768,267	4-Dec-03	Issued	Isis Innovation, Ltd.
150/202CA	Dendritic Cell Manipulation	CA	2350210	5-Nov-99			Pending	Isis Innovation, Ltd.
150/203EP	Method for Producing Dendritic Cells	EP	99954148.5	5-Nov-99			Pending	Isis Innovation, Ltd.
600/001	Lysosomal Targeting of Immunogens	US	08/006,845	22-Jan-93	5,633,234	27-May-97	Issued	Johns Hopkins Univ.
600/201CA	Lysosomal Targeting of Immunogens	CA	2154445	21-Jan-94	2,154,445	26-Jun-07	Issued	Johns Hopkins Univ.
600/203JP	Lysosomal Targeting of Immunogens	JP	19940517149	21-Jan-94	3581366	30-Jul-04	Issued	Johns Hopkins Univ.
600/204AT	Lysosomal Targeting of Immunogens	AT	94910648.8	21-Jan-94	180835	15-Jun-99	Issued	Johns Hopkins Univ.
600/205DE	Lysosomal Targeting of Immunogens	DE	94910648.8	21-Jan-94	69418856	20-Jan-00	Issued	Johns Hopkins Univ.
600/206DK	Lysosomal Targeting of Immunogens	DK	94910648.8	21-Jan-94	680513	27-Dec-99	Issued	Johns Hopkins Univ.
600/207ES	Lysosomal Targeting of Immunogens	ES	94910648.8	21-Jan-94	2132395	16-Aug-99	Issued	Johns Hopkins Univ.
600/208GR	Lysosomal Targeting of Immunogens	GR	94910648.8	21-Jan-94	3031026	31-Dec-99	Issued	Johns Hopkins Univ.
601/201EP	Chimeric Vaccines	EP	02763958.2	5-Apr-02			Pending	Johns Hopkins Univ.
601/202CA	Chimeric Vaccines	CA	2446462	4-May-02			Pending	Johns Hopkins Univ.
800/001	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	US	08/640,444	30-Apr-96	5,853,719	29-Dec-98	Issued	Duke Univ.

800/002C	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	US	09/073,819	6-May-98	6,306,388	23-Oct-01	Issued	Duke Univ.
800/003C	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	US	09/875,264	7-Jun-01	7,101,705	5-Sep-06	Issued	Duke Univ.
800/010P	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	US	09/171,916	16-Feb-99	7,105,157	12-Sep-06	Issued	Duke Univ.
800/011D	RNA-loaded Antigen Presenting Cells	US	09/667,319	22-Sep-00	6,670,186	30-Dec-03	Issued	Duke Univ.
800/012C	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	US	11/250,546	17-Oct-05	7,601,343	13-Oct-09	Issued	Duke Univ.
800/013D	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	US	12/585,028	1-Sep-09	8,263,066	11-Sep-12	Issued	Duke Univ.
800/014C	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	US	13/554,938	20-Jul-12			Pending	Duke Univ.
800/020P	Method of Identifying Tumor Antigens that Elicit a T-cell Response	US	09/302,329	30-Apr-99	6,387,701	14-May-02	Issued	Duke Univ.

800/201AU	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	AU	1997/28213	30-Apr-97	724267	11-Jan-01	Issued	Duke Univ.
800/202CA	Compositions and Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	CA	2253632	30-Apr-97	2,253,632	16-Dec-08	Issued	Duke Univ.
800/204JP	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	JP	539210/97	30-Apr-97	3836151	4-Aug-06	Issued	Duke Univ.
800/213EP D	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	EP	06015438.2	30-Apr-97			Pending	Duke Univ.
800/214JP D	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	JP	2006-129005	30-Apr-97	3955311	11-May-07	Issued	Duke Univ.
800/216HK	Methods for Treating Cancers and Pathogen Infections Using Antigen-presenting Cells Loaded with RNA	HK	11108880.3	30-Apr-97			Pending	Duke Univ.
811/002	In Situ Maturation of Dendritic Cells	US	10/536,211	10-Dec-03	7,785,583	31-Aug-10	Issued	Duke Univ.
811/201AU	In Situ Maturation of Dendritic Cells	AU	2003296439	10-Dec-03	2003296439	10-Jul-09	Issued	Duke Univ.

821/001	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	US	10/362,715	24-Feb-03			Allowed	Gerold Schuler
821/002C	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	US	13/479,612	24-May-12			Pending	Gerold Schuler
821/206JP	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	JP	522234/02	24-Aug-01	4610847	22-Oct-10	Issued	Gerold Schuler
821/215AT	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	AT	19607084	24-Aug-01	1311658	15-Oct-08	Issued	Gerold Schuler
821/216BE	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	BE	19607084	24-Aug-01	1311658	15-Oct-08	Issued	Gerold Schuler
821/217DK	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	DK	19607084	24-Aug-01	1311658	15-Oct-08	Issued	Gerold Schuler
821/218FR	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	FR		24-Aug-01	1311658	15-Oct-08	Issued	Gerold Schuler

821/219IT	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	IT	19607084	24-Aug-01	1311658	15-Oct-08	Issued	Gerold Schuler
821/220NL	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	NL	19607084	24-Aug-01	1311658	15-Oct-08	Issued	Gerold Schuler
821/221SE	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	SE	19607084	24-Aug-01	1311658	15-Oct-08	Issued	Gerold Schuler
821/222UK	Method for Producing Ready to Use, Antigen Loaded or Unloaded, Cryoconserved Mature Dendritic Cells	GB	019607084	24-Aug-01	1311658	15-Oct-08	Issued	Gerold Schuler
822/002C	CD4+ CD25+ Regulatory T Cells from Human Blood	US	13/530,488	22-Jun-12			Pending	Argos Therapeutics, Inc.
822/201AU	CD4+CD25+ Regulatory T Cells from Human Blood	AU	2002257648	12-Mar-02	2,002,257,648	17-Jan-08	Issued	Argos Therapeutics, Inc.
822/202BR	CD4+CD25+ Regulatory T Cells from Human Blood	BR	0208076.1	12-Mar-02			Pending	Argos Therapeutics, Inc.
822/203CA	CD4+CD25+ Regulatory T Cells from Human Blood	CA	2441213	12-Mar-02			Pending	Argos Therapeutics, Inc.

822/204CN	CD4+ CD25+ Regulatory T Cells from Human Blood	CN	02809777.7	12-Mar-02			Pending	Argos Therapeutics, Inc.
822/206JP	CD4+CD25+ Regulatory T Cells from Human Blood	JP	571855/02	12-Mar-02			Pending	Argos Therapeutics, Inc.
822/207KR	CD4+CD25+ Regulatory T Cells from Human Blood	KR	2003-7011970	12-Mar-02			Pending	Argos Therapeutics, Inc.
822/208DE	CD4+CD25+ Regulatory T Cells from Human Blood	DE		12-Mar-02	1379625	30-Jun-10	Issued	Argos Therapeutics, Inc.
822/209FR	CD4+CD25+ Regulatory T Cells from Human Blood	FR	027273978	12-Mar-02	1379625	30-Jun-10	Issued	Argos Therapeutics, Inc.
822/210IE	CD4+CD25+ Regulatory T Cells from Human Blood	IE	027273978	12-Mar-02	1379625	30-Jun-10	Issued	Argos Therapeutics, Inc.
822/211NL	CD4+CD25+ Regulatory T Cells from Human Blood	NL	027273978	12-Mar-02	1379625	30-Jun-10	Issued	Argos Therapeutics, Inc.
822/212SE	CD4+CD25+ Regulatory T Cells from Human Blood	SE	027273978	12-Mar-02	1379625	30-Jun-10	Issued	Argos Therapeutics, Inc.
822/213UK	CD4+CD25+ Regulatory T Cells from Human Blood	GB	027273978	12-Mar-02	1379625	30-Jun-10	Issued	Argos Therapeutics, Inc.
830/004C	Method for In Vitro Proliferation of Dendritic Cell Precursors and Their Use to Produce Immunogens	US	08/458,230	2-Jun-95	5,851,756	22-Dec-98	Issued	Rockefeller Univ. and Argos
830/005D	Method for In Vitro Proliferation of Dendritic Cell Precursors and Their Use to Produce Immunogens	US	09/073,596	6-May-98			Pending	Rockefeller Univ. and Argos

830/010P	Method for In Vitro Proliferation of Dendritic Cell Precursors and Their Use to Produce Immunogens	US	08/261,537	17-Jun-94	5,994,126	30-Nov-99	Issued	Rockefeller Univ. and Argos
830/201AU	Method for In Vitro Proliferation of Dendritic Cell Precursors and Their Use to Produce Immunogens	AU	40461/93	1-Apr-93	687733	5-Mar-98	Issued	Rockefeller Univ. and Argos
830/202CA	Method for In Vitro Proliferation of Dendritic Cell Precursors and Their Use to Produce Immunogens	CA	2133409	1-Apr-93	2,133,409	24-May-11	Issued	Rockefeller Univ. and Argos
830/204JP	Method for In Vitro Proliferation of Dendritic Cell Precursors and Their Use to Produce Immunogens	JP	517738/1993	1-Apr-93	3649335	18-May-05	Issued	Rockefeller Univ. and Argos
830/312MN	Method for In Vitro Proliferation of Dendritic Cell Precursors and Their Use to Produce Immunogens	MN	93911581.2	1-Apr-93	633,929	3-Mar-04	Issued	Rockefeller Univ. and Argos

Exhibit 10.2

EXCLUSIVE SUBLICENSE AGREEMENT

Between

GERON CORPORATION

and

ASTERIAS BIOTHERAPEUTICS, INC.

This EXCLUSIVE SUBLICENSE AGREEMENT (the "Agreement") is entered into as of October 1, 2013 (the "Effective Date") by and between Geron Corporation, a Delaware corporation having a principal place of business at 149 Commonwealth Drive, Menlo Park, California 94025 ("Geron"), and Asterias Biotherapeutics, Inc., a Delaware corporation having a principal place of business at 1301 Harbor Bay Parkway, Alameda, CA 94502 ("Licensee"). Geron and Licensee are each referred to individually herein as a "Party," and collectively as the "Parties."

RECITALS

WHEREAS, Licensee has acquired Geron's technology directly related to the research, development and commercialization of products based on primate pluripotent embryonic stem cells (the "Contributed Assets") pursuant to that certain Asset Contribution Agreement dated January 4, 2013 (the "Asset Contribution Agreement"); and

WHEREAS, Licensee also desires to obtain, and Geron is willing to grant, a license to certain patents licensed to and/or co-owned by Geron under the Colorado Telomerase License (as defined below) for specific uses, on the terms and conditions set forth in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and conditions set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

AGREEMENT

1. Definitions. Capitalized terms used and not otherwise defined in this Agreement shall have the respective meanings ascribed to them in the Asset Contribution Agreement. As used throughout this Agreement and its Exhibits, the following terms shall have the meanings set forth below:

1.1 "Affiliate" means, with respect to a Party, any other entity that as of the date of the Agreement or as of any subsequent date, directly or indirectly, through one or more intermediaries, controls, is controlled by or is under common control with such specified Party.

1.2 "Allowed Sales Deductions" means deductions for (i) import, export, excise, sales, value added and use taxes, custom duties, freight and insurance invoiced to and/or paid by the purchaser of a Licensed Product; (ii) rebates and trade discounts off of the invoiced purchase price customarily and actually allowed; and (iii) credits for returns, allowances or trades, actually granted.

1.3 "Colorado Telomerase License" means that certain Intellectual Property License Agreement, dated December 9, 1996, as amended, by and between Geron and UTC.

1.4 "Commercially Reasonable Efforts" means the expenditure of efforts and resources (including the obtaining of any necessary financing) consistent with the usual practice of a third party of similar size and capability in pursuing, in a reasonably timely manner, the development, approval, commercialization and marketing of its own pharmaceutical products that are of significant market potential and strategic value

1.5 "Confidential Information" means any and all information that is contained in any report under Section 5.1 or any written disclosure of an Invention under Section 8.1 (which information shall be deemed Licensee's Confidential Information), or disclosed by a Party to the other Party or its Representatives or obtained by a Party or its Representatives from the other Party in connection with any audit under Section 5.2.

1.6 "Field of Use" means use of telomerase as an antigen in an immunotherapeutic product for use in humans wherein the telomerase antigen is delivered using (i) patient monocyte-derived dendritic cells, or other patient blood or bone marrow-derived antigen presenting cells, (ii) human embryonic stem cell derived dendritic cells or other antigen presenting cells, or (iii) induced pluripotent stem cell derived dendritic cells or other antigen presenting cells.

1.7 "GRNVAC" means the technology acquired by the Licensee under the Asset Contribution Agreement pertaining to the presentation of one or more antigens to the immune system using patient monocyte-derived (VAC-1) or dendritic cells or human embryonic stem cell-derived or induced pluripotent stem cell-derived antigen presenting cells (VAC-2).

1.8 "Inventions" means any discovery, modification, or improvement (whether or not protectable under state, federal, or foreign intellectual property laws) of the technology covered by the Licensed Patents.

1.9 "Licensed Patents" means the patents and patent applications that are (a) licensed to Geron and/or co-owned by Geron pursuant to the Colorado Telomerase License (b) related to telomerase, and (c) necessary for the development and commercialization of GRNVAC, as listed in Exhibit A.

1.10 "Licensed Product" means any product, or part thereof, that is sold, manufactured or used in the Territory and that is itself, or that is manufactured by a process that is, covered in whole or in part by an issued, unexpired Valid Claim within the Licensed Patents.

1.11 "Net Sales" means the total amount received by Licensee for the sale or other commercial disposition of Licensed Products by Licensee or its sublicensees, less the Allowed Sales Deductions incurred with respect to such sale or disposition.

1.12 "Representatives" means a Party's Affiliates and its and their respective officers, directors, employees, agents, attorneys, accountants and advisors.

1.13 "Territory" means worldwide.

1.14 "Third Party" means any person or entity other than Geron or Licensee.

1.15 "UTC" means University Technology Corporation, a not-for-profit Colorado corporation having its principal place of business at 3101 Iris Ave, Suite 250, Boulder, Colorado, 80301 U.S.A.

1.16 "Valid Claim" means an unexpired claim in the Licensed Patents, whether or not issued or granted, which has not been revoked or held unenforceable, unpatentable or invalid by a court of competent jurisdiction, or unappealable or unappealed within the time allowed for appeal; and which has not been rendered unenforceable.

2. License Grant.

2.1 License Grant by Geron. In consideration of payment by Licensee of the amounts set forth in Article 4 and subject to the terms and conditions of this Agreement, Geron hereby grants to Licensee and its Affiliates an exclusive, royalty-bearing sub-license under the Licensed Patents, including the right to grant further sublicenses in accordance with Section 2.3 hereof, solely to make, have made, use, import, sell, or have sold Licensed Products in the Territory under the Field of Use. Licensee acknowledges that this Agreement is subject to the Colorado Telomerase License, and that this Agreement must be consistent with the terms of the Colorado Telomerase License.

2.2 Retained Rights. The license granted to Licensee under Section 2.1 shall be subject to the retained right of UTC to use the Licensed Patents for noncommercial, research and educational purposes, as set forth in Section 2.4 of the Colorado Telomerase License. Further, Licensee agrees that Geron retains exclusively all rights to use, practice and exploit the Licensed Patents and all products based thereon for all uses outside the Field of Use. Licensee covenants that neither it, nor any of its Affiliates shall use, practice or exercise the Licensed Patents for any purpose outside the Field of Use licensed under Section 2.1.

2.3 Sublicense Rights. Licensee shall have the right to grant sublicenses of the rights granted to it under Section 2.1 solely to Third Parties engaged in research, development and marketing of Licensed Products in the Field of Use, and to contract service providers providing services to Licensee, and solely to the extent such sublicenses are reasonably needed for the research, development and/or commercialization of Licensed Products in the Field of Use. Each such sublicense shall be subject to the applicable terms and conditions of this Agreement, and shall require the sublicensee to diligently pursue the commercialization of the sublicensed technology, as set forth in a written, executed sublicense agreement between Licensee and each sublicensee. Licensee shall use commercially reasonable efforts to monitor and require compliance of its sublicensees with such diligence obligations. Licensee will provide Geron with a complete copy of each sublicense agreement within five (5) business days after its execution.

3. No Implied Licenses; Retained Rights.

3.1 No Implied Licenses. Except as expressly set forth in Section 2.1 with respect to Licensed Patents in the Field of Use, Licensee does not and shall not obtain by virtue of this Agreement any license or other intellectual property interest in, to, or under any patents, know-how or other intellectual property of Geron or UTC, by implication or otherwise. For the avoidance of doubt, no technical data, information or knowledge of UTC related to Licensed Products, or any process based on or covered by the Licensed Patents, or the manufacture, marketing, registration, purity, quality, potency, safety and efficacy of the Licensed Products, exists nor is any such technical data, information or knowledge conveyed or licensed in any way to Licensee under this Agreement.

3.2 Retained Rights. Geron retains all rights not explicitly granted to Licensee in Article 2. For the avoidance of doubt, Geron retains all rights under the Licensed Patents, and all other intellectual property owned or controlled by Geron, outside of the Field of Use as expressly defined herein.

3.3 Expiration of License granted by UTC to Geron. Licensee understands that the license rights granted by UTC to Geron under the Licensed Patents expire upon the end of the term of the Licensed Patents (or at such earlier date that the Colorado Telomerase License is terminated).

4. Consideration.

4.1 Upfront Fee. In consideration of the license granted to Licensee pursuant to Section 2.1, Licensee will pay to Geron a non-refundable, non-creditable upfront license fee of sixty-five thousand U.S. dollars ($65,000 USD) within thirty (30) calendar days after the Effective Date of this Agreement.

4.2 Annual License Maintenance Fee. In consideration of the license granted to Licensee pursuant to Section 2.1, commencing on the first anniversary of the Effective Date of this Agreement, and continuing thereafter during the Term, Licensee will pay to Geron an annual, non-refundable, non-creditable license maintenance fee, in each case, of ten thousand U.S. dollars ($10,000 USD)(each, a "License Maintenance Payment"). Licensee shall pay each License Maintenance Payment to Geron within thirty (30) calendar days after each anniversary of the Effective Date with respect to the immediately preceding annual period (each such period, a "License Maintenance Period").If this Agreement expires or is terminated, Licensee will pay Geron a pro-rated License Maintenance Payment calculated by multiplying ten thousand U.S. dollars ($10,000 USD) by a fraction, the numerator of which is the number of days of the applicable License Maintenance Period that have elapsed as of the date of such expiration or termination, and the denominator of which is the total number of days in such License Maintenance Period.

4.3 Royalties. Licensee will pay to Geron earned royalties equal to one percent (1%) of Net Sales. Royalties due hereunder shall be paid to Geron quarterly within sixty (60) days after the close of each calendar quarter ended March 31, June 30, September 30, and December 31 during the Term.

4.4 Payments Generally. All payments shall be made in US Dollars by check to the following address:

Geron Corporation
Attention: Controller
149 Commonwealth Drive
Menlo Park, CA 94025
Tel: 650-473-8694
Fax: 650-566-7182

Licensee shall be solely responsible for any and all payments due from its sublicensees. Interest shall accrue and be paid on all sums due and unpaid under this Agreement at an interest rate equal to three percent (3%) per annum above the prime rate quoted from time to time by the Bank of America from the due date for payment until the date of payment in full thereof.

4.5 Currency Conversion. All payments to be made by Licensee to Geron under this Agreement shall be made in United States dollars and may be paid by bank wire transfer in immediately available funds to such bank account in the United States as may be designated in writing by Geron from time to time. In the case of payments to be made based on sales which are other than in United States dollars, the rate of exchange to be used in computing the monthly amount of currency equivalent in United States dollars due Geron shall be made in accordance with the exchange rates quoted by the Wall Street Journal on the last day of the calendar quarter for in which such payment is due. Such payments will be without deduction of exchange, collection or other charges.

5. Royalty Reports; Audits.

5.1 Royalty Reports. Commencing at the end of the first quarter during which Licensee receives Net Sales, Licensee will submit to Geron a quarterly written report setting forth the Net Sales received by Licensee during the reporting period; the quantity of each Licensed Product sold by Licensee or its sublicensees during the reporting period and amounts due and payable with respect thereto; any applicable deductions; total royalties due to Geron hereunder; and the name and address of any sublicensees of Licensee. After the first such report, reports shall be made whether or not Licensee has received any Net Sales during said quarter. Licensee agrees to accompany each such report with full payment of all amounts due for the reported period. Licensee shall keep, and shall require its sublicensees to keep, complete and accurate records in sufficient detail to enable royalties due and payable hereunder to be determined.

5.2 Audits. At the written request of Geron not more than once in each Calendar Year, Licensee shall permit an independent certified public accounting firm selected by Geron and reasonably acceptable to Licensee, at Geron's expense, to have access during normal business hours to those records of Licensee as may be reasonably necessary to verify the accuracy of royalty reports submitted by Licensee hereunder. If such accounting firm identifies a discrepancy in royalties paid by Licensee, the discrepancy will be promptly corrected by a payment or a refund by the applicable Party. The fees charged by such accounting firm shall be paid by Geron, provided, however, that if such audit uncovers an underpayment of royalties by Licensee that exceeds five percent (5%) of the total royalties owed, then the fees of such accounting firm shall be paid by Licensee. Licensee shall include in each sublicense granted by it pursuant to this Agreement a provision requiring the sublicensee to grant access to such records by Geron's independent accountant to the same extent required of Licensee under this Agreement.

5.3 Confidentiality of Audited Information. Geron shall treat all financial information subject to review under this Article 5 in accordance with the confidentiality and non-use provisions of this Agreement, and shall cause its accounting firm to enter into a reasonably acceptable confidentiality agreement with Licensee or any sublicensee obligating it to retain such information in confidence pursuant to such confidentiality agreement.

5.4 Taxes. All taxes imposed as a result of the existence of this Agreement or the performance hereunder shall be paid by the Party required to do so by applicable law, provided, however, that if required by applicable law, and solely to the extent required, Licensee shall withhold the amount of any such taxes and shall promptly effect payment thereof to the appropriate tax authorities. In that case, Licensee shall cooperate with Geron in obtaining a refund of any such taxes, and shall transmit to Geron official tax receipts or other evidence issued by such tax authorities sufficient to enable Geron to support a claim for the United States income tax credit in respect of any such taxes so withheld.

6. Development.

Licensee will use Commercially Reasonable Efforts to conduct the research, development and commercialization of Licensed Products. If Licensee fails to use Commercially Reasonable Efforts to conduct the research, development and commercialization of Licensed Products, Geron will have the right to terminate this Agreement in accordance with Section 13.3.

7. Government and Regulatory Approvals.

Licensee is responsible for obtaining all government and regulatory approvals and authorizations necessary for the research, development, testing, production, distribution, sale, and use of Licensed Products.

8. Intellectual Property.

8.1 Inventions. Licensee will promptly disclose in writing to Geron any Inventions that are conceived, made or reduced to practice by Licensee, alone or jointly with others, in the exercise of the license rights granted hereunder. Inventorship of such Inventions shall be determined in accordance with United States Patent law, and ownership shall be consistent with inventorship. Licensee, alone or with a sublicensee, will have the right to prepare, file and prosecute Inventions owned solely by Licensee or jointly with a sublicensee; any Inventions owned jointly by the Parties will be prepared, filed and prosecuted in collaboration by the Parties.

8.2 Filing, Prosecution and Maintenance of Licensed Patents. Geron shall use Commercially Reasonable Efforts to file, prosecute and maintain the Licensed Patents. All final decisions with respect to filing, prosecution and maintenance of the Licensed Patents shall be made by Geron.

8.3 Enforcement. Geron or UTC shall have the sole right, in their sole discretion and in accordance with the terms and conditions of the Colorado Telomerase License, to initiate a suit or other legal proceeding in their name or, if appropriate, in the names of Geron, UTC and Licensee, to enforce and defend the Licensed Patents with respect to any infringement or other unlawful use by a Third Party; provided, however, that neither Geron nor UTC shall have any obligation to bring such suit or other proceeding Licensee shall promptly notify Geron of any potential or actual infringement or unlawful use of the Licensed Products of which Licensee becomes aware. Licensee will assist Geron in any action taken or brought by Geron to enforce and defend the Licensed Patents, and will cooperate fully in such action, at Geron's expense. Any recovery from such action will be retained by Geron, except that any recovery for infringement of Licensee's rights in the Field of Use shall be allocated as follows: (a) first to Geron, pro rata with any recovery for infringement outside the Field of Use, until Geron has recovered its documented out of pocket costs of prosecuting the infringement in such action; (b) to any recovery in settlement of a claim or lawsuit, as damages for lost revenues or profits on the sale of a Licensed Product, shall belong to Licensee, and any amount awarded or paid in settlement of a claim or lawsuit, as damages for lost royalty revenues, shall belong to Geron.

8.4 Third Party Intellectual Property Rights. If Licensee receives any warning letter or other notice of infringement, or an action, suit or other proceeding is brought against Licensee alleging that any activity related to the Licensed Products infringes an intellectual property right of a Third Party, Licensee shall promptly notify Geron.

9. Confidentiality.

9.1 Confidentiality Obligations. During the term of the Agreement and for a period of three (3) years thereafter, each Party shall not disclose any Confidential Information received from the other Party to any Third Party (other than such Party's Representatives who have a need to know such Confidential Information) or use such Confidential Information of the other Party to compete with the other Party; provided, however, that this Section 9.1 shall not restrict either Party from performing any obligation or exercising any right under this Agreement and shall not restrict the individual Representatives of either Party from using Residual Knowledge. For purposes of this Agreement, "Residual Knowledge" means ideas, concepts, know-how, or techniques related to the Confidential Information that are retained in the unaided memories of the receiving Party's individual Representatives who have had access to the Confidential Information. An individual Representative's memory is considered unaided if the employee has not intentionally memorized the relevant Confidential Information for the purpose of retaining and subsequently using or disclosing it. Neither Party shall direct any of its individual Representatives to use or practice any Residual Knowledge. In protecting the other Party's Confidential Information from unauthorized disclosure to any Third Party, each Party shall use at least the same degree of care as it uses in preventing the unauthorized disclosure of its own confidential information.

9.2 Exceptions. Notwithstanding anything contained herein to the contrary, Confidential Information shall not include information that:

(i) is or becomes publicly available (other than through a breach of this Agreement);

(ii) was known to or in the possession of the receiving Party or any of its Representatives at the time of disclosure;

(iii) is independently developed or acquired by the receiving Party or any of its Representatives without the use of Confidential Information provided by the other Party;

(iv) is disclosed with the prior written approval of the disclosing Party; or

(v) becomes known to the receiving Party or its Representatives from a Third Party (other than a former officer, director or employee of a Party who knew such information during the term of their office, directorship or employment with such Party) on a nonconfidential basis without breach of this Agreement by the receiving Party.

9.3 Disclosure Required by Law. Notwithstanding anything to the contrary contained herein, a Party shall be permitted to disclose Confidential Information of the other Party to the extent required by law or pursuant to the order or legal process of a court, administrative agency, or other governmental body (including by deposition, interrogatory, request for documents, subpoena, civil investigation, demand or similar process), or any rule, regulation, policy statement or other formal demand of any national securities exchange, market or automated quotation system; provided, that, to the extent permitted by applicable law or any order or requirement of a court, administrative agency or other governmental body, the receiving Party will, as promptly as practicable, provide the disclosing Party with prior written notice of such requirement so that the disclosing Party may seek a protective or other order at its sole expense, or waive compliance with the terms of this Agreement with respect to such disclosure. If such protective order is not timely obtained, or if the disclosing Party waives compliance with the provisions hereof or fails to promptly respond to the receiving Party's written notice, the receiving Party will, without liability under this Agreement, furnish only that portion of the Confidential Information that it is advised by its outside legal counsel is legally required and will exercise commercially reasonable efforts to obtain assurance that confidential treatment, if available, will be accorded such Confidential Information. Notwithstanding anything to the contrary contained herein, each Party may disclose Confidential Information of the other Party to the extent required by federal or state securities laws or reporting obligations to the United States Securities and Exchange Commission.

9.4 Agreement and Terms Confidential. Except as required by law, including but not limited to federal and state securities laws or reporting obligations to the United States Securities and Exchange Commission, or pursuant to the order or requirement of a court, administrative agency or other governmental body (including by deposition, interrogatory, request for documents, subpoena, civil investigation, demand or similar process), or any rule, regulation, policy statement or other formal demand of any national securities exchange, market or automated quotation system, neither Party shall publicly disclose the terms and conditions of this Agreement unless expressly authorized to do so in writing by the other Party, which authorization shall not be unreasonably withheld. This restriction shall not apply with respect to any terms and conditions of this Agreement that are or become publicly available (other than through a breach of this Agreement).

9.5 Equitable Remedies. Each Party acknowledges and agrees that due to the unique nature of the Confidential Information, there may be no adequate remedy at law for any breach of its obligations hereunder, and therefore, that upon any breach hereof, the other Party shall be entitled to seek appropriate equitable relief in addition to whatever remedies it might have at law.

10. Publications; Press Releases.

10.1 Publications. Licensee shall have the right to publish the results of activities conducted in by Licensee or its sublicensees in the exercise of the license rights granted pursuant to this Agreement. Licensee shall submit proposed publications for Geron's review at least thirty (30) days prior to the date of submission for publication or public disclosure. Geron will complete its review within thirty (30) days of receipt of the proposed publication. Upon Geron's request, Licensee shall delete from proposed publications any reference to Geron's Confidential Information. If, during its thirty (30) day review period, Geron notifies Licensee that it desires patent applications to be filed on any Inventions disclosed or contained in the manuscripts, Licensee shall delay publications or other disclosure for a period, not to exceed ninety (90) days, sufficient to permit Geron or Licensee to file any desired patent applications, as provided by Section 8.1 above.

10.2 Press Releases. Except for disclosures permitted under Section 9.4 or Section 10.1, any press release related to any terms and conditions of this Agreement shall be subject to mutual agreement of the Parties; provided, however, that no such agreement shall be required with respect to any press release that references or discloses the existence of this Agreement or the sublicense of the Licensed Patents, or with respect to any information previously disclosed by the other Party or included in any press release approved by the other Party.

11. Representations and Warranties.

11.1 Each Party represents and warrants to the other that: (a) it is duly organized and validly existing under the laws of its state of incorporation and has full corporate power and authority to enter into this Agreement; (b) it is in good standing with all relevant governmental authorities; (c) it has taken all corporate actions necessary to authorize the execution and delivery of this Agreement and the performance of its obligations under this Agreement; and (d) its entry into and performance of the terms and conditions of this Agreement will not violate any agreements or obligations such Party may have to any other person or entity.

11.2 Geron represents and warrants as of the Effective Date the Colorado Telomerase License is current and in full force and effect. Geron agrees that in the event of the termination of the Colorado Telomerase License, Geron will give Asterias notice of such event within 30 days of its occurrence.

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

11.3.1 A warranty or representation as to the validity or scope of the Licensed Patents;

11.3.2 A warranty or representation that anything made, used, or disposed of under this Agreement is or will be free from infringement of patents, copyrights, and other rights of third parties;

11.3.3 An obligation to bring or prosecute actions or suits against third parties for infringement of the Licensed Patents; or

11.3.4 Granting by implication, estoppel, or otherwise any licenses or rights under patents or other rights of Geron or Third Parties, other than expressly provided herein.

11.4 Disclaimer of Warranty; Limitation of Liability. Except as explicitly set forth herein, Geron makes no representation or warranty, express or implied, with respect to the Licensed Patents, including any warranty of merchantability, fitness for any particular purpose or that the practice of the Licensed Patents does not infringe any third party patents. EXCEPT WITH RESPECT TO CLAIMS FOR MATERIAL BREACH OF ARTICLE 9, IN NO EVENT WILL EITHER PARTY HERETO BE LIABLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES SUFFERED BY THE OTHER PARTY ARISING IN ANY WAY OUT OF THIS AGREEMENT, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY. THIS LIMITATION WILL APPLY EVEN IF THE PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

12. Indemnification; Insurance.

12.1 Indemnification by Geron. Subject to Article 14, Geron hereby agrees at all times during the term of this Agreement to indemnify, defend and hold harmless Licensee and its Affiliates (collectively, the "Asterias Indemnified Parties") from and against any Damages with respect to any claims and any Proceedings with respect to such claims (together, "Claims") made by any Third Party and arising from or based on (a) a material breach of Geron's representations and warranties contained in Section 11.2 or (b) the negligence or willful misconduct of Geron in the performance of its obligations or exercise of its rights under this Agreement; provided that such indemnification obligation shall not apply to Damages incurred by a Asterias Indemnified Party to the extent such Asterias Indemnified Party is adjudicated (in a final non-appealable judgment) to have acted in a negligent or willfully wrongful manner.

12.2 Indemnification by Licensee. Subject to Article 14, Licensee hereby agrees to defend, indemnify and hold harmless Geron and its Affiliates; the University of Colorado; University License Equity Holdings, Inc. (the successor to University Technology Corporation); and the Howard Hughes Medical Institute, and each of their directors, officers, employees, and agents (collectively, the "Geron Indemnified Parties") from and against any Damages with respect to any Claims made by any Third Party and (a) arising from or based on a material breach of Licensee's representations and warranties contained in Section 11.1; or (b) resulting from personal injury, product liability or property damage relating to or arising from: (i) the manufacture, use, promotion or sale of any Licensed Product by Licensee or its sublicensees; or (ii) the use by any person of a Licensed Product made, created, sold or otherwise transferred by Licensee or its sublicensees; or (c) based on or resulting from the breach of this Agreement by Licensee or the negligence or willful misconduct of Licensee or its sublicensee in the performance of their respective obligations or the exercise of their respective rights relating to this Agreement; provided that such indemnification obligation shall not apply to Damages incurred by a Geron Indemnified Party to the extent such Geron Indemnified Party is adjudicated (in a final non-appealable judgment) to have acted in a negligent or willfully wrongful manner.

12.3 Insurance. Asterias agrees to maintain insurance or self-insurance that is reasonably adequate to fulfill any potential obligation to the indemnified parties. Asterias shall continue to maintain such insurance or self-insurance during the term of this Agreement and after the expiration or termination of this Agreement for a period of five (5) years. The Licensee's insurance shall name Geron, UTC, the University of Colorado and the Institute, and its and their employees, directors, and agents as additional named insureds.

13. Term and Termination.

13.1 Term and Expiration. The term of this Agreement shall commence upon the Effective Date and, unless terminated earlier pursuant to Sections 13.2, 13.3, 13.4, 13.5 or 13.6 below, shall continue in effect until expiration of all Valid Claims of the Licensed Patents hereunder (the "Term").

13.2 Termination of Colorado Telomerase License. This Agreement shall terminate immediately upon any termination of the Colorado Telomerase License. In the event that the Colorado Telomerase License is terminated Geron will notify Licensee of such termination within 30 days.

13.3 Termination for Material Breach. Each Party shall have the right to terminate this Agreement for uncured material breach of the other Party, as follows: If a Party believes that the other Party is in material breach of its obligations under this Agreement, then such Party may provide written notice to the other Party setting forth a description of the asserted material breach. The Party against which such breach is asserted by such notice shall then either (1) cure such asserted material breach within sixty (60) days after actual receipt of such written notice (or such longer period as may be agreed by the Parties) or, if such Party disagrees that it is in material breach, (2) initiate dispute resolution pursuant to Article 14, whereupon the sixty (60) day cure period shall be tolled until the dispute is resolved. If a Party has materially breached its obligations under this Agreement and does not cure such breach by the end of the sixty (60) days period after the other Party provides notice of such breach as above, then the Party providing such notice may then terminate the Agreement immediately on written notice to the breaching Party.

13.4 Termination by Licensee. Licensee shall have the right to terminate this Agreement for any reason, with or without cause, upon ninety (90) days prior written notice to Geron. The termination shall become effective upon expiration of the ninety (90) day period.

13.5 Termination for Bankruptcy. A Party may terminate this Agreement upon written notice upon the filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings, or upon an assignment of a substantial portion of the assets for the benefit of creditors by the other Party; provided, however, that in the case of any involuntary bankruptcy proceeding such right to terminate shall only become effective if the Party consents to the involuntary bankruptcy or such proceeding is not dismissed within ninety (90) days after the filing thereof (or such other period as the Parties may mutually agree in writing).

13.6 Effect of Termination. Upon any expiration pursuant to Section 13.1 or any termination pursuant to Sections 13.2, 13.3, 13.4, or 13.5, all obligations incurred by Licensee to Geron and all the rights granted to Licensee, including pursuant to Sections 2.1 and 2.3, shall immediately terminate (except as provided below), and any sublicenses granted by Licensee shall terminate. Upon any termination, Licensee shall immediately cease (and cause its sublicensees to cease) making, having made, using, selling, and having sold Licensed Products. Expiration or termination of this Agreement shall not relieve the Parties of any obligation accruing prior to such expiration or termination. Article 9 shall survive the expiration or termination of this Agreement and shall continue for the period of time set forth in Article 9. In addition, Articles 1, 5, 9, 10, 12, 14 and 15, and Sections 8.1, 11.2, 11.3, 13.6, shall survive expiration or termination of this Agreement.

13.7 In the event Geron receives any written notice from UTC alleging that Geron is in breach or default of Geron's obligations under the Colorado Telomerase License, Geron shall: (a) promptly provide Licensee with notice of UTC's alleged breach or default by Geron; and (b) use its Commercially Reasonable Efforts to cure such breach or default.

14. Dispute Resolution and Indemnification Procedures.

14.1 Notwithstanding anything to the contrary contained in this Agreement, the dispute resolution provisions of Schedule 10.10(b) of the Asset Contribution Agreement shall apply with full force and effect to any disputes with respect to the matters contemplated by this Agreement and the indemnification obligations between the parties under Article 12. Accordingly, the parties agree that any claim (other than a claim for injunctive or other equitable relief from a court of competent jurisdiction in accordance with Section 15.4) for any breach of Geron's or Asterias' obligations under this Agreement, or for indemnification under Article 12, shall be brought and resolved exclusively in accordance with the provisions of Schedule 10.10(b) of the Asset Contribution Agreement as if Geron or Asterias were bringing such claim as a Geron Indemnitee or Asterias Indemnitee, respectively, thereunder, and shall otherwise be governed by the applicable provisions of this Article 14; provided, however, that nothing in this Article 14 shall prevent any party from seeking injunctive and other equitable relief from a court of competent jurisdiction in accordance with Section 15.4.

14.2 In the event that any party to this Agreement becomes aware of any event or circumstance that would reasonably be expected to constitute or give rise to any claim contemplated by Section 14.1, the party having the right to bring such claim ("Claimant") shall take all commercially reasonable efforts to mitigate and minimize all Damages that may result from the breach giving rise to the claim (it being understood that nothing in this Agreement shall limit such Claimant's right to seek recovery from the other party with respect to any costs of such mitigation). Each Claimant shall use reasonable efforts to collect any amounts available under insurance coverage for any claim under this Agreement. The amount of any claim shall be net of any amounts recovered by the Claimant under insurance policies with respect to such claims in excess of the sum of: (i) reasonable out-of-pocket costs and expenses relating to collection under such policies; and (ii) any deductible associated therewith to the extent paid or by which insurance proceeds were reduced.

14.3 In the event of the assertion or commencement by any Third Party of any action or other proceeding ("Proceeding') with respect to which any Asterias Indemnified Party or Geron Indemnified Party (each an "Indemnitee") may be entitled to indemnification pursuant to Article 12 of this Agreement, the indemnifying party ("Indemnitor") shall have the right, at its election and expense, to proceed with the defense of such Proceeding on its own with counsel reasonably satisfactory to the Indemnittee; provided, however, that the Indemnitor shall not settle or compromise any such Proceeding without the prior written consent of the Indemnitee(s), which consent shall not be unreasonably withheld, conditioned or delayed. The Indemnitee(s) shall give the Indemnitor prompt written notice after it becomes aware of the commencement of any such Proceeding against the Indemnitee(s); provided, however, any failure on the part of the Indemnitee(s) to so notify the Indemnitor shall not limit any of the obligations of the Indemnitor, or any of the rights of the Indemnitee(s), under this Section 14.3 (except to the extent such failure prejudices the defense of such Proceeding). If the Indemnitor elects to assume and control the defense of any such Proceeding: (a) at the request of the Indemnitor, the Indemnitee(s) shall make available to the Indemnitor any material documents and materials in the possession of the Indemnitee(s) that may be necessary to the defense of such Proceeding; (b) the Indemnitor shall keep the Indemnitee(s) reasonably informed of all material developments relating to such Proceeding; and (c) the Indemnitee(s) shall have the right to participate in the defense of such Proceeding at its own expense. If the Indemnitor does not elect to proceed with the defense of any such Proceeding, the Indemnitee(s) may proceed with the defense of such Proceeding with counsel reasonably satisfactory to the Indemnitor; provided, however, that the Indemnitee(s) may not settle or compromise any such Proceeding without the prior written consent of the Indemnitor (which consent may not be unreasonably withheld, conditioned or delayed).

14.4 Subject to any injunction or other equitable remedies that may be available to any party, a party shall not be liable or responsible in any manner whatsoever to the other party with respect to the matters contemplated by this Agreement (whether for indemnification or otherwise) other than for claims brought as provided in this Article 14 and subject to the limitations contained therein, and subject to the foregoing, this Article 14 provides the exclusive remedy and cause of action of Indemnitees against any Indemnitor with respect to any matter arising out of or in connection with this Agreement; provided, however, that no claim against a party for fraud by such party shall be subject to the limitations of this Article 14.

15. General Provisions.

15.1 Independent Contractors. The Parties are independent contractors and shall not be deemed to be partners, joint venturers or each other's agents or employees, and neither Party shall have the right to act on behalf of or otherwise bind the other Party, except as is expressly set forth in this Agreement.

15.2 Entire Agreement. This Agreement sets forth the entire agreement and understanding between the Parties, and supersedes all previous agreements, promises, representations, understandings, and negotiations, whether written or oral between the Parties, with respect to the subject matter of this Agreement. There shall be no amendments or modifications to this Agreement, except by a written document signed by both Parties.

15.3 Assignment. This Agreement shall not be assigned by either Party without the prior written consent of the other Party, except that a Party may assign this Agreement, without such consent, to its successor in interest as part of a sale or transfer, by way of merger or otherwise, of all or substantially all of the business assets of such Party (or, if such Party is organized in divisions or other distinct business units, all of the business assets of a division or unit engaged in activities related to the Licensed Patents), or in the case of Geron, it assigns, transfers, or otherwise disposes of the Colorado Telomerase License in whole or in part, provided that the assignee agrees to be bound in writing by all the terms of this Agreement in place of the assignor.

15.4 Governing Law; Dispute Resolution. This Agreement and all claims or causes of action (whether in contract or tort or otherwise) based upon, arising out of or related to this Agreement or the transactions contemplated hereby shall be governed by and construed in accordance with the laws of the State of California without regard to conflict of laws principles that would result in the application of any law other than the laws of the State of California. Except as provided for in Article 14, each of Geron and Asterias: (a) consents to and submits to the exclusive jurisdiction and venue of the Superior Court of the State of California for the County of Santa Clara, or the United States District Court for the Northern District of California, in any Proceeding arising out of or relating to this Agreement or any of the transactions contemplated by this Agreement; (b) agrees that all claims in respect of any such Proceeding shall be heard and determined in any such court; (c) shall not attempt to deny or defeat such personal jurisdiction by motion or other request for leave from any such court; and (d) shall not bring any Proceeding arising out of or relating to this Agreement or any of the transactions contemplated by this Agreement in any other court. Each of Geron and Asterias waives any defense of inconvenient forum to the maintenance of any Proceeding so brought and waives any bond, surety or other security that might be required of any other Person with respect thereto. Each of Geron and Asterias hereby agrees that service of any process, summons, notice or document in accordance with the provisions of Section 15.7 shall be effective service of process for any Proceeding arising out of or relating to this Agreement or any of the transactions contemplated hereby. TO THE EXTENT PERMITTED BY APPLICABLE LAW, EACH OF THE PARTIES HERETO IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT OR OTHER LEGAL PROCEEDING ARISING OUT OF OR RELATED TO THIS AGREEMENT.

15.5 Severability. If any provision of this Agreement is finally held to be invalid, illegal or unenforceable by a court or agency of competent jurisdiction, that provision shall be severed or shall be modified by the Parties so as to be legally enforceable (and to the extent modified, it shall be modified so as to reflect, to the extent possible, the intent of the parties) and the validity, legality and enforceability of the remaining provisions shall not be affected or impaired in any way.

15.6 No Waiver. Any delay in enforcing a Party's rights under this Agreement or any waiver as to a particular default or other matter shall not constitute a waiver of a Party's right to the future enforcement of its rights under this Agreement.

15.7 Notices. Any notice required or permitted by this Agreement to be given to either Party shall be in writing and shall be deemed given when delivered personally, by confirmed fax to a fax number designated in writing by the Party to whom notice is given, or by registered, recorded or certified mail, return receipt requested, and addressed to the Party to whom such notice is directed, at:

If to Geron:
Geron Corporation
149 Commonwealth Drive
Menlo Park, California 94025
Attention: Executive Director, Legal
Telephone: (650) 473-7700
Facsimile: (650) 473-7750

If to Licensee:
Asterias Biotherapeutics, Inc.
c/o BioTime, Inc.
1301 Harbor Bay Parkway
Alameda, CA 94502
Attention: Chief Executive Officer
Telephone: (510) 521-3390
Facsimile: (510) 521-3389

or at such other address or fax number as such Party to whom notice is directed may designate to the other Party in writing.

15.8 Force Majeure. If the performance of this Agreement or any obligations hereunder is prevented, restricted or interfered with by reason of fire or other casualty or accident, strikes or labor disputes, war or other violence, any law, order, proclamation, ordinance, demand or requirement of any government agency, or any other act or condition beyond the control of the Party (a "Force Majeure"), the Party so affected, upon giving prompt notice to the other Party, shall be excused from such performance (other than the obligation to pay money) during such prevention, restriction or interference, provided that such Party continues to perform all its obligations under this Agreement, to the extent it is able, and uses diligent, good faith efforts to perform any such prevented, restricted or interfered obligations as soon as practicable, after the effects of such Force Majeure no longer prevent such performance. Further, if a Party is prevented from performing any material obligation under this Agreement by a Force Majeure, for a period of 180 days, then the other Party may terminate this Agreement on notice.

15.9 Use of Names. Except as otherwise provided herein, no right, express or implied, is granted by either party to use in any manner the name of Geron or Licensee or any other trade name or trademark of the other party in connection with the performance of this Agreement.

15.10 Counterparts. This Agreement shall be fully executed in two (2) original counterparts, each of which shall be deemed an original.

15.11 Licenses of Intellectual Property; Bankruptcy Code. The Parties agree that the sublicenses granted to Licensee to use Licensed Patents constitute licenses of "intellectual property" as defined in the United States Bankruptcy Code (the "Bankruptcy Code") and as used in Section 365(n) of the Bankruptcy Code. The Parties also agree that the payments of royalties on Net Sales required to be paid by Licensee to Geron under this Agreement constitute "royalties" under Section 365(n) of the Bankruptcy Code.

IN WITNESS WHEREOF, authorized officers of each of Geron and Licensee have executed this Agreement as of the date first set forth above.

GERON CORPORATION

By: s/John Scarlett
John Scarlett
Title: Chief Executive Officer

ASTERIAS BIOTHERAPEUTICS, INC.

By: s/Thomas Okarma

EXHIBIT A
LICENSED PATENTS

hTERT Licensed Patents

1/4/2013 10:51

FILE #	**TITLE**	**COUNTRY**	**APPLICATION NUMBER**	**DATE FILED**	**PATENT NUMBER**	**ISSUE DATE**	**STATUS**
018/062C	Genes for Human Telomerase Reverse Transcriptase and Telomerase Variants	US	09/438,486	12-Nov-99	6,927,285	9-Aug-05	Issued
018/181C	Telomerase	US	09/843,676	26-Apr-01	7,056,513	6-Jun-06	Issued
018/210C	Nucleic Acids Encoding Human Telomerase Reverse Transcriptase and Related Homologs	US	09/721,506	22-Nov-00	7,262,288	28-Aug-07	Issued
018/213C	Nucleic Acid Compositions for Eliciting an Immune Response Against Telomerase Reverse Transcriptase	US	10/044,692	11-Jan-02	7,560,437	14-Jul-09	Issued
018/221P	Human Telomerase Reverse Transcriptase Polypeptides	US	10/877,124	24-Nov-09	7,622,549	24-Nov-09	Issued
018/224C	Immunogenic Composition	US	11/894,643	20-Aug-07			Pending
018/204CH	Telomerase Reverse Transcriptase	CH	2312/97	1-Oct-97	689672	13-Aug-99	Issued
018/204GB	hTRT, the Reverse Transcriptase Subunit of Human Telomerase	GB	9720890.4	1-Oct-97	2317891	4-Aug-98	Issued
018/206AU	Human Telomerase Catalytic Subunit	AU	48073/97	1-Oct-97	734089	20-Sep-01	Issued
018/206BR	Human Telomerase Catalytic Subunit: Diagnosis and Therapeutic Methods	BR	9712254.8	1-Oct-97			Pending
018/206CA	Human Telomerase Reverse Transcriptase	CA	2,267,664	1-Oct-97			Allowed
018/206IL	Telomerase Reverse Transcriptase Gene, Promoter, and Encoded Protein and Diagnostic Kits and Pharmaceutical Compositions Utilizing the Same	IL	129103	1-Oct-97	129,103	21-Apr-08	Issued
018/206KR	Human Telomerase Catalytic Subunit	KR	10-1999-7002838	1-Oct-97	10-0530483	16-Nov-05	Issued
018/206NO	Human Telomerase Catalytic Subunit	NO	19991588	1-Oct-97	319982	10-Oct-05	Issued
018/206NZ	Human Telomerase Catalytic Subunit	NZ	334709	1-Oct-97	334709	9-Oct-01	Issued
018/206SG	Human Telomerase Catalytic Subunit	SG	99009565	1-Oct-97	64216	19-Jun-01	Issued
018/216NO D	Human Telomerase Catalytic Subunit: Diagnosis and Therapeutic Methods	NO	2005 3120	1-Oct-97	332085	18-Jun-12	Issued
018/219EP D2	Promoter for Telomerase Reverse Transcriptase	EP	9176870.5	1-Oct-97			Pending

018/225JP D2	Human Telomerase Catalytic Subunit	JP	2008-194208	1-Oct-97	4852576	28-Oct-11	Issued
018/226DE	Human Telomerase Catalytic Subunit	DE	69739497.2	1-Oct-97	69739497.2	15-Jul-09	Issued
018/227IE	Human Telomerase Catalytic Subunit	IE		1-Oct-97	1783139	15-Jul-09	Issued
018/228FR	Human Telomerase Catalytic Subunit	FR		1-Oct-97	1783139	15-Jul-09	Issued
018/229BE	Human Telomerase Catalytic Subunit	BE		1-Oct-97	1783139	15-Jul-09	Issued
018/230IT	Human Telomerase Catalytic Subunit	IT		1-Oct-97	1783139	15-Jul-09	Issued
018/231NL	Human Telomerase Catalytic Subunit	NL	49654/BE/2009	1-Oct-97	1783139	15-Jul-09	Issued
018/232CH	Human Telomerase Catalytic Subunit	CH		1-Oct-97	1783139	15-Jul-09	Issued
018/233GB	Human Telomerase Catalytic Subunit	GB		1-Oct-97	1783139	15-Jul-09	Issued
018/234CN D	Human Telomerase Catalytic Subunit	CN	201010150493.9	1-Oct-97			Pending
018/235HK	Human Telomerase Catalytic Subunit	HK	11111117.2	1-Oct-97			Pending
018/240FR	Human Telomerase Catalytic Subunit	FR	30754543	1-Oct-97	1333094	4-Apr-12	Issued
018/241DE	Human Telomerase Catalytic Subunit	DE	30754543	1-Oct-97	1333094	4-Apr-12	Issued
018/242IE	Human Telomerase Catalytic Subunit	IE	30754543	1-Oct-97	1333094	4-Apr-12	Issued
018/243NL	Human Telomerase Catalytic Subunit	NL	30754543	1-Oct-97	1333094	4-Apr-12	Issued
018/244CH	Human Telomerase Catalytic Subunit	CH	30754543	1-Oct-97	1333094	4-Apr-12	Issued
018/245GB	Human Telomerase Catalytic Subunit	GB	30754543	1-Oct-97	1333094	4-Apr-12	Issued
018/301AT	Human Telomerase Catalytic Subunit	AT	97307757.1	1-Oct-97	245194	16-Jul-03	Issued
018/302BE	Human Telomerase Catalytic Subunit	BE	97307757.1	1-Oct-97	841396	16-Jul-03	Issued
018/303CH	Human Telomerase Catalytic Subunit	CH	97307757.1	1-Oct-97	841396	16-Jul-03	Issued
018/304DE	Human Telomerase Catalytic Subunit	DE	69723531.9-08	1-Oct-97	841396	16-Jul-03	Issued
018/305ES	Human Telomerase Catalytic Subunit	ES	97307757.1	1-Oct-97	841396	16-Jul-03	Issued
018/306FR	Human Telomerase Catalytic Subunit	FR	97307757.1	1-Oct-97	841396	16-Jul-03	Issued
018/307GB	Human Telomerase Catalytic Subunit	GB	97307757.1	1-Oct-97	841396	16-Jul-03	Issued
018/308IE	Human Telomerase Catalytic Subunit	IE	97307757.1	1-Oct-97	841396	16-Jul-03	Issued
018/309IT	Human Telomerase Catalytic Subunit	IT	51975BE/2003	1-Oct-97	841396	16-Jul-03	Issued
018/310LU	Human Telomerase Catalytic Subunit	LU	97307757.1	1-Oct-97	841396	16-Jul-03	Issued
018/311SE	Human Telomerase Catalytic Subunit	SE	97307757.1	1-Oct-97	841396	16-Jul-03	Issued

Exhibit 10.3

FINAL EXECUTION COPY

EXCLUSIVE LICENSE AGREEMENT

between

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

and

GERON CORPORATION for

A Method for Detecting the Differentiation of Multipotential Human Embryonic Stem Cells to Glial-Restricted Progenitor Cells that Generate Pure Populations of Oligodendrocytes for Remyelination and Treatment of Spinal Cord Injury

UC Case No. 2002-338-1

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EXCLUSIVE LICENSE AGREEMENT

This exclusive license agreement ("Agreement") is made effective this 20th day of February, 2003, ("Effective Date"), between The Regents of the University of California, a California corporation, having its statewide administrative offices at 1111 Franklin Street, 12th Floor, Oakland, California 94607-5200 ("The Regents"), and Geron Corporation, a Delaware corporation, having a principal place of business at 230 Constitution Drive, Menlo Park, California 94025 ("Licensee").

BACKGROUND

A. Certain inventions, generally characterized as A Method for Detecting the Differentiation of Multipotential Human Embryonic Stem Cells to Glial-Restricted Progenitor Cells that Generate Pure Populations of Oligodendrocytes for Remyelination and Treatment of Spinal Cord Injury and set forth more specifically under the Regents' Patent Rights (as defined below) (collectively "Inventions"), were made in the course of research conducted at the University of California, Irvine by Drs. Hans A. Keirstead and Gabriel Nistor under the Sponsored Research Agreement (as defined below) and are covered by Regents' Patent Rights as defined below.

B. The Licensee entered into a Sponsored Research Agreement dated August 24, 2001 with the Regents (the "Sponsored Research Agreement"), which Sponsored Research Agreement has been renewed, as of the Effective Date, for an additional period of one year.

C. Under the Sponsored Research Agreement, the Regents granted to Licensee certain license rights to the Inventions, and Licensee wishes to confirm such license rights for the commercial development, use and sale of certain products from the Invention, in accordance with the terms and conditions set forth herein.

D. The scope of such license rights granted by The Regents is intended to extend to the full scope of the patents and patent applications in Regents' Patent Rights.

E. Licensee wishes to obtain rights from The Regents for the commercial development, making, having made, use, sale, having sold and exporting of certain products, services and methods from the Invention, in accordance with the terms and conditions set forth herein and The Regents is willing to grant those rights so that the Invention may be developed to its fullest and the benefits enjoyed by the general public.

F. Licensee is a "small business firm" as defined in 15 U.S.C. § 632.

G. Both parties recognize and agree that royalties are payable under this Agreement with respect to products, services and methods covered by either pending patent applications or issued patents, in accordance with the terms and conditions set forth herein.

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In view of the foregoing, the parties agree:

DEFINITIONS

1.1 "Affiliate" means any corporation or other business entity: (i) in which Licensee owns or controls, directly or indirectly, at least fifty percent (50%) of the outstanding stock or other voting rights entitled to elect directors; or (ii) which owns, directly or indirectly, at least fifty percent (50%) of the outstanding stock or other voting rights entitled to elect directors of the Licensee; or (iii) which is under common ownership or control with Licensee to the extent of at least fifty percent (50%) of the outstanding stock or other voting rights entitled to elect directors. Notwithstanding the foregoing, 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 Licensee owns or controls, or is owned or controlled by, or is under common ownership or control with, directly or indirectly, the maximum percentage of outstanding stock or voting rights permitted by local law.

1.2 "Attributed Income" means the total gross proceeds received by Licensee from a Sublicensee that is not an Affiliate or a Joint Venture, including, without limitation, any Royalties, license fees, maintenance fees, and milestone payments, whether consisting of cash or any other form of consideration received by Licensee from such a Sublicensee. Notwithstanding the foregoing, Attributed Income shall not include proceeds reasonably and fairly attributable to bona fide (i) debt financing; (ii) equity (and conditional equity, such as warrants, convertible debt and the like) investments in Licensee, except to the extent the payment for such equity exceeds its market value; (iii) reimbursements of patent prosecution and maintenance expenses; (iv) reimbursement of manufacturing costs incurred by Licensee with respect to any cell line covered under the Regents' Patent Rights on behalf of any Sublicensee; (v) reimbursement for the cost of research and/or development services provided on the basis of full-time equivalent ("FTE") efforts of personnel at or below Licensee's standard FTE rates, and (vi) reimbursements of any associated supplies, equipment, travel and other out-of-pocket expenses actually incurred by Licensee in connection with research and/or development services provided by such personnel.

1.3 "Customer" means any individual or entity that receives Licensed Products or Licensed Services, provided however, that Licensee and any Affiliate, Joint Venture or Sublicensee shall be deemed a Customer only if it receives Licensed Products or Licensed Services for its own end-use and not for resale.

1.4 "Field of Use" means (a) biological research, (b) drug screening and (c) human therapy.

1.5 "Final Sale" means any sale, transfer, lease, exchange or other disposition or provision of a Licensed Product, Licensed Method and/or a Licensed Service to a Customer. A Final Sale shall be deemed to have occurred upon the earliest to occur of the following (as applicable): (a) the transfer of title to a Licensed Product to a Customer, (b) the provision of an invoice for (i) the shipment of a Licensed Product to a Customer, or (ii) the provision of a Licensed Service to a Customer, or (c) payment by the Customer for Licensed Products, Licensed Methods or Licensed Services.

1.6 "FTE" is defined in Paragraph 1.2 ("Attributed Income").

1.7 "Joint Venture" means any separate entity established pursuant to an agreement between a third party and Licensee or an Affiliate to commercially develop, manufacture, have manufactured use, purchase, sell, have sold, export or acquire Licensed Products, Licensed Methods or Licensed Services for, to or from Licensee or an Affiliate.

1.8 "Licensed Method" means any process, art or method that is practiced or used in a particular country, where such practice or use would infringe, but for the license rights hereunder, a Valid Claim in such country.

1.9 "Licensed Product" means any Product that is made, used, sold, or imported in or into a particular country, where such making, use, sale or import would infringe, but for the license rights hereunder, a Valid Claim in such country.

1.10 "Licensed Service(s)" means any service provided for consideration (whether in cash or any other form) by Licensee or any Affiliate, Joint Venture, or Sublicensee, when such service involves the use of a Licensed Product or involves the practice of a Licensed Method.

1.11 "Licensed Technology" means the Licensed Methods, Licensed Products and Licensed Services, collectively.

1.12 "Net Sales" means the total of the gross amount invoiced or otherwise charged (whether consisting of cash or any other forms of consideration) for the Final Sale of Licensed Products, Licensed Methods or Licensed Services by Licensee or by any Affiliate or Joint Venture to Customers, less the following deductions (to the extent included in and not already deducted from the gross amount invoiced or otherwise charged): (a) cash, trade or quantity discounts actually granted to Customers; (b) sales, use, tariff, import/export duties or other excise taxes imposed on particular sales (excepting value added taxes or income taxes); (c) transportation charges, including insurance to the extent actually paid by the Customer; and allowances or credits to Customers because of rejections or returns. Where a Final Sale is made by Licensee to any Affiliate, Joint Venture or Sublicensee, or by any Affiliate or Joint Venture to Licensee, then Net Sales shall be based on the gross amount normally invoiced or otherwise charged to other Customers in an arms length transaction for such Licensed Products or Licensed Services. If a Licensed Product is sold as part of a unit, system, package or combination of products or active ingredients (a "Combination Product"), the Net Sales for purposes of calculating the royalty shall be calculated by multiplying the net sales of the Combination Product by the fraction A/B where "A" is the Net Sales of the Licensed Product when sold separately and "B" is the Net Sales of the Combination Product. If the foregoing calculation cannot be made because either (x) the Licensed Product or the other product(s) or active ingredients in the Combination Product are not sold separately or (y) such separate market prices are not established, the Net Sales of such Combination Product shall be negotiated in good faith by the Regents and Licensee.

1.13 "Product" means any kit, article of manufacture, composition of matter, material, compound, component or product.

1.14 "Regents' Patent Rights" means The Regents' interest in the following subject matter:

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Regents' Patent Rights shall further include The Regents' interest in any continuing applications of the foregoing including divisions and substitutions and continuation-in- part applications (only to the extent, however, that claims in the continuation-in-part applications are supported in the specification and entitled to the priority filing date of the parent patent applications); any patents on said applications including reissues, reexaminations and extensions; and any corresponding foreign applications or patents.

1.15 "Royalties" means earned royalties due to (a) The Regents under this Agreement from Licensee and/or any Affiliate or Joint Venture or (b) Licensee as a result of the Final Sale by any Sublicensee that is not an Affiliate or a Joint Venture.

1.16 "Sponsored Research Agreement" means the sponsored research agreement number GC- 29615 by and between Licensee and The Regents dated effective August 24, 2001.

1.17 "Sublicensee" means (i) any person or entity (including any Affiliate or Joint Venture) to which Licensee sublicenses any of the rights granted to Licensee hereunder and (ii) any person or entity that has an agreement, arrangement or other relationship with Licensee, any Affiliate, any Joint Venture or any person or entity described in (i) above for the research or development of Licensed Products and who is granted the right to sell or otherwise dispose of Licensed Products in connection with, or as a result of, an agreement, arrangement or other relationship with Licensee, any Affiliate, any Joint Venture or any person or entity described in (i) above.

1.18 "Sublicense Fee" is defined in Paragraph 6.0.

1.19 "Valid Claim" means any claim of (a) an issued, unexpired patent within the Regents' Patent Rights, but excluding any claim that has been (i) withdrawn, cancelled, disclaimed or waived, or (ii) held invalid or unenforceable by a court of competent jurisdiction in a decision that can no longer be appealed; or (b) a pending patent application within the Regents' Patent Rights, which claim has not been abandoned or finally rejected by the United States Patent and Trademark Office (USPTO), or any analogous foreign administrative entity, in a decision that can no longer be appealed or otherwise challenged.

2. LIFE OF PATENT EXCLUSIVE GRANT

2.1 Subject to the limitations and other terms and conditions set forth in this Agreement, The Regents grants to Licensee a world-wide license, including the right to grant sublicenses in accordance with Article 3 (Sublicenses) hereof, under its rights in and to Regents' Patent Rights to make, have made, use, sell, have sold, offer to sell and import the Licensed Technology within the Field of Use, to the extent permitted by law.

2.2 Except as otherwise provided in this Agreement, the license granted under Regents' Patent Rights in Paragraph 2.1 is exclusive for the life of the Agreement.

2.3 The license granted in Paragraphs 2.1 and 2.2 is limited to the Field of Use. Licensee has no license under this Agreement outside the Field of Use.

2.4 Educational and Research Use.

2.4.1 The Regents reserves and retains the right (and the rights granted to Licensee in this Agreement shall be limited accordingly) to make, use, and practice the Invention and any technology relating to the Invention and to make and use any Products and to practice any process that is the subject of the Regents' Patent Rights (and to grant any of the foregoing rights to other educational and non-profit institutions) for educational and research purposes, including without limitation any sponsored research performed for or on behalf of commercial entities and including publication and other communication of any research results arising from such sponsored research conducted for or on behalf of such commercial entities (subject to the terms of any such sponsored research agreement).

2.4.2 In connection with permitting any educational or non-profit institution (including, without limitation, campuses of the UC System) to practice Regents' Patent Rights for educational and research purposes, the Regents, acting through the Director and Senior Licensing Officer of the Office of Technology Alliances of the University of California at Irvine, will exercise reasonable efforts to notify such educational or nonprofit institution in writing of Licensee's exclusive rights hereunder. For the avoidance of doubt, in no event shall the Regents grant, expressly or impliedly, to any person or entity (except as expressly permitted in Section 2.4.1) any rights under Regents' Patent Rights to make, have made, use, sell, have sold, offer to sell and import the Licensed Technology within the Field of Use.

2.4.3 For purposes of this Section 2.4, "educational and research purposes" exclude (i) human clinical research unless the purpose of the research is substantially of a research or educational character;(ii) the performance of human diagnostic or human therapeutic services unless the purpose of the research is substantially of a research or educational character; (iii) the performance of contract services for third parties in return for consideration; (iv) the creation, production, manufacture, sale or offer for sale of a product or process intended for sale or other commercial purpose; and (v) any other activity directed to the commercialization of the Licensed Technology.

3. SUBLICENSES

3.1 The Regents also grants to Licensee the right to sublicense to third parties (including to Affiliates and Joint Ventures) the rights granted to Licensee hereunder, as long as Licensee has current exclusive rights thereto under this Agreement. Each Sublicensee, whether the sublicense is from the Licensee, Affiliates, Joint Venture, or a Sublicensee, must be subject to a written sublicense agreement. To the extent applicable, all sublicenses, whether the sublicense is from the Licensee, Affiliates, Joint Venture, or a Sublicensee, must include all of the terms, conditions, obligations and other restrictions of this Agreement that protect or benefit The Regents' (and, if applicable, the U.S. Government and other sponsors) rights and interests. For the avoidance of doubt, Affiliates and Joint Ventures stand unlicensed unless such Affiliates and Joint Ventures are granted a sublicense.

3.2 Licensee shall promptly provide The Regents with a copy of each sublicense issued, make reasonable efforts to collect all revenues due to Licensee from Sublicensees, and summarize and deliver all reports due The Regents from Sublicensees.

3.3 Upon any expiration or termination of this Agreement for any reason, all sublicenses shall automatically terminate, unless The Regents, at its sole discretion, agrees in writing to an assignment to The Regents of any sublicense. The Regents shall not be bound to any duties under an assigned sublicense beyond The Regents' duties under this Agreement.

4. PAYMENT TERMS

4.1 All Royalties on Net Sales are due to The Regents upon Final Sale by Licensee and/or its Affiliates and/or Joint Venture, and shall be paid to the Regents on a quarterly basis as set forth in Paragraph 4.2 hereof. Revenue Share Payments (as defined by Article 6 (Payments on Sublicenses), below) with respect to any Attributed Income shall be due to The Regents within thirty (30) days of the date that such Attributed Income is due to Licensee, and shall be paid to the Regents on a quarterly basis as set forth in Paragraph 4.2 hereof.

4.2 Licensee shall pay to The Regents all Royalties and Revenue Share Payments quarterly on or before February 28, May 31, August 31 and November 30 of each calendar year. Each payment will be for Royalties and Revenue Share Payments accrued within Licensee's most recently completed calendar quarter. Payments by Licensee under this Paragraph 4.2 shall be accompanied by Royalty and Revenue Share Payment reports as set forth in Paragraph 9.5 hereof.

4.3 All monies due The Regents shall be paid in U.S. dollars by check payable to "The Regents of the University of California" or by wire transfer to an account designated by The Regents, which information will be provided promptly to Licensee by the Regents upon Licensee's request. Licensee is responsible for all bank or other transfer charges. When Net Sales are in currencies other than U.S. dollars, Licensee shall first determine the Royalties in such currency and then convert the amount into equivalent U.S. dollars, using the exchange rate quoted in *The Wall Street Journal* on the last business day of the reporting period.

4.4 Royalties earned on sales occurring in any country outside the U.S. and sublicense fees may not be reduced by any taxes, fees or other charges imposed by the government of such country on the payment of such income. Notwithstanding the foregoing, Licensee shall be entitled to deduct all payments made by Licensee in fulfillment of The Regents' tax liability in any particular country from Royalties or Revenue Share Payments due The Regents for that country with respect to Licensee's next quarterly payment.

4.5 (a) Royalties on Net Sales and (b) Revenue Share Payments shall be payable on Licensed Technology covered by Valid Claims. Royalties and Revenue Share Payments will accrue in each country for the duration of Regents' Patent Rights in that country. For the avoidance of doubt, if any patent or Valid Claim within Regents' Patent Rights is held invalid in a final decision by a court of competent jurisdiction and last resort and from which no appeal has or can be taken, then all obligation to pay Royalties based on that patent or Valid Claim or any claim patentably indistinct therefrom will cease as of the date of final decision. Licensee will not, however, be relieved from paying any Royalties that accrued before the final decision or that are based on another patent or claim not involved in the final decision.

4.6 In the event payments, rebillings or fees are not received by The Regents when due, Licensee shall pay to The Regents interest charges at the lower of: (a) ten percent (10%) per annum or (b) the highest amount allowable by law. Subject to the Notice and Cure Period set forth in Article 12 (Termination by The Regents), below, unless past-due sums are paid by Licensee within the Cure Period interest shall calculated from the date payment was due until actually received by The Regents.

5. LICENSE ISSUE FEE

Licensee shall pay to The Regents a one-time license issue fee of fifteen thousand dollars ($15,000) within ten (10) business days of the Effective Date. This fee is nonrefundable, non-cancelable and is not an advance or otherwise creditable against any royalties or other payments hereunder.

6. PAYMENTS ON SUBLICENSES

Licensee shall pay to The Regents seven and one-half percent (7.5%) of all Attributed Income ("Revenue Share Payment"). Such Revenue Share Payment shall be nonrefundable and non-creditable.

7. EARNED ROYALTIES AND MINIMUM ANNUAL ROYALTIES

7.1 Licensee shall pay to The Regents an earned royalty of one percent (1%) of the Net Sales of Licensed Technology by Licensee or any Affiliate or Joint Venture.

7.2 In the event it becomes necessary for Licensee to license any patent or other intellectual property rights owned or controlled by a third party in order for Licensee to make, have made, use or sell, have sold, offer to sell or import Licensed Technology or to otherwise exercise Licensee's rights under this Agreement ("Third Party Intellectual Property"), then Licensee shall be entitled to deduct fifty percent (50%) of any payment due to such third party under such license with respect to such Third Party Intellectual Property from the Royalties payable to The Regents under Paragraph 7.1 above and the Revenue Share Payments payable to The Regents under Article 6 (Payments on Sublicenses), *provided, however,* that in no event shall the total amount of such deduction by Licensee exceed fifty percent (50%) of the total amounts due to the Regents under Paragraph 7.1 and Article 6 (Payments on Sublicenses). Any such deduction shall be made by Licensee in the calendar quarter as to which payments are due to The Regents corresponding to the calendar quarter in which payments are due to the third party with respect to such Third Party Intellectual Property.

7.3 Licensee shall pay to The Regents a minimum annual royalty of five thousand dollars ($5,000) for the life of Regents' Patent Rights, beginning with the year in which the first Final Sale occurs. The minimum annual royalty will be paid to The Regents by February 28 of each year following the year in which the first Final Sale occurs, and will be credited against the earned royalty due for the calendar year in which the minimum payment was made.

8. DILIGENCE

8.1 Licensee and/or its Sublicensees, promptly upon execution of this Agreement, shall diligently proceed with, or engage others to proceed with, the research, development, manufacture, marketing and/or sale of Licensed Products, and shall earnestly and diligently endeavor to market the same within a reasonable period of time after execution of this Agreement, with the goal of making Licensed Products commercially available as rapidly as reasonably possible and in quantities sufficient to meet market demands. For the avoidance of doubt, research and development of the Licensed Technology conducted on Licensee's or its Sublicensee's behalf under appropriate research or other agreements, or pursuant to such agreements (including, without limitation, the Sponsored Research Agreement and any extensions, amendments or renewals thereof), shall satisfy the diligence obligation under this Agreement.

8.2 If Licensee ceases to conduct or have conducted activities that satisfy the diligence obligations set forth in Section 8.1 above for a period of more than two (2) consecutive years, then The Regents shall have the right and option to give written notice to Licensee of its intent to reduce Licensee's exclusive license under this Agreement to a nonexclusive license. If Licensee fails to commence or otherwise conduct or have conducted research, development, manufacture, marketing and/or sale of Licensed Technology within sixty (60) days after receipt of The Regents' notice of intent to reduce Licensee's exclusive rights to non-exclusive pursuant to the preceding sentence, The Regents may reduce the exclusive license granted to Licensee to a nonexclusive license, subject to Article 25 (Non-Binding Dispute Resolution). This right, if exercised by The Regents, supersedes the rights granted in Article 2 (Life of Patent Exclusive Grant). If Licensee fails to commence or otherwise conduct or have conducted research, development, manufacture, marketing and/or sale of the Licensed Technology for a period of more than three (3) consecutive years after the effective date of any such reduction of Licensee's exclusive license rights to non-exclusive, then The Regents shall have the right and option to give written notice to Licensee of its intent to terminate this Agreement. If Licensee fails to commence or otherwise conduct or have conducted substantive research, development, manufacture, marketing and/or sale of Licensed Technology within sixty (60) days after receipt of The Regents' notice of intent to terminate pursuant to the preceding sentence, The Regents may terminate this Agreement pursuant to Article 12 (Termination By The Regents), and subject to Article 25 (Non- Binding Dispute Resolution).

8.3 Notwithstanding the foregoing Sections 8.1 or 8.2, either of the following shall be sufficient (but not necessary) to satisfy Licensee's or its Sublicensees' diligence obligations under this Agreement:

(a) Continuing to fund the Sponsored Research Agreement and any extensions, amendments or renewals thereof; or

(b) Licensee and/or its Sublicensees spending at least $2,400,000 in the aggregate over a period of eight (8) years ("Minimum Spending Requirement") for research, development, manufacture, marketing and/or sale of Licensed Products (including, without limitation, direct and indirect expenditures on development and/or implementation of methods for making, qualifying, and scaling up undifferentiated human embryonic stem cells as source material for Licensed Products). Decision-making with respect to any amounts to be spent on a year-to-year basis shall be at the sole discretion of Licensee or its Sublicensees, provided that the aggregate total amount spent by License and/or its Sublicensees meets the Minimum Spending Requirement.

(c) If Licensee or its Sublicensees choose to rely upon Section 8.3(b) to satisfy the diligence obligations set forth under this Article 8, then upon expiration of the eight (8) year period set forth in Section 8.3(b), Licensee and/or its Sublicensees shall report to The Regents whether the Minimum Spending Requirement has been met. If the Minimum Spending Requirement has not been met, Licensee or its Sublicensees shall report to The Regents the amount by which Licensee's and/or its Sublicensees' spending fell below the Minimum Spending Requirement (the "Spending Shortfall"), and The Regents shall have the right and option to give written notice to Licensee of its intent to reduce Licensee's exclusive license to a non-exclusive license. Upon receipt of such written notice, Licensee and/or its Sublicensees shall have the right, for a period of sixty (60) days thereafter, to submit to The Regents a detailed development plan demonstrating Licensee's and/or its Sublicensees' intent to commence or otherwise conduct or have conducted research, development, manufacture, marketing and/or sale of Licensed Technology at a spending rate equal to the sum of the Spending Shortfall plus the amount of the Minimum Spending Requirement allocated evenly, from year-to-year, over the next eight (8) year period (the "Annual Spending Minimum"). If Licensee and/or its Sublicensees fail to submit such a development plan, or if, within twelve (12) months after providing such development plan to The Regents, Licensee and/or its Sublicensees have not met the Annual Spending Minimum, the Regents will be entitled, upon prior written notice to Licensee, to reduce the exclusive rights granted to Licensee to a non-exclusive license. If, for a period of an additional twelve (12) months after reduction of Licensee's rights to non-exclusive pursuant to the preceding sentence, Licensee and/or its Sublicensees have not met the Annual Spending Minimum, The Regents may terminate this Agreement pursuant to Article 12.

8.4 Licensee shall endeavor to obtain all necessary governmental approvals for the manufacture, use and sale of the Licensed Technology, when appropriate given the stage of Licensee's efforts to research, develop, manufacture, market and/or sell Licensed Technology but in any event prior to the first Final Sale, and shall use substantive efforts to fill the market demand for Licensed Technology following commencement of marketing at any time during the exclusive period of this Agreement.

9. PROGRESS AND ROYALTY REPORTS

9.1 Beginning December 31, 2003, and annually thereafter, Licensee shall submit to The Regents a written progress report covering Licensee's (and any Affiliate's, Joint Venture's, or Sublicensee's) activities related to (a) the research and development and testing of all Licensed Product and Licensed Services, (b) Licensee's efforts, if any, to obtain the governmental approvals necessary for the manufacture, use and sale of the Licensed Technology in accordance with Paragraph 8.4, above, and (c) the activities required and undertaken in order to meet the diligence requirements set forth in Article 8 above. Annual progress reports are required until the first Final Sale of a Licensed Product or Licensed Service occurs in the U.S. and shall be again required if commercial sales of Licensed Products or Licensed Services are suspended or discontinued. Reports submitted by Licensee under this Article 9 (Progress and Royalty Reports) shall be considered Confidential Information in accordance with Article 30 (Secrecy) hereof.

9.2 Progress reports submitted under Paragraph 9.1 shall include, but are not limited to the following topics, to the extent applicable given the stage of Licensee's research, development, manufacture and/or sales efforts:

9.2.1 summary of work completed;
9.2.2 key scientific discoveries;
9.2.3 summary of work in progress;
9.2.4 current schedule of anticipated events or milestones;
9.2.5 market plans for introduction of Licensed Product; and
9.2.6 a summary of resources spent in the reporting period.

Information in addition to that set forth in Paragraphs 9.2.1-9.2.6, above, may be submitted at Licensee's discretion.

9.3 Licensee has a continuing responsibility, in response to The Regents' request, to keep The Regents informed of the small business entity status (as defined by the USPTO) of itself or any Affiliates or Joint Ventures. Licensee will exercise best efforts to keep The Regents informed of the small business entity status (as defined by the USPTO) of any Sublicensees other than Affiliates or Joint Ventures.

9.4 Licensee shall report to The Regents the date of first Final Sale by Licensee and/or its Affiliates or Joint Venture of a Licensed Product in each country in its first progress and/or royalty reports following such first Final Sale of a Licensed Product. To the extent known to Licensee, Licensee will inform The Regents the date of first Final Sale by a Sublicensee.

9.5 Licensee shall submit quarterly Royalty and Revenue Share Payment reports to The Regents on or before each February 28 (for the quarter ending December 31), May 31 (for the quarter ending March 31), August 31 (for the quarter ending June 30) and November 30 (for the quarter ending September 30) of each year following the first Final Sale of a Licensed Product. Each Royalty and Revenue Share Payment report will cover Licensee's most recently completed calendar quarter and will show:

9.5.1 the gross sales and Net Sales and any Attributed Income due to Licensee during the most recently completed calendar quarter;
9.5.2 the number of each type of Licensed Product and Licensed Service sold;
9.5.3 the country in which the Licensed Technology was made, used or sold;
9.5.4 the Royalties and Revenue Share Payment, in U.S. dollars, payable with respect to Net Sales and Attributed Income, respectively;
9.5.5 the method used to calculate the Royalties and Revenue Share Payment; and
9.5.6 the exchange rates used, if any;
9.5.7 any other information determined by Licensee to be reasonably necessary to confirm Licensee's calculation of its royalty obligations hereunder.

Royalty and Revenue Share Payment reports submitted by Licensee under this Paragraph 9.5 shall be deemed Licensee's Confidential Information under Article 30 (Secrecy), except that The Regents shall be permitted to disclose, in confidence, the detailed amounts paid by Licensee under this Agreement, in royalty-share distribution calculations provided to its campuses and to the inventors. Total amounts received by The Regents hereunder shall not be deemed "Confidential Information."

9.6 If, for any reporting period after the first Final Sale of a Licensed Product, Licensee has no Net Sales and no Attributed Income is due to Licensee during such reporting period, then a statement to this effect is required.

10. BOOKS AND RECORDS

10.1 Licensee shall keep accurate books and records showing all Net Sales and Attributed Income, Revenues and Royalty Share Payments, and other amounts payable hereunder and all sublicenses granted under the terms of this Agreement. Books and records must be preserved for at least five (5) years from the date of the reporting period to which they pertain.

10.2 Licensee's books and records pertaining to Net Sales, Attributed Income, Royalties and Revenue Share Payments must be open to inspection, in confidence, no more than twice annually, by an independent certified public accountant selected by The Regents and representatives or agents of The Regents at reasonable times during normal business hours and with prior written notice to Licensee, during the term of this Agreement and for at least five (5) years thereafter. The Regents shall bear the fees and expenses of examination but if an error in Royalties of more than five percent (5%) of the total Royalties due for any year is discovered in any examination, then Licensee shall bear the fees and expenses of that examination. Any underpayment shall be paid within thirty (30) days after receipt by The Regents and Licensee of the report submitted by such certified public accountant. Any overpayment by Licensee shall be credited toward Licensee's next Royalty and/or Revenue Share Payments due under this Agreement, irrespective of whether such Royalty and/or Revenue Share Payment is due in the next quarter or in a subsequent quarter, or if no such payments are expected to become due under this Agreement, shall be reimbursed to Licensee within a reasonable period, not to exceed ninety (90) days, after determination of such overpayment by the certified public accountant selected by The Regents.

11. LIFE OF THE AGREEMENT

11.1 Unless otherwise terminated by operation of law or by acts of the parties in accordance with the terms of this Agreement, this Agreement will be in force from the Effective Date until the date of expiration of the last-to-expire Valid Claim of the Regents' Patent Rights; or until the last patent application licensed under this Agreement is abandoned and no patent in Regents' Patent Rights ever issues.

11.2 Any termination of this Agreement will not affect the rights and obligations set forth in the following Articles:

Article 10	Books and Records
Article 14	Disposition of Licensed Product on Hand Upon Termination

Article 15	Use of Names and Trademarks
Article 20	Indemnification
Article 24	Failure to Perform
Article 30	Secrecy

12. TERMINATION BY THE REGENTS

If Licensee fails to perform or violates any term of this Agreement, then The Regents may give written notice of default ("Notice of Default") to Licensee. If Licensee fails to repair the default within sixty (60) days after receipt by Licensee of the Notice of Default (the "Cure Period"), then The Regents may terminate this Agreement and its licenses by a second written notice ("Notice of Termination"). Notwithstanding the foregoing, with respect to the diligence obligations set forth in Article 8 (Diligence), The Regents' remedies shall be as set forth in Article 8. If a Notice of Termination is sent to Licensee, then this Agreement will automatically terminate on the effective date of that notice. Such termination will not relieve Licensee of its obligation to pay any fees owing at the time of termination and will not impair any accrued right of The Regents. These notices are subject to Article 21 (Notices).

13. TERMINATION BY LICENSEE

13.1 Licensee has the right at any time to terminate this Agreement with or without cause, in whole or as to any portion of Regents' Patent Rights by giving notice in writing to The Regents. Such notice of termination will be subject to Article 21 (Notices) and termination of this Agreement will be effective sixty (60) days from the effective date of such notice.

13.2 Any termination under the above Paragraph 13.1 does not relieve Licensee of any obligation or liability accrued under this Agreement prior to termination, nor shall any such termination rescind any payment made to The Regents or anything done by Licensee prior to the time termination becomes effective. Termination does not affect in any manner any rights of The Regents arising under this Agreement prior to termination After termination by The Regent or Licensee, Licensee shall be permitted to dispose of Licensed Products and perform Licensed Services in accordance with Article 14 (Disposition of Licensed Product On Hand Upon Termination); *provided, however,* that Royalties shall be payable by Licensee hereunder for Products that were Licensed Products at the time such Products were made, regardless of whether such Products are still Licensed Products when used, sold or imported thereafter in accordance with the terms of Article 14 (Disposition of Licensed Products On Hand Upon Termination).

14. DISPOSITION OF LICENSED PRODUCT ON HAND UPON TERMINATION

Upon termination of this Agreement, within a period of one hundred and twenty (120) days following termination, Licensee is entitled to (i) dispose of all Licensed Products made, generated or produced, in whole or in part, prior to the effective date of such termination, but Licensee shall not be entitled to make, generate or produce any additional Licensed Products and (ii) provide Licensed Services contracted prior to the effective date of such termination, provided that the sale or use of such Licensed Product and the provision of such Licensed Services are subject to the terms of this Agreement, including, but not limited to, the rendering of reports and payment of Royalties, Revenue Share Payments and any other payments therefore required under this Agreement.

15. USE OF NAMES AND TRADEMARKS

15.1 Nothing contained in this Agreement confers any right to use in advertising, publicity or other promotional activities any name, trade name, trademark or other designation of either party hereto (including contraction, abbreviation or simulation of any of the foregoing). Unless required by law, the use by Licensee of the name "The Regents of the University of California" or the name of any campus of the University of California in any advertising, publicity or other promotional activities is prohibited, except by mutual written consent of the parties.

15.2 The terms and conditions of this Agreement shall be considered Confidential Information of the parties in accordance with Article 30 (Secrecy) hereof. Notwithstanding the foregoing, The Regents is free to release to the inventors and senior administrators employed by The Regents the terms and conditions of this Agreement. If such release is made, then The Regents shall give notice of the confidential nature and shall require that the recipient does not disclose such terms and conditions to others. If a third party inquires whether a license to Regents' Patent Rights is available, then The Regents may disclose the existence of this Agreement and the extent of the grant to such third party (i.e., the exclusive nature of the license grant, and the Field of Use), but will not disclose the name of Licensee or any other terms or conditions of this Agreement. If The Regents is required to release information under governmental requirements such as the California Public Records Act, a regulatory requirement, a contractual requirement, an audit requirement or other requirements of law, The Regents will provide prior written notice to Licensee and work with Licensee to redact material that can be withheld from disclosure to the extent permitted by law. Licensee may disclose the terms and conditions of this Agreement if one of the following conditions is satisfied:

(a) the disclosure is required by applicable securities laws or by the laws applicable to the regulatory approval of Licensed Technology;

(b) the disclosure is made to a third party for a proposed or consummated business transaction or relationship; provided that the third party agrees to maintain the information as confidential; or

(c) the disclosure is made to a third party for a public or private equity or other financing or corporate transaction such as a public offering, merger, acquisition, consolidation or asset transfer and the third party agrees to maintain such information as confidential. Any other disclosure of the existence of or terms and conditions of this Agreement by Licensee or The Regents shall require written agreement of the parties, which shall not be unreasonably withheld.

16. LIMITED WARRANTY

16.1 The Regents represents and warrants to Licensee that (a) it has the lawful right to grant this license and (b) as of the Effective Date, based upon the knowledge of the Director and Senior Licensing Officer of the Office of Technology Alliances of the University of California at Irvine after reasonable review and diligence, its entry into this Agreement does not violate any agreements or obligations The Regents may have to any other person or entity.

16.2 This license and the associated Inventions are provided WITHOUT WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED. THE REGENTS MAKES NO REPRESENTATION OR WARRANTY THAT LICENSED PRODUCT, LICENSED SERVICE OR LICENSED METHOD WILL NOT INFRINGE ANY PATENT OR OTHER PROPRIETARY RIGHT.

16.3 IN NO EVENT MAY THE REGENTS BE LIABLE FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES RESULTING FROM EXERCISE OF THIS LICENSE OR THE USE OF THE INVENTION, LICENSED PRODUCT, LICENSED SERVICE OR LICENSED METHOD.

16.4 This Agreement does not:

16.4.1 express or imply a warranty or representation as to the validity or scope of any of Regents' Patent Rights;

16.4.2 express or imply a warranty or representation that anything made, used, sold, offered for sale or imported or otherwise disposed of under any license granted in this Agreement is or will be free from infringement of patents of third parties;

16.4.3 obligate The Regents to bring or prosecute actions or suits against third parties for patent infringement except as provided in Article 19 (Patent Infringement);

16.4.4 confer by implication, estoppel or otherwise any license or rights under any patents of The Regents other than Regents' Patent Rights as defined in this Agreement, regardless of whether those patents are dominant or subordinate to Regents' Patent Rights; or

16.4.5 obligate The Regents to furnish any know-how not provided in Regents' Patent Rights.

17. PATENT PROSECUTION AND MAINTENANCE

17.1 As long as Licensee has paid patent costs as provided for in this Article 17 (Patent Prosecution and Maintenance), The Regents shall diligently endeavor to prosecute and maintain the U.S. and foreign patents comprising Regents' Patent Rights using counsel of its choice, subject to the approval of the Licensee, which approval shall not be unreasonably withheld. The Regents shall propose at least three (3) choices of patent prosecution counsel to Licensee. If Licensee rejects three (3) of The Regents' choices of patent prosecution counsel, then The Regents may appoint a patent prosecution counsel without Licensee's consent. Unless otherwise agreed by the parties or requested by Licensee or The Regents, the parties agree to continue to utilize the services of Ms. Carol Francis in connection with prosecution and maintenance matters related to the Regents' Patent Rights. In the event Ms. Francis is no longer available or upon Licensee's or The Regents' request, the parties will use the method set forth in this Paragraph 17.1 to identify mutually acceptable alternative counsel.

17.2 The Regents shall provide Licensee with copies of any patent applications within the Regents' Patent Rights, and all relevant documentation related thereto (including a copy of all written communications from the USPTO) promptly, and in any event within thirty (30) days after receipt thereof so that Licensee may be informed of the continuing prosecution. The parties will continue to cooperate in prosecution and maintenance matters related to Regents' Patent Rights. Licensee agrees to keep documentation provided to Licensee under this Section 17.2 confidential. The Regents' counsel will take instructions only from The Regents and all patents and patent applications under this Agreement will be assigned solely to The Regents, to the extent of The Regents' ownership interest therein and as provided by any agreements between The Regents and the inventors. Notwithstanding the foregoing, Licensee shall have the right to review and comment upon all applications and communications with the USPTO prior to submission. Licensee's comments shall be considered in good faith by The Regents and shall be incorporated unless determined by The Regents to be inconsistent with the public benefit. The Regents shall use reasonable efforts to amend any patent application to include claims reasonably requested by Licensee to protect the products and services contemplated to be sold under this Agreement.

17.3 The Regents will request that The Regents' patent prosecution counsel notify Licensee at least ninety (90) days in advance of the date upon which any application for extension of the term of any patent included within the Regents' Patent Rights must be filed, and inform Licensee of the basis upon which such application for extension may be warranted. If Licensee is not notified of the date upon which such application for extension of the patent term must by filed, Licensee shall not be liable for any failure by Licensee to file an application for extension thereof. If Licensee concurs with The Regents with respect to the propriety of such application for extension, Licensee shall apply for an extension of the term of any patent included within Regents' Patent Rights, if appropriate, under the Drug Price Competition and Patent Term Restoration Act of 1984 and/or European, Japanese and other foreign counterparts of this Law. Licensee shall prepare all documents and The Regents agrees to execute the documents and to take additional action as Licensee reasonably requests in connection therewith, at The Regents expense.

17.4 If either party (in the case of The Regents, the Licensing Officer responsible for administration of this Agreement) receives written notice pertaining to infringement or potential infringement of any issued patent included within Regents' Patent Rights under the Drug Price Competition and Patent Term Restoration Act of 1984 (and/or foreign counterparts of this Law), then that party shall notify the other party within ten (10) business days after receipt of notice of infringement.

17.5 Licensee shall bear the costs of preparing, filing, prosecuting and maintaining all patents included within the Regents' Patent Rights. Costs billed by The Regents' counsel will be rebilled to Licensee and are due within thirty (30) days after Licensee's receipt of an invoice therefor from The Regents. These costs include patent prosecution costs for the Regents' Patent Rights incurred by The Regents prior to the execution of this Agreement and any patent prosecution costs that may be incurred for patentability opinions, re-examination, re-issue, interferences, oppositions or inventorship determinations with respect to Regents' Patent Rights. In order to reduce these costs, The Regents will consider, in good faith, giving Licensee the opportunity to perform such activities, using Licensee's in-house patent counsel. Notwithstanding the foregoing, nothing herein shall (a) preclude The Regents from obtaining such services from patent prosecution counsel other than Licensee's in-house patent counsel, or (b) require Licensee to undertake such activities on behalf of The Regents. Patent prosecution costs incurred prior to the Effective Date of this Agreement in the amount of $5,168.57 will be due within thirty (30) days after Licensee's receipt of an invoice therefor from The Regents.

17.6 Licensee may request The Regents to obtain patent protection in foreign countries if available and if it so desires. The Regents will request that the Regents' patent prosecution counsel notify Licensee in writing at least ninety (90) days prior to the deadline for any payment, filing or action to be taken in connection therewith, and Licensee shall notify The Regents whether it wishes to obtain or maintain foreign patents not less than sixty (60) days prior to the deadline for any payment, filing or action to be taken in connection therewith. This notice concerning foreign filing must be in writing, must identify the countries desired and must reaffirm Licensee's obligation to underwrite the costs thereof. The absence of such a notice from Licensee to The Regents will be considered an election not to obtain or maintain foreign rights.

17.7 Licensee's obligation to underwrite and to pay patent prosecution costs will continue for so long as this Agreement remains in effect, but Licensee may terminate its obligations with respect to any given patent application or patent within the Regents' Patent Rights upon three (3) months' written notice to The Regents. The Regents will use its reasonable efforts to curtail patent costs when a notice of termination is received from Licensee. The Regents may prosecute and maintain such application(s) or patent(s) at its sole discretion and expense, but Licensee will have no further right or licenses thereunder. Non-payment of patent costs may be deemed by The Regents as an election by Licensee not to maintain application(s) or patent(s), unless cured by Licensee within sixty (60) days after receipt by Licensee of notice of failure to pay from The Regents. 17.8 The Regents may file, prosecute or maintain patent applications at its own expense in any country in which Licensee has not elected to file, prosecute or maintain patent applications in accordance with this Article 17 (Patent Prosecution and Maintenance) and those applications and resultant patents will not be subject to this Agreement. Notwithstanding the foregoing, The Regents will not license such patent applications or resultant patents to any third party without first offering Licensee the opportunity to include such patents within the Regents' Patent Rights under this Agreement and subject to the terms and conditions of this Agreement, in consideration of Licensee's payment of any patent costs incurred by The Regents to file, prosecute or maintain such patent application or resultant patents.

18. PATENT MARKING

Licensee shall mark all Licensed Product made, used or sold under the terms of this Agreement, or their containers, in accordance with the applicable patent marking laws.

19. PATENT INFRINGEMENT

19.1 If Licensee learns of the infringement of any patent within Regents' Patent Rights, then Licensee shall call The Regents' attention thereto in writing and provide The Regents with reasonable evidence of infringement. Neither party will notify a third party of the infringement of any of Regents' Patent Rights without first obtaining consent of the other party, which consent will not be unreasonably denied. Both parties shall use their reasonable efforts in cooperation with each other to terminate infringement without litigation.

19.2 Licensee may request that The Regents take legal action against the infringement of Regents' Patent Rights, Such request must be in writing and must include reasonable evidence of infringement and damages to Licensee. If the infringing activity has not abated within ninety (90) days following the date of request, then The Regents has the right to:

(a) commence suit on its own account; or
(b) refuse to participate in the suit, and

The Regents shall give notice of its election in writing to Licensee by the end of the one- hundredth (100^{th}) day after receiving notice of written request from Licensee. Licensee may thereafter bring suit for patent infringement, at its own expense, if and only if The Regents elects not to commence suit and if the infringement occurred during the period and in a jurisdiction where Licensee had exclusive rights under this Agreement. If, however, Licensee elects to bring suit in accordance with this Paragraph 19.2, then The Regents may thereafter join that suit at its own expense. Licensee agrees not to bring suit for patent infringement without following the procedures of this Paragraph, and both parties agree to be bound by an order of a court issued as a result of a suit brought under this Paragraph as to any findings concerning patent infringement, patent infringement issues and patent infringement defenses raised through a suit under this Paragraph.

19.3 Legal action, as is decided on, will be at the expense of the party bringing suit and all damages recovered thereby will belong to the party bringing suit, but legal action brought jointly by The Regents and Licensee will be at the joint expense of the parties and all recoveries will be shared jointly by them in proportion to the share of expense paid by each party.

19.4 Each party shall cooperate with the other in litigation proceedings instituted hereunder but at the expense of the party bringing suit. Litigation will be controlled by the party bringing the suit, except that The Regents may be represented by counsel of its choice in any suit brought by Licensee.

20. INDEMNIFICATION

20.1 Licensee shall indemnify, hold harmless and defend The Regents, its officers, employees and agents, the UC Biotechnology Strategic Targets for Alliances in Research Project (BioSTAR) and the inventors of the patents and patent applications under Regents' Patent Rights and their employers (collectively, "Indemnified Parties") against any and all claims, suits, losses, liabilities, damages, costs, fees and expenses resulting from or arising out of exercise of this license. This indemnification includes, but is not limited to, any product liability.

20.2 Licensee, at its sole cost and expense, shall insure its activities in connection with the work under this Agreement and obtain, keep in force and maintain insurance as follows or an equivalent program of self-insurance.

20.3 Comprehensive or commercial form general liability insurance (contractual liability included) with limits as follows:

- Each Occurrence $1,000,000
- Products/Completed Operations Aggregate $1,000,000 (increasing to $5,000,000 to be effective at the time of initiation of a human clinical trial sponsored by Licensee or its Sublicensees for the Licensed Technology)
- Personal and Advertising Injury $1,000,000 General
- Aggregate (commercial form only) $1,000,000

The coverage and limits referred to under the above do not in any way limit the liability of Licensee. Not more than once annually, Licensee shall furnish The Regents with certificates of insurance showing compliance with all of the foregoing requirements. Certificates must:

- Indicate that The Regents has been endorsed as an additional Insured under the coverage referred to under the above.
- Include a provision that the coverage will be primary and will not participate with nor will be excess over any valid and collectable insurance or program of self-insurance carried or maintained by The Regents.

20.4 The Regents shall promptly notify Licensee in writing of any claim or suit brought against The Regents in respect of which The Regents intends to invoke the provisions of this Article 20 (Indemnification). Licensee shall have the right to defend against, settle or compromise such claim or suit, and The Regents shall cooperate, and shall use reasonable efforts to cause any Indemnified Party to cooperate fully with Licensee, at Licensee's sole cost and expense, in any defense, settlement or compromise of such claim or suit. The Regents shall not enter into, and shall use reasonable efforts to prevent any Indemnified Party from entering into, any settlement agreement or other voluntary resolution of any such claim or suit without obtaining the Licensee's prior written consent, which consent will not be unreasonably withheld. The Regents does not guarantee its ability to control University of California faculty members, and will not be responsible if such a faculty member fails so to cooperate or enters into such an agreement in spite of The Regents reasonable efforts. Licensee shall keep The Regents informed on a current basis of its defense of any claims under this Article 20 (Indemnification). Licensee shall not admit liability or wrongdoing on the part of an Indemnified Party without the written consent of The Regents, which consent shall not be unreasonably withheld.

21. NOTICES

21.1 Any notice or payment required to be given to either party under this Agreement shall be in writing and shall be deemed to have been properly given and to be effective as of the date specified below if delivered to the respective address given below or to another address as designated by written notice given to the other party:

(a) on the date of delivery if delivered in person;
(b) on the date of mailing if mailed by first-class certified mail, postage paid; or
(c) on the date of mailing if mailed by any global express carrier service that requires recipient to sign the documents demonstrating the delivery of such notice or payment.

In the case of Licensee:	Geron Corporation 230 Constitution Drive Menlo Park, California 94025 Attention: Director, Corporate Development Telephone: (650) 473-7700 Facsimile: (650)566-7181
In the case of The Regents:	Office of Technology Transfer 1111 Franklin Street, 5th Floor Oakland, CA 94607-5200 Attention: Executive Director Research Administration and Technology Transfer RE: UC Case No. 2002-338-1

22. ASSIGNABILITY

This Agreement may be assigned by The Regents, but shall not be assigned by Licensee without the prior written consent of The Regents, which consent will not be unreasonably withheld, except as part of a sale or transfer, by way of merger, acquisition or otherwise, of all or substantially all of the business assets of Licensee (or all of the business assets of Licensee related to the Licensed Technology). Except as permitted hereby, any attempted assignment by Licensee without the written consent of The Regents will be null and void.

23. NO WAIVER

No waiver by either party of any default of this Agreement may be deemed a waiver of any subsequent or similar default. A suspension of duty under this Agreement due to force majeure shall not be for a period longer than one (1) year.

24. FAILURE TO PERFORM

If either party finds it necessary to undertake legal action against the other on account of failure of performance due under this Agreement, then the prevailing party is entitled to reasonable attorney's fees in addition to costs and necessary disbursements.

25. NON-BINDING DISPUTE RESOLUTION

Should any dispute arise under or related to this Agreement between The Regents and Licensee (other than a dispute involving a claim for injunctive or equitable relief), The Regents and Licensee, through appropriately senior persons, shall first meet and attempt to resolve the dispute in face-to-face negotiations. This meeting shall occur within sixty (60) days after request by either party for such meeting, subsequent to the time the dispute arises. If no resolution is reached through such face-to-face negotiations, both parties shall be free to seek any other remedy available by law.

26. GOVERNING LAWS

THIS AGREEMENT WILL BE INTERPRETED AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF CALIFORNIA WITHOUT REGARD TO CONFLICT OF LAWS OR TO WHICH PARTY DRAFTED PARTICULAR PROVISIONS OF THIS AGREEMENT, but the scope and validity of any patent or patent application within Regents' Patent Rights will be governed by the applicable laws of the country of the patent or patent application. Venue for disputes between the parties regarding this Agreement will be within California.

27. PREFERENCE FOR U.S. INDUSTRY

Because this Agreement grants the exclusive right to use or sell the Licensed Technology and for as long as such exclusive rights are retained by Licensee, Licensee agrees to make commercially reasonable efforts to ensure that any Licensed Products to be sold in the U.S. will be manufactured substantially in the U.S. to the extent that manufacturing capacity and capability is available within the U.S. The parties hereby acknowledge and agree that the Licensed Technology, as defined hereunder, is not subject to the terms and conditions of the Bayh-Dole Act. To the extent, in any written amendment or modification of this Agreement which may be entered by the parties, additional technology is exclusively licensed to Licensee which is subject to the terms and conditions of the Bayh-Dole Act, Licensee agrees to ensure that any licensed products developed using such licensed technology will be manufactured substantially in the U.S., unless otherwise agreed in writing by the parties.

28. GOVERNMENT APPROVAL OR REGISTRATION

Licensee shall notify The Regents if it becomes aware that this Agreement is subject to any U.S. or foreign government reporting or approval requirement. Licensee shall make all necessary filings and pay all costs including fees, penalties and all other out-of- pocket costs associated with such reporting or approval process.

29. EXPORT CONTROL LAWS

Licensee shall observe all applicable U.S. and foreign laws with respect to the transfer of Licensed Product and related technical data to foreign countries, including, without limitation, the International Traffic in Arms Regulations (ITAR) and the Export Administration Regulations.

30. SECRECY

30.1 With regard to confidential information ("Confidential Information"), which can be oral or written or both, received by Licensee from The Regents regarding the Licensed Technology, or received by The Regents regarding the performance by Licensee of its obligations or exercise of its rights under this Agreement (including without limitation, the Reports submitted by License under Paragraph 9 hereof, Licensee and The Regents agree, respectively:

30.1.1 not to use the Confidential Information except for the sole purpose of performing its obligations or exercising its rights under the terms of this Agreement;

30.1.2 to safeguard Confidential Information against disclosure to or by others with the same degree of care as it exercises with its own data of a similar nature;

30.1.3 not to disclose Confidential Information to others except as necessary to perform its obligations or exercise its rights under this Agreement and then only to its employees, agents, consultants, or third parties who are bound by a like obligation of confidentiality without the express written permission of The Regents or Licensee, which permission shall not be unreasonably withheld.

30.2 Notwithstanding the foregoing Paragraph 30.1:

30.2.1 Licensee's and The Regents' rights to use and disclose data, information, research results and research records arising or developed under the Sponsored Research Agreement and any extensions or renewals thereof shall continue to be governed by the terms and conditions of Article 7 of the Sponsored Research Agreement; and

30.2.2 Neither Licensee nor The Regents shall be prevented from using or disclosing any of the information that:

30.2.2.1 Licensee or The Regents can demonstrate by written records was known to it prior to disclosure hereunder by the other party;

30.2.2.2 is now or becomes in the future, public knowledge other than through wrongful acts or omissions of Licensee or The Regents; or

30.2.2.3 is lawfully obtained by Licensee or The Regents from sources independent of The Regents or Licensee, respectively;

30.2.2.4 is required to be disclosed to a governmental entity or agency in connection with seeking any governmental or regulatory approval, or pursuant to the lawful requirement or request of a governmental entity or agency (subject to the terms set forth in Section 15.2 with respect thereto); and/or

30.2.2.5 is developed independently by Licensee or The Regents without use of any Confidential Information received from the other party hereunder.

30.3 The secrecy obligations of Licensee and The Regents with respect to Confidential Information will continue for a period ending five (5) years from receipt of such Confidential Information under this Agreement.

30.2 Upon any expiration or termination of this Agreement, Licensee and The Regents must destroy or return to the other party any Confidential Information in its possession within thirty (30) days following the effective date of such termination or expiration. However, each party may retain one copy of Confidential Information solely for archival purposes, provided that such Confidential Information is subject to the confidentiality provisions set forth in this Article 30 (Secrecy). Within sixty (60) days following any expiration or termination of this Agreement, each party must provide the other party with a written notice that Confidential Information has been returned or destroyed.

31. MISCELLANEOUS

31.1 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.

31.2 This Agreement is not binding on the parties until it has been signed below on behalf of each party. It is then effective as of the Effective Date.

31.3 No amendment or modification of this Agreement is valid or binding on the parties unless made in writing and signed on behalf of each party.

31.4 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.

31.5 In case any of the provisions contained in this Agreement is held to be invalid, illegal or unenforceable in any respect, that invalidity, illegality or unenforceability will not affect any other provisions of this Agreement and this Agreement will be construed as if the invalid, illegal or unenforceable provisions had never been contained in it.

31.6 None of the provisions of this Agreement is intended to create any form of joint venture between the parties, rights in third parties or rights that are enforceable by any third party. Nothing in this Agreement, express or implied, is intended to confer, nor shall anything herein confer on, any person other than the parties and the respective successors or permitted assigns of the parties, any rights or remedies.

IN WITNESS WHEREOF, both The Regents and Licensee have executed this Agreement, in duplicate originals, by their respective and duly authorized officers on the day and year written.

GERON CORPORATION

By : /s/ Melissa A. Kelly
(Signature)

Name: Melissa A. Kelly

Title: Vice President, Corporate Development, and General Manager, R&D Technologies

Date: February 4, 2003

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

By : /s/ David G. Schetter
(Signature)

Name: David G. Schetter

Title: Assistant Vice Chancellor Research & Technology Alliances

Date: 2-20-03

Approved as to legal form: P. Martin Simpson Jr.
P. Martin Simpson Jr.
University Counsel
Office of General Counsel

Date: 2-19-2003

FIRST AMENDMENT TO LICENSE AGREEMENT
BETWEEN
GERON CORPORATION
AND
THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

This First Amendment ("First Amendment") to License Agreement Control No. 2003-04- 0484 ("Agreement") between Geron Corporation ("GERON") and The Regents of the University of California ("THE REGENTS"), is effective as of this 7th day of September, 2004.

WHEREAS, GERON and THE REGENTS entered into the Agreement effective as of February 20, 2003, covering certain inventions developed by THE REGENTS as identified therein;

WHEREAS, GERON and THE REGENTS now desire to revise, add and clarify certain terms and provisions of the Agreement as set forth herein;

NOW THEREFORE, GERON and THE REGENTS amend the Agreement as follows:

(I) DELETE: Section 1.14

(II) REPLACE: the above deleted section with the following Section 1.14:

1.14 "Regents' Patent Rights" means The Regents' interest in the following subject matter:

Regents' Patent Rights shall further include The Regents' interest in any continuing applications of the foregoing including divisions and substitutions and continuation-in- part applications (only to the extent, however, that claims in the continuation-in-part applications are supported in the specification and entitled to the priority filing date of the parent patent applications); any patents on said applications including reissues, reexaminations and extensions; and any corresponding foreign applications or patents. Notwithstanding anything to the contrary herein, Regents' Patent Rights as defined herein shall also include any patentable invention that (a) is dominated by one or more of the patent claims disclosed in UC Case Nos. as set forth in this Section 1.14 and (b) that is conceived and reduced to practice during the course of performing the research work under the Sponsored Research Agreement dated

UC Case Number	U.S. Application Number or U.S. Patent Number	Filing or Issue Date
2002-338-1	60/395,382	July 11, 2002
2002-338-2	10/406,817	April 4, 2003
2002-338-2	PCT/IB03/03539	July 11, 2003
2003-338-3	10/661,105	September 12, 2003

(III) All other terms of the Agreement remain unchanged.

IN WITNESS WHEREOF, the parties hereto have executed this First Amendment.

GERON CORPORATION

By: /s/ Bill Stempel
(Signature)

Name: Bill Stempel
(Please Print)

Title: General Counsel
(Please Print)

Date: 9/7/04

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

By: /s/ David Schetter
(Signature)

Name: David Schetter
(Please Print)

Title: Assistant Vice Chancellor
(Please Print)

Date: 9/22/04

NON-EXCLUSIVE LICENSE AGREEMENT

This Agreement is made effective as of the date of the last to sign party on page 15 ("Effective Date"), by and between the Wisconsin Alumni Research Foundation ("WARF"), a nonprofit Wisconsin corporation, and Asterias Biotherapeutics Incorporated ("Asterias"), a corporation organized and existing under the laws of Delaware, and its Affiliates who agree to sign on and be bound by the terms and obligations of this Agreement (collectively, "Licensee"). To the extent any Affiliate exercises any rights granted to Licensee hereunder, Asterias is liable to WARF for the duties and obligations of any such Affiliate, and any act or omission of an Affiliate that constitutes a breach of this Agreement shall be deemed to be a breach by Asterias.

WHEREAS, WARF owns or holds certain intellectual property rights to the inventions described in the Licensed Patents defined below; and

WHEREAS, Asterias (previously known as BioTime Acquisition Corporation) and its Affiliate BioTime, Inc. ("BioTime") entered into an Asset Contribution Agreement dated January 4, 2013 with Geron Corporation ("Geron"), pursuant to which certain patents, know-how, documents, materials, and other assets relating to Geron's embryonic stem cell programs will be contributed to Asterias (the "ACA"); and

WHEREAS, WARF previously granted to BioTime, a non-exclusive license under certain Licensed Patents, Licensed Materials, and Wisconsin Materials in certain fields covering certain products as provided therein, i.e., Agreement No. 08-0155, and amendments, (the "BioTime Research License"); and

WHEREAS, WARF and BioTime wish to maintain the BioTime Research License, and Licensee desires to obtain a license under the Licensed Patents, Licensed Materials and Wisconsin Materials for Internal Research (defined below) and to make, use and sell Products in the Licensed Field (all defined below) and WARF is willing to grant to Licensee such a license under the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth below, the parties covenant and agree as follows:

Section 1. Definitions.

For the purposes of this Agreement, the Appendix A definitions shall apply.

Section 2. Grant.

A. License.

(i) Subject to the terms of Section 2B, WARF hereby grants Licensee a world-wide, nonexclusive license (a) under the Licensed Patents to make, use and receive Licensed Materials, and (b) under WARF's rights in the Wisconsin Materials to make, use and receive Wisconsin Materials; in each case, solely for use in Internal Research.

(ii) Subject to the terms of Section 2B, WARF hereby grants Licensee a world-wide, nonexclusive license (a) under the Licensed Patents to make, use and receive Licensed Materials, and (b) under WARF's rights in the Wisconsin Materials to make, use and receive Wisconsin Materials; in each case to develop, make, have made, use, distribute, sell, import, and offer for sale Products in the Licensed Field and Licensed Territory; for clarity, Licensee may not distribute, sell or offer for sale any Wisconsin Materials, but may distribute, sell or offer for sale Products that are Derivative Materials.

B. Restrictions and Limitations.

The licenses granted under this Agreement **do not** provide any right or license to: (i) grant any sublicenses under this Agreement to any third parties other than as expressly provided for below; or (ii) use the Licensed Patents, Wisconsin Materials or any Derivative Materials in the manufacture or distribution of Products for any commercial purpose or in human clinical trials in fields outside the Licensed Field.

C. Sublicensing.

(i) Licensee may grant written sublicenses to third parties under the nonexclusive licenses granted herein in the Licensed Field, but only:

(a) To Contract Services Providers to enable the Contract Service Provider to perform specific services solely for Licensee's benefit in support of Licensee's development or commercialization of Products, under a written contract with Licensee, at Licensee's expense, and pursuant to protocols or specifications developed by Licensee. Such a sublicense may include a license to make or use Licensed Materials, Wisconsin Materials or Derivative Materials, or Products, solely for the purpose of providing the services to Licensee, or to sell Products as Licensee's agent, but not to sell or transfer any of them for any other purpose, or to or for any other entity, and shall state the Licensed Materials, Wisconsin Materials and Derivative Materials must be destroyed within thirty (30) days of the completion or termination of the services. Licensee will not receive from any Contract Services Provider any payments or any non-cash consideration in exchange for the grant of a sublicense hereunder and any Products sold by Contract Services Providers as Licensee's agent will be treated as Products sold by Licensee under this Agreement.

(b) To Collaborators to enable the Collaborator to engage in a project of collaborative research with Licensee on (i) the Licensed Materials or Wisconsin Materials, and cells derived from such Licensed Materials or Wisconsin Materials, and/or (ii) the development of Products, provided that the project is described and directed by a Collaborative Research Agreement including a specific workplan collaboratively established by Collaborator and Licensee and that Licensee has the first right to any data and IP arising from such Collaboration. Such a sublicense may include a license to make or use the Licensed Materials, Wisconsin Materials or Derivative Materials, or Products, solely for the purpose of carrying out its obligations under the collaborative research project, but not to sell or transfer any of them for any purpose and shall state the Licensed Materials, Wisconsin Materials and Derivative Materials, and any Products, must be destroyed within thirty (30) days of the completion or termination of the project. Licensee will not receive from any Collaborator any payments or any non-cash consideration in exchange for the grant of a sublicense hereunder.

(c) To Development Partners to enable the Development Partner to develop or commercialize Products initially substantially developed by Licensee, provided WARF does not disapprove as provided below. In the event that such sublicense includes a grant of a limited commercial sublicense to a Development Partner: (i) a copy of such sublicense shall be provided to WARF for review at least [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] business days prior to execution, (ii) such sublicense shall specifically identify the Products covered by such commercial sublicense and shall only include rights under Licensed Patents and Wisconsin Materials as reasonably necessary in the development of those Products, (iii) Licensee, an Affiliate or Geron Corporation ("Geron") must have previously invested at least [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] in the development of each Product to which the sublicense applies, and (iv) Licensee shall remain directly responsible for paying to WARF the consideration described in Sections 4B, 4C and 4F that are incurred (and/or received) as a result of such sublicense and/or Development Partner's subsequent development and commercialization of such Products under such sublicense. Such a sublicense may include a license to make, use and receive the Licensed Materials, Wisconsin Materials or Derivative Materials, and to develop, make, have made, use, distribute, sell, import and offer for sale Products, in each case solely to the extent permitted by this Section 2C(i)(c), and shall state the Licensed Materials, Wisconsin Materials, and Derivative Materials, and any Products, must be destroyed within thirty (30) days of the expiration or termination of the sublicense agreement. WARF shall have the right to disapprove of a commercial sublicense with a Development Partner only if it reasonably believes that Licensee, Affiliates, or Geron have not previously invested at least [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] in the development of the Product that is the subject of such sublicense, or that the rights extended under such sublicense are not reasonably necessary for the development or commercialization of the licensed Product. If WARF does not inform Licensee in writing of its disapproval and the reasons for it within fifteen (15) business days after Licensee informs WARF of the proposed terms, WARF shall be deemed to have approved them. For sake of clarity, no right or license may be extended to a Development Partner to research, develop and/or commercialize any Product that was not initially substantially developed by Licensee, an Affiliate or Geron. Licensee will not receive from any Development Partner any payments or any non-cash consideration in exchange for the grant of a sublicense hereunder that is not fully accounted for under this Section 2C and Section 4C below.

(d) To Corning Incorporated to enable Corning to sell surfaces, glassware and plasticware for the growth of pluripotent stem cells ("Corning Surfaces") developed and tested by Corning under the Collaboration and License Agreement between Corning and Geron, effective as of June 15, 2006, amended and restated as of August 24, 2012, which will be assigned to Licensee as of closure of the Asset Contribution Agreement between Licensee and Geron (the "Corning Collaboration and License Agreement"). Such sublicense: (i) shall be solely for the performance of Corning's activities under the Corning Collaboration and License Agreement, and (ii) shall not include any right to transfer a sublicense under the Licensed Patents to Corning customers with the purchase of Corning Surfaces. In consideration of the rights granted herein, Licensee agrees to pay to WARF [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of all consideration (actual and in kind) received by Licensee from Corning that is the result of or covers any invention made as a part of the Development Partnership Agreement (including without limitation up-front license fees, annual license maintenance fees, milestone payments, royalty payments, equity ,and share of profits, but excluding any payments received to fund research under the development partnership). Such percentage shall be reduced to [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] if the consideration received from Corning and to be paid to WARF was also paid by Corning in exchange for a sublicense to other intellectual property owned or controlled by Licensee required for the purposes of the development partnership. In both cases, such payment shall continue until such time as none of the sublicensed Licensed Patents remains enforceable, unless this Agreement is terminated earlier as provided herein.

(ii) Any agreement granting a sublicense under this Section 2C shall contain terms and conditions no less restrictive than those set forth in this Agreement, and state that the sublicense is subject to the termination of this Agreement; that further sublicensing is prohibited; that the sublicensee is not authorized to transfer any Licensed Materials, Derivative Materials or Wisconsin Materials, or Products, or use them for any purpose outside that permitted by the sublicense; and that the sublicensee will not use Licensed Materials, Derivative Materials or Wisconsin Materials to perform any of the following experiments: (a) intermixing of Licensed Materials, Derivative Materials or Wisconsin Materials with an intact embryo, either human or nonhuman; (b) implanting Licensed Materials, Derivative Materials or Wisconsin Materials, or products of Licensed Materials, Derivative Materials or Wisconsin Materials, in a uterus; or (c) attempting to make whole embryos by any method. Licensee shall require that its sublicensee(s) comply with all requirements, restrictions, limitations and obligations, and acknowledge all limitations of warranties provided in this Agreement, including without limitation those in Sections 2C, 5-7, and 12-15, of this Agreement (to the extent applicable to the work under the sublicense) and Licensee shall have responsibility for the performance of any sublicensee under such sublicense. Licensee shall provide to WARF, in confidence, a summary of any sublicense agreement under this Section 2C within thirty (30) days after execution of such sublicense agreement subject to the obligation, however, in the case of commercial sublicenses to Development Partners to have earlier provided the proposed terms as required above in Section 2C(i)(c).

D. License to WARF.

Licensee hereby grants, and shall require its sublicensee(s) to grant, to WARF a world-wide, nonexclusive, royalty-free, irrevocable, paid-up license, with the right to grant sublicenses, to the University of Wisconsin, the WiCell Research Institute and the Morgridge Institute for Research, to make, have made, use and otherwise practice Developments for Non-Commercial Research Purposes.

Section 3. Reporting.

A. Within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of the Effective Date of this Agreement, Licensee shall submit to WARF a Development Plan describing its intended development efforts relating to Products. If WARF does not inform Licensee of its disapproval of such Development Plan within thirty (30) days, the Development Plan shall be deemed accepted and shall be incorporated hereto as Appendix E. The Development Plan shall include a timeline indicating Licensee's internal operating estimate of when Licensee will [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]. Licensee shall diligently develop, manufacture, market and sell Products in the Licensed Field throughout the term of this Agreement. Such activities shall include, without limitation, those activities listed in the "Development Plan". Licensee agrees that it shall take all commercially reasonable steps to meet the development program as set forth therein.

B. Beginning in June 2014 and until the Date of First Commercial Sale, Licensee shall provide WARF with a semi-annual written Development Report summarizing Licensee's (and those of its sublicensee(s)') development activities since the last Development Report and any necessary adjustments to the Development Plan. Licensee agrees to provide each Development Report to WARF on or before [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] from the end of each semi-annual period ending June 30 and December 31 for which a report is due, and shall set forth in each Development Report sufficient detail to enable WARF to ascertain Licensee's progress toward the requirements of the Development Plan. WARF reserves the right to audit Licensee's and its sublicensee(s)'s records relating to the development activities required hereunder. Such record keeping and audit procedures shall be subject to the procedures and restrictions set forth in Section 6 for auditing the financial records of Licensee.

C. Licensee acknowledges that any failure by Licensee to make commercially reasonable efforts to develop, manufacture, market and sell Products, or to make timely submission to WARF of any Development Report, or the providing of any false information to WARF regarding Licensee's development activities hereunder, shall be a material breach of the terms of this Agreement, subject to the right to cure under Section 7.

Section 4. Consideration.

A. License Fee.

Licensee shall pay to WARF a license fee of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] due and payable within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of the Effective Date.

B. Royalty.

(i) In addition to the Section 4A license fee, Licensee (and its sublicensees) shall pay to WARF, as "earned royalties," a royalty calculated as a percentage of the Net Sales of Products in accordance with the terms of this Agreement. The royalty is deemed earned as [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]. The royalty rate shall remain fixed while this Agreement is in effect according to the following schedule:

(ii) For Therapeutic Products the royalty is set at a rate of:

[*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]

(iii) For Related Therapeutic Products the royalty is set at a rate of:

(iv) For Research Products, the royalty is set at a rate of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of Net Sales.

(v) For Diagnostic Products, the royalty is set at a rate of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of Net Sales.

(vi) If Licensee is required to make payments to a third party (who is not an Affiliate or Development Partner) for a license or similar right to such third party's patents, in the absence of which right or license Licensee could not legally make, use or sell Products, then the royalty payable under this Section 4B shall be reduced by [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] for each additional [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of royalties payable to such third parties on that Product; *provided, however*, that the adjusted royalty rate to WARF will be no less than [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of the applicable royalty rate payable to WARF under this Agreement for such Products.

(vii) In the event that the sale, lease, or other transfer by Licensee of Products under this Agreement also requires payment to WARF of royalties under any other agreement between WARF and Licensee, the cumulative earned royalties owed to WARF for that Product under all such agreements shall not exceed the single highest royalty as set forth in those agreements. Licensee shall pay to WARF royalties under all such agreements individually and on a *pro rata* basis. (For example, if Licensee owes to WARF a [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] earned royalty under this Agreement and a [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] earned royalty under a separate agreement, the cumulative royalties owed to WARF shall be [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission], but shall be paid proportionately under each agreement in payments of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] under this Agreement and [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] on the other.)

(viii) Given the particular Licensed Patents of this Agreement, rather than requiring Licensee to pay earned royalties under a Licensed Patent that is a pending patent application which has not issued as of the Effective Date ("Licensed Patent Application"), WARF is willing to permit Licensee to defer such amounts as follows [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission].

C. [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]

D. Minimum Royalty.

Starting in calendar year 2014, Licensee shall pay to WARF a minimum royalty of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] per calendar year or part thereof during which this Agreement is in effect against which any earned royalty paid for the same calendar year will be credited. The minimum royalty for a given year shall be due at the time payments are due for the calendar quarter ending on December 31. It is understood that the minimum royalties will apply on a calendar year basis, and that sales of Products requiring the payment of earned royalties made during a prior or subsequent calendar year shall have no effect on the annual minimum royalty due WARF for any other given calendar year.

E. Patent Fees and Costs.

Licensee shall pay to WARF [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] toward reimbursement of the costs associated with preparing, filing and maintaining the Licensed Patents, which shall be due on the same date as the License Fee of Section 4A is due.

F. Milestones.

Licensee shall pay to WARF the amounts detailed below within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] days of the first achievement of the corresponding milestones for each Product developed by Licensee (or by a sublicensee):

(i) [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] upon first dosing of a human patient with a Product.

(ii) [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] upon first dosing of a human patient with a Product in a pivotal clinical trial designed to provide statistically significant safety and efficacy data to support the filing of a biologics license application or for registration of a Product with the FDA, EMA or similar regulatory bodies in a nation listed as one of the top [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] world pharmaceutical markets by IMS Health or a similar broadly recognized authority in pharmaceutical market analysis.

(iii) [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] upon receipt of marketing authorization for a Product from the FDA, EMA or similar regulatory bodies in a nation listed as one of the top [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] world pharmaceutical markets by IMS Health or a similar broadly recognized authority in pharmaceutical market analysis.

Notwithstanding the foregoing, in the event the indication that is the subject of the clinical trial set forth in Section 4F(ii) or the marketing authorization set forth in 4F(iii) has been designated by the applicable regulatory authority as an orphan indication, the corresponding milestone payment set forth in Section 4F(ii) or Section 4F(iii) shall be reduced by [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]; provided however that a second payment of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of the applicable milestone payment shall be due upon the first achievement of the corresponding milestone for that Product in a non-orphan indication.

G. Accounting; Payments.

(i) Amounts owing to WARF under Section 4B and 4C or 2C(d) of this Agreement shall be paid on a quarterly basis, with such amounts due and received by WARF on or before the forty-fifth (45^{th}) day following the end of the calendar quarter ending on March 31, June 30, September 30 or December 31 in which such amounts were earned. [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission].

(ii) Except as otherwise directed, all amounts owing to WARF under this Agreement shall be paid in U.S. dollars. All royalties owing with respect to the Net Sales and other fees are stated in currencies other than U.S. dollars shall be converted at the rate shown in the Federal Reserve Noon Valuation - Value of Foreign Currencies on the day preceding the payment. WARF is exempt from paying income taxes under U.S. law. Therefore, all payments due under this Agreement shall be made without deduction for taxes, assessments, or other charges of any kind which may be imposed on WARF by any government outside of the United States or any political subdivision of such government with respect to any amounts payable to WARF pursuant to this Agreement. All such taxes, assessments, or other charges shall be assumed by Licensee or its sublicensees.

(iii) A full accounting showing how any amounts owing to WARF under Section 4B have been calculated shall be submitted to WARF on the date of each such payment. Such accounting shall be on a per-country and Product line, model or tradename basis and shall be summarized on the form shown in Appendix C of this Agreement. In the event no payment is owed to WARF, a statement setting forth that fact shall be supplied to WARF.

Section 5. Certain Warranties.

A. WARF warrants that it has the right to grant the licenses granted to Licensee in this Agreement. Nothing in this Agreement shall, however, be construed as: (i) a warranty or representation by WARF or Licensee as to the validity or scope of any of the Licensed Patents; (ii) a warranty or representation that anything made, used, sold or transferred under the license granted in this Agreement will or will not infringe patents of third parties; (iii) an obligation to furnish any assistance, or know-how not provided in the Licensed Patents or any materials or services other than those specified in this Agreement; or (iv) an obligation to file any patent application or secure or maintain any patent right.

B. EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, WARF MAKES NO OTHER REPRESENTATIONS, EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITIES WHATSOEVER WITH RESPECT TO THE MERCHANTIBILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THE NON-INFRINGEMENT OR USE OF ANY PRODUCT, OR WITH RESPECT TO THE USE, SALE OR OTHER DISPOSITION BY LICENSEE, ITS SUBLICENSEE(S), OR THEIR VENDEES OR OTHER TRANSFEREES, OF PRODUCTS INCORPORATING OR MADE BY USE OF THE INVENTIONS LICENSED, UNDER THIS AGREEMENT.

C. TO THE MAXIMUM EXTENT PERMITTED BY LAW, IN NO EVENT SHALL WARF OR ITS TRUSTEES, DIRECTORS, OFFICERS AND EMPLOYEES (INCLUDING WITHOUT LIMITATION ANY INVENTORS OF THE LICENSED PATENTS) BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING ECONOMIC DAMAGES OR INJURY TO PROPERTY AND LOST PROFITS, REGARDLESS OF WHETHER SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND NOTWITHSTANDING THE FAILURE OF THE ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.

D. Licensee represents and warrants that Products produced under the license granted herein shall be manufactured substantially in the United States as required by 35 U.S.C § 204 [for clarity, such requirement shall apply only to Products utilizing Licensed Patents or Wisconsin Materials whose development was funded at least in part by the Federal government] and applicable regulations of Chapter 37 of the Code of Federal Regulations.

Section 6. Recordkeeping.

A. Licensee and its sublicensee(s) shall keep books and records sufficient to verify the accuracy and completeness of Licensee's and its sublicensee(s)'s accounting referred to above, including without limitation inventory, purchase and invoice records relating to any Products sold under this Agreement. In addition, Licensee shall keep books and records sufficient to verify the accuracy and completeness of Licensee's Development Reports. Such documentation may include, but is not limited to, invoices for studies, laboratory notebooks, internal job cost records, and filings made to the Internal Revenue Department to obtain tax credit, if available, for research and development. All such books and records shall be preserved for a period not less than [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] years after they are created during and after the term of this Agreement.

B. Licensee and its sublicensee(s) shall take all steps reasonably necessary so that WARF may, within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] days of its request, review Licensee's books and records to allow WARF to verify the accuracy of Licensee's Development Reports, the development and royalty reports of its sublicensee(s), and the payments made to WARF. Such review will be performed no more than annual and by an attorney or registered CPA and scientific expert designated by WARF at WARF's expense upon reasonable notice and during regular business hours.

C. If a royalty payment deficiency is determined, Licensee and its sublicensee(s), as applicable, shall pay the royalty deficiency outstanding within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] days of receiving written notice thereof, plus interest on outstanding amounts as described in Section 4G(i). If a royalty payment deficiency for a calendar year exceeds the lesser of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of the royalties paid for that year or [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission], then Licensee or its sublicensee(s) shall be responsible for paying WARF's out-of-pocket expenses incurred with respect to such review.

Section 7. Term and Termination.

A. The term of this Agreement shall begin on the Effective Date and continue until (i) with respect to the Licensed Patents, the expiration of the last to expire Licensed Patent, unless otherwise earlier terminated as provided herein and (ii) with respect to the Wisconsin Materials (per the attached Wisconsin Materials Addendum), until this Agreement is terminated by either Party as provided herein.

B. Licensee may terminate this Agreement at any time by giving at least [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] days written and unambiguous notice of such termination to WARF. WARF may terminate this Agreement if the payment of earned royalties under Section 4B, once begun, ceases for more than [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission].

C. WARF may terminate this Agreement prior to the Date of First Commercial Sale by giving Licensee at least [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]days written notice if Licensee and/or its Collaborators, Contract Service Providers and Development Partners fail to spend at least [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] per year to develop Products in [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] successive calendar years.

D. If Licensee at any time (i) defaults in the timely payment of any monies due to WARF; or the timely submission to WARF of any report, or (ii) commits any breach of any other covenant herein contained, and Licensee fails to remedy any such breach or default within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] days after written notice thereof by WARF, or if Licensee commits any act of bankruptcy, becomes insolvent, is unable to pay its debts as they become due, files a petition under any bankruptcy or insolvency act, or has any such petition filed against it which is not dismissed within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]days, or if Licensee or a sublicensee offers any component of the Licensed Patents, Wisconsin Materials or Licensed Materials to its creditors, WARF may, at its option, terminate this Agreement by giving notice of termination to Licensee.

E. Upon termination of this Agreement, the licenses granted herein shall immediately terminate. In the event of termination under Section 7B or 7C, Licensee shall have [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] days to cease all activities involving the use of Licensed Materials, Wisconsin Materials and Derivative Materials for any purpose, and shall destroy all Licensed Materials, Wisconsin Materials and Derivative Materials in its possession. Licensee and its sublicensee(s) shall remain obligated to pay any outstanding amounts owed as of the date of termination and all such amounts shall be paid within forty-five (45) days of termination.

F. For clarity, the obligations of Sections 5B, 5C, 11, 13, 14, 16, and 18 shall survive any termination of this Agreement.

Section 8. Assignability; Change of Control; Affiliates.

Licensee shall not assign or transfer this Agreement, nor any of the rights granted herein, without the prior written consent of WARF (which shall not be unreasonably withheld), except pursuant to a sale of all or substantially all of the assets relating to Products. Licensee shall notify WARF in writing at least [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] days in advance of any such assignment and, with respect to a transfer of this Agreement to any non-Affiliate, pay to WARF a fee of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] to allow the transfer of the license granted herein to that non-Affiliate to whom control has been transferred, within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] days after the occurrence of such event. For clarity, in no event shall a bona fide financing transaction, or series of bona fide financing transactions, of Licensee including one or more financial investors be deemed to be a sale of the assets of Licensee and no transfer fee under this Section 8 shall be due to WARF in such event.

In the event that an Affiliate who has previously agreed to sign on and be bound by the terms and obligations of this Agreement should subsequently cease to be an Affiliate of Asterias Biotherapeutics through dilution of Asterias' ownership to <50% through a series of bona fide financing transactions, such Affiliate's rights under this Agreement shall survive such Affiliate cessation date for a period of [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission], during which WARF and such Affiliate shall negotiate a direct license agreement with terms substantially identical to those herein, except for: (i) division of the Annual Minimum Royalty due under Section 4D, which division shall be worked out between Asterias and such Affiliate and this Agreement will be amended to reflect such division, and (ii) any other changes as mutually agreed upon between such Affiliate and WARF. For clarity, no transfer fee under this Section 8, sublicense fee under Section 4C (except for any amounts that may remain outstanding under this Agreement), upfront license fee, or additional patent fee shall be due to WARF for the establishment of such a direct license agreement with such Affiliate assuming such foregoing amounts have been satisfied under this Agreement and no additional intellectual property or proprietary rights have been added to such to-be-negotiated license agreement.

Section 9. Contest of Validity.

A. Licensee and its sublicensee(s) must provide WARF at least [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] months prior written notice before filing any action that contests the validity of any Licensed Patent during the term of this Agreement.

B. If Licensee or its sublicensee(s) files any action contesting the validity of any Licensed Patent, the filing party shall pay [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]. Moreover, should the outcome of such contest determine that any claim of a Licensed Patent challenged by the filing party is valid and would be infringed by a Product sold by the filing party if not for the license granted by this Agreement, such filing party shall thereafter, and for the remaining term of this Agreement [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission].

C. If Licensee or its sublicensee(s) contests the validity of any Licensed Patent during the term of this Agreement, Licensee shall pay (and shall require its sublicensee(s) to agree to pay) to WARF all royalties due under the Agreement during the period of challenge. For the sake of clarity, Licensee or the sublicensee shall not pay such amounts into any escrow or other account, but directly to WARF.

Section 10. Enforcement.

WARF intends to protect the Licensed Patents against infringers, or otherwise act to eliminate infringement when, in WARF's sole judgment and discretion, such action may be reasonably necessary, proper and justified. In the event that Licensee or its sublicensee believes there is infringement of any Licensed Patents, Licensee shall provide WARF with notification and reasonable evidence of such infringement. If WARF takes action to remedy the infringement, Licensee or such sublicensee agrees to provide reasonable assistance to WARF as requested by WARF and at WARF's expense.

Section 11. Indemnification and Insurance.

A. Licensee and its sublicensee(s) shall, at all times during the term of this Agreement and thereafter, indemnify, defend and hold WARF, WiCell, the Morgridge Institute for Research and the University of Wisconsin (the "University"), and their respective trustees, directors, officers, shareholders and employees (including without limitation any inventors of the Licensed Patents) (each, an "Indemnitee") harmless against all liabilities, demands, damages, settlements, suits, claims, proceedings, costs and expenses, including legal expenses and reasonable attorneys fees, arising out of or relating to the death of or injury to any person or persons or any damage to property, due to the sale, marketing, use, or manufacture of Products, Licensed Materials, Wisconsin Materials, or any Derivative Materials or Developments by Licensee and all sublicensees hereunder. WARF at all times reserves the right to select and retain counsel of its own to defend WARF's interests in any such proceeding.

B. Licensee warrants that it now maintains and will continue to maintain liability insurance coverage reasonably appropriate to the risk involved in use, sale, marketing, and manufacture of Products, the Licensed Materials, Wisconsin Materials, and any Derivative Materials, or the performance of Services, under this Agreement, and that such insurance coverage is sufficient to cover WARF and the inventors of the Licensed Patents, the Wisconsin Materials and Licensed Materials as additional insureds. Upon WARF's request, Licensee will present evidence to WARF that such coverage is being maintained.

Section 12. Use of Names.

Neither party shall use the other's name, and Licensee and its sublicensee(s) shall not use the name of any inventor of the Licensed Patents, or the name of WARF, WiCell Research Institute, or the University, in any form of publicity without the prior written approval of the entity or person whose name is being used, except where a disclosure is required by any applicable law or the rules of any securities exchange. Notwithstanding the foregoing, WARF shall have the right to disclose to existing and potential licensees the fact that WARF has entered into this Agreement with Licensee.

Section 13. Confidentiality.

A. Both parties agree to keep any information identified as confidential by the disclosing party, confidential using methods at least as stringent as each party uses to protect its own confidential information. Confidential information shall include, without limitation, this Agreement and its terms, as well as any information provided to WARF under Section 3. Except as may be authorized in advance in writing by WARF, Licensee shall only grant access to WARF's Confidential Information to its sublicensee(s) and those employees of Licensee and its sublicensee(s) involved in research relating to the Licensed Patents. Licensee shall require its sublicensee(s) and all such employees to be bound by terms of confidentiality no less restrictive than those set forth in this Section 13. The confidentiality and use obligations set forth above apply to all or any part of information disclosed hereunder except to the extent that:

(i) the receiving party can show by written record that they possessed the information prior to its receipt from the disclosing party;

(ii) the information was already available to the public or became so through no fault of the receiving party;

(iii) the information is subsequently disclosed to the receiving party by a third party that has the right to disclose it free of any obligations of confidentiality; or

(iv) five (5) years have elapsed from the expiration or termination of this Agreement.

B. Nothing contained in this Section 13 shall be construed to limit or preclude WARF from negotiating or entering into any agreements with third parties under terms and conditions similar to that set forth in this Agreement.

Section 14. United States Government Interests.

It is understood that if the United States Government (through any of its agencies or otherwise) has funded research, during the course of or under which any of the inventions of the Licensed Patents were conceived or made, the United States Government is entitled, as a right, under the provisions of 35 U.S.C. § 200-212 and applicable regulations of Chapter 37 of the Code of Federal Regulations, to a nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced the inventions of the Licensed Patents for governmental purposes. Any license granted to Licensee or any of its sublicensees under this Agreement shall be subject to such right.

Section 15. Patent Marking.

Licensee and its sublicensee(s) shall mark all service agreements, Products or product packaging with the appropriate patent number reference in compliance with the requirements of the laws of the United States of America, including specifically, 35 U.S.C. § 287.

Section 16. Miscellaneous.

A. This Agreement shall be governed by and construed in all respects in accordance with the laws of the State of Wisconsin, without reference to its conflicts of laws principles.

B. The parties hereto are independent contractors and not joint venturers or partners.

C. If Asterias or any of its Affiliates also has rights under the BioTime Research License, the terms and obligations of this Agreement shall control.

D. If the enforcement of any provisions of this Agreement are or shall come into conflict with the laws or regulations of any jurisdiction or any governmental entity having jurisdiction over the parties or this Agreement, those provisions shall be deemed automatically deleted, if such deletion is allowed by relevant law, and the remaining terms and conditions of this Agreement shall remain in full force and effect. If such a deletion is not so allowed or if such a deletion leaves terms thereby made clearly illogical or inappropriate in effect, the parties agree to substitute new terms as similar in effect to the present terms of this Agreement as may be allowed under the applicable laws and regulations.

E. WARF and Licensee have each been represented by counsel who participated in the preparation of this Agreement. This Agreement reflects a negotiated compromise between the parties. Neither party shall be considered to be the drafter of this Agreement or any of its provisions for the purpose of any statute, case law or rule of interpretation or construction that would or might cause any provision to be construed against the drafter of this Agreement. The Section headings contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement.

F. This Agreement is not intended to be for the benefit of and shall not be enforceable by any third party. Nothing in this Agreement, express or implied, is intended to or shall confer on any third party any rights (including third-party beneficiary rights), remedies, obligations or liabilities under or by reason of this Agreement. This Agreement shall not provide third parties with any remedy, claim, reimbursement, cause of action or other right in excess of those existing without reference to the terms of this Agreement. No third party shall have any right, independent of any right that exists irrespective of this Agreement, to bring any suit at law or equity for any matter governed by or subject to the provisions of this Agreement.

G. Licensee acknowledges and agrees that damages may not be an adequate remedy in the event of a breach of this Agreement by Licensee. Licensee therefore agrees that WARF shall be entitled to seek immediate and permanent injunctive relief from a court of competent jurisdiction in addition to any other rights or remedies otherwise available to WARF.

H. Waiver by either party of a single breach or default, or a succession of breaches or defaults, shall not deprive such party of any right to terminate this Agreement in the event of any subsequent breach or default.

Section 17. Notices.

Any notice required to be given pursuant to the provisions of this Agreement shall be in writing and shall be deemed to have been given at the earlier of the time when actually received as a consequence of any effective method of delivery, including but not limited to hand delivery, transmission by telecopier, or delivery by a professional courier service or the time when sent by certified or registered mail addressed to the party for whom intended at the address below or at such changed address as the party shall have specified by written notice, provided that any notice of change of address shall be effective only upon actual receipt.

(a) Wisconsin Alumni Research Foundation
Attn: Contracts Manager
614 Walnut Street
Madison, Wisconsin 53726

(b) Asterias Biotherapeutics, Inc.
Attn: Katharine Spink
230 Constitution Dr.
Menlo Park, CA 94025

Section 18. Integration.

This Agreement together with the Wisconsin Materials Addendum, attached hereto, constitutes the full understanding between the parties with reference to the subject matter hereof, and no statements or agreements by or between the parties, whether orally or in writing, except as provided for elsewhere in this Section 18, made prior to or at the signing hereof, shall vary or modify the written terms of this Agreement. Neither party shall claim any amendment, modification, or release from any provisions of this Agreement by mutual agreement, acknowledgment, or otherwise, unless such mutual agreement is in writing, signed by both parties, and specifically states that it is an amendment to this Agreement.

Section 19. Authority.

The persons signing on behalf of WARF and Licensee hereby warrant and represent that they have authority to execute this Agreement on behalf of the party for whom they have signed.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement on the dates indicated below.

WISCONSIN ALUMNI RESEARCH FOUNDATION ("WARF")

By: s/Leigh Cagan Date: 10/7, 2013
Leigh Cagan, Chief Technology Commercialization Officer

ASTERIAS BIOTHERAPEUTICS, INC. ("LICENSEE")

By: s/Katharine Spink Date: October 1, 2013
Katharine Spink, Vice President and Chief Operating Officer

WARF Ref.: Thomson – P96014US

Asterias WARF License – 13-00300

APPENDIX A

A. "Affiliate" and "Affiliates" mean any entity controlled by Asterias. As used herein, "control" shall refer to and mean ownership of greater than fifty percent (>50%) or more of the outstanding voting equity of an entity.

B. "Collaborator" means an academic, non-profit research institution with which Licensee enters into a written agreement pursuant to and solely to the extent permitted by Section 2C for a collaborative project or projects for the further research on and/or development of the Licensed Materials, Wisconsin Materials, Derivative Materials and/or Products in support of Licensee's development or commercialization of one or more Products.

C. "Contract Service Provider" means a third party with which Licensee enters into a written agreement pursuant to and solely to the extent permitted by Section 2C for the provision of specific services in support of Licensee's development or of one or more Products on behalf of Licensee or its Collaborator.

D. "Date of First Commercial Sale" means the date when cumulative sales to the retail market of Therapeutic Products exceed [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission].

E. "Derivative Materials" means any compositions or materials derived by Licensee or its sublicensee(s) from the use of the Wisconsin Materials, or produced by the use of the Wisconsin Materials by Licensee or its sublicensee(s), or which incorporate wholly or partially the Wisconsin Materials, including without limitation, fully or partially differentiated cells or cell lines derived from the Wisconsin Materials by Licensee or its sublicensee(s).

F. "Development" and "Developments" means (i) Derivative Materials; (ii) any inventions, discoveries or developments, whether patentable, that are conceived of, reduced to practice, discovered, tested or developed through the use of the inventions of the Licensed Patents, Wisconsin Materials or Derivative Materials by Licensee or its sublicensee(s); and (iii) any compositions, products or other materials of Licensee or its sublicensee(s) in which the Wisconsin Materials or Derivative Materials were used in any way in their discovery or testing.

G. "Development Partner" means a third party with which Licensee enters into a written agreement pursuant to and solely to the extent permitted by Section 2C for the further development and/or commercialization of Products initially substantially developed by Licensee.

H. "Development Report" means the written report provided under Section 3 describing each Development and Product to be patented or commercialized by Licensee or a sublicensee.

I. "Diagnostic Products" means products or services that (i) are used in the diagnosis, prognosis, screening or detection of disease in humans, and (ii) (a) employ, or are in any way produced or manufactured by the practice or use of the inventions of the Licensed PatentsDerivative Materials or Wisconsin Materials, and/or (b) would otherwise constitute infringement of any claims of the Licensed Patents.

J. "Internal Research" means research conducted internally by Licensee at Licensee's facilities.

K. "Licensed Field" is limited to the field of Products.

L. "Licensed Materials" means primate (including human) embryonic stem cells covered by the Licensed Patents and which meet the following conditions:

(i) For embryonic stem cells created prior to April 26, 2005, the embryonic stem cell must be either: (1) listed on the NIH Human Embryonic Stem Cell Registry at http://escr.nih.gov; or (2) derived from excess embryos created for the purpose of in vitro fertilization with appropriate consent of the donor couple and not for the purpose of creating embryonic stem cells; or (3) derived from embryos created specifically for research purposes either by in vitro fertilization or by somatic cell nuclear transfer, for which the following additional conditions apply: (a) the embryo may not have been maintained in vitro for more than 14 days; (b) the gamete donor(s) and somatic cell donor (if any) made the donation without payment beyond reimbursement for reasonable expenses associated with donation; (c) in the case of egg donation, the donor was fully informed of the risks to herself; (d) the gamete donor(s) and somatic cell donor (if any) were fully informed of the purposes to which their donated materials would be put; (e) the research could not be done equally well using surplus IVF embryos originally created for reproductive purposes; (f) the research protocol, including gamete collection, somatic cell collection, embryo management and stem cell derivation is approved by an appropriate Institutional Review Board; and (g) protections are in place to prevent misappropriation of embryos created specifically for research.

(ii) For embryonic stem cells created from embryos created after April 26, 2005, the embryonic stem cells must be derived from embryos and under conditions in compliance with the "Guidelines for Human Embryonic Stem Cell Research" established by the National Research Council Institute of Medicine of the National Academies (the "NAS Guidelines").

(iii) For embryonic stem cells created after April 26, 2005 from embryos generated prior to April 26, 2005, and which do not meet the NAS Guidelines, the embryonic stem cells must meet one of the conditions set forth in paragraph (i) above and be created using protocols substantially in compliance with the requirements of the NAS Guidelines.

M. "Licensed Patents" means those patents and patent applications listed on Appendix B attached hereto and all foreign equivalents owned by or licensed to WARF.

N. "Licensed Territory" means worldwide.

O. "Net Sales" [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]

In the event that a Product is sold in combination with another product, component or service for which no royalty would be due hereunder if sold separately, Net Sales from such combination sales for purposes of calculating the amounts due under Section 4B shall be calculated by multiplying the Net Sales of the combination product by the fraction A/(A + B), where "A" is the average selling price during the previous calendar quarter of the Product sold separately and "B" is the average selling price during the previous calendar quarter of the product(s), component(s) and/or service(s) combined therewith. Where a Product is sold only as a component of a larger product or system and not as a stand-alone product, then the Net Sales amount shall be deemed to be the amount received by Licensee or sublicensees for the entire product containing the Product multiplied by a number, the numerator of which is Licensee's (or the sublicensee's) costs for the Product and the denominator of which is Licensee's (or the sublicensee's) costs for the entire product sold by Licensee (or the sublicensee) that includes the Product.

P. "Non-Commercial Research Purposes" means the use for internal academic research purposes or other internal not-for-profit or scholarly purposes not involving the use of the technology: (1) to perform services for a fee; or (2) for the production or manufacture of products for sale to third parties.

Q. "Products" means any Research Products, Diagnostic Products, Therapeutic Products, and Related Therapeutic Products.

R. "Related Therapeutic Product" means products or services that (i) are used in the treatment of disease in humans, and (ii) are in any way produced or manufactured using, and/or incorporate any Wisconsin Material or
Derivative Material, but do not employ the practice or otherwise constitute infringement of any [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of the Licensed Patents.

S. "Research products" means products or services that (i) are used as research tools, including in drug discovery and development, and (ii) (a) employ, or are in any way produced or manufactured by, the practice or use of the inventions of the Licensed Patents, Derivative Materials or the Wisconsin Materials, and/or (b) would otherwise constitute infringement of any claims of the Licensed Patents.

T. "Therapeutic Products" means products or services that (i) are used in the treatment of disease in humans, and (ii) (a) employ, or are in any way produced or manufactured by, the practice or use of a [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of the Licensed Patents, and/or (b) would but for this Agreement otherwise constitute infringement of any [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] of the Licensed Patents.

U. [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission]

V. "Wisconsin Materials" is defined in the attached Wisconsin Materials Addendum.

LICENSED PATENTS
APPENDIX B

REFERENCE NUMBER	COUNTRY	APPLICATION SERIAL NUMBER	FILING DATE	PATENT NUMBER
METHOD OF IN VITRO DIFFERENTIATION OF TRANSPLANTABLE NEURAL PRECURSOR CELLS FROM PRIMATE EMBRYONIC STEM CELLS				
(Ian Duncan, James Thomson, Su-Chun Zhang)				
P01258US	UNITED STATES	09/970382	10/03/2001	6887706
P04277US	UNITED STATES	10/928805	08/27/2004	7588937
P07050US	UNITED STATES	11/594455	11/08/2006	7972850
P07445US	UNITED STATES	11/932582	10/31/2007	8153424
P09335IL	ISRAEL	198450	08/27/2004	198450
PRIMATE EMBRYONIC STEM CELLS				
(James Thomson)				
P02115US	UNITED STATES	09/982637	10/18/2001	7029913
P05206US	UNITED STATES	11/036245	01/14/2005	7582479
P08333US	UNITED STATES	12/047135	03/12/2008	7781216
P96014US	UNITED STATES	08/591246	01/18/1996	5843780
P98222US	UNITED STATES	09/106390	06/26/1998	6200806
SERUM FREE CULTIVATION OF PRIMATE EMBRYONIC STEM CELLS				
(James Thomson)				
P99275US	UNITED STATES	09/522030	03/09/2000	7005252
P03122US	UNITED STATES	10/430497	05/06/2003	7217569
W05007US	UNITED STATES	11/078737	03/11/2005	7439064
W09003US	UNITED STATES	12/489978	06/23/2009	
P07322AU	AUSTRALIA	2007200575	03/02/2001	2007200575
METHOD OF MAKING EMBRYOID BODIES FROM PRIMATE EMBRYONIC STEM CELLS				
(James Thomson, Jennifer Swiergiel, Vivienne Marshall)				
P99276US	UNITED STATES	09/510444	02/21/2000	6602711
P03410US	UNITED STATES	10/632399	05/06/2003	7220584

APPENDIX C

WARF ROYALTY REPORT

Licensee: _____ **Agreement No:** _____

Inventor: _____ **WARF Ref. #:** P _____

Period Covered: From: ____/____/____ Through: ____/____/____

Prepared By: _____ **Date:** _____

Approved By: _____ **Date:** _____

If license covers several major Product lines, please prepare a separate report for each line, and combine all Product lines into a summary report.

Report Type: q **Single Product Line Report:** _____

q **Multiproduct Summary Report:** Page 1 of _____ Pages

q **Product Line Detail.** Line: _____ Tradename: _____ Page:

Report Currency: q **U. S. Dollars** q **Other** _____

Country	**Gross Sales**	*** Less: Allowances**	**Net Sales**	**Royalty Rate**	**Period Royalty Amount This Year**	**Last Year**
U.S.A.						
Canada						
Europe:						
Japan						
Other:						
TOTAL:						

Total Royalty: _____ Conversion Rate: _____ Royalty in U.S. Dollars: $

The following royalty forecast is non-binding and for WARF's internal planning purposes only:

Royalty Forecast Under This Agreement: Next Quarter:_____ Q2:_____ Q3:_____ Q4:_____

* On a separate page, please indicate the reasons for returns or other adjustments if significant.
Also note any unusual occurrences that affected royalty amounts during this period.

To assist WARF's forecasting, please comment on any significant expected trends in sales volume.

APPENDIX D

DEVELOPMENT REPORT

A. Date development plan initiated and time period covered by this report.

B. Development Report (4-8 paragraphs).

1. Activities completed since last report including the object and parameters of the development, when initiated, when completed and the results.

2. Activities currently under investigation, i.e., ongoing activities including object and parameters of such activities, when initiated, and projected date of completion.

C. Future Development Activities (4-8 paragraphs).

1. Activities to be undertaken before next report including, but not limited to, the type and object of any studies conducted and their projected starting and completion dates.

2. Estimated total development time remaining before a Product will be commercialized.

D. Changes to initial development plan (2-4 paragraphs).

1. Reasons for change.

2. Variables that may cause additional changes.

E. Items to be provided if applicable:

1. Information relating to Product that has become publicly available, e.g., published articles, competing products, patents, etc.

2. Development work being performed by third parties other than Licensee to include name of third party, reasons for use of third party, planned future uses of third parties including reasons why and type of work.

3. Update of competitive information trends in industry, government compliance (if applicable) and market plan.

PLEASE SEND DEVELOPMENT REPORTS TO:

Wisconsin Alumni Research Foundation
Attn.: Contract Manager
614 Walnut Street
Madison, WI 53726

APPENDIX E

DEVELOPMENT PLAN

(To be provided by Licensee within [*Certain information has been omitted under a request for confidential treatment, and the omitted information has been filed with the Commission] months of Effective Date)

WISCONSIN MATERIALS ADDENDUM

This Addendum is made effective the 1st day of October, 2013, by and between Wisconsin Alumni Research Foundation ("WARF"), a nonprofit Wisconsin corporation, and Asterias Biotherapeutics Incorporated ("Licensee"), a corporation organized and existing under the laws of Delaware.

WHEREAS, WARF and Licensee have entered into License Agreement No. 13-00300, effective October 1, 2013 (the "Patent Rights Agreement"), granting Licensee the right under certain Licensed Patents to make, use and receive Licensed Materials for use in Internal Research;

WHEREAS, WARF also holds certain rights in human embryonic stem cell lines developed by James A. Thomson of the University of Wisconsin – Madison, working either alone or with other researchers at the University (the "Wisconsin Materials" as defined below); and

WHEREAS, Licensee has entered into an Asset Contribution Agreement dated January 4, 2013 with Geron Corporation ("Geron"), pursuant to which certain Wisconsin Materials will be transferred to Licensee (the "ACA"); and

WHEREAS, Licensee desires to obtain from WARF rights to utilize the Wisconsin Materials in accordance with the License Agreement executed between the parties dated October 1, 2013 and the terms and conditions set forth below.

NOW, THEREFORE, in consideration of the above premises and the mutual covenants contained herein, the parties further agree as follows:

1. Except as otherwise provided in this Addendum, all terms and conditions previously set forth in the License Agreement shall remain in effect as set forth therein. In the event that this Addendum and the License Agreement are inconsistent with respect to any terms and conditions pertaining to the Wisconsin Materials, the terms and provisions of this Addendum shall supersede the terms and provisions of the License Agreement.

2. "Wisconsin Materials" shall mean the H1, H7, H9, H13 and H14 embryonic stem cell lines provided to Licensee by WARF, Geron or a third party authorized by WARF, including any progeny, unmodified derivatives, genetically modified embryonic stem cells or clones of those cells or cell lines. Upon request of Licensee, WARF or WiCell shall provide Licensee within thirty (30) days of such request, without additional charge, two aliquots each of the following embryonic stem cell lines: H1, H9, H7, H13 and H14.

3. As used in the License Agreement, "Licensed Materials" shall further include the Wisconsin Materials; provided, however, that Licensee shall not have the right to:

(a) intermix the Wisconsin Materials with an intact embryo, either human or nonhuman;
(b) implant the Wisconsin Materials or any products of the Wisconsin Materials in a uterus, including Derivative Materials derived from the Wisconsin Materials;
(c) attempting to make whole embryos by any method using the Wisconsin Materials.
(d) use the Wisconsin Materials for therapeutic purposes.

4. Licensee agrees that on or before June 30th of each year in which this Addendum is in effect, License will submit to WARF a signed Annual Certification Statement as set forth on Exhibit A confirming compliance with the above restrictions. Licensee agrees that it will comply with all applicable laws, regulations and government orders with respect to any use of the Wisconsin Materials, and shall, as appropriate, seek and comply with the decisions and recommendations of any applicable Institutional Review Board or similar body.

5. Wisconsin Materials are the property of WARF and are being made available to Licensee as a service by WARF. Ownership of all Wisconsin Materials, including any progeny or modified versions thereof, shall remain with WARF, regardless of whether such Wisconsin Materials are received from WARF or an authorized third party. Any Wisconsin Materials provided hereunder will be returned to WARF or destroyed upon a material breach of any terms of this Addendum or the Patent Rights Agreement.

6. Licensee agrees to communicate to WARF all publications and/or research results made public by Licensee based on research using the Wisconsin Materials. In addition, any reports, publications, or other disclosure of results obtained with the Wisconsin Materials will acknowledge WARF as the original source of the Wisconsin Materials and, in the event that the Wisconsin Materials were received from an authorized third party, the conditions in which such Wisconsin Materials were maintained prior to their transfer.

7. Licensee may not assign or transfer this Addendum, nor any of the rights granted herein, without the prior written consent of WARF, such consent not to be unreasonably withheld. This Addendum shall be governed by and construed in all respects in accordance with the laws of the State of Wisconsin.

The persons signing on behalf of WARF and Licensee hereby warrant and represent that they have authority to execute this Agreement on behalf of the party for whom they have signed.

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement on the dates indicated below.

WISCONSIN ALUMNI RESEARCH FOUNDATION

By: s/Leigh Cagan Date: 10/7, 2013
Leigh Cagan, Chief Technology Commercialization Officer

ASTERIAS BIOTHERAPEUTICS, INC.

By: s/Katharine Spink Date: October 1, 2013
Katharine Spink Vice President and Chief Operating Officer

WARF Ref.: Thomson – P96014US

Asterias WARF License – 13-00300

Exhibit 10.5

EMPLOYMENT AGREEMENT

THIS EMPLOYMENT AGREEMENT ("Agreement") is made as of August 15, 2013 by and between BioTime, Inc. ("BioTime"), a California corporation, and Lesley Stolz ("Executive").

1. Engagement; Position and Duties.

(a) BioTime agrees to employ Executive in the position described on Exhibit A (which Exhibit A is a part of this Agreement) effective as of the date of this Agreement. Executive shall perform the duties and functions described on Exhibit A and such other duties as the executive(s) to whom Executive reports or the Board of Directors of BioTime may from time to time determine. Executive shall devote Executive's best efforts, skills, and abilities, on a full-time basis, exclusively to the business of BioTime and its Related Companies pursuant to, and in accordance with, business policies and procedures, as fixed from time to time by the Board of Directors (the "Policies"). Executive covenants and agrees that Executive will faithfully adhere to and fulfill the Policies, including any changes to the Policies that may be made in the future. Executive may be provided with a copy of BioTime's employee manual (the "Manual") which contains the Policies. BioTime may change its Policies from time to time, in which case Executive will be notified of the changes in writing by a memorandum, a letter, or an update or revision of the Manual.

(b) Performance of Services for Related Companies. In addition to the performance of services for BioTime, Executive shall, to the extent so required by BioTime, also perform services for one or more members of a consolidated group of which BioTime is a part ("Related Company"), provided that such services are consistent with the kind of services Executive performs or may be required to perform for BioTime under this Agreement. If Executive performs any services for any Related Company, Executive shall not be entitled to receive any compensation or remuneration in addition to or in lieu of the compensation and remuneration provided under this Agreement on account of such services for the Related Company. The Policies will govern Executive's employment by BioTime and any Related Companies for which Executive is asked to provide Services. In addition, Executive covenants and agrees that Executive will faithfully adhere to and fulfill such additional policies as may established from time to time by the board of directors of any Related Company for which Executive performs services, to the extent that such policies and procedures differ from or are in addition to the Policies adopted by BioTime.

(c) No Conflicting Obligations. Executive represents and warrants to BioTime and each Related Company that Executive is under no obligations or commitments, whether contractual or otherwise, that are inconsistent with Executive's obligations under this Agreement or that would prohibit Executive, contractually or otherwise, from performing Executive's duties as under this Agreement and the Policies.

(d) No Unauthorized Use of Third Party Intellectual Property. Executive represents and warrants to BioTime and each Related Company that Executive will not use or disclose, in connection with Executive's employment by BioTime or any Related Company, any patents, trade secrets, confidential information, or other proprietary information or intellectual property as to which any other person has any right, title or interest, except to the extent that BioTime or a Related Company holds a valid license or other written permission for such use from the owner(s) thereof. Executive represents and warrants to BioTime and each Related Company that Executive has returned all property and confidential information belonging to any prior employer.

2. Compensation

(a) ***Salary***. During the term of this Agreement, BioTime shall pay to the Executive the salary shown on Exhibit A. Executive's salary shall be paid in equal semi-monthly installments, consistent with BioTime's regular salary payment practices. Executive's salary may be increased from time-to-time by BioTime, in BioTime's sole and absolute discretion, without affecting this Agreement.

(b) ***Bonus***. Executive may be eligible for an annual bonus, as may be approved by the Board of Directors in its discretion, based on Executive's performance and achievement of goals or milestones set by the Board of Directors from time to time. Executive agrees that the Board of Directors of BioTime may follow the recommendations of the Compensation Committee of the board of directors of BioTime's parent company in determining whether to a award bonus or to establish performance goals or milestones. Executive also agrees that the Board of Directors and BioTime are not obligated to adopt any bonus plan, to maintain in effect any bonus plan that may now be in effect or that may be adopted during the term of Executive's employment, or to pay Executive a bonus unless a bonus is earned under the terms and conditions of any bonus plan adopted by BioTime.

(c) ***Expense Reimbursements***. BioTime or a Related Company shall reimburse Executive for reasonable travel and other business expenses (but not expenses of commuting to work) incurred by Executive in the performance of Executive's duties under this Agreement, subject to the Policies and procedures in effect from time to time, and provided that Executive submits supporting vouchers.

(d) ***Benefit Plans.*** Executive may be eligible (to the extent Executive qualifies) to participate in certain retirement, pension, life, health, accident and disability insurance, stock option plan or other similar employee benefit plans which may be adopted by BioTime (or a Related Company) for its employees. BioTime and the Related Companies have the right, at any time and without any amendment of this Agreement, and without prior notice to or consent from Executive, to adopt, amend, change, or terminate any such benefit plans that may now be in effect or that may be adopted in the future, in each case without any further financial obligation to Executive. Any benefits to which Executive may be entitled under any benefit plan shall be governed by the terms and conditions of the applicable benefit plan, and any related plan documents, as in effect from time to time. If Executive receives any grant of stock options or restricted stock under any stock option plan or stock purchase plan of BioTime or any Related Company, the terms and conditions of the stock options or restricted stock, and Executive's rights with respect to the stock options or restricted stock, shall be governed by (i) the terms of the applicable stock option or stock purchase plan, as the same may be amended from time to time, and (ii) the terms and conditions of any stock option agreement or stock purchase agreement and related agreements that Executive may sign or be required to sign with respect to the stock options or restricted stock.

(e) ***Vacation; Sick Leave***. Executive shall be entitled to the number of days of vacation and sick leave (without reduction in compensation) during each calendar year shown on Exhibit A or as may be provided by the Policies. Executive's vacation shall be taken at such time as is consistent with the needs and Policies of BioTime and its Related Companies. All vacation days and sick leave days shall accrue annually based upon days of service. Executive's right to leave from work due to illness is subject to the Policies and the provisions of this Agreement governing termination due to disability, sickness or illness. The Policies governing the disposition of unused vacation days and sick leave days remaining at the end of BioTime's fiscal year shall govern whether unused vacation days or sick leave days will be paid, lost, or carried over into subsequent fiscal years.

3. Competitive Activities. During the term of Executive's employment, and for one year thereafter, Executive shall not, for Executive or any third party, directly or indirectly employ, solicit for employment or recommend for employment any person employed by BioTime or any Related Company. During the term of Executive's employment, Executive shall not, directly or indirectly as an employee, contractor, officer, director, member, partner, agent, or equity owner, engage in any activity or business that competes or could reasonably be expected to compete with the business of BioTime or any Related Company. Executive acknowledges that there is a substantial likelihood that the activities described in this Section would (a) involve the unauthorized use or disclosure of BioTime's or a Related Company's Confidential Information and that use or disclosure would be extremely difficult to detect, and (b) result in substantial competitive harm to the business of BioTime or a Related Company. Executive has accepted the limitations of this Section as a reasonably practicable and unrestrictive means of preventing such use or disclosure of Confidential Information and preventing such competitive harm.

4. Inventions/Intellectual Property/Confidential Information

(a) As used in this Agreement, "Intellectual Property" means any and all inventions, discoveries, formulas, improvements, writings, designs, or other intellectual property. Any and all Intellectual Property relating to or in any way pertaining to or connected with the systems, products, apparatus, or methods employed, manufactured, constructed, or researched by BioTime, or any Related Company, which Executive may conceive or make while performing services for BioTime or a Related Company shall be the sole and exclusive property of BioTime or the applicable Related Company. Executive hereby irrevocably assigns and transfers to BioTime, or a Related Company, all rights, title and interest in and to all Intellectual Property that Executive may now or in the future have under patent, copyright, trade secret, trademark or other law, in perpetuity or for the longest period otherwise permitted by law, without the necessity of further consideration. BioTime and the Related Companies will be entitled to obtain and hold in their own name all copyrights, patents, trade secrets, trademarks and other similar registrations with respect to such Intellectual Property.

(b) ***Moral Rights.*** To the extent allowed by law, the rights to Intellectual Property assigned by Executive to BioTime or any Related Company includes all rights of paternity, integrity, disclosure and withdrawal, and any other rights that may be known as or referred to as "moral rights," "artist's rights," "droit moral," or the like (collectively "Moral Rights"). To the extent Executive retains any such Moral Rights under applicable law, Executive hereby ratifies and consents to any action that may be taken with respect to such Moral Rights by or authorized by BioTime or a Related Company and agrees not to assert any Moral Rights with respect thereto. Executive shall confirm in writing any such ratifications, consents, and agreements from time to time as requested by BioTime or Related Company.

(c) ***Execution of Documents; Power of Attorney.*** Executive agrees to execute and sign any and all applications, assignments, or other instruments which BioTime or a Related Company may deem necessary in order to enable BioTime or a Related Company, at its expense, to apply for, prosecute, and obtain patents of the United States or foreign countries for the Intellectual Property, or in order to assign or convey to, perfect, maintain or vest in BioTime or a Related Company the sole and exclusive right, title, and interest in and to the Intellectual Property. If BioTime or a Related Company is unable after reasonable efforts to secure Executive's signature, cooperation or assistance in accordance with the preceding sentence, whether because of Executive's incapacity or any other reason whatsoever, Executive hereby designates and appoints BioTime or any Related Company or its designee as Executive's agent and attorney-in-fact, to act on Executive's behalf, to execute and file documents and to do all other lawfully permitted acts necessary or desirable to perfect, maintain or otherwise protect BioTime's or a Related Company's rights in the Intellectual Property. Executive acknowledges and agrees that such appointment is coupled with an interest and is irrevocable.

(d) ***Disclosure of Intellectual Property***. Executive agrees to disclose promptly to BioTime or a Related Company all Intellectual Property which Executive may create or conceive solely, jointly, or commonly with others. This paragraph is applicable whether or not the Intellectual Property was made under the circumstances described in paragraph (a) of this Section. Executive agrees to make such disclosures understanding that they will be received in confidence and that, among other things, they are for the purpose of determining whether or not rights to the related Intellectual Property is the property of BioTime or a Related Company.

(e) ***Limitations.*** The obligations provided for by this Section 4, except for the requirements as to disclosure in paragraph 4(d), do not apply to any rights Executive may have acquired in connection with Intellectual Property for which no equipment, supplies, facility, or trade secret information of BioTime or a Related Company was used and which was developed entirely on the Executive's own time and (i) which at the time of conception or reduction to practice does not relate directly or indirectly to the business of BioTime or a Related Company, or to the actual or demonstrable anticipated research or development activities or plans of BioTime or a Related Company, or (ii) which does not result from any work performed by Executive for BioTime or a Related Company. All Intellectual Property that (1) results from the use of equipment, supplies, facilities, or trade secret information of BioTime or a Related Company; (2) relates, at the time of conception or reduction to practice of the invention, to the business of BioTime or a Related Company, or actual or demonstrably anticipated research or development of BioTime or a Related Company; or (3) results from any work performed by Executive for BioTime or a Related Company shall be assigned and is hereby assigned to BioTime or the applicable Related Company. The parties understand and agree that this limitation is intended to be consistent with California Labor Code, Section 2870, a copy of which is attached as Exhibit A. If Executive wishes to clarify that something created by Executive prior to Executive's employment by BioTime or a Related Company that relates to the actual or proposed business of BioTime or a Related Company is not within the scope of this Agreement, Executive has listed it on Exhibit B in a manner that does not violate any third party rights.

(f) ***Confidential and Proprietary Information***. During Executive's employment, Executive will have access to trade secrets and confidential information of BioTime and one or more Related Companies. Confidential Information means all information and ideas, in any form, relating in any manner to matters such as: products; formulas; technology and know-how; inventions; clinical trial plans and data; business plans; marketing plans; the identity, expertise, and compensation of employees and contractors; systems, procedures, and manuals; customers; suppliers; joint venture partners; research collaborators; licensees; and financial information. Confidential Information also shall include any information of any kind, whether belonging to BioTime, a Related Company, or any third party, that BioTime or a Related Company has agreed to keep secret or confidential under the terms of any agreement with any third party. Confidential Information does not include: (i) information that is or becomes publicly known through lawful means other than unauthorized disclosure by Executive; (ii) information that was rightfully in Executive's possession prior to Executive's employment with BioTime and was not assigned to BioTime or a Related Company or was not disclosed to Executive in Executive's capacity as a director or other fiduciary of BioTime or a Related Company; or (iii) information disclosed to Executive, after the termination of Executive's employment by BioTime, without a confidential restriction by a third party who rightfully possesses the information and did not obtain it, either directly or indirectly, from BioTime or a Related Company, and who is not subject to an obligation to keep such information confidential for the benefit of BioTime, a Related Company, or any third party with whom BioTime or a Related Company has a contractual relationship. Executive understands and agrees that all Confidential Information shall be kept confidential by Executive both during and after Executive's employment by BioTime or any Related Company. Executive further agrees that Executive will not, without the prior written approval by BioTime or a Related Company, disclose any Confidential Information, or use any Confidential Information in any way, either during the term of Executive's employment or at any time thereafter, except as required by BioTime or a Related Company in the course of Executive's employment.

5. Termination of Employment. Executive understands and agrees that Executive's employment has no specific term. This Agreement, and the employment relationship, are **"at will"** and may be terminated by Executive or by BioTime (and the employment of Executive by any Related Company may be terminated by the Related Company) with or without cause at any time by notice given orally or in writing. Except as otherwise agreed in writing or as otherwise provided in this Agreement, upon termination of Executive's employment, BioTime and the Related Companies shall have no further obligation to Executive by way of compensation or otherwise as expressly provided in this Agreement or in any separate employment agreement that might then exist between Executive and a Related Company.

(a) ***Payments Due Upon Termination of Employment***. Upon termination of Executive's employment with BioTime and all Related Companies at any time and for any reason, Executive will be entitled to receive only the severance benefits set forth below, but Executive will not be entitled to any other compensation, award, or damages with respect to Executive's employment or termination of employment.

(i) *Termination for Cause, Death, Disability, or Resignation*. In the event of Executive's termination for Cause, or termination as a result of death, Disability, or resignation, Executive will be entitled to receive payment for all accrued but unpaid salary, accrued but unpaid bonus, if any, and vacation accrued as of the date of termination of Executive's employment. Executive will not be entitled to any cash severance benefits or additional vesting of any stock options or other equity or cash awards.

(ii) *Termination Without Cause*. In the event of Executive's termination by BioTime without Cause, Executive will be entitled to (A) the benefits set forth in paragraph (a)(i) of this Section, and (B) payment in an amount equal to: (1) three months' base salary if terminated within the first 12 months of employment, or (2) six months' base salary if terminated after 12 months of employment, either of which may be paid in a lump sum or, at the election of BioTime, in installments consistent with the payment of Executive's salary while employed by BioTime, subject to such payroll deductions and withholdings as are required by law, and (C) payment, for a period of three months, of any health insurance benefits that Executive was receiving at the time of termination of Executive's employment, under a BioTime employee health insurance plan subject to the Consolidated Omnibus Budget Reconciliation Act ("COBRA"). This paragraph shall not apply to (x) termination of Executive's employment by a Related Company if Executive remains employed by BioTime, or (y) termination of Executive's employment by BioTime if Executive remains employed by a Related Company.

(iii) *Change of Control*. In the event BioTime (or any successor in interest to BioTime that has assumed BioTime's obligation under this Agreement) terminates Executive's employment without Cause within twelve (12) months following a Change in Control, Executive will be entitled to (A) the benefits set forth in paragraph (a)(i) of this Section, and (B) payment of an amount equal to six months' base salary, which shall be paid in a lump sum, subject to such payroll deductions and withholdings as are required by law, and (C) payment, for a period of six months, of any health insurance benefits that Executive was receiving at the time of termination of Executive's employment under a BioTime employee health insurance plan subject to COBRA. This paragraph shall not apply to (x) termination of Executive's employment by a Related Company if Executive remains employed by BioTime or a successor in interest, or (y) termination of Executive's employment by BioTime or a successor in interest if Executive remains employed by a Related Company.

(b) ***Release***. Any other provision of this Agreement notwithstanding, paragraphs (a)(ii) and (a)(iii) of this Section shall not apply unless the Executive (i) has executed a general release of all claims against BioTime or its successor in interest and the Related Companies (in a form prescribed by BioTime or its successor in interest) and (ii) has returned all property in the Executive's possession belonging BioTime or its successor in interest and any Related Companies.

(c) ***Definitions***. For purposes of this Section, the following definitions shall apply:

(i) "Affiliated Group" means (A) a Person and one or more other Persons in control of, controlled by, or under common control with such Person; and (B) two or more Persons who, by written agreement among them, act in concert to acquire Voting Securities entitling them to elect a majority of the directors of BioTime.

(ii) "Cause" means: (A) the failure to properly perform Executive's job responsibilities, as determined reasonably and in good faith by the Board of Directors; (B) commission of any act of fraud, gross misconduct or dishonesty with respect to BioTime or any Related Company; (C) conviction of, or plea of guilty or "no contest" to, any felony, or a crime involving moral turpitude; (D) breach of any provision of this Agreement or any provision of any proprietary information and inventions agreement with BioTime or any Related Company; (E) failure to follow the lawful directions of the Board of Directors of BioTime or any Related Company; (F) chronic alcohol or drug abuse; (G) obtaining, in connection with any transaction in which BioTime, any Related Company, or any of BioTime's affiliates is a party, a material undisclosed financial benefit for Executive or for any member of Executive's immediate family or for any corporation, partnership, limited liability company, or trust in which Executive or any member of Executive's immediate family owns a material financial interest; or (H) harassing or discriminating against, or participating or assisting in the harassment of or discrimination against, any employee of BioTime (or a Related Company or an affiliate of BioTime) based upon gender, race, religion, ethnicity, or nationality.

(iii) "Change of Control" means (A) the acquisition of Voting Securities of BioTime by a Person or an Affiliated Group entitling the holder thereof to elect a majority of the directors of BioTime; provided, that an increase in the amount of Voting Securities held by a Person or Affiliated Group who on the date of this Agreement owned beneficially owned (as defined in Section 13(d) of the Securities Exchange Act of 1934, as amended, and the regulations thereunder) more than 10% of the Voting Securities shall not constitute a Change of Control; and provided, further, that an acquisition of Voting Securities by one or more Persons acting as an underwriter in connection with a sale or distribution of such Voting Securities shall not constitute a Change of Control under this clause (A); (B) the sale of all or substantially all of the assets of BioTime; or (C) a merger or consolidation of BioTime with or into another corporation or entity in which the stockholders of BioTime immediately before such merger or consolidation do not own, in the aggregate, Voting Securities of the surviving corporation or entity (or the ultimate parent of the surviving corporation or entity) entitling them, in the aggregate (and without regard to whether they constitute an Affiliated Group) to elect a majority of the directors or persons holding similar powers of the surviving corporation or entity (or the ultimate parent of the surviving corporation or entity); provided, however, that in no event shall any transaction described in clauses (A), (B) or (C) be a Change of Control if all of the Persons acquiring Voting Securities or assets of BioTime or merging or consolidating with BioTime are one or more Related Companies.

(iv) "Disability" shall mean Executive's inability to perform the essential functions of Executive's job responsibilities for a period of one hundred eighty (180) days in the aggregate in any twelve (12) month period.

(v) "Person" means any natural person or any corporation, partnership, limited liability company, trust, unincorporated business association, or other entity.

(vi) "Voting Securities" means shares of capital stock or other equity securities entitling the holder thereof to regularly vote for the election of directors (or for person performing a similar function if the issuer is not a corporation), but does not include the power to vote upon the happening of some condition or event which has not yet occurred.

6. Turnover of Property and Documents on Termination. Executive agrees that on or before termination of Executive's employment, Executive will return to BioTime and all Related Companies all equipment and other property belonging to BioTime and the Related Companies, and all originals and copies of Confidential Information (in any and all media and formats, and including any document or other item containing Confidential Information) in Executive's possession or control, and all of the following (in any and all media and formats, and whether or not constituting or containing Confidential Information) in Executive's possession or control: (a) lists and sources of customers; (b) proposals or drafts of proposals for any research grant, research or development project or program, marketing plan, licensing arrangement, or other arrangement with any third party; (c) reports, job or laboratory notes, specifications, and drawings pertaining to the research, development, products, patents, and technology of BioTime and any Related Companies; (d) any and all Intellectual Property developed by Executive during the course of employment; and (e) the Manual and memoranda related to the Policies.

7. Arbitration. Except for injunctive proceedings against unauthorized disclosure of Confidential Information, any and all claims or controversies between BioTime or any Related Company and Executive, including but not limited to (a) those involving the construction or application of any of the terms, provisions, or conditions of this Agreement or the Policies; (b) all contract or tort claims of any kind; and (c) any claim based on any federal, state, or local law, statute, regulation, or ordinance, including claims for unlawful discrimination or harassment, shall be settled by arbitration in accordance with the then current Employment Dispute Resolution Rules of the American Arbitration Association. Judgment on the award rendered by the arbitrator(s) may be entered by any court having jurisdiction over the Company and Executive. The location of the arbitration shall be San Francisco, California. Unless BioTime or a Related Company and Executive mutually agree otherwise, the arbitrator shall be a retired judge selected from a panel provided by the American Arbitration Association, or the Judicial Arbitration and Mediation Service (JAMS). BioTime, or a Related Company if the Related Company is a party to the arbitration proceeding, shall pay the arbitrator's fees and costs. Executive shall pay for Executive's own costs and attorneys' fees, if any. BioTime and any Related Company that is a party to an arbitration proceeding shall pay for its own costs and attorneys' fees, if any. However, if any party prevails on a statutory claim which affords the prevailing party attorneys' fees, the arbitrator may award reasonable attorneys' fees and costs to the prevailing party.

EXECUTIVE UNDERSTANDS AND AGREES THAT THIS AGREEMENT TO ARBITRATE CONSTITUTES A WAIVER OF EXECUTIVE'S RIGHT TO A TRIAL BY JURY OF ANY MATTERS COVERED BY THIS AGREEMENT TO ARBITRATE.

8. Severability. In the event that any of the provisions of this Agreement or the Policies shall be held to be invalid or unenforceable in whole or in part, those provisions to the extent enforceable and all other provisions shall nevertheless continue to be valid and enforceable as though the invalid or unenforceable parts had not been included in this Agreement or the Policies. In the event that any provision relating to a time period of restriction shall be declared by a court of competent jurisdiction to exceed the maximum time period such court deems reasonable and enforceable, then the time period of restriction deemed reasonable and enforceable by the court shall become and shall thereafter be the maximum time period.

9. Agreement Read and Understood. Executive acknowledges that Executive has carefully read the terms of this Agreement, that Executive has had an opportunity to consult with an attorney or other representative of Executive's own choosing regarding this Agreement, that Executive understands the terms of this Agreement, and that Executive is entering this agreement of Executive's own free will.

10. Complete Agreement, Modification. This Agreement is the complete agreement between Executive and BioTime on the subjects contained in this Agreement. This Agreement supersedes and replaces all previous correspondence, promises, representations, and agreements, if any, either written or oral with respect to Executive's employment by BioTime or any Related Company and any matter covered by this Agreement. No provision of this Agreement may be modified, amended, or waived except by a written document signed both by BioTime and Executive.

11. Governing Law. This Agreement shall be construed and enforced according to the laws of the State of California.

12. Assignability. This Agreement, and the rights and obligations of Executive and BioTime under this Agreement, may not be assigned by Executive. BioTime may assign any of its rights and obligations under this Agreement to any successor or surviving corporation, limited liability company, or other entity resulting from a merger, consolidation, sale of assets, sale of stock, sale of membership interests, or other reorganization, upon condition that the assignee shall assume, either expressly or by operation of law, all of BioTime's obligations under this Agreement.

13. Survival. This Section 13 and the covenants and agreements contained in Sections 4 and 6 of this Agreement shall survive termination of this Agreement and Executive's employment.

14. Notices. Any notices or other communication required or permitted to be given under this Agreement shall be in writing and shall be mailed by certified mail, return receipt requested, or sent by next business day air courier service, or personally delivered to the party to whom it is to be given at the address of such party set forth on the signature page of this Agreement (or to such other address as the party shall have furnished in writing in accordance with the provisions of this Section 14).

IN WITNESS WHEREOF, Executive and BioTime have executed this Agreement on the day and year first above written.

EXECUTIVE:

s/Lesley Stolz
(Signature)

Address: 1369 De Soto Ave
Burlingame, CA 94010

BIOTIME:

BioTime, Inc.

By: s/Robert W. Peabody

Title: COO and CFO
Address: 1301 Harbor Bay Parkway, Suite100
Alameda, California 94502

EXHIBIT A

Job Title: EVP of Corporate Development

Description of Job and Duties:

The Executive Vice President of Corporate Development will have primary responsibility for interactions with investors and corporate partners on behalf of BioTime and its subsidiaries. This interaction will include the establishment, development, and maintenance of new relationships with institutional investors, sell-side analysts, and investment banks, as well as the planning and execution of capital-raising transactions for both BioTime and its subsidiary companies. The incumbent will champion these activities with BioTime's Chief Executive Officer and Chief Financial Officer participating, as needed. She will also initiate, develop, and execute corporate partnering relationships with potential pharmaceutical and biotechnology companies interested in licensing products and/or sponsoring product development from within BioTime's wide array of technological assets. It is anticipated that BioTime's leadership role in regenerative medicine with respect to both technology and patents will allow the Executive Vice President of Corporate Development to build a wide array of corporate partnering relationships over time with companies of various sizes that are eager to participate in this emerging field of biotechnology.

Additional representative responsibilities will include, but not necessarily be limited to, the following:

- Define and execute strategic initiatives focused on expanding BioTime's product portfolio, market scope and reach, accelerating the Company's entry into new markets, responding to competitive threats and maximizing shareholder value through mergers, acquisitions, joint ventures, and/or corporate partnerships. Develop a sophisticated and detailed understanding of the Company's product portfolio, research pipeline, and Sales and Marketing infrastructure as the basis for these activities.
- In collaboration with senior leadership and other key stakeholders, identify and coordinate the evaluation of prospective deals with input from Research & Development, manufacturing, commercial, legal, finance, and accounting, and presentation of target opportunities to senior management.
- Serve as the primary point of contact and a key member of the negotiating team for all transactions approved by Management and the Board.
- Establish strong collaborative relationships with the Company's operational units; act as an advisor or as a transactional partner when appropriate.

Annual Salary : $275,000

Initial BTX options: 200,000 options, vesting monthly over 48 months

EXHIBIT B

California Labor Code Section 2870.

Application of provision providing that employee shall assign or offer to assign rights in invention to employer.

(a) Any provision in an employment agreement which provides that an employee shall assign, or offer to assign, any of his or her rights in an invention to his or her employer shall not apply to an invention that the employee developed entirely on his or her own time without using the employer's equipment, supplies, facilities, or trade secret information except for those inventions that either:

(i) Relate at the time of conception or reduction to practice of the invention to the employer's business, or actual or demonstrably anticipated research or development of the employer; or

(ii) Result from any work performed by the employee for his employer.

(b) To the extent a provision in an employment agreement purports to require an employee to assign an invention otherwise excluded from being required to be assigned under subdivision (a), the provision is against the public policy of this state and is unenforceable.

EXHIBIT C

PRIOR MATTERS

None

Exhibit 10.6

BIOTIME, INC. 2012 EQUITY INCENTIVE PLAN

1. Purpose; Eligibility.

1.1 General Purpose. The name of this plan is the BioTime, Inc.2012 Equity Incentive Plan (the "**Plan**"). The purposes of the Plan are to (a) enable the Company, to attract and retain the types of Employees, Consultants and Directors who will contribute to the Company's long range success; (b) provide incentives that align the interests of Employees, Consultants and Directors with those of the shareholders of the Company; and (c) promote the success of the Company's business.

1.2 Eligible Award Recipients. The persons eligible to receive Awards are the Employees, Consultants and Directors of the Company.

1.3 Available Awards. Awards that may be granted under the Plan include: (a) Incentive Stock Options, (b) Non-qualified Stock Options, (c) Stock Appreciation Rights, and (d) Stock Awards.

2. Definitions.

"**Applicable Laws**" means the requirements related to or implicated by the administration of the Plan under applicable state corporate law, United States federal and state securities laws, the Code, any stock exchange or quotation system on which the shares of Common Stock are listed or quoted, and the applicable laws of any foreign country or jurisdiction where Awards are granted under the Plan.

"**Award**" means any right granted under the Plan, including an Incentive Stock Option, a Non-qualified Stock Option, a Stock Appreciation Right, or a Stock Award.

"**Award Agreement**" means a written agreement, contract, certificate or other instrument or document evidencing the terms and conditions of an individual Award granted under the Plan which may, in the discretion of the Company, be transmitted electronically to any Participant. Each Award Agreement shall be subject to the terms and conditions of the Plan.

"BioTime" means BioTime, Inc., a California corporation, and any successor company or any parent company.

"**Board**" means the Board of Directors of BioTime, as constituted at any time.

"**Cause**" means:

With respect to any Employee or Consultant:(a) If the Employee or Consultant is a party to an employment or service agreement with the Company or its Affiliates and such agreement provides for a definition of Cause, the definition contained therein; or(b) If no such agreement exists, or if such agreement does not define Cause: (i) the commission of, or plea of guilty or no contest to, a felony or a crime involving moral turpitude or the commission of any other act involving wilful malfeasance or material fiduciary breach with respect to the Company or an Subsidiary; (ii) conduct that results in or is reasonably likely to result in harm to the reputation or business of the Company or any of its Affiliates; (iii) wilful conversion or misappropriation of corporate funds; (iv) gross negligence or wilful misconduct with respect to the Company or an Subsidiary; or (v) material violation of any state or federal securities law.

With respect to any Director, a determination by a majority of the disinterested Board members that the Director has engaged in any of the following: (a) malfeasance in office;(b) gross misconduct or neglect;(c) false or fraudulent misrepresentation inducing the director's appointment;(d) wilful conversion or misappropriation of corporate funds; or(e) repeated failure to participate in Board meetings on a regular basis despite having received proper notice of the meetings in advance.

The Committee, in its absolute discretion, shall determine the effect of all matters and questions relating to whether a Participant has been discharged for Cause.

"**Change in Control**" (a) The direct or indirect sale, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the properties or assets of the Company and its subsidiaries, taken as a whole, to any Person that is not a subsidiary of the Company; (b) The Incumbent Directors cease for any reason to constitute at least a majority of the Board; (c) The date which is 10 business days prior to the consummation of a complete liquidation or dissolution of the Company; (d) The acquisition by any Person of Beneficial Ownership of 50% or more (on a fully diluted basis) of either (i) the then outstanding shares of Common Stock of the Company, taking into account as outstanding for this purpose such Common Stock issuable upon the exercise of options or warrants, the conversion of convertible stock or debt, and the exercise of any similar right to acquire such Common Stock (the "Outstanding Company Common Stock") or (ii) the combined voting power of the then outstanding voting securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that for purposes of this Plan, the following acquisitions shall not constitute a Change in Control: (A) any acquisition by the Company or any Subsidiary, (B) any acquisition by any employee benefit plan sponsored or maintained by the Company or any subsidiary, (C) any acquisition which complies with clauses, (i), (ii) and (iii) of subsection (e) of this definition or (D) in respect of an Award held by a particular Participant, any acquisition by the Participant or any group of persons including the Participant (or any entity controlled by the Participant or any group of persons including the Participant); or (e) The consummation of a reorganization, merger, consolidation, statutory share exchange or similar form of corporate transaction involving the Company that requires the approval of the Company's shareholders, whether for such transaction or the issuance of securities in the transaction (a "Business Combination"), unless immediately following such Business Combination: (i) more than 50% of the total voting power of (A) the entity resulting from such Business Combination (the "Surviving Company"), or (B) if applicable, the ultimate parent entity that directly or indirectly has beneficial ownership of sufficient voting securities eligible to elect a majority of the members of the board of directors (or the analogous governing body) of the Surviving Company (the "Parent Company"), is represented by the Outstanding Company Voting Securities that were outstanding immediately prior to such Business Combination (or, if applicable, is represented by shares into which the Outstanding Company Voting Securities were converted pursuant to such Business Combination), and such voting power among the holders thereof is in substantially the same proportion as the voting power of the Outstanding Company Voting Securities among the holders thereof immediately prior to the Business Combination; (ii) no Person (other than any employee benefit plan sponsored or maintained by the Surviving Company or the Parent Company) is or becomes the Beneficial Owner, directly or indirectly, of 50% or more of the total voting power of the outstanding voting securities eligible to elect members of the board of directors of the Parent Company (or the analogous governing body) (or, if there is no Parent Company, the Surviving Company); and (iii) at least a majority of the members of the board of directors (or the analogous governing body) of the Parent Company (or, if there is no Parent Company, the Surviving Company) following the consummation of the Business Combination were Board members at the time of the Board's approval of the execution of the initial agreement providing for such Business Combination.

"**Code**" means the Internal Revenue Code of 1986, as it may be amended from time to time. Any reference to a section of the Code shall be deemed to include a reference to any regulations promulgated thereunder.

"**Committee**" means a committee of the Board appointed by the Board to administer the Plan in accordance with ***Section*** 3.3 and ***Section*** 3.4.

"**Common Stock**" means the common shares, no par value per share, of BioTime, or such other securities of the BioTime as may be designated by the Board or Committee from time to time in substitution thereof.

"**Company**" means BioTime and any or all of its Subsidiaries.

"**Consultant**" means any individual who is engaged by the Company to render consulting or advisory services.

"**Continuous Service**" means that the Participant's service with the Company, whether as an Employee, Consultant or Director, is not interrupted or terminated. The Participant's Continuous Service shall not be deemed to have terminated merely because of a change in the capacity in which the Participant renders service to the Company as an Employee, Consultant or Director or a change in the entity for which the Participant renders such service (such as a change of employment from one Subsidiary to another Subsidiary), *provided that* there is no interruption or termination of the Participant's Continuous Service; *provided further that* if any Award is subject to Section 409A of the Code, this sentence shall only be given effect to the extent consistent with Section 409A of the Code. For example, a change in status from an Employee to a Director will not constitute an interruption of Continuous Service. The Board or Committee, in its sole discretion, may determine whether Continuous Service shall be considered interrupted in the case of any leave of absence approved by the Board or Committee, such as sick leave, military leave, or any other personal or family leave of absence.

"**Director**" means a member of the Board.

"**Disability**" means that the Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment; *provided, however,* for purposes of determining the term of an Incentive Stock Option pursuant to ***Section*** 6.10 hereof, the term Disability shall have the meaning ascribed to it under Section 22(e)(3) of the Code. The determination of whether an individual has a Disability shall be determined by the Board or Committee or under procedures adopted by the Board or Committee. Except for a determination of Disability within the meaning of Section 22(e)(3) of the Code for purposes of an Incentive Stock Option, the Board or Committee may rely on any determination that a Participant is disabled for purposes of benefits under any long-term disability plan maintained by the Company in which a Participant participates.

"**Effective Date**" shall mean the date as of which this Plan is adopted by the Board.

"**Employee**" means any person employed by the Company; *provided, that,* for purposes of determining eligibility to receive Incentive Stock Options, an Employee shall mean an employee of the Company or a parent corporation within the meaning of Code Section 424. Mere service as a Director or payment of a director's fee by the Company shall not be sufficient to constitute "employment" by the Company.

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

"**Fair Market Value**" means, as of any date, the value of the Common Stock as determined below. If the Common Stock is listed on any national stock exchange, inter-dealer quotation system, or over-the-counter market that reports closing prices, including without limitation, the New York Stock Exchange, NYSE MKT, or the OTC Bulletin Board, the Fair Market Value shall be the closing price of a share of Common Stock (or if no sales were reported the closing price on the date immediately preceding such date) as quoted on such exchange or system on the day of determination, as reported in the *Wall Street Journal* or such other source as the Board or Committee deems reliable. In the absence of an established market for the Common Stock, the Fair Market Value shall be determined in good faith by the Board or Committee, using such methods as the Board or Committee determines to be reasonable under the circumstances, and such determination shall be conclusive and binding on all persons.

"**Free Standing Rights**" has the meaning set forth in ***Section*** 7.1(a).

"**Good Reason**" means: (a) if an Employee or Consultant is a party to an employment or service agreement with the Company and such agreement provides for a definition of Good Reason, the definition contained therein; or (b) if no such agreement exists or if such agreement does not define Good Reason, the occurrence of one or more of the following without the Participant's express written consent, which circumstances are not remedied by the Company within thirty (30) days of its receipt of a written notice from the Participant describing the applicable circumstances (which notice must be provided by the Participant within ninety (90) days of the Participant's knowledge of the applicable circumstances): (i) any material increase in the Participant's duties (other than by way of promotion attendant with additional responsibilities, authority or title and an increase in salary commensurate therewith), (ii) any material diminution of responsibilities, authority, title, status or reporting structure; (iii) a material reduction in the Participant's base salary or bonus opportunity; or (iv) a geographical relocation of the Participant's principal office location by more than fifty (50) miles.

"**Grant Date**" means the date on which the Board or Committee adopts a resolution, or takes other appropriate action, expressly granting an Award to a Participant that specifies the key terms and conditions of the Award or, if a later date is set forth in such resolution, then such date as is set forth in such resolution.

"**Incentive Stock Option**" means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code.

"**Non-Employee Director**" means a Director who is a "non-employee director" within the meaning of Rule 16b-3.

"**Non-qualified Stock Option**" means an Option that by its terms does not qualify or is not intended to qualify as an Incentive Stock Option.

"**Officer**" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.

"**Option**" means an Incentive Stock Option or a Non-qualified Stock Option granted pursuant to the Plan.

"**Optionholder**" means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.

"**Option Exercise Price**" means the price at which a share of Common Stock may be purchased upon the exercise of an Option.

"**Outside Director**" means a Director who is an "outside director" within the meaning of Section 162(m) of the Code and Treasury Regulations Section 1.162-27(e)(3).

"**Participant**" means an eligible person to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Award.

"**Performance Goals**" means one or more goals established by the Board or Committee that must be attained by BioTime or a Subsidiary, or a division, business unit or operational unit of BioTime or a Subsidiary in order for an Award to vest or for the determination of the amount of an Award. A Performance Goal may be based on financial results or performance or upon the attainment of any other goal or milestone designated by the Board or Committee such as, by way of example only and not by way of limitation, the attainment of a specified amount of sales, revenues, or net income, an increase in the Fair Market Value of the Common Stock, or the commencement or successful completion of a clinical trial of a new drug, biological product, or medical device.

"**Permitted Transferee**" means: (a) a member of the Optionholder's immediate family (child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships), any person sharing the Optionholder's household (other than a tenant or employee), a trust in which these persons have more than 50% of the beneficial interest, a foundation in which these persons (or the Optionholder) control the management of assets, and any other entity in which these persons (or the Optionholder) own more than 50% of the voting interests; (b) third parties designated by the Committee in connection with a program established and approved by the Committee pursuant to which Participants may receive a cash payment or other consideration in consideration for the transfer of a Non-qualified Stock Option; and (c) such other transferees as may be permitted by the Committee in its sole discretion.

"**Plan**" means this BioTime, Inc. 2012 Equity Incentive Plan, as amended and/or amended and restated from time to time.

"**Related Rights**" has the meaning set forth in ***Section*** 7.1(a).

"**Restricted Period**" has the meaning set forth in ***Section*** 7.2(a).

"**Rule 16b-3**" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

"**Securities Act**" means the Securities Act of 1933, as amended.

"**Stock Appreciation Right**" means the right pursuant to an Award granted under ***Section*** 7.1 to receive, upon exercise, an amount payable in cash or shares equal to the number of shares subject to the Stock Appreciation Right that is being exercised multiplied by the excess of (a) the Fair Market Value of a share of Common Stock on the date the Award is exercised, over (b) the exercise price specified in the Stock Appreciation Right Award Agreement.

"**Stock Award**" means any Award granted pursuant to ***Section*** 7.2(a).

"**Stock for Stock Exchange**" has the meaning set forth in ***Section*** 6.4.

"Subsidiary" means (i) any corporation or other entity in which the Company possesses directly or indirectly equity interests representing at least 50% of the total ordinary voting power or at least 50% of the total value of all classes of equity interests of such corporation or other entity and (ii) any other entity in which the Company has a direct or indirect economic interest that is designated as a Subsidiary by the Committee.

"**Ten Percent Shareholder**" means a person who owns (or is deemed to own pursuant to Section 424(d) of the Code) stock possessing more than 10% of the total combined voting power of all classes of stock of the Company or of any of its Subsidiaries.

"Voting Securities" means any class or series of stock or other securities entitling the holder vote for the election of Directors generally, but shall exclude any such security that entitles the holder to designate, appoint, or vote for the election of a minority of the Directors.

3. Administration.

3.1 Authority of Committee. The Plan shall be administered by the Board or, in the Board's sole discretion, by a Committee. Subject to the terms of the Plan, the Board or Committee shall have the authority:

(a) to construe and interpret the Plan and apply its provisions;

(b) to promulgate, amend, and rescind rules and regulations relating to the administration of the Plan;

(c) to authorize any person to execute, on behalf of the Company, any instrument required to carry out the purposes of the Plan;

(d) to determine when Awards are to be granted under the Plan and the applicable Grant Date;

(e) from time to time to select those Participants to whom Awards shall be granted;

(f) to determine the number of shares of Common Stock to be made subject to each Award;

(g) to determine whether each Option is to be an Incentive Stock Option or a Non-qualified Stock Option;

(h) to prescribe the terms and conditions of each Award, including, without limitation, the exercise price and medium of payment and vesting provisions, and to specify the provisions of the Award Agreement relating to such grant;

(i) to amend any outstanding Awards, including for the purpose of modifying the time or manner of vesting, or the term of any outstanding Award; *provided, however*, that if any such amendment impairs a Participant's rights or increases a Participant's obligations under his or her Award or creates or increases a Participant's federal income tax liability with respect to an Award, such amendment shall also be subject to the Participant's consent;

(j) to determine the duration and purpose of leaves of absences which may be granted to a Participant without constituting termination of their employment for purposes of the Plan, which periods shall be no shorter than the periods generally applicable to Employees under the Company's employment policies;

(k) to make decisions with respect to outstanding Awards that may become necessary upon a change in corporate control or an event that triggers anti-dilution adjustments;

(l) to interpret, administer, reconcile any inconsistency in, correct any defect in and/or supply any omission in the Plan and any instrument or agreement relating to, or Award granted under, the Plan; and

(m) to exercise discretion to make any and all other determinations which it determines to be necessary or advisable for the administration of the Plan.

The Board or Committee also may modify the purchase price or the exercise price of any outstanding Award, *provided that* if the modification effects a repricing, shareholder approval shall be required before the repricing is effective.

3.2 Decisions Final. All decisions made by the Board or Committee pursuant to the provisions of the Plan shall be final and binding on the Company and the Participants.

3.3 Delegation. The Board may delegate administration of the Plan to a committee or committees of the Board, and the term "**Committee**" shall apply to any such committee. The Board may abolish the Committee at any time and revest in the Board the administration of the Plan. The members of the Committee shall be appointed by and serve at the pleasure of the Board. From time to time, the Board may increase or decrease the size of the Committee, add additional members to, remove members (with or without cause) from, appoint new members in substitution therefor, and fill vacancies, however caused, in the Committee. The Committee shall act pursuant to a vote of the majority of its members or, in the case of a Committee comprised of only two members, the unanimous consent of its members, whether present or not, or by the written consent of the majority of its members and minutes shall be kept of all of its meetings and copies thereof shall be provided to the Board. Subject to the limitations prescribed by the Plan and the Board, the Committee may establish and follow such rules and regulations for the conduct of its business as it may determine to be advisable.

3.4 Committee Composition. Except as otherwise determined by the Board, the Committee shall consist solely of two or more Non-Employee Directors who are also Outside Directors. The Board shall have discretion to determine whether or not it intends to comply with the exemption requirements of Rule 16b-3 and/or Section 162(m) of the Code. However, if the Board intends to satisfy such exemption requirements, with respect to Awards to any "covered employee" (as defined in Section 162(m)(3) of the Code, as interpreted by Internal Revenue Service Notice 2007-49) and with respect to any insider subject to Section 16 of the Exchange Act, the Committee shall be a compensation committee of the Board that at all times consists solely of two or more Non-Employee Directors who are also Outside Directors. Nothing herein shall create an inference that an Award is not validly granted under the Plan in the event Awards are granted under the Plan by a compensation committee of the Board that does not at all times consist solely of two or more Non-Employee Directors who are also Outside Directors.

4. Shares Subject to the Plan.

4.1 Subject to adjustment in accordance with ***Section*** 11, a total of 4,000,000 shares of Common Stock shall be available for the grant of Awards under the Plan. Any shares of Common Stock granted in connection with Options and Stock Appreciation Rights shall be counted against this limit as one share for every one Option or Stock Appreciation Right awarded. Any shares of Common Stock granted in connection with Awards other than Options and Stock Appreciation Rights shall be counted against this limit as two (2) shares of Common Stock for every one (1) share of Common Stock granted in connection with such Award. During the terms of the Awards, the Company shall keep available at all times the number of shares of Common Stock required to satisfy such Awards.

4.2 Subject to adjustment in accordance with ***Section*** 11, no Participant shall be granted, during any one (1) year period, Options to purchase Common Stock and Stock Appreciation Rights with respect to more than 1,000,000 shares of Common Stock in the aggregate or any other Awards with respect to more than 500,000 shares of Common Stock in the aggregate. If an Award is to be settled in cash, the number of shares of Common Stock on which the Award is based shall not count toward the individual share limit set forth in this Section 4.

4.3 Any shares of Common Stock subject to an Award that is cancelled, forfeited or expires prior to exercise or realization, either in full or in part, shall again become available for issuance under the Plan. Any shares of Common Stock that again become available for future grants pursuant to this Section shall be added back as one share if such shares were subject to Options or Stock Appreciation Rights and as two (2) shares if such shares were subject to other Awards. Notwithstanding anything to the contrary contained herein: shares subject to an Award under the Plan shall not again be made available for issuance or delivery under the Plan if such shares are (a) shares tendered in payment of an Option, (b) shares delivered or withheld by the Company to satisfy any tax withholding obligation, or (c) shares covered by a stock-settled Stock Appreciation Right or other Awards that were not issued upon the settlement of the Award.

5. Eligibility.

5.1 Eligibility for Specific Awards. Incentive Stock Options may be granted only to Employees. Awards other than Incentive Stock Options may be granted to Employees, Consultants and Directors. Awards may be granted to individuals whom the Committee determines are reasonably expected to become Employees, Consultants and Directors; provided that such grant and the Grant Date shall become effective only the individual becoming an Employee, Consultant or Director.

5.2 Ten Percent Shareholders. A Ten Percent Shareholder shall not be granted an Incentive Stock Option unless the Option Exercise Price is at least 110% of the Fair Market Value of the Common Stock at the Grant Date and the Option is not exercisable after the expiration of five years from the Grant Date.

6. Option Provisions. Each Option granted under the Plan shall be evidenced by an Award Agreement. Each Option so granted shall be subject to the conditions set forth in this Section 6, and to such other conditions not inconsistent with the Plan as may be reflected in the applicable Award Agreement. All Options shall be separately designated Incentive Stock Options or Non-qualified Stock Options at the time of grant, and, if certificates are issued, a separate certificate or certificates will be issued for shares of Common Stock purchased on exercise of each type of Option. Notwithstanding the foregoing, the Company shall have no liability to any Participant or any other person if an Option designated as an Incentive Stock Option fails to qualify as such at any time or if an Option is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Code and the terms of such Option do not satisfy the requirements of Section 409A of the Code. The provisions of separate Options need not be identical, but each Option shall include (through incorporation of provisions hereof by reference in the Option or otherwise) the substance of each of the following provisions:

6.1 Term. An Option shall expire, and thereafter no longer be exercisable, on such date as the Board or Committee may designate; *provided, however*, no Option shall be exercisable after the expiration of 10 years from the Grant Date, and no Incentive Stock Option granted to a Ten Percent Shareholder shall be exercisable after the expiration of 5 years from the Grant Date. The expiration date of each Option shall be stated in the Award Agreement pertaining to the Option.

6.2 Exercise Price of An Incentive Stock Option. Subject to the provisions of ***Section*** 5.2 pertaining to Incentive Stock Options granted to Ten Percent Shareholders, the Option Exercise Price of each Incentive Stock Option shall be not less than 100% of the Fair Market Value of the Common Stock subject to the Option on the Grant Date. Notwithstanding the foregoing, an Incentive Stock Option may be granted with an Option Exercise Price lower than that set forth in the preceding sentence if such Option is granted pursuant to an assumption or substitution for another option in a manner satisfying the provisions of Section 424(a) of the Code.

6.3 Exercise Price of a Non-qualified Stock Option. The Option Exercise Price of each Non-qualified Stock Option shall be not less than 100% of the Fair Market Value of the Common Stock subject to the Option on the Grant Date. Notwithstanding the foregoing, a Non-qualified Stock Option may be granted with an Option Exercise Price lower than that set forth in the preceding sentence if such Option is granted pursuant to an assumption or substitution for another option in a manner satisfying the provisions of Section 409A of the Code.

6.4 Consideration. The Option Exercise Price of Common Stock acquired pursuant to an Option shall be paid, to the extent permitted by applicable statutes and regulations, either (a) in cash or by certified or bank check at the time the Option is exercised or (b) to the extent approved by the Board or Committee, the Option Exercise Price may be paid: (i) by delivery to the Company of other Common Stock, duly endorsed for transfer to the Company, with a Fair Market Value on the date of delivery equal to the Option Exercise Price (or portion thereof) due for the number of shares being acquired (a "**Stock for Stock Exchange**"); (ii) a "cashless" exercise program established with a broker pursuant to which the broker exercises or arranges for the coordination of the exercise of the Option with the sale of some or all of the underlying Common Stock; (iii) any combination of the foregoing methods; or (iv) in any other form of consideration that is legal consideration for the issuance of Common Stock and that may be acceptable to the Board or Committee. Unless otherwise specifically provided in the Option, the exercise price of Common Stock acquired pursuant to an Option that is paid by delivery to the Company of other Common Stock acquired, directly or indirectly from the Company, shall be paid only by shares of the Common Stock of the Company that have been held for more than six months (or such longer or shorter period of time required to avoid a charge to earnings for financial accounting purposes). Notwithstanding the foregoing, during any period for which the Common Stock is publicly traded (i.e., the Common Stock is listed on any national securities exchange or an interdealer quotation system, or is traded in an over-the-counter market that reports closing prices) an exercise by a Director or Officer that involves or may involve a direct or indirect extension of credit or arrangement of an extension of credit by the Company, directly or indirectly, in violation of Section 402(a) of the Sarbanes-Oxley Act of 2002 shall be prohibited with respect to any Award under this Plan.

6.5 Transferability of An Incentive Stock Option. An Incentive Stock Option shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Optionholder only by the Optionholder.

6.6 Transferability of a Non-qualified Stock Option. A Non-qualified Stock Option may, in the sole discretion of the Board or Committee, be transferable to a Permitted Transferee, upon approval by the Board or Committee, to the extent provided in the Award Agreement or by subsequent consent granted by the Board or Committee. If the Non-qualified Stock Option does not provide for transferability or consent to transfer to a Permitted Transferee is not granted by the Board or Committee, then the Non-qualified Stock Option shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Optionholder only by the Optionholder.

6.7 Vesting of Options. Each Option may, but need not, vest and therefore become exercisable in periodic instalments as determined by the Board or Committee or based upon the attainment of a Performance Goal or the occurrence of a specified event. The vesting provisions of individual Options may vary. No Option may be exercised for a fraction of a share of Common Stock.

6.8 Termination of Continuous Service. Unless otherwise provided in an Award Agreement or in an employment agreement the terms of which have been approved by the Board or Committee, in the event an Optionholder's Continuous Service terminates (other than upon the Optionholder's death or Disability), the Optionholder may exercise his or her Option (to the extent that the Optionholder was entitled to exercise such Option as of the date of termination) but only within such period of time ending on the earlier of (a) the date three months following the termination of the Optionholder's Continuous Service or (b) the expiration of the term of the Option as set forth in the Award Agreement. If, after termination, the Optionholder does not exercise his or her Option within the time specified in the Award Agreement, the Option shall terminate.

6.9 Extension of Termination Date. An Optionholder's Award Agreement may also provide that if the exercise of the Option following the termination of the Optionholder's Continuous Service for any reason would be prohibited at any time because the issuance of shares of Common Stock would violate the registration requirements under the Securities Act or any other state or federal securities law or the rules of any securities exchange or interdealer quotation system, then the Option shall terminate on the earlier of (a) the expiration of the term of the Option in accordance with ***Section*** 6.1 or (b) the expiration of a period after termination of the Participant's Continuous Service that is three months after the end of the period during which the exercise of the Option would be in violation of such registration or other securities law requirements.

6.10 Disability of Optionholder. Unless otherwise provided in an Award Agreement, in the event that an Optionholder's Continuous Service terminates as a result of the Optionholder's Disability, the Optionholder may exercise his or her Option (to the extent that the Optionholder was entitled to exercise such Option as of the date of termination), but only within such period of time ending on the earlier of (a) the date 12 months following such termination or (b) the expiration of the term of the Option as set forth in the Award Agreement. If, after termination, the Optionholder does not exercise his or her Option within the time specified herein or in the Award Agreement, the Option shall terminate.

6.11 Death of Optionholder. Unless otherwise provided in an Award Agreement, in the event an Optionholder's Continuous Service terminates as a result of the Optionholder's death, then the Option may be exercised (to the extent the Optionholder was entitled to exercise such Option as of the date of death) by the Optionholder's estate, executor, or personal representative, by a person who acquired the right to exercise the Option by bequest, but only within the period ending on the earlier of (a) the date 12 months following the date of death or (b) the expiration of the term of such Option as set forth in the Award Agreement. If, after the Optionholder's death, the Option is not exercised within the time specified herein or in the Award Agreement, the Option shall terminate.

6.12 Incentive Stock Option $100,000 Limitation. To the extent that the aggregate Fair Market Value (determined at the time of grant) of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company) exceeds $100,000, the Options or portions thereof which exceed such limit (according to the order in which they were granted) shall be treated as Non-qualified Stock Options.

7. Provisions of Awards Other Than Options.

7.1 Stock Appreciation Rights.

(a) **General**

Each Stock Appreciation Right granted under the Plan shall be evidenced by an Award Agreement. Each Stock Appreciation Right so granted shall be subject to the conditions set forth in this Section 7.1, and to such other conditions not inconsistent with the Plan as may be reflected in the applicable Award Agreement. Stock Appreciation Rights may be granted alone ("**Free Standing Rights**") or in tandem with an Option granted under the Plan ("**Related Rights**").

(b) **Grant Requirements**

Any Related Right that relates to a Non-qualified Stock Option may be granted at the same time the Option is granted or at any time thereafter but before the exercise or expiration of the Option. Any Related Right that relates to an Incentive Stock Option must be granted at the same time the Incentive Stock Option is granted.

(c) **Term of Stock Appreciation Rights**

The term of a Stock Appreciation Right granted under the Plan shall be determined by the Board or Committee; *provided, however*, no Stock Appreciation Right shall be exercisable later than the tenth anniversary of the Grant Date.

(d) **Vesting of Stock Appreciation Rights**

Each Stock Appreciation Right may, but need not, vest and therefore become exercisable in periodic instalments as determined by the Board or Committee or based upon the attainment of a Performance Goal or the occurrence of a specified event. The vesting provisions of individual Stock Appreciation Rights may vary. No Stock Appreciation Right may be exercised for a fraction of a share of Common Stock.

(e) **Exercise and Payment**

Upon exercise of a Stock Appreciation Right, the holder shall be entitled to receive from the Company an amount equal to the number of shares of Common Stock subject to the Stock Appreciation Right that is being exercised multiplied by the excess of (i) the Fair Market Value of a share of Common Stock on the date the Award is exercised, over (ii) the exercise price specified in the Stock Appreciation Right or related Option. Payment with respect to the exercise of a Stock Appreciation Right shall be made on the date of exercise. Payment shall be made in the form of shares of Common Stock (with or without restrictions as to substantial risk of forfeiture and transferability, as determined by the Board Committee in its sole discretion), cash or a combination thereof, as determined by the Board or Committee.

(f) **Exercise Price**

The exercise price of a Free Standing Stock Appreciation Right shall be determined by the Board or Committee, but shall not be less than 100% of the Fair Market Value of one share of Common Stock on the Grant Date of the Stock Appreciation Right. A Related Right granted simultaneously with or subsequent to the grant of an Option and in conjunction therewith or in the alternative thereto shall have the same exercise price as the related Option, shall be transferable only upon the same terms and conditions as the related Option, and shall be exercisable only to the same extent as the related Option; *provided, however*, that a Stock Appreciation Right, by its terms, shall be exercisable only when the Fair Market Value per share of Common Stock subject to the Stock Appreciation Right and related Option exceeds the exercise price per share thereof. No Stock Appreciation Rights may be granted in tandem with an Option unless the Board or Committee determines that the requirements of ***Section*** 7.1(b) are satisfied.

(g) **Reduction in the Underlying Option Shares**

Upon any exercise of a Related Right, the number of shares of Common Stock for which any related Option shall be exercisable shall be reduced by the number of shares for which the Stock Appreciation Right has been exercised. The number of shares of Common Stock for which a Related Right shall be exercisable shall be reduced upon any exercise of any related Option by the number of shares of Common Stock for which such Option has been exercised.

7.2 Stock Awards.

(a) **General**

A Stock Award is an Award of actual shares of Common Stock ("**Restricted Stock**") or hypothetical Common Stock units ("**Restricted Stock Units**") having a value equal to the Fair Market Value of an identical number of shares of Common Stock. A Stock Award may, but need not, provide that such Stock Award may not be sold, assigned, transferred or otherwise disposed of, or pledged or hypothecated as collateral for a loan or as security for the performance of any obligation or for any other purpose for such period as the Board or Committee shall determine (the "**Restricted Period**"). Each Stock Award granted under the Plan shall be evidenced by an Award Agreement. Each Stock Award so granted shall be subject to the conditions set forth in this ***Section* 7.2**, and to such other conditions not inconsistent with the Plan as may be reflected in the applicable Award Agreement.

(b) **Restricted Stock and Restricted Stock Units**

(i) Each Participant granted Restricted Stock shall execute and deliver to the Company an Award Agreement with respect to the Restricted Stock setting forth the applicable payment terms, if any, for the Restricted Stock, and restrictions and other terms and conditions applicable to such Restricted Stock.

(ii) Restricted Stock may be issued to a Participant without payment or without the delivery of a promissory note or instalment payment agreement only for services actually performed by the Participant prior to the issuance of the Restricted Stock.

(iii) In the case of Restricted Stock sold to a Participant on an instalment payment basis, the Company may require, as a condition of the grant, that the Participant execute and deliver to the Company a promissory note or instalment payment agreement and a stock pledge or security agreement, and a blank stock power with respect to the Restricted Stock, in such form and containing such terms as the Board or Committee may require. No Restricted Stock shall be sold to an Officer or Director on instalment payment terms that would constitute an extension of credit in violation of in violation of Section 402(a) of the Sarbanes-Oxley Act of 2002.

(iv) If the Committee determines that the Restricted Stock shall be held by the Company or in escrow rather than delivered to the Participant pending the release of the applicable restrictions, the Committee may require the Participant to additionally execute and deliver to the Company (A) an escrow agreement satisfactory to the Committee, if applicable and (B) the appropriate blank stock power with respect to the Restricted Stock covered by such agreement.

(v) If a Participant fails to execute an agreement evidencing an Award of Restricted Stock and, if applicable, a promissory note or instalment payment agreement, stock pledge or security agreement, escrow agreement, and stock power, the Award shall be null and void. Subject to the restrictions set forth in the Award, the Participant generally shall have the rights and privileges of a shareholder as to such Restricted Stock, including the right to vote such Restricted Stock and the right to receive dividends; *provided that*, any cash dividends and stock dividends with respect to the Restricted Stock shall be withheld by the Company for the Participant's account, and interest may be credited on the amount of the cash dividends withheld at a rate and subject to such terms as determined by the Board or Committee. The cash dividends or stock dividends so withheld and attributable to any particular share of Restricted Stock (and earnings thereon, if applicable) shall be distributed to the Participant in cash or, at the discretion of the Board or Committee, in shares of Common Stock having a Fair Market Value equal to the amount of such dividends, if applicable, upon the release of restrictions on such share and, if such share is forfeited, the Participant shall have no right to such dividends.

(vi) The terms and conditions of a grant of Restricted Stock Units shall be reflected in an Award Agreement. No shares of Common Stock shall be issued at the time a Restricted Stock Unit is granted, and the Company will not be required to set aside a fund for the payment of any such Award. A Participant shall have no voting rights with respect to any Restricted Stock Units granted hereunder. At the discretion of the Committee, each Restricted Stock Unit (representing one share of Common Stock) may be credited with cash and stock dividends paid by the Company in respect of one share of Common Stock ("**Dividend Equivalents**"). Dividend Equivalents shall be withheld by the Company for the Participant's account, and interest may be credited on the amount of cash Dividend Equivalents withheld at a rate and subject to such terms as determined by the Board or Committee. Dividend Equivalents credited to a Participant's account and attributable to any particular Restricted Stock Unit (and earnings thereon, if applicable) shall be distributed in cash or, at the discretion of the Board or Committee, in shares of Common Stock having a Fair Market Value equal to the amount of such Dividend Equivalents and earnings, if applicable, to the Participant upon settlement of such Restricted Stock Unit and, if such Restricted Stock Unit is forfeited, the Participant shall have no right to such Dividend Equivalents.

(c) **Restrictions**

(i) Restricted Stock awarded to a Participant shall be subject to the following restrictions until the expiration of the Restricted Period, and to such other terms and conditions as may be set forth in the applicable Award Agreement: (A) if an escrow arrangement is used, the Participant shall not be entitled to delivery of the stock certificate; (B) the shares shall be subject to the restrictions on transferability set forth in the Award Agreement; (C) the shares shall be subject to forfeiture to the extent provided in the applicable Award Agreement; and (D) to the extent such shares are forfeited, the stock certificates shall be returned to the Company, and all rights of the Participant to such shares and as a shareholder with respect to such shares shall terminate without further obligation on the part of the Company.

(ii) Restricted Stock Units awarded to any Participant shall be subject to (A) forfeiture until the expiration of the Restricted Period, and satisfaction of any applicable Performance Goals during such period, to the extent provided in the applicable Award Agreement, and to the extent such Restricted Stock Units are forfeited, all rights of the Participant to such Restricted Stock Units shall terminate without further obligation on the part of the Company and (B) such other terms and conditions as may be set forth in the applicable Award Agreement.

(iii) The Board or Committee shall have the authority to remove any or all of the restrictions on the Restricted Stock and Restricted Stock Units whenever it may determine that, by reason of changes in Applicable Laws or other changes in circumstances arising after the date the Restricted Stock or Restricted Stock Units are granted, such action is appropriate.

(d) **Restricted Period**

With respect to Stock Awards, the Restricted Period shall commence on the Grant Date and end at the time or times set forth on a schedule established by the Board or Committee in the applicable Award Agreement. The Board or Committee may, but shall not be required to, provide for an acceleration of the expiration of a Restricted Period upon the occurrence of a specified event.

(e) **Delivery of Restricted Stock and Settlement of Restricted Stock Units**

Upon the expiration of the Restricted Period with respect to any shares of Restricted Stock, the restrictions set forth in ***Section*** 7.2(c) and the applicable Award Agreement shall be of no further force or effect with respect to such shares, except as set forth in the applicable Award Agreement. If an escrow arrangement is used, upon such expiration, the Company shall deliver to the Participant, or his or her beneficiary, without charge, the stock certificate evidencing the shares of Restricted Stock which have not then been forfeited and with respect to which the Restricted Period has expired (provided, that no fractional shares shall be issued) and any cash dividends or stock dividends credited to the Participant's account with respect to such Restricted Stock and the interest thereon, if any. Upon the expiration of the Restricted Period with respect to any outstanding Restricted Stock Units, the Company shall deliver to the Participant, or his or her beneficiary, without charge, one share of Common Stock for each such outstanding Restricted Stock Unit ("**Vested Unit**"); *provided, however*, that, if explicitly provided in the applicable Award Agreement, the Company may, in its sole discretion, elect to pay cash or part cash and part Common Stock in lieu of delivering only shares of Common Stock for Vested Units. If a cash payment is made in lieu of delivering shares of Common Stock, the amount of such payment shall be equal to the Fair Market Value of the Common Stock as of the date on which the Restricted Period lapsed with respect to each Vested Unit.

(f) **Stock Restrictions**

Each certificate representing Restricted Stock awarded under the Plan shall, in addition to any other legends as may be required by law or by the Board or Committee, bear a legend to the following effect:

THESE SHARES MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE SHAREHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY

8. Securities Law Compliance. All Awards, including all Options, Stock Appreciation Rights, and Stock Awards granted under the Plan shall be subject to the requirement that, if at any time the Board or the Committee shall determine, in its discretion, that the listing upon any securities exchange, or the registration under the Securities Act, or registration or qualification under any state law is required for the grant, exercise, issue , or sale of any Options, Stock Appreciation Rights, Common Stock, or Restricted Stock Units under the Plan, or the consent or approval of any government regulatory body, is necessary or desirable as a condition of, or in connection therewith, such Option, Stock Appreciation Rights, or Stock Award may not be exercised in whole or in part unless such listing, registration, qualification, consent or approval shall have been effected or obtained free of any conditions not acceptable to the Board or the Committee. Furthermore, if the Board or the Committee determines that any amendment to any Award (including, but not limited to, an increase in the exercise price of any Option or Stock Award) is necessary or desirable in connection with the registration or qualification of any of its shares under any state securities or “blue sky” law, then the Board or the Committee shall have the unilateral right to make such changes without the consent of the Participant to whom the Award was granted.

(a) Each Award Agreement shall provide that no shares of Common Stock shall be purchased or sold thereunder unless and until (i) any then applicable requirements of state or federal laws and regulatory agencies have been fully complied with to the satisfaction of the Company and its counsel and (i) if required to do so by the Company, the Participant has executed and delivered to the Company a letter of investment intent in such form and containing such provisions as the Committee may require.

(b) Except as may otherwise be required by the Securities Act, the Company shall not be required to register under the Securities Act the Plan, any Award or any Option, Stock Appreciation Right, Restricted Stock, Restricted Stock Unit, or any Common Stock issued or issuable pursuant to any such Award, and the Company shall have no liability for any delay in issuing or failure to issue or sell any Option, Stock Appreciation Right, Common Stock, or Restricted Stock Unit prior to the date on which a registration statement under the Securities Act becomes effective with respect to the offer, sale, and issuance of such Award, Option, Stock Appreciation Right, Restricted Stock, Restricted Stock Unit, or Common Stock.

9. Use of Proceeds from Stock. Proceeds from the sale of Common Stock pursuant to Awards, or upon exercise thereof, shall constitute general funds of the Company.

10. Miscellaneous.

10.1 Acceleration of Exercisability and Vesting. The Board or Committee shall have the power to accelerate the time at which an Award may first be exercised or the time during which an Award or any part thereof will vest in accordance with the Plan, notwithstanding the provisions in the Award stating the time at which it may first be exercised or the time during which it will vest.

10.2 Shareholder Rights. Except as provided in the Plan or an Award Agreement, no Participant shall be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to such Award unless and until such Participant has satisfied all requirements for exercise of the Award pursuant to its terms and no adjustment shall be made for dividends (ordinary or extraordinary, whether in cash, securities or other property) or distributions of other rights for which the record date is prior to the date such Common Stock certificate is issued, except as provided in ***Section*** 11 hereof.

10.3 No Employment or Other Service Rights. Nothing in the Plan or any instrument executed or Award granted pursuant thereto shall confer upon any Participant any right to continue to serve the Company in the capacity in effect at the time the Award was granted or shall affect the right of the Company to terminate (a) the employment of an Employee with or without notice and with or without Cause, except as may otherwise be provided in a written employment agreement between the Company and the Participant, or (b) the service of a Director pursuant to the By-laws of BioTime or an Subsidiary, and any applicable provisions of the corporate law of the state in which BioTime or the Subsidiary is incorporated, as the case may be.

10.4 Withholding Obligations. To the extent provided by the terms of an Award Agreement or as may be approved by the Board or Committee, a Participant may satisfy any federal, state or local tax withholding obligation relating to the exercise or acquisition of Common Stock under an Award by any of the following means (in addition to the Company's right to withhold from any compensation paid to the Participant by the Company) or by a combination of such means: (a) tendering a cash payment; (b) authorizing the Company to withhold shares of Common Stock from the shares of Common Stock otherwise issuable to the Participant as a result of the exercise or acquisition of Common Stock under the Award, *provided, however*, that no shares of Common Stock are withheld with a value exceeding the minimum amount of tax required to be withheld by law; or (c) delivering to the Company previously owned and unencumbered shares of Common Stock.

11. Adjustments Upon Changes in Stock. In the event of changes in the outstanding Common Stock or in the capital structure of the Company by reason of any stock or extraordinary cash dividend, stock split, reverse stock split, an extraordinary corporate transaction such as any recapitalization, reorganization, merger, consolidation, combination, exchange, or other relevant change in capitalization occurring after the Grant Date of any Award, Awards granted under the Plan and any Award Agreements, including the exercise price of Options and Stock Appreciation Rights and the number of shares of Common Stock subject to such Options, Stock Appreciation Rights, or Stock Awards, the maximum number of shares of Common Stock subject to all Awards stated in ***Section*** 4, and the maximum number of shares of Common Stock with respect to which any one person may be granted Awards during any period stated in ***Section*** 4 will be equitably adjusted or substituted, as to the number, price or kind of a share of Common Stock or other consideration subject to such Awards to the extent necessary to preserve the economic intent of such Award. In the case of adjustments made pursuant to this ***Section*** **11**, unless the Board or Committee specifically determines that such adjustment is in the best interests of the Company, Board or the Committee shall, in the case of Incentive Stock Options, ensure that any adjustments under this ***Section*** **11** will not constitute a modification, extension or renewal of the Incentive Stock Options within the meaning of Section 424(h)(3) of the Code and in the case of Non-qualified Stock Options, ensure that any adjustments under this ***Section*** **11** will not constitute a modification of such Non-qualified Stock Options within the meaning of Section 409A of the Code. Any adjustments made under this ***Section*** **11** shall be made in a manner which does not adversely affect the exemption provided pursuant to Rule 16b-3 under the Exchange Act. Further, with respect to Awards intended to qualify as "performance-based compensation" under Section 162(m) of the Code, any adjustments or substitutions will not cause the Company to be denied a tax deduction on account of Section 162(m) of the Code. The Company shall give each Participant notice of an adjustment hereunder and, upon notice, such adjustment shall be conclusive and binding for all purposes.

12. Effect of Change in Control.

12.1 In the discretion of the Board and the Committee, any Award Agreement may provide, or the Board or the Committee may provide by amendment of any Award Agreement or otherwise, notwithstanding any provision of the Plan to the contrary, that in the event of a Change in Control, Options and/or Stock Appreciation Rights shall become immediately exercisable with respect to all or a specified portion of the shares subject to such Options or Stock Appreciation Rights, and/or the Restricted Period shall expire immediately with respect to all or a specified portion of the shares of Restricted Stock or Restricted Stock Units.

12.2 In addition, in the event of a Change in Control, the Committee may in its discretion and upon at least 10 days' advance notice to the affected persons, cancel any outstanding Awards and pay to the holders thereof, in cash or stock, or any combination thereof, the value of such Awards based upon the price per share of Common Stock received or to be received by other shareholders of the Company in the event. In the case of any Option or Stock Appreciation Right with an exercise price (or SAR Exercise Price in the case of a Stock Appreciation Right) that equals or exceeds the price paid for a share of Common Stock in connection with the Change in Control, the Committee may cancel the Option or Stock Appreciation Right without the payment of consideration therefor.

12.3 The obligations of the Company under the Plan shall be binding upon any successor corporation or organization resulting from the merger, consolidation or other reorganization of the Company, or upon any successor corporation or organization succeeding to all or substantially all of the assets and business of the Company and its Subsidiaries, taken as a whole.

13. Amendment of the Plan and Awards.

13.1 Amendment of Plan. The Board at any time, and from time to time, may amend or terminate the Plan. However, except as provided in ***Section*** 11 relating to adjustments upon changes in Common Stock, and ***Section*** 13.3 and ***Section*** 14.14, no amendment shall be effective unless approved by the shareholders of the Company to the extent shareholder approval is necessary to satisfy any Applicable Laws. At the time of such amendment, the Board shall determine, upon advice from counsel, whether such amendment will be contingent on shareholder approval.

13.2 Shareholder Approval. The Board may, in its sole discretion, submit any amendment to the Plan or any Award for shareholder approval, including, but not limited submissions for shareholder approval intended to satisfy the requirements of Section 162(m) of the Code and the regulations thereunder regarding the exclusion of performance-based compensation from the limit on corporate deductibility of compensation paid to certain executive officers. If any Award is granted under the Plan prior to the date that the Plan has been approved by the shareholders of BioTime, such Award shall be contingent upon the approval of the Plan by the shareholders of BioTime. Further, the Board or Committee may make the payment of any Award contingent upon shareholder approval, for the purposes of compliance with Section 162(m) of the Code or otherwise.

13.3 No Impairment of Rights. Rights under any Award granted before amendment of the Plan shall not be impaired by any amendment of the Plan unless (a) the Company requests the consent of the Participant and the Participant consents in writing, or (b) the Award was granted subject to the terms of the amendment.

14. General Provisions.

14.1 Forfeiture Events. The Committee may specify in an Award Agreement that the Participant's rights, payments and benefits with respect to an Award shall be subject to reduction, cancellation, forfeiture or recoupment upon the occurrence of certain events, in addition to applicable vesting conditions of an Award. Such events may include, without limitation, breach of non-competition, non-solicitation, confidentiality, or other restrictive covenants that are contained in the Award Agreement or otherwise applicable to the Participant, a termination of the Participant's Continuous Service for Cause, or other conduct by the Participant that is detrimental to the business or reputation of the Company and/or its Subsidiaries.

14.2 Clawback. Notwithstanding any other provisions in this Plan, any Award which is subject to recovery under any law, government regulation or stock exchange listing requirement, will be subject to such deductions and clawback as may be required to be made pursuant to such law, government regulation or stock exchange listing requirement (or any policy adopted by the Company pursuant to any such law, government regulation or stock exchange listing requirement).

14.3 Other Compensation Arrangements. Nothing contained in this Plan shall prevent the Board or Committee from adopting other or additional compensation arrangements, subject to shareholder approval if such approval is required; and such arrangements may be either generally applicable or applicable only in specific cases.

14.4 Sub-plans. The Committee may from time to time establish sub-plans under the Plan for purposes of satisfying blue sky, securities, tax or other laws of various jurisdictions in which the Company intends to grant Awards. Any sub-plans shall contain such limitations and other terms and conditions as the Committee determines are necessary or desirable. All sub-plans shall be deemed a part of the Plan, but each sub-plan shall apply only to the Participants in the jurisdiction for which the sub-plan was designed.

14.5 Deferral of Awards. The Committee may establish one or more programs under the Plan to permit selected Participants the opportunity to elect to defer receipt of consideration upon exercise of an Award, satisfaction of performance criteria, or other event that absent the election would entitle the Participant to payment or receipt of shares of Common Stock or other consideration under an Award. The Committee may establish the election procedures, the timing of such elections, the mechanisms for payments of, and accrual of interest or other earnings, if any, on amounts, shares or other consideration so deferred, and such other terms, conditions, rules and procedures that the Committee deems advisable for the administration of any such deferral program.

14.6 Unfunded Plan. The Plan shall be unfunded. Neither the Company, the Board nor the Committee shall be required to establish any special or separate fund or to segregate any assets to assure the performance of its obligations under the Plan.

14.7 Recapitalizations. Each Award Agreement shall contain provisions required to reflect the provisions of ***Section*** 11.

14.8 Delivery. Subject to ***Section*** 8 and ***Section*** 7.2(c), upon exercise of an Option or Stock Appreciation Right or Restricted Stock Unit granted under this Plan, the Company shall issue Common Stock or pay any amounts due within a reasonable period of time thereafter. A period of 30 days shall be considered a reasonable period of time.

14.9 No Fractional Shares. No fractional shares of Common Stock shall be issued or delivered pursuant to the Plan. The Board or Committee shall determine whether cash, additional Awards or other securities or property shall be issued or paid in lieu of fractional shares of Common Stock or whether any fractional shares should be rounded down, forfeited, or otherwise eliminated.

14.10 Other Provisions. The Award Agreements authorized under the Plan may contain such other provisions not inconsistent with this Plan, including, without limitation, restrictions upon the exercise of the Awards, as the Committee may deem advisable.

14.11 Section 409A. The Plan is intended to comply with Section 409A of the Code to the extent subject thereto, and, accordingly, to the maximum extent permitted, the Plan shall be interpreted and administered to be in compliance therewith. Any payments described in the Plan that are due within the "short-term deferral period" as defined in Section 409A of the Code shall not be treated as deferred compensation unless Applicable Laws require otherwise. Notwithstanding anything to the contrary in the Plan, to the extent required to avoid accelerated taxation and tax penalties under Section 409A of the Code, amounts that would otherwise be payable and benefits that would otherwise be provided pursuant to the Plan during the six (6) month period immediately following the Participant's termination of Continuous Service shall instead be paid on the first payroll date after the six-month anniversary of the Participant's separation from service (or the Participant's death, if earlier). Notwithstanding the foregoing, neither the Company nor the Committee shall have any obligation to take any action to prevent the assessment of any excise tax or penalty on any Participant under Section 409A of the Code and neither the Company nor the Committee will have any liability to any Participant for such tax or penalty.

14.12 Disqualifying Dispositions. Any Participant who shall make a "disposition" (as defined in Section 424 of the Code) of all or any portion of shares of Common Stock acquired upon exercise of an Incentive Stock Option within two years from the Grant Date of such Incentive Stock Option or within one year after the issuance of the shares of Common Stock acquired upon exercise of such Incentive Stock Option shall be required to immediately advise the Company in writing as to the occurrence of the sale and the price realized upon the sale of such shares of Common Stock.

14.13 Section 16. It is the intent of the Company that the Plan satisfy, and be interpreted in a manner that satisfies, the applicable requirements of Rule 16b-3 as promulgated under Section 16 of the Exchange Act so that Participants will be entitled to the benefit of Rule 16b-3, or any other rule promulgated under Section 16 of the Exchange Act, and will not be subject to short-swing liability under Section 16 of the Exchange Act. Accordingly, if the operation of any provision of the Plan would conflict with the intent expressed in this ***Section*** 14.13, such provision to the extent possible shall be interpreted and/or deemed amended so as to avoid such conflict.

14.14 Section 162(m). To the extent the Committee issues any Award that is intended to be exempt from the deduction limitation of Section 162(m) of the Code, the Committee may, without shareholder or grantee approval, amend the Plan or the relevant Award Agreement retroactively or prospectively to the extent it determines necessary in order to comply with any subsequent clarification of Section 162(m) of the Code required to preserve the Company's federal income tax deduction for compensation paid pursuant to any such Award.

14.15 Expenses. The costs of administering the Plan shall be paid by the Company.

14.16 Severability. If any of the provisions of the Plan or any Award Agreement is held to be invalid, illegal or unenforceable, whether in whole or in part, such provision shall be deemed modified to the extent, but only to the extent, of such invalidity, illegality or unenforceability and the remaining provisions shall not be affected thereby.

14.17 Plan Headings. The headings in the Plan are for purposes of convenience only and are not intended to define or limit the construction of the provisions hereof.

14.18 Non-Uniform Treatment. The determinations of the Board or Committee under the Plan need not be uniform and may be made selectively among persons who are eligible to receive, or actually receive, Awards. Without limiting the generality of the foregoing, the Board and Committee shall be entitled to make non-uniform and selective determinations, amendments and adjustments, and to enter into non-uniform and selective Award Agreements.

15. Effective Date of Plan. The Plan shall become effective as of the Effective Date, but no Award shall be exercised (or, in the case of a stock Award, shall be granted) unless and until the Plan has been approved by the shareholders of the Company, which approval shall be within twelve (12) months before or after the date the Plan is adopted by the Board.

16. Termination or Suspension of the Plan. The Plan shall terminate automatically on December 19, 2022 which is ten from the date the Plan was approved by the Company's Board of Directors. No Award shall be granted pursuant to the Plan after such date, but Awards theretofore granted may extend beyond that date.

17. Effect of Dissolution, Merger or Other Reorganization. Upon the dissolution or liquidation of BioTime, or upon a reorganization, merger or consolidation of BioTime as a result of which the outstanding Common Stock or other securities of the class then subject to Awards are changed into or exchanged for cash or property or securities not of BioTime's issue, or upon a sale of substantially all the property of BioTime to, or the acquisition of more than eighty percent (80%) of the Voting Securities of BioTime then outstanding by, another corporation or person, this Plan shall terminate, and all unexercised Awards theretofore granted hereunder shall terminate, unless provision can be made in writing in connection with such transaction for the continuance of the Plan and/or for the assumption of Awards theretofore granted, or the substitution for Awards options or other rights covering the shares of a successor corporation, or a parent or a subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices, in which event the Plan and Awards theretofore granted shall continue in the manner and under the terms so provided, subject to such adjustments. The grant of an Award pursuant to the Plan shall not affect in any way the right or power of BioTime or any Subsidiary or parent corporation to make adjustments, reclassifications, reorganizations or changes or its capital or business structure or to merge or to consolidate or to dissolve, liquidate or sell, or transfer all or any part of its business or assets.

18. Choice of Law. The law of the State of California shall govern all questions concerning the construction, validity and interpretation of this Plan, without regard to such state's conflict of law rules.

As adopted by the Board of Directors of BioTime, Inc. on December 20, 2012.

As approved by the shareholders of BioTime, Inc. on October 28, 2013.

Exhibit 10.7

INCENTIVE STOCK OPTION AGREEMENT

THIS AGREEMENT made and entered into as of _____, 20XX, by and between BioTime, Inc., a California corporation (the "Company"), and _____, an employee (the "Employee") of the Company or of a subsidiary of the Company (hereinafter included within the term "Company") within the meaning of Section 425(f) of the Internal Revenue Code of 1986, as amended (the "Code"),

W I T N E S S E T H

WHEREAS, the Company has adopted the BioTime, Inc. 2012 Equity Incentive Plan (the "Plan"), administered by the Company's Board of Directors (the "Board") or, in the discretion of the Board, by a committee (the "Committee"), providing for the granting to its employees or other individuals, stock options to purchase the Company's common stock, no par value; and

WHEREAS, the Plan provides for the grant of certain options which are intended to be incentive stock options ("Incentive Stock Options" or "Options") within the meaning of Selection 422(b) of the Code; and

WHEREAS, the Employee is an officer or key employee who is in a position to make an important contribution to the long-term performance of the Company;

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants hereinafter set forth and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties agree as follows:

1. Grant. The Company hereby grants to the Employee an Incentive Stock Option to purchase _____ common shares, no par value (the "Shares"), at the price set forth in Section 2, on the terms and conditions hereinafter stated and subject to any limitations contained in the Plan.

2. Exercise Price. The purchase price per Share is _____ dollars and _____ cents ($_____) which was the last closing price of the Company's common shares on the date of this grant (i.e., _____, 20XX) and 100% of the fair market value of common stock subject to the option on the grant date.

3. Vesting. Unless otherwise terminated as provided by this Agreement, this option will vest (and thereby become exercisable) as follows: 1/48th of the number of Shares will vest at the end of each full month that elapses following _____, 20XX. Vesting will depend on Employee's continued employment with the Company through the applicable vesting date. The unvested portion of the Option shall not be exercisable.

4. Expiration. The vested portion of the options shall expire on the earliest of (A) seven (7) years from date of grant, (B) ninety days after Employee ceases to be an employee of the Company for any reason other than Employee's death or Disability (as defined below), or (C) one year after Employee ceases to be an employee of the Company due to death or Disability; provided that if Employee dies during the ninety day period described in clause (B) of this paragraph, the expiration date of the vested portion of the Option shall be one year after the date of Employee's death.

5. Adjustments in Shares and Purchase Price.

(a) In the event of changes in the outstanding common shares or in the capital structure of the Company by reason of any stock or extraordinary cash dividend, stock split, reverse stock split, an extraordinary corporate transaction such as any recapitalization, reorganization, merger, consolidation, combination, exchange, or other relevant change in capitalization occurring after the date of grant of this option, the exercise price and the number of Shares subject to this option will be equitably adjusted or substituted, as to the number, price or kind of a share of securities or other consideration to the extent necessary to preserve the economic intent of such Award, as determined by the Board or Committee.

(b) Upon the dissolution or liquidation of the Company, or upon a reorganization, merger, or consolidation of the Company as a result of which the outstanding securities of the class then subject to options hereunder are changed into or exchanged for cash or property or securities not of the Company's issue, or upon a sale of substantially all the property of the Company to, or the acquisition of stock representing more than eighty percent (80%) of the voting power of the stock of the Company then outstanding by, another corporation or person, this option shall terminate, unless provision is made in writing in connection with such transaction for the assumption of options theretofore granted under the Plan, or the substitution of such options by any options covering the stock of a successor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices, in which event this option shall continue in the manner and under the terms so provided.

(c) To the extent that the foregoing adjustments relate to stock or securities of the Company or the exercise price of this option, such adjustments shall be made by the Board or Committee, whose determination in that respect shall be final, binding and conclusive.

(d) The grant of this option shall not affect in any way the right of power of the Company to make adjustments, reclassifications, reorganizations or changes of its capital or business structure or to merge or to consolidate or to dissolve, liquidate or sell, or transfer all or any part of its business or assets.

6. Effect of Termination of Employment. In the event of termination of the Employee's Continuous Service for any reason other than his or her death or disability, this option may not be exercised after the date three months following the date of termination of Employees Continuous Service, and may be exercisable only up to the amount vested on the date of termination. "Continuous Service" means that the Employee's service with the Company, whether as an employee, consultant, or director, is not interrupted or terminated, as determined in accordance with the Plan.

7. Effect of Death or Disability. This option shall be exercisable during the Employee's lifetime only by the Employee and shall be nontransferable by the Employee otherwise than by will or the laws of descent and distribution.

(a) In the event the Employee's Continuous Service terminates on account of the Employee's disability, this option may not be exercised after the earlier of (i) date 12 months following such termination, and (ii) the expiration of the term of this option, and this option shall be exercisable only up to the amount vested under Section 3 on the date of disability. Disability shall have the meaning ascribed to it under Section 22(e)(3) of the Code.

(b) In the event Employee's Continuous Service terminates due to Employee's death, or if Employee dies during the three month period following termination of Employee's Continuous Service during which the Employee is permitted to exercise this option pursuant to Section 6, this option may be exercised by the executor or administrator of the Employee's estate or any person who shall have acquired the option from the Employee by his or her will or the applicable law of descent and distribution, during a period ending on the earlier of (i) 12 months following the date of death, and (ii) the expiration of the term of this option, with respect to the number of Shares for which the deceased Employee would have been entitled to exercise at the time of his or her death, including the number of Shares that vested upon his death under Section 3, subject to adjustment under Section 5. Any such transferee exercising this option must furnish the Company upon request of the Committee (i) written notice of his or her status as transferee, (ii) evidence satisfactory to the Company to establish the validity of the transfer of the option in compliance with any laws of regulations pertaining to said transfer, and (iii) written acceptance of the terms and conditions of the option as prescribed in this Agreement.

8. How to Exercise Option. This option may be exercised by the person then entitled to do so as to any Share which may then be purchased by giving written notice of exercise to the Company, specifying the number of full Shares to be purchased and accompanied by full payment of the purchase price thereof and the amount of any income tax the Company is required by law to withhold by reason of such exercise. The Option Exercise Price of Shares acquired pursuant to an Option shall be paid, to the extent permitted by applicable statutes and regulations, either (a) in cash or by certified or bank check at the time the Option is exercised or (b) the Option Exercise Price may be paid: (i) by delivery to the Company of other Shares, duly endorsed for transfer to the Company, with a Fair Market Value on the date of delivery equal to the Option Exercise Price (or portion thereof) due for the number of shares being acquired (a "**Stock for Stock Exchange**"); (ii) a "cashless" exercise program established with a broker pursuant to which the broker exercises or arranges for the coordination of the exercise of the Option with the sale of some or all of the underlying Shares; (iii) any combination of the foregoing methods; or (iv) in any other form of consideration that is legal consideration for the issuance of Shares and that may be acceptable to the Board or Committee. The exercise price of Shares acquired pursuant to an Option that is paid by delivery to the Company of other Shares acquired, directly or indirectly from the Company, shall be paid only by Shares that have been held for more than six months (or such longer or shorter period of time required to avoid a charge to earnings for financial accounting purposes). Notwithstanding the foregoing, during any period for which the Company has any security registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or is required to file reports under Section 15(d) of the Exchange Act, or has filed a registration statement that has not yet become effective under the Securities Act of 1933, as amended, and that it has not withdrawn, if the Employee is a director or officer of the Company, any exercise that involves or may involve a direct or indirect extension of credit or arrangement of an extension of credit by the Company, directly or indirectly, in violation of Section 402(a) of the Sarbanes-Oxley Act of 2002 shall be prohibited.

9. No Rights as Shareholder Prior to Exercise. Neither the Employee nor any person claiming under or through the Employee shall be or have any of the rights or privileges of a shareholder of the Company in respect of any of the Shares issuable upon the exercise of the option until the date of receipt of payment (including any amounts required by income tax withholding requirements) by the Company.

10. Notices. Any notice to be given to the Company under the terms of this Agreement shall be addressed to the Company at its principal executive office, or at such other address as the Company may hereafter designate in writing. Any notice to be given to the Employee shall be addressed to the Employee as the address set forth beneath his or her signature hereto, or at any such other address as the Employee may hereafter designate in writing. Any such notice shall be deemed to have been duly given three (3) days after being addressed as aforesaid and deposited in the United States mail, first class postage prepaid.

11. Restrictions on Transfer. Except as otherwise provided herein, the option herein granted and the rights and privileges conferred hereby shall not be transferred, assigned, pledged or hypothecated in any way (whether by operation of law or otherwise) and shall not be subject to sale under execution attachment or similar process upon the rights and privileges conferred hereby. Any transfer, assignment, pledge or other disposal of said option, or of any right or privilege conferred hereby, contrary to the provisions hereof, or any sale under any execution, attachment or similar process upon the rights and privileges conferred hereby, shall immediately be null and void and shall not vest in any purported assignee or transferee any rights or privileges of the optionee, under this Agreement or otherwise with respect to such options. Notwithstanding the preceding two sentences, in conjunction with the exercise of an option, and for the purpose of obtaining financing for such exercise, the option holder may arrange for a securities broker/dealer to exercise an option on the option holder's behalf, to the extent necessary to obtain funds required to pay the exercise price of the option.

12. Successor and Assigns. Subject to the limitations on transferability contained herein, this Agreement shall be binding upon and inure to the benefit of the heirs, legal representatives, successors, and assigns of the parties hereto.

13. Additional Restrictions. The rights awarded hereby are subject to the requirement that, if at any time the Board or the Committee shall determine, in its discretion, that the listing, registration or qualification of the Shares subject to such rights upon any securities exchange or under any state or federal law, or the consent or approval of any government regulatory body, is necessary or desirable as a condition of, or in connection with, the granting of such rights or the issuance or purchase of Shares in connection with the exercise of such rights, then such rights may not be exercised in whole or in part unless such listing, registration, qualification, consent or approval shall have been affected or obtained free of any conditions not acceptable to the Board or the Committee. Furthermore, if the Board or Committee determines that amendment to any stock option (including but not limited to the increase in the exercise price) is necessary or desirable in connection with the registration or qualification of any Shares or other securities under the securities or "blue sky" laws of any state, then the Board or Committee shall have the unilateral right to make such changes without the consent of the Employee.

14. Notice of Sale or Other Disposition of Shares. In the event the Employee disposes of any of the Shares that may be acquired hereunder at any time within two years of the date hereof or one year from the date the Shares were acquired, the Employee agrees to notify the Company in writing within ten days of the date of such disposition, of the number of Shares disposed of, the nature of the transaction, and the amount received (if any) upon such disposition. Employee understands that such a disposition may result in imposition of withholding taxes, and agrees to remit to the Company on request any amounts requested to satisfy any withholding tax liability.

15. Terms of Employment. Subject to any employment contract with the Employee, the terms of employment of the Employee shall be determined from time to time by the Company and the Company shall have the right, which is hereby expressly reserved, to terminate the Employee or change the terms of the employment at any time for any reason whatsoever, with or without good cause. The Employee agrees to notify in writing the Corporate Secretary of the Company of the Employee's intention, if any, to terminate Employee's employment within ten days after said intention is formed.

16. Payment of Taxes. Whenever Shares are to be issued to the Employee in satisfaction of the rights conferred hereby, the Company shall have the right to require the Employee to remit to the Company an amount sufficient to satisfy federal, state and local withholding tax requirements prior to the delivery of any certificate or certificates for such Shares.

17. Terms and Conditions of Plan. This Agreement is subject to, and the Company and the Employee agree to be bound by, all of the terms and conditions of the Plan, as the same shall have been amended from time to time in accordance with the terms thereof, provided that no such amendment shall deprive the Employee, without his or her consent, of any of his or her rights hereunder, except as otherwise provided in this Agreement or in the Plan. The Shares acquired hereunder may also be subject to restrictions on transfer and/or rights of repurchase that may be contained in the Bylaws of the Company or in separate agreements with Employee. The Board or the Committee shall have the power to interpret the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret or revoke any such rules. All actions taken and all interpretations and determinations made by the Board or the Committee in good faith shall be final and binding upon Employee, the Company and all other interested persons. No member of the Board or the Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan or this Agreement.

18. Severability. In the event that any provision in this Agreement shall be invalid or unenforceable, such provision shall be severable from, and such invalidity or unenforceability shall not be construed to have any effect on the remaining provisions of this Agreement.

19. Governing Law. This Agreement shall be governed by and construed under the laws of the state of California, without regard to conflicts of law provisions.

IN WITNESS HEREOF, the parties hereto have executed this Agreement, as of the day and year first above written.

COMPANY:

BioTime, Inc.

_____
(Signature)

By _____
Title _____

EMPLOYEE:

_____
(Signature)

_____
(Please Print Name)

Exhibit 10.8

STOCK OPTION AGREEMENT
(Director)

THIS AGREEMENT made and entered into as of _____, 20___, by and between BioTime, Inc., a California corporation (the "Company"), and _____, a director (the "Optionee") of the Company or of a subsidiary of the Company (hereinafter included within the term "Company") within the meaning of Section 425(f) of the Internal Revenue Code of 1986, as amended (the "Code"),

W I T N E S S E T H

WHEREAS, the Company has adopted the BioTime, Inc. 2012 Equity Incentive Plan (the "Plan"), administered by the Company's Board of Directors (the "Board") or, in the discretion of the Board, by a committee (the "Committee"), providing for the granting to its employees or other individuals, stock options to purchase the Company's common stock, no par value; and

WHEREAS, the Plan provides for the grant of certain options which are not intended to be incentive stock options within the meaning of Section 422(b) of the Code ("nonqualified stock options" or "options"); and

WHEREAS, the Optionee is a director, who is in a position to make an important contribution to the long-term performance of the Company;

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants hereinafter set forth and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties agree as follows:

1. Grant. The Company hereby grants to the Optionee a stock option to purchase _____ common shares, no par value (the "Shares"), at the price set forth in Section 2, on the terms and conditions hereinafter stated and subject to any limitations contained in the Plan.

2. Exercise Price. The purchase price per Share is _____ ($_____) which was the last closing price of the Company's common shares on the date of this grant (___, 20__) and 100% of the fair market value of common stock subject to the option on the grant date.

3. Expiration. This option is not exercisable after 5:00 p.m. California time on _____, 20__.

4. Adjustments in Shares and Purchase Price.

(a) In the event of changes in the outstanding common shares or in the capital structure of the Company by reason of any stock or extraordinary cash dividend, stock split, reverse stock split, an extraordinary corporate transaction such as any recapitalization, reorganization, merger, consolidation, combination, exchange, or other relevant change in capitalization occurring after the date of grant of this option, the exercise price and the number of Shares subject to this option will be equitably adjusted or substituted, as to the number, price or kind of a share of securities or other consideration to the extent necessary to preserve the economic intent of such Award, as determined by the Board or Committee.

(b) Upon the dissolution or liquidation of the Company, or upon a reorganization, merger, or consolidation of the Company as a result of which the outstanding securities of the class then subject to options hereunder are changed into or exchanged for cash or property or securities not of the Company's issue, or upon a sale of substantially all the property of the Company to, or the acquisition of stock representing more than eighty percent (80%) of the voting power of the stock of the Company then outstanding by, another corporation or person, this option shall terminate, unless provision is made in writing in connection with such transaction for the assumption of options theretofore granted under the Plan, or the substitution of such options by any options covering the stock of a successor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices, in which event this option shall continue in the manner and under the terms so provided.

(c) To the extent that the foregoing adjustments relate to stock or securities of the Company or the exercise price of this option, such adjustments shall be made by the Board or Committee, whose determination in that respect shall be final, binding and conclusive.

(d) The grant of this option shall not affect in any way the right of power of the Company to make adjustments, reclassifications, reorganizations or changes of its capital or business structure or to merge or to consolidate or to dissolve, liquidate or sell, or transfer all or any part of its business or assets.

5. Partial Exercise. No partial exercise of this option will be permitted for fewer than one hundred (100) shares.

6. Restrictions on Transfer and Exercise.

(a) This option shall be exercisable during the Optionee's lifetime only by the Optionee and shall be nontransferable by the Optionee otherwise than by will or the laws of descent and distribution or through a property settlement upon dissolution of marriage.

(b) Except as otherwise provided herein, the option herein granted and the rights and privileges conferred hereby shall not be transferred, assigned, pledged or hypothecated in any way (whether by operation of law or otherwise) and shall not be subject to sale under execution attachment or similar process upon the rights and privileges conferred hereby. Upon any attempt to transfer, assign, pledge or otherwise dispose of said option, or of any right or privilege conferred hereby, contrary to the provisions hereof, or upon any attempted sale under any execution, attachment or similar process upon the rights and privileges conferred hereby, said option and the rights and privileges conferred hereby shall immediately become null and void.

(c) Subject to the limitations on transferability contained herein, this Agreement shall be binding upon and inure to the benefit of the heirs, legal representatives, successors and assigns of the parties hereto.

7. Death of Optionee. In the event of the Optionee's death while this option is exercisable, this option may be exercised by the executor or administrator of the Optionee's estate or any person who shall have acquired the option from the Optionee by his or her will or the applicable law of descent and distribution, during a period ending on the earlier of (i) 12 months following the date of death, and (ii) the expiration of the term of this option, with respect to the number of Shares for which the deceased Optionee would have been entitled to exercise at the time of his or her death, including the number of Shares that were vested upon his death under Section 8, subject to adjustment under Section 4. Any such transferee exercising this option must furnish the Company upon request of the Committee (a) written notice of his or her status as transferee, (b) evidence satisfactory to the Company to establish the validity of the transfer of the option in compliance with any laws of regulations pertaining to said transfer, and (c) written acceptance of the terms and conditions of the option as prescribed in this Agreement.

8. Exercise of Option.

(a) This option will not be exercisable except to the extent it has vested. The option will vest, and thereby become exercisable, on the dates shown in the following table (each such date being referred to as a "Vesting Date"):

Number of Option Shares Vesting	Vesting Date

(b) This option shall vest on the designated Vesting Date only if Optionee is still serving as a non-employee director of the Company on the Vesting Date.

(c) This option may be exercised by the person then entitled to do so as to any Shares which may then be purchased by giving written notice of exercise to the Company, specifying the number of full Shares to be purchased and accompanied by full payment of the purchase price thereof and the amount of any income tax the Company is required by law to withhold by reason of such exercise. The Option Exercise Price of Shares acquired pursuant to an Option shall be paid, to the extent permitted by applicable statutes and regulations, either (a) in cash or by certified or bank check at the time the Option is exercised or (b) the Option Exercise Price may be paid: (i) through a "cashless" exercise program established with a broker pursuant to which the broker exercises or arranges for the coordination of the exercise of the Option with the sale of some or all of the underlying Shares; or (ii) in any other form of consideration that is legal consideration for the issuance of Shares and that may be acceptable to the Board or Committee. Notwithstanding the foregoing, during any period for which the Company has any security registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") or is required to file reports under Section 15(d) of the Exchange Act, or has filed a registration statement that has not yet become effective under the Securities Act of 1933, as amended, and that it has not withdrawn, if the Optionee is a director or officer of the Company, any exercise that involves or may involve a direct or indirect extension of credit or arrangement of an extension of credit by the Company, directly or indirectly, in violation of Section 402(a) of the Sarbanes-Oxley Act of 2002 shall be prohibited.

9. No Rights as Shareholder Prior to Exercise. Neither the Optionee nor any person claiming under or through the Optionee shall be or have any of the rights or privileges of a shareholder of the Company in respect to any of the Shares issuable upon the exercise of the option until the date of receipt of payment (including any amounts required by income tax withholding requirements) by the Company.

10. Notices. Any notice to be given to the Company under the terms of this Agreement shall be addressed to the Company at its principal executive office, or at such other address as the Company may hereafter designate in writing. Any notice to be given to the Optionee shall be addressed to the Optionee as the address set forth beneath his or her signature hereto, or at any such other address as the Optionee may hereafter designate in writing. Any such notice shall be deemed to have been duly given three (3) days after being addressed as aforesaid and deposited in the United States mail, first class postage prepaid.

11. Restrictions on Transfer. Except as otherwise provided herein, the option herein granted and the rights and privileges conferred hereby shall not be transferred, assigned, pledged or hypothecated in any way (whether by operation of law or otherwise) and shall not be subject to sale under execution attachment or similar process upon the rights and privileges conferred hereby. Any transfer, assignment, pledge or other disposal of said option, or of any right or privilege conferred hereby, contrary to the provisions hereof, or any sale under any execution, attachment or similar process upon the rights and privileges conferred hereby, shall immediately be null and void and shall not vest in any purported assignee or transferee any rights or privileges of the Optionee, under this Agreement or otherwise with respect to such options. Notwithstanding the preceding two sentences, in conjunction with the exercise of an option, and for the purpose of obtaining financing for such exercise, the option holder may arrange for a securities broker/dealer to exercise an option on the option holder's behalf, to the extent necessary to obtain funds required to pay the exercise price of the option.

12. Successor and Assigns. Subject to the limitations on transferability contained herein, this Agreement shall be binding upon and inure to the benefit of the heirs, legal representatives, successors, and assigns of the parties hereto.

13. Additional Restrictions. The rights awarded hereby are subject to the requirement that, if at any time the Board or the Committee shall determine, in its discretion, that the listing, registration or qualification of the Shares subject to such rights upon any securities exchange or under any state or federal law, or the consent or approval of any government regulatory body, is necessary or desirable as a condition of, or in connection with, the granting of such rights or the issuance or purchase of Shares in connection with the exercise of such rights, then such rights may not be exercised in whole or in part unless such listing, registration, qualification, consent or approval shall have been affected or obtained free of any conditions not acceptable to the Board or the Committee. Furthermore, if the Board or Committee determines that amendment to any stock option (including but not limited to the increase in the exercise price) is necessary or desirable in connection with the registration or qualification of any Shares or other securities under the securities or "blue sky" laws of any state, then the Board or Committee shall have the unilateral right to make such changes without the consent of the Optionee.

14. Payment of Taxes. Whenever Shares are to be issued to the Optionee in satisfaction of the rights conferred hereby, the Company shall have the right to require the Optionee to remit to the Company an amount sufficient to satisfy federal, state and local withholding tax requirements prior to the delivery of any certificate or certificates for such Shares.

15. Terms and Conditions of Plan. This Agreement is subject to, and the Company and the Optionee agree to be bound by, all of the terms and conditions of the Plan, as the same shall have been amended from time to time in accordance with the terms thereof, provided that no such amendment shall deprive the Optionee, without his or her consent, of any of his or her rights hereunder, except as otherwise provided in this Agreement or in the Plan. The Shares acquired hereunder may also be subject to restrictions on transfer and/or rights of repurchase that may be contained in the Bylaws of the Company or in separate agreements with Optionee. The Board or the Committee shall have the power to interpret the Plan and this Agreement and to adopt such rules for the administration, interpretation and application of the Plan as are consistent therewith and to interpret or revoke any such rules. All actions taken and all interpretations and determinations made by the Board or the Committee in good faith shall be final and binding upon Optionee, the Company and all other interested persons. No member of the Board or the Committee shall be personally liable for any action, determination or interpretation made in good faith with respect to the Plan or this Agreement.

16. Severability. In the event that any provision in this Agreement shall be invalid or unenforceable, such provision shall be severable from, and such invalidity or unenforceability shall not be construed to have any effect on the remaining provisions of this Agreement.

17. Governing Law. This Agreement shall be governed by and construed under the laws of the state of California, without regard to conflicts of law provisions.

IN WITNESS HEREOF, the parties hereto have executed this Agreement, as of the day and year first above written.

COMPANY:

BIOTIME, INC.

_____
(Signature)

By: _____

Title: _____

_____
(Signature)

By: _____

Title: _____

OPTIONEE:

_____
(Signature)

_____
(Print or type name)

PURCHASE FORM

(To be executed upon exercise of Option)

To BioTime, Inc.:

The undersigned hereby irrevocably elects to exercise the right of purchase represented by the Option Agreement dated _____, and to purchase thereunder, _____common shares, as provided for therein, and tenders herewith payment of the Exercise Price ($_____ per common share) in full in the form of a bank wire transfer to the account of the Company, cash, a certified check, or bank cashier's check in the amount of $_____.

Please issue a certificate or certificates for such common shares in the name of, and pay any cash for any fractional share to:

_____
(Please Print Name)

_____
(Please Print Address)

_____
(Social Security Number or
Other Taxpayer Identification Number)

_____
(Signature)

NOTE: The above signature should correspond exactly with the name on the face of the Option Agreement.

And, if said number of shares shall not be all the shares purchasable under the Option Agreement, a new Option Agreement is to be issued in the name of said undersigned for the balance remaining of the shares purchasable thereunder less any fraction of a share paid in cash.

Exhibit 31

CERTIFICATIONS

I, Michael D. West, certify that:

1. I have reviewed this quarterly report on Form 10-Q of BioTime, Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which the periodic reports are being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 12, 2013

s/ Michael D. West

Michael D. West
Chief Executive Officer

CERTIFICATIONS

I, Robert W. Peabody, certify that:

1. I have reviewed this quarterly report on Form 10-Q of BioTime, Inc.

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which the periodic reports are being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 12, 2013

/s/ Robert W. Peabody

Robert W. Peabody
Chief Financial Officer

Exhibit 32

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of BioTime, Inc. (the "Company") for the quarter ended September 30, 2013 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, Michael D. West, Chief Executive Officer, and Robert W. Peabody, Chief Financial Officer of the Company, certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 12, 2013

\s/ Michael D. West
Michael D. West
Chief Executive Officer

s/ Robert W. Peabody
Robert W. Peabody
Chief Financial Officer