FORM 10-K

Caladrius Biosciences, Inc. - CLBS

Filed: March 13, 2014 (period: December 31, 2013)

Annual report with a comprehensive overview of the company

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL ENDED DECEMBER 31, 2013

OR

☐ 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 001-33650

NEOSTEM, INC.
(Exact name of registrant as specified in its charter)

DELAWARE	22-2343568
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
420 LEXINGTON AVE, SUITE 350 NEW YORK, NEW YORK	10170
(Address of principal executive offices)	(zip code)

Registrant's telephone number, including area code: 212-584-4180

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange On Which Registered
Common Stock, par value $0.001 per share	NasdaqCM

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ☐ No ☒

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. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, 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).

Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this Chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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 definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

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

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

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2013 (the last business day of the most recently completed second fiscal quarter) was approximately $92.3 million, computed by reference to the closing sales price of $5.60 for the common stock on the NasdaqCM reported for such date. Shares held by executive officers, directors and persons owning directly or indirectly more than 10% of the outstanding common stock have been excluded from the preceding number because such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

On March 11, 2014, 28,582,625 shares of the registrant's common stock, par value $0.001per share, were outstanding.

EXPLANATORY NOTE

The Registrant meets the "accelerated filed" requirements as of the end of its 2013 fiscal year pursuant to Rule 12b-2 of the Securities Exchange Act of 1934, as amended. However, pursuant to Rule 12b-2 and SEC Release No. 33-8876, the Registrant (as a smaller reporting company transitioning to the larger reporting company system based on its public float as of June 30, 2013) is not required to satisfy the larger reporting company requirements until its first quarterly report on Form 10-Q for the 2014 fiscal year and thus is eligible to check the "Smaller Reporting Company" box on the cover of this Form 10-K.

DOCUMENTS INCORPORATED BY REFERENCE

None.

All references in this Annual Report on Form 10-K to "we," "us," the "Company" and "NeoStem" mean NeoStem, Inc., including subsidiaries and predecessors, except where it is clear that the term refers only to NeoStem, Inc. This Annual Report on Form 10-K contains forward-looking statements, which involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth under "Cautionary Note Regarding Forward-Looking Statements" and under "Risk Factors" and elsewhere in this Annual Report on Form 10-K.

Unless otherwise indicated to the contrary, all share numbers and per share prices in this Annual Report on Form 10-K have been retrospectively adjusted, as appropriate, to give effect to the one-for-ten reverse stock split implemented on July 16, 2013.

TABLE OF CONTENTS

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995, as well as historical information. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or industry results, to be materially different from anticipated results, performance or achievements expressed or implied by such forward-looking statements. When used in this Annual Report on Form 10-K, statements that are not statements of current or historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "plan," "intend," "may," "will," "expect," "believe," "could," "anticipate," "estimate," or "continue" or similar expressions or other variations or comparable terminology are intended to identify such forward-looking statements, although some forward-looking statements are expressed differently. We remind readers that forward-looking statements are merely predictions and therefore inherently subject to uncertaintities and other factors and involve known and unknown risks that could cause the actual results, performance, levels of activity or our achievements or industry results, to be materially different from any future results, performance levels of activity or our achievements or industry results expressed or implied by such forward-looking statements. Such forward looking statements appear in Item 1- "Business" and Item 7-"Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as elsewhere in this Annual Report. Factors that could cause our actual results to differ materially from anticipated results expressed or implied by forward-looking statements include, among others:

- our ability to manage our business despite operating losses and cash outflows;
- our ability to obtain sufficient capital or strategic business arrangements to fund our operations and expansion plans, including meeting our financial obligations under various licensing and other strategic arrangements, the funding of our clinical trials for product candidates in our development programs for our CD34 Cell Program and our T Regulatory Cell Program, and the commercialization of the relevant technology;
- our ability to build and maintain the management and human resources infrastructure necessary to support the growth of our business;
- our ability to integrate our acquired businesses successfully and grow such acquired businesses as anticipated, including expanding our PCT business internationally;
- whether a large global market is established for our cellular-based products and services and our ability to capture a meaningful share of this market;
- scientific and medical developments beyond our control;
- our ability to obtain and maintain, as applicable, appropriate governmental licenses, accreditations or certifications or comply with healthcare laws and regulations or any other adverse effect or limitations caused by government regulation of our business;
- whether any of our current or future patent applications result in issued patents, the scope of those patents and our ability to obtain and maintain other rights to technology required or desirable for the conduct of our business;
- whether any potential strategic benefits of various licensing transactions will be realized and whether any potential benefits from the acquisition of these licensed technologies will be realized;
- the results of our development activities, including the results of our PreSERVE Phase 2 clinical trial of AMR-001 and planned clinical trials; and
- our ability to complete our planned clinical trials (or initiate other trials) in accordance with our estimated timelines due to delays associated with enrolling patients due to the novelty of the treatment, the size of the patient population and the need of patients to meet the inclusion criteria of the trial or otherwise.

The factors discussed herein, including those risks described in Item 1A. "Risk Factors" and elsewhere in this Annual Report on Form 10-K and in the Company's other periodic filings with the Securities and Exchange Commission (the "SEC") which are available for review at *www.sec.gov* under "Search for Company Filings" could cause actual results and developments to be materially different from those expressed or implied by such statements. All forward-looking statements attributable to us are expressly qualified in their entirety by these and other factors. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. Except as required by law, the Company undertakes no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

PART I

ITEM 1. BUSINESS.

OVERVIEW

NeoStem, Inc. (“we,” “NeoStem” or the “Company”) is a leader in the emerging cellular therapy industry. We are pursuing the preservation and enhancement of human health globally through the development of cell based therapeutics that prevent, treat or cure disease by repairing and replacing damaged or aged tissue, cells and organs and restoring their normal function. We believe that cell therapy will play a large role in changing the natural history of diseases as more breakthrough therapies are developed, ultimately lessening the overall burden of disease on patients and their families as well as the economic burden that these diseases impose upon modern society.

Our business includes the development of novel proprietary cell therapy products as well as a revenue generating contract development and manufacturing service business that we not only leverage for the development of our therapeutics but anticipate will benefit from the advancement in the regenerative medicine industry. The combination of our own therapeutic development business and a revenue-generating service provider business provides the Company with unique capabilities for cost effective in-house product development and immediate revenue and cash flow generation.

We are developing therapies to address ischemia through our CD34 Cell Program. Ischemia occurs when the supply of oxygenated blood in the body is restricted. We seek to reverse this restriction through the development and formation of new blood vessels. AMR-001 is our most clinically advanced product candidate in our CD34 Cell Program and is being developed to treat damaged heart muscle following an acute myocardial infarction (heart attack) ("AMI"). In December 2013, the Company completed enrollment in its PreSERVE AMI study. PreSERVE AMI is a randomized, double-blinded, placebo-controlled Phase 2 clinical trial testing AMR-001, an autologous (donor and recipient are the same) adult stem cell product for the treatment of patients with left ventricular dysfunction following acute ST segment elevation myocardial infarction (STEMI). With infusion of the target population of 160 patients complete, the last patient primary endpoint follow-up for this study is expected in June 2014 followed by data lock and analysis with a submission for a possible presentation of the study at the American Heart Association's Scientific Sessions to be held November 15-19, 2014. If approved by Food and Drug Administration (the "FDA ") and/or other worldwide regulatory agencies following successful completion of further trials, AMR-001 would address a significant medical need for which there is currently no effective treatment, potentially improving longevity and quality of life for those suffering a STEMI, and positioning the Company to capture a meaningful share of this worldwide market. We also expect to initiate a Phase 2 clinical trial for chronic heart failure in Europe in 2014 and are conducting preclinical studies in traumatic brain injury for which we expect data in the second half of 2014.

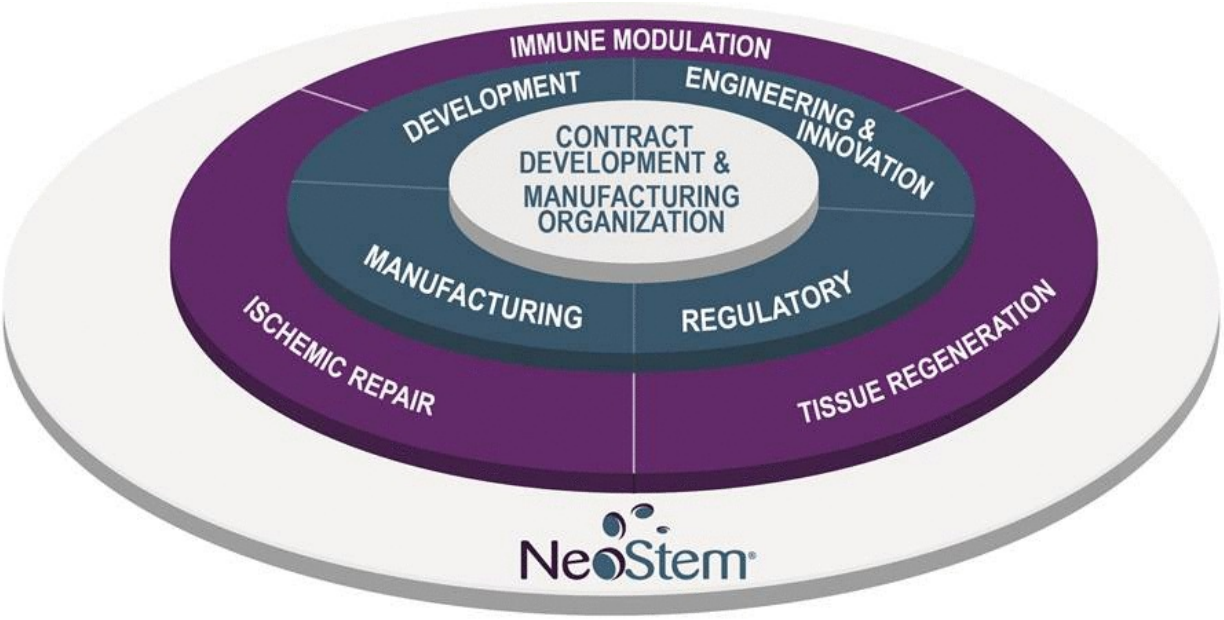
Another platform technology we are developing utilizes T Regulatory Cells ("Tregs") to treat diseases caused by imbalances in the immune system. In collaborating with Becton-Dickinson and the University of California, San Francisco, we are utilizing this technology platform of our majority-owned subsidiary, Athelos Corporation ("Athelos"), to restore immune balance by enhancing Treg cell number and function. Tregs are a natural part of the human immune system and regulate the activity of T effector cells, the cells that are responsible for protecting the body from viruses and other foreign antigen exposure. When Tregs function properly, only foreign materials are attacked by T effector cells. In autoimmune disease it is thought that deficient Treg activity permits the T effector cells to attack the body's own tissues. We plan to initiate a Phase 2 study of Treg based therapeutics to treat type 1 diabetes in 2014. We also plan to initiate a Phase 1 study in Canada of Treg based therapeutics in support of a steroid resistant asthma indication in 2014.

Pre-clinical assets include our VSEL ™ (Very Small Embryonic Like) Technology regenerative medicine platform. Regenerative medicine holds the promise of improving clinical outcomes and reducing overall healthcare costs. We are working on a Department of Defense funded study of VSELs ™ for the treatment of chronic wounds. Other preclinical work with VSELs ™ includes exploring macular degeneration as a target indication.

Progenitor Cell Therapy, LLC ("PCT") is a contract manufacturer that generates revenue. This wholly owned subsidiary, which we acquired in 2011, is an industry leader in providing high quality manufacturing capabilities and support to developers of cell-based therapies to enable them to improve efficiencies and profitability and reduce capital investment for their own development activities. Since its inception more than 15 years ago, PCT has provided pre-clinical and clinical current Good Manufacturing Practice (“cGMP”) development and manufacturing services to more than 100 clients. PCT has experience advancing regenerative medicine product candidates from product inception through rigorous quality standards all the way through to human testing, Biologic License Application ("BLA") filing and FDA product approval. PCT's core competencies in the cellular therapy industry include manufacturing of cell therapy-based products, engineering and innovation services, product and process development, cell and tissue processing, regulatory support, storage, distribution and delivery and consulting services. PCT has two cGMP, state-of-the art cell therapy research, development, and manufacturing facilities in New Jersey and California, serving

the cell therapy community with integrated and regulatory compliant distribution capabilities. The Company is pursuing commercial expansion of our manufacturing operations both in the U.S. and internationally.

We believe that NeoStem is ideally positioned to lead the cell therapy industry.



We are a Delaware corporation with our principal executive offices located at 420 Lexington Avenue, Suite 350, New York, New York 10170. Our telephone number is (212) 584-4180 and our corporate website address is *www.neostem.com*. We include our website address in this Annual Report on Form 10-K only as an inactive textual reference and do not intend it to be an active link to our website. The information on our website is not incorporated by reference in this Annual Report on Form 10-K.

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports, as well as other documents we file with the U.S. Securities and Exchange Commission ("SEC"), are available free of charge through the Investor Insights section of our website as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. The public can obtain documents that we file with the SEC at *www.sec.gov*.

This report includes the following trademarks, service marks and trade names owned by us: NeoStem, Inc. ®, Amorcyte, LLC®, Athelos™, Progenitor Cell Therapy LLC™ and VSEL™ Technology. These trademarks, service marks and trade names are the property of NeoStem and its affiliates.

OVERVIEW OF THE CELL THERAPY FIELD

Regenerative medicine is defined as the process of replacing or regenerating human cells, tissues or organs to restore normal function. Among the categories of therapeutic technology platforms within this field are cell therapy; tissue engineering; tools, devices and diagnostics; and aesthetic medicine. NeoStem's business model is focused on two of these areas. First, cell therapy, in which we introduce cells (adult, donor or patient, stem cell or differentiated) into the body to prevent and treat disease; and second, tools, devices and diagnostics in which we intend to utilize engineering and innovation to automate, integrate or otherwise modify cell therapy manufacturing platforms to improve the deliverability of cellular therapeutics to patients.

All living complex organisms start as a single cell that replicates, differentiates (matures) and perpetuates in an adult organism through its lifetime. Cellular therapy is the process that uses cells to prevent, treat or cure disease, or regenerate damaged or aged tissue. To date, the most common type of cell therapy has been the replacement of mature, functioning cells such as through blood and platelet transfusions. Since the 1970s, first bone marrow and then blood and umbilical cord-derived stem cells have been used to restore bone marrow, as well as blood and immune system cells damaged by the chemotherapy and radiation that are used to treat many cancers. These types of cell therapies are standard of practice world-wide and are typically reimbursed by insurance.

Within the field of cell therapy, research and development using stem cells to treat a host of diseases and conditions has greatly expanded. Stem cells (in either embryonic or adult forms) are primitive and undifferentiated cells that have the unique ability to transform into or otherwise affect many different cells, such as white blood cells, nerve cells or heart muscle cells. NeoStem's cell therapy development efforts are focused on the use of adult stem cells; these cells are found in the bone marrow, peripheral blood, umbilical cord blood and other body organs.

There are two general classes of cell therapies: Patient Specific Cell Therapies ("PSCTs") and Off-the-Shelf Cell Therapies ("OSCTs"). In PSCTs, cells collected from a person (donor) are transplanted, with or without modification, to a patient (recipient). In cases where the donor and the recipient are the same individual, these procedures are referred to as “autologous”. In cases in which the donor and the recipient are not the same individual, these procedures are referred to as “allogeneic.” A notable form of autologous PSCT involves the use of autologous cells to create vaccines directed against tumor cells in the body and has been demonstrated to be effective and safe in clinical trials. For example, Dendreon Corporation's Provenge ®, an autologous therapy PSCT for prostate cancer, received FDA approval in early 2010. NeoStem's CD34 Cell Program also focuses on PSCTs using autologous cells. Autologous cells offer a low likelihood of rejection by the patient and we believe the long-term benefits of these PSCTs can best be achieved with an autologous product. In the case of OSCT, donor cells are expanded many fold in tissue culture, and large banks of cells are frozen in individual aliquots that may result in treatments for as many as 10,000 people from a single donor tissue. By definition, OSCTs are always allogeneic in nature.

Various adult stem cell therapies are in clinical development for an array of human diseases, including autoimmune, oncologic, neurologic and orthopedic, among other indications. NeoStem, as well as other companies, are developing cell therapies that address ischemic repair and immune modulation. While no assurances can be given regarding future medical developments, we believe that the field of cell therapy holds the promise to better the human experience and minimize or ameliorate the pain and suffering from many common diseases and/or from the process of aging.

As a contract development and manufacturing organization (CDMO), PCT is currently working with a wide range of clients in the regenerative medicine industry. PCT provides us with a unique and fundamental base platform of experience with a multitude of cell types in development. PCT is strategically helping to position us in a way that allows us to participate in the cell therapy field on multiple levels as the cell therapy industry evolves. Our goal is to be recognized as a premier service provider in the regenerative medicine industry by continuing to leverage the experience and expertise of PCT as a recognized leader of cell therapy manufacturing and development in the sector.

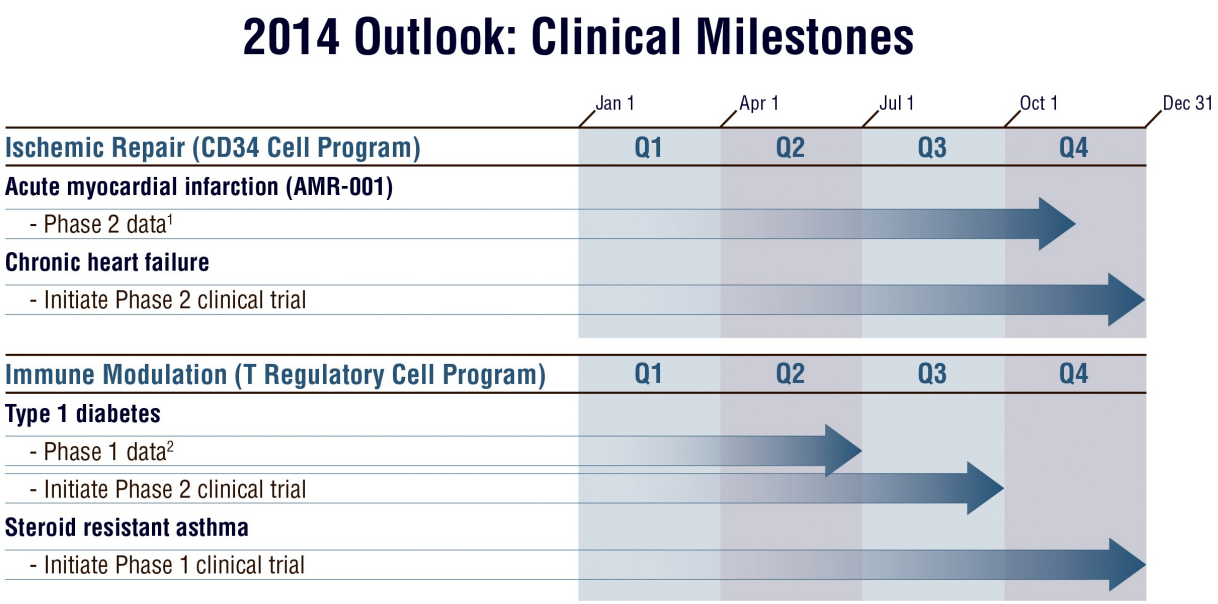
Market Analysis

According to Robin R. Young's Stem Cell Summit Executive Summary-Analysis and Market Forecasts 2014-2024, the U.S. stem cell therapy market is estimated to grow from an estimated $237 million in 2013 to more than $5.7 billion in 2020.

With approved cell therapy products currently being sold in the United States and abroad, and an increasing number of Phase 2 and Phase 3 trials with cell therapies underway, we believe the "promise" of cell therapy is becoming more and more clear. Cell therapies, if approved, should cut health care costs as they aim to facilitate functional restoration of damaged tissues and not just abate or moderate symptoms. Safe and efficacious cell therapies for chronic diseases could capture an increasing portion of future healthcare spending in the United States, driven both by favorable demographics and meaningful pharmacoeconomic benefit.

CELL THERAPY PRODUCT DEVELOPMENT

NeoStem has a multi-pronged research and clinical development strategy that targets three therapeutic platforms: ischemic repair (CD34 Cell Program), immune modulation (T Regulatory Cell Program) and tissue regeneration (VSEL ™ Technology). The following chart depicts our 2014 clinical outlook:



1. The last patient primary endpoint follow-up for this study is expected in June followed by data lock and analysis with data available in 2H 2014.
2. It is expected that this study will be presented at the American Diabetes Association's Scientific Sessions, to be held June 13 - 17, 2014, by Study Director Dr. Jeffrey Bluestone (University of California, San Francisco) and Dr. Kevan Herold (Yale University), the Study Principal Investigator. The data from the study has been licensed by the Company from The University of California, San Francisco, and is expected to serve as the basis for initiation of a Phase 2 study by the Company.

Ischemic Repair (CD34 Cell Program)

Through our CD34 Cell Program, we are pursuing the development of therapies to address ischemia. Ischemia occurs when the supply of oxygenated blood is restricted in the body. Through this program, we seek to repair this restriction through the development and formation of new blood vessels.

Our most advanced product candidate in our CD34 Cell Program is AMR-001, a chemotactic hematopoietic stem cell product comprised of autologous bone marrow derived CD34/CXCR4 cells selected to preserve heart muscle function following an AMI (heart attack).

AMR-001 works by increasing microvascular blood flow in the heart muscle via the development and formation of new blood vessels, thereby reversing the restriction of blood supply caused by a heart attack and rescuing tissue from eventual cell death. The treatment process works as follows:

- A patient's own bone marrow is harvested and a sterile pharmaceutical composition of stem cells found in the bone marrow, enriched for CD34/CXCR4 cells, is prepared using our patented technology. Cell preparation has a 72 hour shelf life.

- The isolated cells are then infused back into the patient via catheter into the infarct-related artery 5 to 11 days following an AMI, which we believe to be the optimal time frame for cellular intervention, after the pro-inflammatory “hot phase” and prior to permanent scar formation, while the heart tissue is naturally and actively attracting CD34/CXCR4 cells.

- The cells are attracted to certain chemicals that are released in higher concentrations in oxygen-starved tissue and when they reach that tissue begin to orchestrate the process of building new blood vessels to restore blood supply and thereby enhance the function of the damaged heart muscle.

Preclinical Development

Pre-clinical animal models of induced AMI have demonstrated that CD34/CXCR4 expressing cells migrate naturally to oxygen-deprived locations. More specifically, these cells home to the viable tissue surrounding the infarcted (dead) myocardium, known as the peri-infarct zone. Moreover, CD34/CXCR4 expressing cells have been shown to be capable of inducing the development and formation of new blood vessels over time and preventing heart cell death due to chronic ischemia (chronic ischemia can occur when one's coronary arteries may become so narrowed that they limit the flow of blood to one's heart all the time, even when they are at rest). Other studies have demonstrated that the CD34/CXCR4 cells that take up residence in the peri-infarct zone are likely the cell type that affects angiogenesis (the development and formation of new blood vessels), relieves ischemia (restriction of blood supply) and prevents apoptosis (cell death). Collectively, these results provided the rationale for the clinical exploration of CD34/CXCR4 expressing cells to reduce the incidence and severity of MACE (Major Adverse Cardiac Events) after an extensive AMI.

Clinical Development Efforts

AMR-001 is currently being evaluated to determine its safety and efficacy in patients with a recent heart attack.

In December 2010, our wholly owned subsidiary Amorcyte reported results of a Phase 1 study of AMR-001 treating 31 patients with damaged heart muscle following AMI. The completed Phase 1 study of AMR-001 showed a statistically significant dose-related improvement in myocardial perfusion (the flow of blood to the heart muscle). Patients who received 10 million cells (n=5) or 15 million cells (n=4) showed statistically significant improvement in resting perfusion rates at six months as compared to patients who received 5 million cells (n=6) or the control groups (n=15), as measured by single-photon emission computerized tomography (SPECT). The study data also showed a dose-related trend towards improvement in ejection fraction (the percentage of blood pumped out of the ventricles with each heart beat), end systolic volume (the blood volume remaining in a ventricle at the end of contraction and the beginning of filling, which can be used clinically as a measurement of the adequacy of cardiac emptying), and reduction in infarct size (dead tissue caused by shutting off the blood supply).

In December 2013, we completed patient enrollment in our PreSERVE AMI Phase 2 trial, a multicenter, randomized, double-blind, placebo-controlled U.S. clinical trial to evaluate the efficacy and safety of a single intra-coronary infusion of at least 10 million cells of AMR-001, in patients with an acute ST elevation myocardial infarction (“STEMI”), a particular type of AMI,

who are shown to have reduced heart muscle function with ejection fractions of 48% or less as measured by cardiac magnetic resonance imaging ("CMR").

Individuals with reduced ventricular function after STEMI are known to be at increased risk for the development of heart failure and for subsequent hospitalizations and the need for additional procedures.

Multiple peer reviewed publications from well-regarded research laboratories and investigators indicate that AMR-001 should increase microvascular blood flow in the myocardium (heart muscle) via angiogenesis (development and formation of new blood vessels), thereby reversing post-heart attack induced restriction of blood supply and rescuing heart muscle tissue from eventual cell death, which should improve long term outcomes. At the time of a heart attack, doctors rush to open up the coronary artery, usually using a stent. AMR-001 is administered within the first 5 to 11 days following the heart attack via that same artery. With angiogenesis initiated in the peri-infarct zone (that is, the living tissue on the periphery of the dead tissue), the myocardium surrounding the site of the heart attack is preserved.

The objective of the Phase 2 study is to determine the safety and the efficacy of AMR-001 in improving cardiac function and outcomes of patients after STEMI. The primary endpoint of the study is improvement in myocardial cardiac perfusion using the resting total severity score (“RTSS”), measured by gated single photon emission computed tomography (“SPECT”) myocardial perfusion imaging (“MPI”) at six months post randomization (MPI is a non-invasive imaging test that shows how well blood flows through heart muscle), with secondary endpoints including the occurrence of MACE at 6, 12, 18, 24 and 36 months. MACE includes: premature death; recurrent heart attack; chronic heart failure; significant arrhythmias; and acute coronary syndrome. Additional secondary endpoints of the study are to determine preservation of cardiac function via CMR (Cardiac Magnetic Resonance) to measure LVEF (Left Ventricular Ejection Fraction), LVESV (Left Ventricular End Systolic Volume), LVEDV (Left Ventricular End Diastolic Volume), regional myocardial strain infarct/peri-infarct regional wall motion abnormalities, and infarct size and Quality of Life measures questionnaires such as Kansas City Cardiomyopathy Questionnaire (“KCCQ”) & Seattle Angina Questionnaire (“SAQ”). The last patient primary endpoint follow-up for this study is expected in June 2014 followed by data lock and analysis with a submission for a possible presentation of the study at the American Heart Association's Scientific sessions to be held November 15-19, 2014.

Other Conditions

We believe that the CD34 Cell Program may be applicable to other conditions resulting from underlying ischemic injury. Published reports have provided evidence that CD34 cells administered into the coronary arteries of patients with chronic heart failure (CHF) can improve survival compared to patients treated with standard medical therapy. Accordingly, we are evaluating the potential of a CD34 product in treating CHF and treating the associated comorbidities of that disease and expect to initiate a Phase 2 clinical trial in 2014.

Under our CD34 Cell Program, we are conducting pre-clinical studies to determine if a CD34 product exerts a therapeutic effect in an animal model of traumatic brain injury for which we expect data in 2014. If these studies are positive, then we anticipate seeking partnerships to begin a full development program for this new indication.

Market Opportunity and Competition

Within the cardiovascular space alone the forecasted economic burden on society for medical care is expected to rise substantially. According to *Heart Disease and Stroke Statistics--2014 Update: A Report From the American Heart Association*, it is projected that by 2030, 43.9% of Americans - approximately 139 million people - will have some form of cardiovascular disease. Between 2012 and 2030, total direct medical costs of cardiovascular disease are projected to increase from $396 billion to $918 billion. Real indirect costs - due to lost productivity - for all forms of cardiovascular disease are estimated to increase more than 58% from $183 billion in 2012 to $290 billion in 2030. The combined costs are expected to increase to more than $1.48 trillion by 2030. Cell therapy offers the potential of alleviating much of the burdens of these chronic diseases in a cost-effective way.

A statistical report from *Agency for Healthcare Research and Quality in 2011* surveyed the most expensive hospitalization conditions by payer and lists AMIs as the sixth most expensive condition treated in U.S. hospitals, with a national hospital bill of more than $37 billion annually. AMI patients are at significant risk of downstream adverse events including chronic heart failure, re-current AMI, significant arrhythmias, premature death or acute coronary syndrome, and thus AMI is one of the target populations in our CD34 Cell Program. In the U.S., each year there are over 160,000 patients who suffer a STEMI, the most dangerous type

of heart attack, which results from a sudden blockage of one of the arteries that supplies nutrient-rich blood to the heart muscle. Treatment of these patients post-heart attack represents a significant financial burden for many managed care programs. We expect that this burden will increase as the “baby boomer” population ages and the annual number of STEMIs likely increases. AMR-001, if approved, could provide significant pharmacoeconomic benefits for this subpopulation alone by preventing downstream cardiac adverse events.

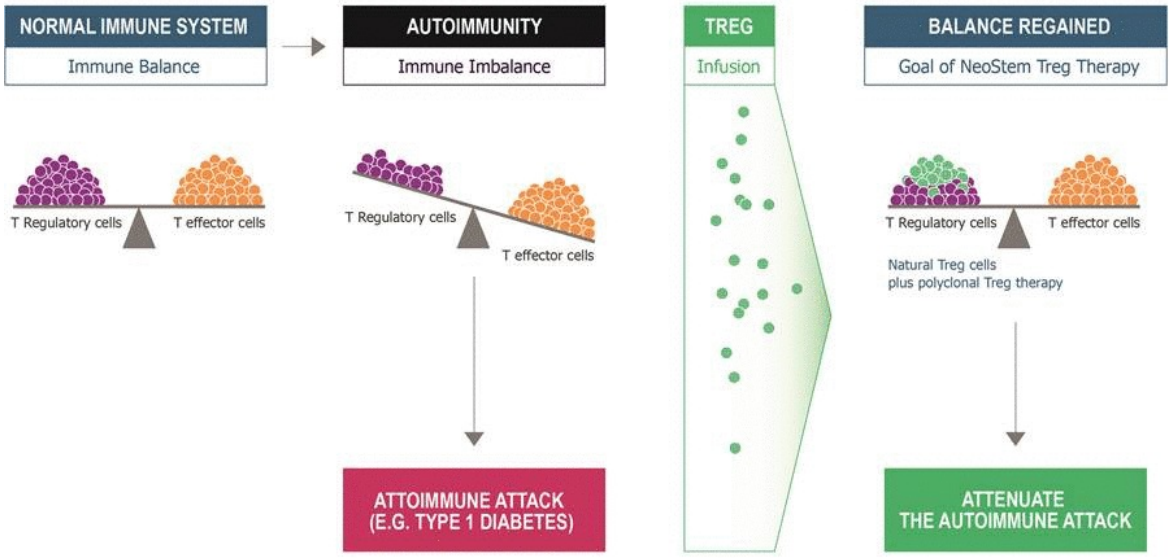
An additional and related potential application includes chronic heart failure. According to a *US News Health* article published in 2012, chronic heart failure affects 5.7 million individuals in the U.S. alone. Each year, nearly 1 million people are hospitalized with CHF, of whom 30 - 60 % are "readmits." According to the American Heart Association, CHF is now a main or contributing cause of nearly 53,000 U.S. deaths each year.

Ischemic health maladies are not limited to the cardiac setting. According to the Centers for Disease Control (CDC), an estimated 1.7 million people annually sustain a traumatic brain injury (TBI). Like a heart attack, TBI can involve the creation of an ischemic condition in brain tissue. TBI is a contributing factor to a third (30.5%) of all injury-related deaths in the U.S. About 75% of TBIs that occur each year are concussions or other forms of mild TBI. Direct medical costs and indirect costs such as lost productivity of TBI totaled an estimated $76.5 billion in the United States in 2000.

The field of cardiovascular cell therapy development is competitive. There are a number of companies that are developing stem cell-based therapies for cardiovascular diseases, including, but not limited to, Cardio3 Biosciences SA, Capricor, Inc., MesoBlast Limited, Athersys, Inc., Pluristem Therapeutics Inc., and Cytori Therapeutics, Inc. These companies are utilizing a number of different therapeutic approaches in their development efforts. Specifically, there are both autologous and allogeneic based competitive therapies that derive cells principally from four sources: fat, peripheral blood, cord blood, and bone marrow. Of these, the allogeneic sources (where donor and recipient are different persons) face a series of technical limitations that we believe can minimize their clinical value due to durability of cell issues. AMR-001, an autologous cell therapy, has demonstrated positive Phase 1 data, a cGMP process for manufacturing and a broad portfolio of patents and patent applications including dosing related technology. As such, we believe AMR-001 is in a strong competitive position.

Immune Modulation (T Regulatory Cell Program)

We are collaborating with Becton-Dickinson and the University of California, San Francisco (UCSF) on our T Regulatory Cell program, using technology platform of our majority-owned subsidiary, Athelos Corporation ("Athelos") to pursue the development of cell therapies using a person's immune cells as a therapeutic product to treat disorders of the immune system. Many immune-mediated diseases are a result of an imbalance in the immune system whereby inflammatory cells go unchecked. Therapy using T Regulatory Cells (Treg) represents a novel approach to restoring immune balance by enhancing Treg cell number and function to inhibit pathogenic immune responses.



Preclinical and Clinical Development

Through exclusive world-wide licenses to more than 30 issued patents and patent applications, we have secured the rights to a broad patent estate within the Treg field, covering natural Tregs (nTregs), induced Tregs (iTregs) and methods of treating or preventing certain conditions and/or diseases by use of Tregs. Both types of Tregs have been shown in pre-clinical studies to be important in modulating autoimmune and inflammatory diseases. nTregs have been evaluated by others in early phase human clinical trials and shown to be safe with suggestions of clinical benefit in graft-versus-host disease. Both nTregs and iTregs have demonstrated the ability to treat conditions like diabetes, inflammatory bowel disease and organ transplant tolerance in animal models of disease.

Type 1 diabetes (also known as insulin dependent diabetes or juvenile diabetes) is caused by the autoimmune destruction of insulin-producing beta cells of the pancreas. We have established a collaboration with UCSF and the laboratories of Drs. Jeffrey Bluestone and Qizhi Tang, to collaborate on the development of a therapy for the treatment of type 1 diabetes. This collaboration, comprised of a data license, patent license and research agreement, is advancing the Company's T Regulatory Cell Program towards a Phase 2 trial, expected to be initiated in 2014 to evaluate the efficacy of autologous Tregs in Type 1 diabetes, effectively advancing this program more quickly than if the Company had developed a program for this clinical indication on its own. In this collaboration, NeoStem will sponsor and manufacture a Treg product consisting of polyclonally expanded Tregs for the planned Phase 2 trial to treat patients newly diagnosed with type 1 diabetes. The collaboration also includes research efforts to develop the next generation of Treg products for therapeutic use. Dr. Bluestone, the Study Director, and Dr. Kevan Herold (Yale University), the Study Principal Investigator, completed the Phase 1 study of autologous Tregs in type 1 diabetes and expect to report the Phase 1 results at the American Diabetes Association Scientific Sessions in Chicago being held on June 13-17, 2014, which, if positive, will support the Company's planned Phase 2 study.

Asthma, another condition caused by an imbalance in the immune system, occurs when excessive inflammation is triggered in the lungs resulting in constriction of the airways and difficulty breathing. The causes of asthma are complex, through it is known that over-activity of T-helper type 2 (Th2) cells is a common feature. Th2 cells secrete the inflammatory signals that lead to the symptoms of asthma. Existing evidence indicates that Treg cells may regulate Th2 activity and therefore may have a beneficial effect on severe asthma. Accordingly, we are planning a pilot clinical trial to assess the effect of Treg therapy on severe asthma. We expect to initiate in Canada, a Phase 1 trial of Tregs to support a steroid resistant asthma indication in 2014.

Other potential therapeutic targets for T Regulatory cells could include prevention of organ transplant rejection, graft vs. host disease (GVHD) (Tregs have been evaluated in early phase human clinical trials and have shown clinical benefit in GVHD), lupus and multiple sclerosis.

NeoStem's ongoing T Regulatory Cell Program is establishing methods to isolate and expand human nTregs for large scale manufacturing to enable our planned clinical trials.

Market Opportunity

Type 1 diabetes -- also referred to as insulin dependent diabetes or juvenile diabetes -- affects over 34 million people worldwide, or 1 in 300 children. Diabetes is the leading cause of kidney failure, new cases of adult blindness and non-traumatic lower-limb amputations. Type 1 diabetes accounts for $14.9 billion in healthcare costs in the U.S. each year.

According to the American Academy of Allergy, Asthma & Immunology, as of 2009, asthma affected 25 million people in the US and 300 million people worldwide. According to the American Lung Association, the annual direct health care cost of asthma is approximately $50.1 billion; and indirect costs (e.g. lost productivity) add another $5.9 billion, for a total of $56.0 billion. Steroid resistant asthma afflicts less than 5% of the total asthma population, but accounts for up to 50% of healthcare spending on asthma.

Tissue Regeneration (VSEL™ Technology)

Our scientists have been evaluating the therapeutic potential of so-called very small embryonic-like stem cells, which we refer to as "VSELs ™" or "VSEL™ stem cells".

These cells were originally described in mice by researchers at the University of Louisville. Our research has identified cells in human blood and bone marrow that have many of the properties described for murine VSELs ™. This research includes evidence of multipotency and multi-lineage differentiation. These observations provide the groundwork for the development of VSEL ™ therapies to regenerate or repair damaged or diseased tissues in human subjects.

Preclinical animal models have demonstrated that highly enriched human VSELs ™, when injected in the vitreal or subretinal space can migrate and integrate into areas of damage and have the ability to differentiate and express markers of retinal stem cells, neuronal cells, and photoreceptors and thus, through further studies, may demonstrate VSELs™ potential to treat ocular diseases such as macular degeneration, retinitis pigmentosa, and other retinal degenerative diseases that have no effective treatment options today.

Therapeutic uses of VSELs™ are assessed on the basis of unmet medical need, target patient population size, regulatory strategy, and overall commercial market. Through either grant funding or NeoStem's own funding, we are exploring VSEL ™ treatment development for chronic wounds and retinal repair. We anticipate that a single clinical manufacturing process would be developed, and that the major pacing item will be the generation of preclinical data to support an IND application for a Phase 1 clinical trial.

VSEL Technology represents the Company's earliest therapeutic platform of interest and while the focus of the Company's clinical development emphasizes later stage therapeutics, we look forward to the results of the preclinical work exploring whether or not VSELs have therapeutic promise.

To further drive our development initiatives, we will continue to target key governmental agencies, congressional committees and not-for-profit organizations to contribute funds for our research and development programs. These grant awards, together with our other submitted grant applications, to the extent funded, would not only further our research efforts already underway, but potentially could launch new inquiries and further diversify our base of research partners in other areas. We have been awarded $4.5 million of grant activity toward preclinical VSEL™ research in areas such as bone repair, scleroderma, nerve regeneration and acute radiation syndrome.

Regulatory and Clinical Affairs Strategy

Our cell therapy regulatory and clinical strategy is to utilize all opportunities to discuss with regulators our development plans. We will take the opportunity to meet with regulators at various stages in our product development from preclinical to more advanced stages of development. We intend to utilize this strategy with all regulatory agencies as we move forward with the product pipeline.

Intellectual Property

CD34 Cell Program

We have sixteen granted or allowed patents (6 in the U.S. and 10 in countries outside the U.S.) covering our CD34 Cell Program, the claims of which are currently scheduled to expire between 2026 and 2030, and we have approximately 20 patent applications pending worldwide. Specifically, in the U.S. the following patents have claims covering our CD34 -based compositions and methods to treat injuries caused by vascular insufficiency:

- U.S. Patent No. 7,794,705 covering a chemotactic stem cell product enriched for CD34 cells that treats injury from AMI;
- U.S. Patent No. 8,088,370 covering the use of a chemotactic stem cell product enriched for CD34 cells in the repair of injury caused by vascular insufficiency, including all forms of cardiac insufficiency, such as chronic heart failure, chronic myocardial ischemia and, we believe, vascular insufficiency induced ischemic conditions beyond the cardiac setting;
- U.S. Patent No. 8,343,485, 8,637,005 and application 13/686,585 offering expanded breadth in our CD34 cell composition and treatment methods in the vascular insufficiency setting; and
- U.S. Patent No. 8,425,899 covering a method of treating a progressive myocardial injury caused by an ischemic condition and utilizing a multi-dosing regimen.

T Regulatory Cell Program

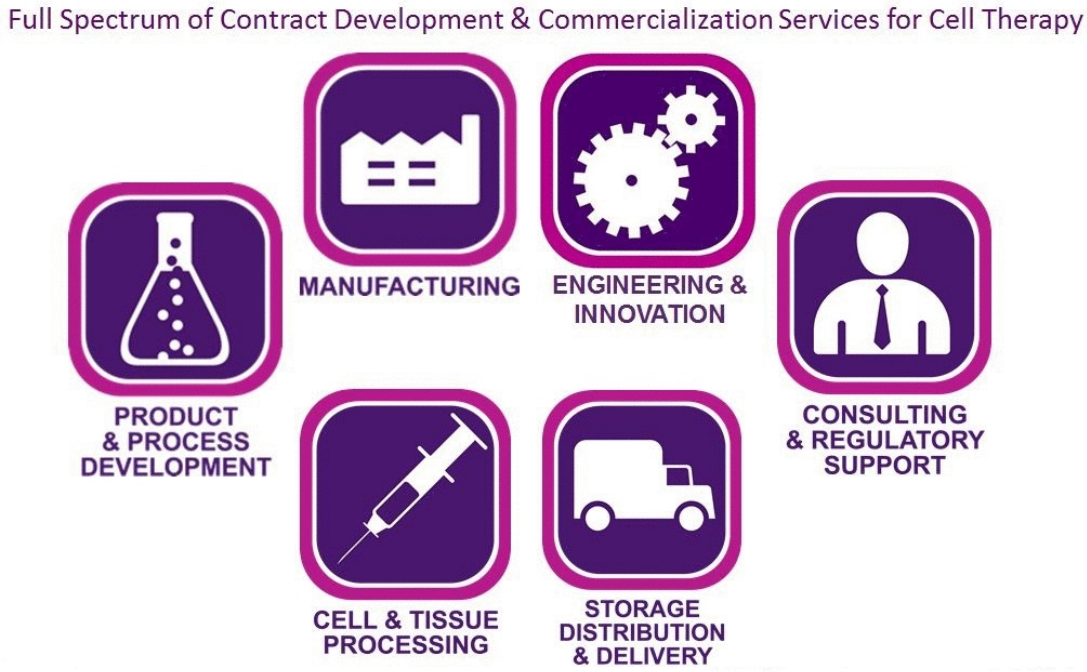
Through exclusive world-wide licenses of over 30 issued patents and patent applications, we have secured the rights to a broad patent estate within the Treg field, covering natural Tregs (nTregs), induced Tregs (iTregs) and methods of treating or preventing certain conditions and/or diseases by use of Tregs.

VSEL™ Technology Program

NeoStem also continues prosecution of patent applications relating to methods of identifying and purifying its regenerative adult stem cell candidate (VSELs™) as well as methods of treating an array of maladies using VSELs, including cardiac repair, bone and cartilage regeneration, ocular disease and cutaneous wound healing.

CONTRACT DEVELOPMENT AND MANUFACTURING OPERATIONS

Progenitor Cell Therapy, LLC ("PCT"), our wholly-owned subsidiary, is an internationally recognized contract development and manufacturing organization (CDMO) focused on providing exceptional service, quality and value to its clients, which include an expanding range of development stage organizations, Fortune 500 biotechnology, pharmaceutical and medical product companies, as well as leading academic research institutions. PCT's business strategy is to provide contract research, development, engineering and manufacturing services, enabling our clients to cost effectively outsource their pre-clinical, clinical and commercial development manufacturing and cell storage operations. PCT's expert, customer centric services include, but are not limited to current Good Manufacturing Practices/Good Laboratory Practices ("cGMP/GLP") manufacturing; engineering and innovation; product, process and assay development; Good Tissue Practices ("GTP") cell and tissue processing; cell and tissue sourcing and banking; distribution and delivery; and consulting and regulatory services. PCT operates two state-of-the-art, accredited and certified U.S. facilities, one in Allendale, New Jersey and the other in Mountain View, California and is looking to expand its service activities both in the U.S. and Europe during 2014.



NeoStem is also a PCT client, enabling us to cost-effectively and efficiently develop our own cell therapy products, as well as translate our own research and development efforts, capabilities and proprietary technologies into stable, reproducible, well-characterized cell therapy products, including product candidates for NeoStem's CD34 Cell Program and T Regulatory Cell program, through all stages of the commercial life of the product.

Management Experience

PCT's management team has extensive experience in domestic and internationally regulated cellular therapy development, including contract research, development and manufacturing across a broad range of science, technologies, and process operations. Team members are recognized and credentialed experts in all aspects of clinical and product development, characterization, manufacturing, delivery, and use, of cellular products and have extensive experience designing, validating, and operating cGMP/GLP cell therapy manufacturing facilities.

Informed by this experience, PCT has in the past formed companies intended to develop specific therapeutic products and leverage its capabilities to bring its own cell therapy product portfolio to market. In this regard, PCT management founded a cardiovascular cell therapy company (Amorcyte), an immunotherapy company (our 88.5% owned subsidiary Athelos) and a cGMP cord blood company (our subsidiary NeoStem Family Storage, LLC).

Service Offerings

PCT's business model is focused on helping our clients advance their respective product candidates from conception through to commercialization by reducing manufacturing risks, shortening the time to regulatory approval, and lowering the overall costs of a clinical development program. With its established facilities and infrastructure, PCT can offer our clients expertise at all stages of the product development lifecycle and cost-effective development and manufacturing services at the highest quality without the need for significant capital investment.

Since its inception more than15 years ago, PCT has served more than 100 clients and is experienced with greater than 20 different cell-based therapeutics including neuronal and skin based cells for brain and spinal cord repair, myoblast, mesenchymal cells and bone marrow derived cells for heart disease, tumor, dendritic cells and monocytes for cancer treatment, cord blood, peripheral blood, bone marrow CD34 selected cells for transplantation and islet cells for diabetes. PCT has performed more than 30,000 cell therapy procedures in its cell therapy manufacturing facilities, processed and stored over 18,000 cell therapy products (including approximately 7,000 umbilical cord blood, 10,000 blood and marrow derived stem cells and 1,000 dendritic cells) and arranged the logistics and transportation for more than 14,000 cell therapy products for clinical use by more than 6,000 patients nationwide. Importantly, PCT manufactured more than 85% of Dendreon's approved Provenge® product during its Phase 3 clinical testing, and more than 60% of all Dendreon cell therapeutics in clinical testing from 1999 through 2007.

PCT's current business development efforts target cell and tissue therapeutic product companies, academic stem cell and other cell therapy clinical trials, device companies serving the regenerative medicine sector, pharmaceutical companies with an interest in a cell or tissue therapeutic or research product, and any other potential client with needs in the manufacturing and development of a cell or tissue-based product. More specifically, PCT focuses its service offerings in the following six areas:

- Manufacturing: Manufacturers of cell therapy-based products face a number of challenges, including the need for substantial capital and resource investment, limited unit sizes and process scalability, short processing turnaround times and stringent and evolving regulatory requirements. PCT's facilities, infrastructure and extensive experience provide a turn-key solution to clients to meet these challenges.

- Engineering and Innovation: PCT helps clients think beyond current practices and develop long-term solutions to the unique challenges of cell therapy manufacturing. Our team accelerates use of automation, integration, closed processing and other strategies to address scale up, cost of goods, quality control and robustness of client manufacturing process. In order to bolster our unique expertise and further reduce cost of goods sold for products, PCT continually seeks innovation drivers, including new opportunities for automation in its manufacturing operations.

- Product and Process Development: PCT works with clients to develop, optimize, implement and validate various aspects of cell therapy product and process development.

- Cell and Tissue Processing: PCT offers a full range of cost-effective cell collection and processing services that meet cGTP standards.

- Storage, Distribution and Delivery: PCT offers cryogenic storage facilities for both short- and long-term storage of tissues, primary cells and cell therapy products. In addition, PCT leverages its established logistics and distribution network to ensure a timely, secure and cost-effective point-to-point chain of control and custody.

- Consulting and Regulatory Support: PCT offers our clients a full-range of scientific, technical and regulatory support along the entire spectrum of cell therapy development.

Over the next several years, we anticipate that the number of companies in the cell therapy field will continue to increase and the relative distribution of stage of development of the therapeutics will begin to skew more heavily towards Phase 2 and Phase 3 trials, and into commercial distribution. As this industry continues to develop and mature, we believe PCT is well positioned to capture a meaningful share of this larger, more profitable market. To prepare for the advancement of this industry, PCT is pursuing multiple options for commercial manufacturing capacity, both in the U.S. and internationally, with the goal of having these capabilities in place in 2014. PCT has also taken strides to expand its services into Europe.

Improving Deliverability of Cell Therapy Products through PCT's Engineering & Innovation Center

As the field of regenerative medicine matures, and an increasing number of products are reaching the marketplace, valuable lessons are being learned about the strengths and weaknesses of various business models that may allow for therapies to be delivered to a large numbers of patients. PCT's newly formed Engineering & Innovation center is working, on behalf of Neostem's internal development pipeline and for its own clients, to think beyond current practices to accelerate the use of automation, integration and other engineering strategies to address the important issues of scale up, cost of goods, and improved robustness of manufacturing process in anticipation of commercial production.

PCT is applying engineering principles to transition cell therapy science to manufacturing, and applying development by design principles, as well as structure development methodology centered on unit operations to increase the chance of successful commercial-scale manufacturing. In addition to building our internal core of engineering and innovation expertise, we are partnering with solutions providers and academic institutions to leverage existing and develop novel closed systems, single-use disposables, automation, and integration as key drivers for innovation. In this way, we believe we will be able to support the manufacture of high quality products, and a reasonable cost of goods, to meet product demand in a scalable manner as it grows throughout the commercial life of the therapeutic.

Facilities

With more than 55,000 square feet of built out development and manufacturing space in its Allendale, NJ, and Mountain View, CA facilities, PCT is a cGMP-compliant cell therapy CDMO with facilities on both the East and the West Coast of the United States. These facilities include 5,500 square feet of controlled environment rooms (CERs) or clean rooms that are unidirectional-flow, negative-pressure, International Organization for Standardization ("ISO ") designation 7 (ISO7)/Class 10,000 classified and ISO6/Class 1000, and material pass-throughs. Each CER has controlled access, live facility and equipment monitoring with automated alarm call-out, dedicated HVAC systems, and is on an uninterruptible power supply (UPS) connection, maintained by an external diesel-fueled back-power generator. Each facility also contains cell and tissue cryogenic storage rooms, with controlled access, live facility and equipment monitoring with automated alarm call-out, and UPS connection, to ensure highest level of quality control and risk mitigation for product storage.

PCT's facilities are accredited by AABB (American Association of Blood Banks) and FACT (Foundation for the Accreditation of Cellular Therapy), hold all requisite licensures, are registered with the FDA as human cells, tissues, and cellular and tissue-based products (HCT/Ps) facilities, and maintain cGMP compliant quality systems. The Allendale facility has been designed to be compliant with FDA and European Medicines Agency (EMA) standards for the manufacture of human cells for therapeutic use.

Transportation Network and Logistics

PCT seeks to maintain the highest standards in transportation and handling of our clients' cell products. A successful transportation network for cell therapies requires a completely secure point-to-point chain of control and custody; cGMP standard operating procedures in all phases of transit; a highly specialized and trained air and ground courier network; quality assurance at each transfer point; and real-time package tracking. As part of its business development process, PCT is laying the groundwork for such transportation network. We strive to maintain high standards in transportation and handling of client cell products. Currently, PCT works with validated specialty air carrier(s) that follow specific protocols for shipping medical products, including whole blood and blood products, tissue for transplantation, and diagnostic specimens and also handles cryopreserved specimens and biologics. Shipments of products are tracked as PCT and its clients develop confidence in the abilities of PCT's transportation partners.

Competition

PCT's CDMO business faces competition from other third party contract manufacturers, as well as more general competition from companies and academic and research institutions that may choose to self-manufacture rather than utilize a contract manufacturer. The two largest third party contract manufacturer competitors in the field of cell therapy are Lonza Group Ltd. and WuXi AppTec. Both of these companies are large, well-established manufacturers with financial, technical, research and development and sales and marketing resources that are significantly greater than those of PCT. In addition, both Lonza and WuXi have international capabilities that we do not currently possess though are pursuing. We also face competition from a number of other contract manufacturers that are somewhat smaller in size and have fewer resources than PCT.

More generally, we face competition inherent in any third party manufacturer's business: namely, that potential customers may instead choose to invest in their own facilities and infrastructure, affording them greater control over their products and the promise of long-term cost savings compared to a third party contract manufacturer. To be successful, we will need to convince potential customers that PCT's services are both of higher-quality and more cost-effective than could be achieved through internal manufacturing and that our experience and expertise is unique in the industry. Our ability to achieve this and to successfully compete against other contract manufacturers will depend, in large part, on our success in developing superior automation technologies that improve both the quality and profitability associated with cell therapy manufacturing.

Cord Blood and Stem Cell Processing and Storage

We provide services to treat patients with cell and tissue therapies, including the processing for blood and bone marrow stem cell transplants used following radiation and/or chemotherapy for certain cancers, in particular, leukemia, lymphoma and myeloma. We also provide services to individuals for the private collection, processing and storage of umbilical cord blood units and adult stem cells, through our subsidiary, NeoStem Family Storage, LLC. This enables healthy individuals to have their stem cells or those of their infant collected and stored for personal therapeutic use in the future, as and when needed. Our facilities on both the East and West Coast of the United States are cGMP compliant, the highest FDA standard, which we believe gives us a competitive advantage in the industry.

We believe that the perceived value of stem cell donation and storage will increase as additional indications for stem cell-based therapies are developed. Individuals may begin to view the ability to donate and store autologous adult stem cells for future personal therapeutic use as a valuable part of a “bio-insurance” program. The benefits of pre-donation include having a known supply of autologous stem cells rather than an uncertain supply of compatible allogeneic stem cells; collecting and storing the cells while healthy (since autologous stem cells may be compromised once a patient becomes sick); and storing the patient's cells earlier (since the quantity and quality of stem cells generally diminish with age).

However, currently there is no significant global market for the use of autologous stem cells and hence no significant market yet exists for their processing or their collection and storage, nor is there any guarantee that such markets will develop in the near future, or at all. While we believe that the medical community is generally supportive of cord blood and adult stem cell collection systems, medical institutions currently do not specifically recommend storage of stem cells from the cord blood or adult stem cells. Patients can currently donate their cord blood to the public cord blood collection system without charge. If medical research discovers new and more effective medical procedures that make allogeneic cord blood transplants safer and more effective than autologous modalities, the clinical advantage of storing umbilical cord blood for a child's own future therapeutic use may significantly decline. As such, we are not putting resources into marketing the services but are developing a network to enable us to capitalize on this market if the demand emerges.

GOVERNMENT REGULATION

The health care industry is one of the most highly regulated industries in the United States and abroad. Various governmental regulatory authorities, as well as private accreditation organizations, oversee and monitor the activities of individuals and businesses engaged in the development, manufacture and delivery of health care products and services. The following is a general description of certain current laws and regulations that are relevant to our business.

HCT/P Regulations

Manufacturing facilities that produce cellular therapies are subject to extensive regulation by the FDA. In particular, FDA regulations set forth requirements pertaining to establishments that manufacture human cells, tissues, and cellular and tissue-based products (“HCT/Ps”). Title 21, Code of Federal Regulations, Part 1271 provides for a unified registration and listing system, donor-eligibility, current Good Tissue Practices (“cGTP”), and other requirements that are intended to prevent the introduction, transmission, and spread of communicable diseases by HCT/Ps. More specifically, key elements of Part 1271 include:

- Registration and listing requirements for establishments that manufacture HCT/Ps;
- Requirements for determining donor eligibility, including donor screening and testing;
- cGTP requirements, which include requirements pertaining to the manufacturer's quality program, personnel, procedures, manufacturing facilities, environmental controls, equipment, supplies and reagents, recovery, processing and process controls, labeling, storage, record-keeping, tracking, complaint files, receipt, pre-distribution shipment, distribution, and donor eligibility determinations, donor screening, and donor testing;
- Adverse reaction reporting;

- Labeling of HCT/Ps; and
- FDA inspection, retention, recall, destruction, and cessation of manufacturing operations.

PCT currently collects, processes, stores and manufactures HCT/Ps, including the manufacture of cellular therapy products. NeoStem Family Storage also collects, processes, and stores HCT/Ps. Therefore, both PCT and NeoStem Family Storage must comply with cGTP and with the current Good Manufacturing Practices ("cGMP") requirements that apply to biological products. Cell and tissue based products may also be subject to the same approval standards, including demonstration of safety and efficacy, as other biologic and drug products if they meet certain criteria such as if the cells or tissues are more than minimally manipulated or if they are intended for a non-homologous use. Management believes that requirements pertaining to premarket approval, do not currently apply to PCT or NeoStem Family Storage because those entities are not currently investigating, marketing or selling cellular therapy products. If either PCT or NeoStem Family Storage changes its business operations in the future, the FDA requirements that apply to PCT or NeoStem Family Storage may also change.

State Regulation of Cell Therapy

Certain state and local governments regulate cell-processing facilities by requiring them to obtain other specific licenses. As required under applicable state law, PCT's New Jersey and California facilities are licensed, respectively, as a blood bank in New Jersey and as a biologics manufacturing facility in California. PCT also maintains licenses with respect to states that require licensure of out-of-state facilities that process cell, tissue and/or blood samples of residents of such states (e.g., New York and Maryland). PCT has the relevant state licenses needed for processing and is AABB (American Association of Blood Banks) accredited for this purpose. Management believes that it is in material compliance with currently applicable federal, state, and local laboratory licensure requirements, and intends to continue to comply with new licensing requirements that may become applicable in the future.

Certain states may also have enacted laws and regulations, or may be considering laws and regulations, regarding the use and marketing of stem cells or cell therapy products, such as those derived from human embryos. While these laws and regulations should not directly affect PCT's business, they could affect the business of some of PCT's clients and therefore the amount of business PCT receives from these clients.

Federal Regulation of Clinical Laboratories

The Clinical Laboratory Improvement Amendments (“CLIA”) extends federal oversight to clinical laboratories that examine or conduct testing on materials derived from the human body for the purpose of providing information for the diagnosis, prevention, or treatment of disease or for the assessment of the health of human beings. CLIA requirements apply to those laboratories that handle biological matter. CLIA requires that these laboratories be certified by the government, satisfy governmental quality and personnel standards, undergo proficiency testing, be subject to biennial inspections, and remit fees. The sanctions for failure to comply with CLIA include suspension, revocation, or limitation of a laboratory's CLIA certificate necessary to conduct business, fines, or criminal penalties. Additionally, CLIA certification may sometimes be needed when an entity, such as PCT or NeoStem Family Storage, desire to obtain accreditation, certification, or license from non-government entities for cord blood collection, storage, and processing. PCT has obtained CLIA certification for its facilities in New Jersey. We have been advised that, currently, CLIA certification is not required for our PCT facilities in California. However, to the extent that any of the activities of PCT or NeoStem Family Storage (for example, with regard to processing or testing blood and blood products) require CLIA certification, PCT intends to obtain and maintain such certification and/or licensure.

Stem Cell Therapeutic and Research Act of 2005

The Stem Cell Therapeutic and Research Act of 2005 established a national donor bank of cord blood and created a national network for matching cord blood to patients. The National Marrow Donor Program (NMDP) carries out this legislation, which entails acting as the nation's Cord Blood Coordinating Center and actively recruiting parents for cord blood donations. The NMDP also administers the National Cord Blood Inventory (NCBI), which has a goal of collecting 150,000 cord blood units that could be used to treat patients all over the United States. Importantly, the legislation also authorized federal funding to support the legislation's goals for collecting cord blood units.

Pharmaceutical and Biologic Products

Government authorities in the United States, at the federal, state and local level, and in other countries, extensively regulate, among other things, the research, development, testing, manufacture, including any manufacturing changes, packaging, storage, recordkeeping, labeling, advertising promotion, distribution, marketing, import and export of biological products such as AMR-001. The process of obtaining required regulatory approvals and the subsequent compliance with appropriate statutes and

regulations require the expenditure of substantial time and money, and there is no guarantee that we will successfully complete the steps needed to obtain regulatory approval of AMR-001 or any future product candidates. In addition, these regulations may change and our product candidates may be subject to new legislation or regulations.

In the United States, pharmaceutical and biologic products, including cellular therapies, are subject to extensive pre- and post-market regulation by the U.S. FDA. The Federal Food, Drug, and Cosmetic Act ("FD&C Act"), and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Biological products are approved for marketing under provisions of the Public Health Service Act, or PHS Act. However, because most biological products also meet the definition of "drugs" under the FD&C Act, they are also subject to regulation under FD&C Act provisions. The PHS Act requires the submission of a biologics license application ("BLA"), rather than a New Drug Application ("NDA"), for market authorization. However, the application process and requirements for approval of BLAs are similar to those for NDAs, and biologics are associated with similar approval risks and costs as drugs.

Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending NDAs or BLAs, untitled or warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

Pharmaceutical product development in the U.S. typically involves preclinical laboratory and animal tests, the submission to the FDA of a notice of claimed investigational exemption or an investigational new drug application ("IND"), which must become effective before clinical testing can commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the drug or biologic for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease.

Preclinical tests include laboratory evaluation of product chemistry, formulation and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements including good laboratory practices. The results of preclinical testing are submitted to the FDA as part of an IND along with other information including information about product chemistry, manufacturing and controls and a proposed clinical trial protocol. Long term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

Submission of an IND may not result in FDA authorization to initiate a clinical trial if FDA raises concerns or questions about the design of the clinical trial or the preclinical or manufacturing information supporting it, including concerns that human research subjects will be exposed to unreasonable health risks. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development.

Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted in compliance with federal regulations; good clinical practice, or GCP, as set forth in FDA guidance, which is meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators, and monitors; as well as under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND. Sponsors of clinical trials of FDA regulated products, including drugs and biologics, are required to register and disclose certain clinical trial information. Information related to the product, patient population, phase of investigation, study sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to disclose the results of their clinical trials after completion. Competitors may use this publicly available information to gain knowledge regarding the progress of development programs.

The FDA may order the temporary or permanent discontinuation of a clinical trial at any time, or impose other sanctions, if it believes that the clinical trial is not being conducted in accordance with FDA requirements, or presents an unacceptable risk to the clinical trial patients. The study protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board, or IRB, for approval. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support NDAs or BLAs for marketing approval are typically conducted in four sequential phases, but the phases may overlap.

- *Phase 1*: Studies are initially conducted in a limited population to test the product candidate for safety, dose tolerance, absorption, metabolism, distribution and excretion in healthy humans or, on occasion, in patients, such as cancer patients when the drug or biologic is too toxic to be ethically given to healthy individuals.
- *Phase 2*: Studies are generally conducted in a limited patient population to identify possible adverse effects and safety risks, to determine the efficacy of the product for specific targeted indications and to determine dose tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- *Phase 3*: These are commonly referred to as pivotal studies. When Phase 2 evaluations demonstrate that a dose range of the product is effective and has an acceptable safety profile, Phase 3 clinical trials are undertaken in large patient populations to further evaluate dosage, to provide substantial evidence of clinical efficacy and to further test for safety in an expanded and diverse patient population at multiple, geographically-dispersed clinical trial sites. In most cases FDA requires two adequate and well controlled Phase 3 clinical trials to demonstrate the efficacy of the drug. A single Phase 3 trial with other confirmatory evidence may be sufficient in rare instances where the study is a large multicenter trial demonstrating internal consistency and a statistically very persuasive finding of a clinically meaningful effect on mortality, irreversible morbidity or prevention of a disease with a potentially serious outcome and confirmation of the result in a second trial would be practically or ethically impossible.
- *Phase 4*: In some cases, FDA may condition approval of an NDA or BLA for a product candidate on the sponsor's agreement to conduct additional clinical trials after NDA or BLA approval. In other cases, a sponsor may voluntarily carry out additional trials post approval to gain more information about the drug or biologic. Such post approval trials are typically referred to as Phase 4 studies.

After completion of the required clinical testing, an NDA or BLA is prepared and submitted to the FDA. FDA approval of the NDA or BLA is required before marketing of the product may begin in the U.S. The NDA or BLA must include the results of all preclinical, clinical, and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture, and controls. The cost of preparing and submitting an NDA or BLA is substantial. Under federal law, the submission of most NDAs or BLAs is additionally subject to a substantial application user fee, currently exceeding $2,169,000, and the manufacturer and/or sponsor under an approved new drug application are also subject to annual product and establishment user fees, currently exceeding $104,000 per product and $554,000 per establishment. These fees are typically increased annually.

The FDA has 60 days from its receipt of an NDA or BLA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of NDAs and BLAs. Most such applications for standard review drug or biologic products are reviewed within ten to twelve months; most applications for priority review drugs or biologics are reviewed in six to eight months. FDA can extend these reviews by three months. Priority review can be applied to drugs or biologics that the FDA determines offer major advances in treatment, or provide a treatment where no adequate therapy exists. For biologics, priority review is further limited only for products intended to treat a serious or life-threatening disease relative to the currently approved products.

The FDA may refer applications for novel drug or biologic products, or drug or biologic products which present difficult questions of safety or efficacy, to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation, and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations.

Before approving an NDA or BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. The FDA will not approve the product unless compliance with cGMP - a quality system regulating manufacturing - is satisfactory and the NDA or BLA contains data that provide substantial evidence that the drug or biologic is safe and effective in the indication studied.

After the FDA evaluates the NDA and the manufacturing facilities, it issues an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. If and when those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. The FDA has committed to reviewing such resubmissions in 2 or 6 months depending on the type of information included.

Additional Controls

The PHS Act also provides authority to the FDA to immediately suspend licenses in situations where there exists a danger to public health, to prepare or procure products in the event of shortages and critical public health needs, and to authorize the

creation and enforcement of regulations to prevent the introduction or spread of communicable diseases in the U.S. and between states.

Biosimilars

The Patient Protection and Affordable Care Act, or Affordable Care Act, signed into law on March 23, 2010, included a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCI Act, which created an abbreviated approval pathway for biological products shown to be highly similar to, or interchangeable with, an FDA-licensed reference biological product. This is conceptually similar to the established process for generic drug approval in that it attempts to minimize duplicative testing. Biosimilarity, which requires that there be no differences in conditions of use, route of administration, dosage form, and strength and there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, must be shown through analytical studies, animal studies, and at least one clinical study, absent a waiver by the Secretary. Interchangeability requires that a product must demonstrate that it can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biologic and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. No biosimilar or interchangeable products have been approved under the BPCIA to date. Complexities associated with the larger and often more complex structures of biological products, as well as the process by which such products are manufactured, pose significant hurdles to implementation that are still being worked out by the FDA.

A reference biologic is granted twelve years of exclusivity from the time of first licensure of the reference product, and no application for a biosimilar can be submitted for four years from the date of licensure of the reference product. The first biologic product submitted under the abbreviated approval pathway that is determined to be interchangeable with the reference product has exclusivity against other biologics submitting under the abbreviated approval pathway for the same condition for the lesser of (i) one year after first commercial marketing of the first interchangeable biosimilar, (ii) eighteen months after the first interchangeable biosimilar is approved if there is no legal challenge, (iii) 18 months after the resolution in the first interchangeable applicant's favor of a lawsuit challenging the reference biologics' patents, or (iv) 42 months after the first interchangeable biosimilar's application has been approved if a lawsuit is ongoing within the 42 month period.

Post-Approval Regulation

Once an NDA or BLA is approved, a product will be subject to certain post-approval requirements. For instance, FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet. As a condition of NDA or BLA approval, the FDA may require a risk evaluation and mitigation strategy, or REMS, to help ensure that the benefits of the product drug outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals, and elements to assure safe use, or ETASU. The requirement for a REMS can materially affect the potential market and profitability of the product.

Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or BLA or NDA supplement or BLA supplement before the change can be implemented. An NDA or BLA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements and BLA supplements as it does in reviewing NDAs or BLAs. The FDA has broad enforcement authority under the FDC Act, and failure to abide by these regulations can result in enforcement action, including the issuance of a Warning Letter directing entities to correct deviations from FDA standards, a requirement that future advertising and promotional materials be pre-cleared by the FDA, and federal civil and criminal investigations, prosecutions and penalties. State enforcement actions relating to promotional violations are also becoming more common.

Adverse experiences associated with the use of the drug must be reported to the FDA and could result in the imposition of market restrictions through labeling changes or in product removal. Product approvals may be withdrawn if compliance with regulatory requirements is not maintained or if problems concerning safety or efficacy of the product occur following approval. The FDA may also require a labeling change if it becomes aware of new safety information that it believes should be included in the labeling of a drug.

Current Good Manufacturing Practices (cGMP) Standards

The FDA Act and FDA regulations govern the quality control, manufacture, packaging, and labeling procedures of products regulated as a drug or biological product, including cellular therapies comprised of HCT/Ps. These laws and regulations include

requirements for cGMP. These requirements are designed to ensure that a facility's processes - and products resulting from those processes - meet defined safety requirements. The cGMP requirements, are federal regulations that govern the manufacture, processing, packaging and holding of drug and cell therapy products.

The objective of compliance with cGMP standards is to protect the public health and safety by ensuring that products (i) have the identity, strength, quality and purity that they purport or are represented to possess; (ii) meet their specifications; and (iii) are free of objectionable microorganisms and contamination.

A central focus of the cGMP requirements is to design and build quality into the manufacturing processes and the facilities in which products are produced and to ensure the consistency, product integrity, and reproducibility of results and product characteristics. This is done by implementing quality systems and processes including specifications and documentation.

In addition, drug manufacturers and certain of their subcontractors are required to register their establishments with FDA and certain state agencies. Registration with the FDA subjects entities to periodic unannounced inspections by the FDA, during which the agency inspects manufacturing facilities to assess compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money, and effort in the areas of production and quality-control to maintain compliance with cGMPs. Failure to comply with applicable FDA requirements can result in regulatory inspections and associated observations, warning letters, other requirements of remedial action, and, in the case of failures that are more serious, suspension of manufacturing operations, seizure, injunctions, product recalls, fines, and other penalties. We believe that our facilities are in material compliance with applicable existing FDA requirements.

Additionally, FDA, other regulatory agencies, or the United States Congress may be considering, and may enact laws or regulations regarding the use and marketing of stem cells, cell therapy products, or products derived from human cells or tissue. These laws and regulations can affect us directly or the business of some of PCT's clients and therefore the amount of business PCT receives from these clients.

Pediatric Information

Under the Pediatric Research Equity Act, or PREA, NDAs or BLAs or supplements to NDAs or BLAs must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The FDA may grant full or partial waivers or deferrals for submission of data. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation has been granted.

The Best Pharmaceuticals for Children Act, or BPCA, provides NDA holders a six-month extension of any exclusivity-patent or non-patent-for a drug if certain conditions are met. Conditions for exclusivity include the FDA’s determination that information relating to the use of a new drug in the pediatric population may produce health benefits in that population, FDA making a written request for pediatric studies, and the applicant agreeing to perform, and reporting on, the requested studies within the statutory timeframe. Applications under the BPCA are treated as priority applications, with all of the benefits that designation confers.

Orphan Drugs

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition - generally a disease or condition that affects fewer than 200,000 individuals in the U.S. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the generic identity of the drug and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. The first NDA applicant to receive FDA approval for a particular active ingredient to treat a particular disease with FDA orphan drug designation is entitled to a seven-year exclusive marketing period in the U.S. for that product, for that indication. During the seven-year exclusivity period, the FDA may not approve any other applications to market the same drug for the same disease, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug for the same disease or condition, or the same drug for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the NDA application user fee.

Other Health Care Regulations

Health Privacy Laws

The Administrative Simplification provisions of the Health Insurance Portability and Accountability Act of 1996 ("HIPAA"), as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH Act"), require health care plans, health care providers and health care clearinghouses, collectively defined under HIPAA as "Covered Entities," to comply with standards for the use and disclosure of health information within such organizations and with third parties. These include standards for:

- Common health care transactions, such as claims information, plan eligibility, payment information and the use of electronic signatures;
- Unique identifiers for providers, employers, health plans and individuals; and
- Security and privacy of health information.

Although the obligations of HIPAA only apply directly to Covered Entities, any Covered Entity that uses third parties (referred to in HIPAA as "Business Associates") to perform functions on its behalf involving the creation or use of certain patient health information is required to have a contract with the Business Associate that limits the use and disclosure of such information by the Business Associate.

HIPAA does not preempt, or override, state privacy laws that provide even more protection for individuals' health information. These laws' requirements could further complicate Amorcyte's ability to obtain necessary research data from its collaborators. In addition, certain state privacy and genetic testing laws may directly regulate our research activities, affecting the manner in which we use and disclose individuals' health information, potentially increasing the cost of doing business, and exposing us to liability claims. In addition, patients and research collaborators may have contractual rights that further limit our ability to use and disclose individually identifiable health information. Claims that we violated individuals' privacy rights or breached its contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm the business.

While we believe that the current business operations of PCT or NeoStem Family Storage would not cause either of them to be considered a Covered Entity, there is a risk that due to conflicting interpretations of the regulations, NeoStem Family Storage may be deemed to be a Covered Entity. If NeoStem Family Storage is a Covered Entity, there is a risk of liability that NeoStem Family Storage may not be complying fully with all HIPAA requirements. PCT has signed Business Associate Agreements where requested by PCT's customers who are Covered Entities, which would require compliance with certain privacy and security requirements relating to individually identifiable health information created or used in connection with such relationships. PCT is in substantial compliance with such Business Associate Agreements. However, given the law's complexity and the possibility that the regulations may change and may be subject to changing and even conflicting interpretation, PCT's ability to comply fully with all of the HIPAA requirements and requirements of its Business Associate Agreements is uncertain. Further, as a result of amendments the HITECH Act, PCT's and NeoStem Family Storage's compliance burden has increased and they will be subject to audit and enforcement by the federal government and, in some cases, by state authorities. Further, they are obligated to publicly disclose wrongful disclosures or losses of personal health information.

Fraud and Abuse Laws

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal laws have been applied to restrict certain marketing practices in the pharmaceutical industry in recent years. These laws include anti-kickback statutes and false claims statutes. The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Violations of the anti-kickback statute are punishable by imprisonment, criminal prosecution, civil monetary penalties and exclusion from participation in federal healthcare programs. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exemption or safe harbor.

Federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to have a false claim paid. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly inflating drug prices they report to pricing services, which in turn were used by the government to set Medicare and Medicaid reimbursement rates, and for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. In addition, certain marketing practices, including off-label promotion, may also violate false claims laws. The

majority of states also have statutes or regulations similar to the federal anti-kickback statute and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

Affordable Care Act

In late March 2010, the Federal government enacted the comprehensive health care reform package, the Affordable Care Act. Among other provisions, the Affordable Care Act imposes individual and employer health insurance requirements, provides certain insurance subsidies (e.g., premiums and cost sharing), mandates extensive insurance market reforms, creates new health insurance access points (e.g., State and federal-based health insurance exchanges), expands the Medicaid program, promotes research on comparative clinical effectiveness of different technologies and procedures, and makes a number of changes to how products and services will be reimbursed by the Medicare program. Amendments to the Federal False Claims Act under the Affordable Care Act have made it easier for private parties to bring "qui tam" (whistleblower) lawsuits against companies, under which the whistleblower may be entitled to receive a percentage of any money paid to the government.

There are a number of provisions in the Affordable Care Act that may directly impact our customers and, therefore, indirectly affect us. For example, the Affordable Care Act expands the number of individuals that will be covered by either private or public health insurance, which may, in turn, increase the pool of potential purchasers for our customers' products to the extent they are reimbursable by private or public health insurance. The Affordable Care Act also requires health insurance issuers in the individual and small group markets to cover certain "essential health benefits," which include prescription drugs and which may increase coverage for our customers' products. In addition, the Affordable Care Act reduces income and raises costs for our customers through, for instance, the imposition of drug price discounts for Medicare Part D enrollees in the "donut hole" and the imposition of an annual fee on prescription drug and biologic manufacturers. Such provisions may cause our customers to seek to restrain costs in other areas, including the services that we provide. The effective dates of the various provisions within the Affordable Care Act are staggered over the next several years, with some changes occurring immediately. Much of the interpretation of the Affordable Care Act will be subject to administrative rulemaking, the development of agency guidance, and court interpretation.

Other Applicable Laws

In addition to those described above, other federal and state laws and regulations that could directly or indirectly affect our ability to operate the business and/or financial performance include:

- state and local licensure, registration and regulation of laboratories, the processing and storage of human cells and tissue, and the development and manufacture of pharmaceuticals and biologics;
- other laws and regulations administered by the United States FDA, including the Federal Food, Drug, and Cosmetic Act and related laws and regulations and the Public Health Service Act and related laws and regulations;
- laws and regulations administered by the United States Department of Health and Human Services, including the Office for Human Research Protections;
- state laws and regulations governing human subject research;
- federal and state coverage and reimbursement laws and regulations, including laws and regulations administered by the Centers for Medicare & Medicaid Services and state Medicaid agencies;
- the federal Medicare and Medicaid Anti-Kickback Law and similar state laws and regulations;
- the federal physician self-referral prohibition commonly known as the Stark Law, and state equivalents of the Stark Law;
- Occupational Safety and Health Administration ("OSHA") requirements;
- state and local laws and regulations dealing with the handling and disposal of medical waste; and
- the Intermediate Sanctions rules of the IRS providing for potential financial sanctions with respect to "Excess Benefit Transactions" with HUMC or other tax-exempt organizations.

Other Regulations

We are also subject to various local, state and federal laws and regulations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use and disposal of hazardous or potentially hazardous substances, including chemicals, micro-organisms and various radioactive compounds used in connection with our research and development activities. These laws include, but are not limited to, the Occupational Safety and Health Act, the Toxic Test Substances Control Act and the Resource Conservation and Recovery Act. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards prescribed by state and federal regulations, there can be no assurances that accidental contamination or injury to employees and third parties from these materials will not occur. Our insurance program does not include environmental coverage.

Regulation in the European Union

In the European Union, or EU, medicinal products, including advanced therapy medicinal products, are subject to extensive pre- and post-market regulation by regulatory authorities at both the EU and national levels. Advanced therapy medicinal products comprise gene therapy products, somatic cell therapy products and tissue engineered products, which are cells or tissues that have undergone substantial manipulation and that are administered to human beings in order to regenerate, repair or replace a human tissue. We anticipate that our cell therapy products in development, including AMR-001, would be regulated as advanced therapy medicinal products in the EU.

Clinical Trials

Clinical trials of medicinal products in the EU must be conducted in accordance with EU and national regulations and the International Conference on Harmonization, or ICH, guidelines on Good Clinical Practices, or GCP. Additional GCP guidelines from the European Commission, focusing in particular on traceability, apply to clinical trials of advanced therapy medicinal products. If the sponsor of the clinical trial is not established within the EU, it must appoint an entity within the EU to act as its legal representative. The sponsor must take out a clinical trial insurance policy, and in most EU countries the sponsor is liable to provide 'no fault' compensation to any study subject injured in the clinical trial.

Prior to commencing a clinical trial, the sponsor must obtain a clinical trial authorization from the competent authority, and a positive opinion from an independent ethics committee. The application for a clinical trial authorization must include, among other things, a copy of the trial protocol and an investigational medicinal product dossier containing information about the manufacture and quality of the medicinal product under investigation. Currently, clinical trial authorization applications must be submitted to the competent authority in each EU member state in which the trial will be conducted. Under proposed new rules, there will be a centralized application procedure where one national authority takes the lead in reviewing the application and the other national authorities have only a limited involvement. Any substantial changes to the trial protocol or other information submitted with the clinical trial applications must be notified to or approved by the relevant competent authorities and ethics committees.

The sponsor of a clinical trial must register the clinical trial in advance, and information related to the product, patient population, phase of investigation, study sites and investigators, and other aspects of the clinical trial will be made public as part of the registration. The results of the clinical trial must be submitted to the competent authorities and, with the exception of non-pediatric Phase 1 trials, will be made public at the latest within 12 months after the end of the trial.

During the development of a medicinal product, the European Medicines Agency, or EMA, and national medicines regulators within the EU provide the opportunity for dialogue and guidance on the development program. At the EMA level, this is usually done in the form of scientific advice, which is given by the Scientific Advice Working Party of the Committee for Medicinal Products for Human Use, or CHMP. A fee is incurred with each scientific advice procedure. Advice from the EMA is typically provided based on questions concerning, for example, quality (chemistry, manufacturing and controls testing), nonclinical testing and clinical studies, and pharmacovigilance plans and risk-management programs. Advice is not legally binding with regard to any future marketing authorization application of the product concerned. To date, we have not initiated any scientific advice procedures or other discussions with the EMA or any national regulatory authorities in the EU.

Marketing Authorizations

After completion of the required clinical testing, we must obtain a marketing authorization before we may place a medicinal product on the market in the EU. There are various application procedures available, depending on the type of product involved. All application procedures require an application in the common technical document, or CTD, format, which includes the submission of detailed information about the manufacturing and quality of the product, and non-clinical and clinical trial information. There is an increasing trend in the EU towards greater transparency and, while the manufacturing or quality information is currently generally protected as confidential information, the EMA and national regulatory authorities are now liable to disclose much of the non-clinical and clinical information in marketing authorization dossiers, including the full clinical study reports, in response to freedom of information requests after the marketing authorization has been granted. The EMA is currently considering a procedure under which clinical study reports would be posted on the agency's website following the grant, denial or withdrawal of a marketing authorization application, subject to procedures for limited redactions and protection against unfair commercial use. A similar requirement is contained in a draft new Regulation on Clinical Trials that is expected to become applicable in mid 2016 or later.

The centralized procedure gives rise to marketing authorizations that are valid throughout the EU and, by extension (after national implementing decisions), in Norway, Iceland and Liechtenstein, which, together with the EU member states, comprise the European Economic Area, or EEA. Applicants file marketing authorization applications with the EMA, where they are reviewed

by a relevant scientific committee, in most cases the CHMP. The EMA forwards CHMP opinions to the European Commission, which uses them as the basis for deciding whether to grant a marketing authorization. The centralized procedure is compulsory for medicinal products that (1) are derived from biotechnology processes, (2) contain a new active substance (not yet approved on 20 November 2005) indicated for the treatment of certain diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative disorders, viral diseases or autoimmune diseases and other immune dysfunctions, (3) are orphan medicinal products or (4) are advanced therapy medicinal products, such as cell therapy medicines. For medicines that do not fall within these categories, an applicant may voluntarily submit an application for a centralized marketing authorization to the EMA, as long as the CHMP agrees that (i) the medicine concerned contains a new active substance (not yet approved on 20 November 2005), (ii) the medicine is a significant therapeutic, scientific, or technical innovation, or (iii) if its authorization under the centralized procedure would be in the interest of public health.

For those medicinal products for which the centralized procedure is not available, the applicant must submit marketing authorization applications to the national medicines regulators through one of three procedures: (1) a national procedure, which results in a marketing authorization in a single EU member state; (2) the decentralized procedure, in which applications are submitted simultaneously in two or more EU member states; and (3) the mutual recognition procedure, which must be used if the product has already been authorized in at least one other EU member state, and in which the EU member states are required to grant an authorization recognizing the existing authorization in the other EU member state, unless they identify a serious risk to public health. A national procedure is only possible for one member state; as soon as an application is submitted in a second member state the mutual recognition or decentralized procedure will be triggered.

Under the centralized procedure in the European Union, the maximum timeframe for the evaluation of a marketing authorization application is 210 days. However, this timeline excludes clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP, so the overall process typically takes a year or more. Accelerated evaluation might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest, defined by three cumulative criteria: the seriousness of the disease (e.g. heavy disabling or life-threatening diseases) to be treated; the absence or insufficiency of an appropriate alternative therapeutic approach; and anticipation of high therapeutic benefit. In this circumstance, EMA ensures that the opinion of the CHMP is given within 150 days.

Data Exclusivity

Marketing authorization applications for generic medicinal products do not need to include the results of pre-clinical and clinical trials, but instead can refer to the data included in the marketing authorization of a reference product for which regulatory data exclusivity has expired. If a marketing authorization is granted for a medicinal product containing a new active substance, that product benefits from eight years of data exclusivity, during which generic marketing authorization applications referring to the data of that product may not be accepted by the regulatory authorities, and a further two years of market exclusivity, during which such generic products may not be placed on the market. The two-year period may be extended to three years if during the first eight years a new therapeutic indication with significant clinical benefit over existing therapies is approved.

There is a special regime for biosimilars, or biological medicinal products that are similar to a reference medicinal product but that do not meet the definition of a generic medicinal product, for example, because of differences in raw materials or manufacturing processes. For such products, the results of appropriate pre-clinical or clinical trials must be provided, and guidelines from the EMA detail the type of quantity of supplementary data to be provided for different types of biological product. There are no such guidelines for complex biological products, such as gene or cell therapy medicinal products, and so it is unlikely that biosimilars of those products will currently be approved in the EU. However, guidance from the EMA states that they will be considered in the future in light of the scientific knowledge and regulatory experience gained at the time.

Orphan Medicinal Products

The EMA's Committee for Orphan Medicinal Products, or COMP, may recommend orphan medicinal product designation to promote the development of products that are intended for the diagnosis, prevention or treatment of life-threatening or chronically debilitating conditions affecting not more than 5 in 10,000 persons in the EU. Additionally, designation is granted for products intended for the diagnosis, prevention or treatment of a life-threatening, seriously debilitating or serious and chronic condition and when, without incentives, it is unlikely that sales of the product in the EU would be sufficient to justify the necessary investment in developing the medicinal product. The COMP may only recommend orphan medicinal product designation when the product in question offers a significant clinical benefit over existing approved products for the relevant indication. Following a positive opinion by the COMP, the European Commission adopts a decision granting orphan status. The COMP will reassess orphan status in parallel with EMA review of a marketing authorization application and orphan status may be withdrawn at that stage if it no longer fulfills the orphan criteria (for instance because in the meantime a new product was approved for the indication and no convincing data are available to demonstrate a significant benefit over that product). Orphan medicinal product designation entitles

a party to financial incentives such as reduction of fees or fee waivers and 10 years of market exclusivity is granted following marketing authorization. During this period, the competent authorities may not accept or approve any similar medicinal product, unless it offers a significant clinical benefit. This period may be reduced to 6 years if the orphan medicinal product designation criteria are no longer met, including where it is shown that the product is sufficiently profitable not to justify maintenance of market exclusivity. The EMA is currently preparing guidance on assessing similarity of active ingredients for purposes of orphan exclusivity. It is possible that for biological products a narrow interpretation of similarity will be adopted.

Pediatric Development

In the EU, companies developing a new medicinal product must agree to a Pediatric Investigation Plan, or PIP, with the EMA and must conduct pediatric clinical trials in accordance with that PIP, unless a waiver applies, *e.g.* because the relevant disease or condition occurs only in adults. The marketing authorization application for the product must include the results of pediatric clinical trials conducted in accordance with the PIP, unless a waiver applies, or a deferral has been granted, in which case the pediatric clinical trials must be completed at a later date. Products that are granted a marketing authorization on the basis of the pediatric clinical trials conducted in accordance with the PIP are eligible for a six month extension of the protection under a supplementary protection certificate (if any is in effect at the time of approval) or, in the case of orphan medicinal products, a two year extension of the orphan market exclusivity. This pediatric reward is subject to specific conditions and is not automatically available when data in compliance with the PIP are developed and submitted.

Post-Approval Controls

The holder of a marketing authorization must establish and maintain a pharmacovigilance system and appoint an individual qualified person for pharmacovigilance, or QPPV, who is responsible for oversight of that system. Key obligations include expedited reporting of suspected serious adverse reactions and submission of periodic safety update reports, or PSURs.

All new marketing authorization applications must include a risk management plan, or RMP, describing the risk management system that the company will put in place and documenting measures to prevent or minimize the risks associated with the product. The regulatory authorities may also impose specific obligations as a condition of the marketing authorization. Such risk-minimization measures or post-authorization obligations may include additional safety monitoring, more frequent submission of PSURs, or the conduct of additional clinical trials or post-authorization safety studies. Risk management plans and PSURs are routinely available to third parties requesting access, subject to limited redactions.

All advertising and promotional activities for the product must be consistent with the approved summary of product characteristics, and therefore all off-label promotion is prohibited. Direct-to-consumer advertising of prescription medicines is also prohibited in the EU. Although general requirements for advertising and promotion of medicinal products are established under EU directives, the details are governed by regulations in each member state and can differ from one country to another.

Manufacturing

Medicinal products may only be manufactured in the EU, or imported into the EU from another country, by the holder of a manufacturing authorization from the competent national authority. The manufacturer or importer must have a qualified person, or QP, who is responsible for certifying that each batch of product has been manufactured in accordance with EU standards of good manufacturing practice, or GMP, before releasing the product for commercial distribution in the EU or for use in a clinical trial. Manufacturing facilities are subject to periodic inspections by the competent authorities for compliance with GMP.

Human Cells and Tissues

Human cells and tissues that are intended for human applications but that do not fall within the scope of rules governing medicinal products or medical devices are not subject to premarket review and approval, nor do they require extensive preclinical and clinical testing. However, there are EU rules governing the donation, procurement, testing and storage of human cells and tissues intended for human application, whether or not they are advanced therapy medicinal products. These rules also cover the processing, preservation and distribution of human cell and tissues that are not advanced therapy medicinal products. Establishments that conduct such activities must be licensed and are subject to inspection by regulatory authorities. Such establishments must implement appropriate quality systems and maintain appropriate records to ensure that cells and tissues can be traced from the donor to the recipient and vice versa. There are also requirements to report serious adverse events and reactions linked to the quality and safety of cells and tissues. More detailed rules may exist at the national level.

Named Patient Sales

The EU medicines rules allow individual member states to permit the supply of a medicinal product without a marketing authorization to fulfill special needs, where the product is supplied in response to a bona fide unsolicited order, formulated in accordance with the specifications of a healthcare professional and for use by an individual patient under his direct personal responsibility. This may in certain countries also apply to products manufactured in a country outside the EU and imported to treat specific patients or small groups of patients. In addition, advanced therapy medicinal products do not need a marketing authorization if they are prepared on a non-routine basis and are used within the same EU member state in a hospital in accordance with a medical prescription for an individual patient.

These exemptions may allow us to make limited sales of our products before we obtain a marketing authorization in the EU. However, the exemptions could also allow our competitors to make sales without having obtained a marketing authorization and without undergoing the expense of clinical trials, especially if those competitors have cell processing facilities in the relevant EU member state. Similarly, certain hospitals may be able to compete with us on the basis of these rules.

Pricing and Reimbursement

Governments influence the price of medicinal products in the EU through their pricing and reimbursement rules and control of national healthcare systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on healthcare costs in general, particularly prescription medicines, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products.

Regulation in Other Countries

We intend to seek to market our products in jurisdictions outside the U.S. and the EU. Most of these jurisdictions have product approval and post-approval regulatory processes that are similar in principle to those in the U.S. or EU. Any such considerations are in the early stages.

EMPLOYEES

As of December 31, 2013, we had 108 full-time employees, including the employees of our subsidiaries. Most of our senior management and professional employees have had prior experience in pharmaceutical or biotechnology companies. None of our employees is covered by collective bargaining agreements. We believe that our relations with our employees are good.

ITEM 1A. RISK FACTORS.

Our business, financial condition, operating results and cash flows can be affected by a number of factors, including, but not limited to, those set forth below, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results. The risks described below are not the only ones we face, but those we currently consider to be material. There may be other risks which we now consider immaterial, or which are unknown or unpredictable, with respect to our business, our competition, the regulatory environment or otherwise that could have a material adverse effect on our business.

RISKS RELATED TO OUR FINANCIAL CONDITION

We anticipate that we will need substantial additional financing in the future to continue our operations; if we are unable to raise additional capital, as and when needed, or on acceptable terms, we may be forced to delay, reduce or eliminate one or more of our product development programs, or expansion of our contract development and manufacturing operations and our business will be harmed.

Our current operating plan will require significant levels of additional capital to fund, among other things, the continued development of our cell therapy product candidates and the operation, enhancement and expansion of our contract development and manufacturing operations to support our customers and our clinical development activities.

Our research and development expenses increased significantly over the past two years as a result of the initiation of the AMR-001 Phase 2 clinical trial in 2012. This trial completed enrollment in December 2013. Research and development expenses also have been increasing with respect to our T Regulatory Cell Program, particularly due to the licensing of patents, data and collaboration with third parties. The Company's clinical activities are expected to continue to grow as AMR-001 is developed for AMI and other clinical trials for indications are launched under our CD34 Cell Program and T Regulatory Cell Program. These programs will require significant investment over a period of several years before they could be approved by FDA and commercialized by us, if ever. If the results of the current Phase 2 and other clinical trials are positive, we will need to conduct additional clinical studies of the product, including larger and more expensive pivotal Phase 3 studies. To do so, we will need to raise additional money in the capital markets, enter into collaboration agreements with third parties or undertake some combination thereof. If we are unsuccessful in these efforts, we will likely need to otherwise delay or abandon the trials.

The amount and timing of our future capital requirements also will likely depend on many other factors, including:

- the scope, progress, results, costs, timing and outcomes of our other cell therapy research and development programs and product candidates;
- our ability to enter into any collaboration agreements with third parties for our other product candidates and the timing and terms of any such agreements;
- the costs associated with the consummation of one or more strategic transactions;
- the timing of and the costs involved in obtaining regulatory approvals for our product candidates, a process which could be particularly lengthy or complex given the FDA's limited experience with marketing approval for cell therapy products;
- the costs of maintaining, expanding and protecting our intellectual property portfolio, including potential litigation costs and liabilities; and
- the cost of expansion of our contract development and manufacturing operations, including but not limited to the costs of expanded facilities, equipment costs, engineering and innovation initiatives and personnel.

To both fund our clinical studies and support our future operations, we would likely seek to raise capital through a variety of different public and/or private financings vehicles. This could include, but not be limited to, use of our common stock purchase agreement with Aspire Capital, as described below, potential warrant exercises, option exercises, issuances of other debt or equity securities in public or private financings, and/or sale of assets. If we raise capital through the sale of equity, or securities convertible into equity, it would result in dilution to our then existing stockholders. Servicing the interest and principal repayment obligations under debt facilities could divert funds that would otherwise be available to support research and development, clinical or commercialization activities. In certain cases, we also may seek funding through collaborative arrangements, that would likely require us to relinquish certain rights to our technology or product candidates and share in the future revenues associated with the partnered product.

Ultimately, we may be unable to raise capital to enter into collaborative relationships on terms that are acceptable to us, if at all. Our inability to obtain necessary capital or financing to fund our future operating needs could adversely affect our business, results of operations and financial condition.

We have incurred substantial losses and negative cash flow from operations in the past, and expect to continue to incur losses and negative cash flow for the foreseeable future.

We have a limited operating history, limited capital, and limited sources of revenue. Since our inception in 1980 through December 31, 2013, we have incurred aggregate net losses of approximately $236.4 million. Our net losses attributable to common stockholders for the years ended December 31, 2013 and December 31, 2012 were approximately $39.0 million and $55.3 million, respectively. As of December 31, 2013, our cash and cash equivalents were $46.1 million. The revenues generated in our cell therapy services business have not been, and are not expected in the foreseeable future to be, sufficient to cover costs attributable to that business or to our operations as a whole, including our development activities associated with our product candidates. Ultimately, we may never generate sufficient revenue from our cell therapy services business for us to reach profitability, generate positive cash flow or sustain, on an ongoing basis, our current or projected levels of product development and other operations.

Our stock price has been, and will likely continue to be, highly volatile.

The market price of our common stock has been and in the future may continue to be highly volatile. For example, from January 1, 2013 through March 11, 2014 our common stock traded as low as $5.00 per share and as high as $9.89 per share; in 2012, our common stock traded as low as $3.00 per share and as high as $9.00 per share.

The market price for our common stock is highly dependent on, among other things, our clinical development efforts the profitability and growth of our cell therapy services business and the growth of our business in general, the amount of our available cash and investments and our level of cash utilization. Future events could increase the volatility seen in our common stock and ultimately cause a significant decline in the price of our common stock and ultimately impact our ability to raise additional capital in the future. These events could include the following, among others:

- low levels of trading volume for our shares;
- capital-raising or other transactions that are, or may in the future be, dilutive to existing stockholders or that involve the issuance of debt securities;
- delays in our clinical trials, negative clinical trial results or adverse regulatory decisions relating to our product candidates;
- adverse fluctuations in our revenues or operating results or financial results that otherwise fall below the market's expectations;
- disappointing developments concerning our cell therapy services clients or other collaborators for our product candidates; and
- legal challenges, disputes and/or other adverse developments impacting our patents or other proprietary rights that protect our products.

In addition, broader external events, such as news concerning economic or market conditions in the general economy or within our industry, the activities of our competitors, changes (or the threat of changes) in U.S. or foreign government regulations impacting the life sciences industry or the movement of capital into or out of our industry, are likely to affect the price of our Common Stock. There can be no assurance that the market price of our common stock will not continue to fluctuate or decline significantly in the future.

In addition to potential dilution associated with future fundraising transactions, we currently have significant numbers of securities outstanding that are exercisable for our Common Stock, which could result in significant additional dilution and downward pressure on our stock price.

As of December 31, 2013, there were 27,196,537 shares of our Common Stock outstanding. In addition, there were outstanding stock options and warrants representing the potential issuance of an additional 7,830,457 shares of our Common Stock. The issuance of these shares in the future would result in significant dilution to our current stockholders and could adversely affect the price of our Common Stock and the terms on which we could raise additional capital. In addition, the issuance and subsequent trading of shares could cause the supply of our Common Stock available for purchase in the market to exceed the purchase demand for our Common Stock. Such supply in excess of demand could cause the market price of our Common Stock to decline.

Sales of our Common Stock to Aspire Capital pursuant to our Purchase Agreement may cause substantial dilution to our existing stockholders and the sale of the shares of Common Stock acquired by Aspire Capital could cause the price of our Common Stock to decline.

The Company entered into a Purchase Agreement with Aspire Capital Fund, LLC in March 2014, pursuant to which Aspire Capital committed to the purchase of up to $30 million of shares of the Company's Common Stock over the term of that Agreement, subject to certain terms and conditions.

Pursuant to the agreement, after Aspire Capital acquires shares under the Purchase Agreement, it may sell all or some of those shares. Sales to Aspire Capital by us pursuant to the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock to Aspire Capital, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales. However, we have the right to control the timing and amount of any sales of our shares to Aspire Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Actual and beneficial ownership of large quantities of our Common Stock by our executive officers and directors may substantially reduce the influence of other stockholders.

As of December 31, 2013, our executive officers and directors owned, of record and beneficially, an aggregate of approximately 11.41% and 16.86%, respectively, of our outstanding common stock. As a result, such persons may have the ability to exercise enhanced control and influence over the approval process for actions that require stockholder approval, including the approval of mergers, sales of assets or other significant corporate transactions or other matters submitted for stockholder approval. Furthermore, at certain times the interests of our substantial stockholders may conflict with the interests of our other stockholders.

Failure to maintain effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act could have a material adverse effect on our business and stock price.

During the course of testing our disclosure controls and procedures and internal control over financial reporting, we may identify and disclose material weaknesses or significant deficiencies in internal control over financial reporting that will have to be remedied. Implementing any appropriate changes to our internal control may require specific compliance training of our directors, officers and employees, entail substantial costs to modify our existing accounting systems, and take a significant period of time to complete. Such changes may not, however, be effective in maintaining the adequacy of our internal control over financial reporting, and any failure to maintain that adequacy or inability to produce accurate financial statements on a timely basis could result in our financial statements being unreliable, increase our operating costs and materially impair our ability to operate our business.

Failure to achieve and maintain effective internal control over financial reporting could result in a loss of investor confidence in our financial reports and could have a material adverse effect on our stock price. Additionally, failure to maintain effective internal control over our financial reporting could result in government investigation or sanctions by regulatory authorities.

Compliance with public company obligations, including the securities laws and regulations, is costly and requires significant management resources, and we may fail to comply. We are now an "accelerated filer," and beginning with our Form 10-Q for the quarter ending March 31, 2014 will no longer qualify to report under smaller reporting company disclosure rules, and as a result will be subject to more comprehensive disclosure obligations, with increased compliance costs.

The federal securities laws and regulations, including the corporate governance and other requirements of the Sarbanes-Oxley Act of 2002, impose complex and continually changing regulatory requirements on our operations and reporting. Because the aggregate market value of our public float was in excess of $75 million as of June 30, 2013, we became an "accelerated filer" as of the end of our 2013 fiscal year. As a result, pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, our independent registered public accounting firm auditing our financial statements is now required to attest to and report on the effectiveness of our internal controls over financial reporting. The auditor attestation requirement applies to us for the first time with respect to this Annual Report on Form 10-K. In addition, beginning with our Form 10-Q for our first quarter of fiscal 2014, we will be required to satisfy all of the larger reporting company disclosure requirements. These requirements will increase our legal compliance obligations and costs, which could harm our results of operations and divert management's attention from business operations.

Relatively speaking, we are a small company with limited resources. There can be no assurances that we will be able to comply with the added "accelerated filer" requirements by applicable deadlines and to maintain compliance in the future. If our independent registered public accounting firm is unable to provide us with an unqualified report as to the effectiveness of our internal control over financial reporting for future year ends, investors could lose confidence in the reliability of our financial reporting.

RISKS RELATED TO OUR CELL THERAPY PRODUCT DEVELOPMENT EFFORTS

Our future success is dependent on the timely and successful development and commercialization of our CD34 Cell Program and T Regulatory Cell Program product candidates, and if we encounter delays or difficulties in the development of these product candidates, our business prospects would be significantly harmed.

We are dependent upon the successful development, approval and commercialization of our product candidates which are in an early stages of development. Before we are able to seek regulatory approval, we must conduct extensive clinical trials to demonstrate their safety and efficacy in humans. With infusion of the target population of 160 patients complete, the last patient primary endpoint follow-up for this study is expected in June 2014 followed by data lock and analysis with a submission for a possible presentation of the study at the American Heart Association's Scientific Sessions to be held November 15-19, 2014. We also expect to initiate a Phase 2 clinical trial for chronic heart failure in Europe in 2014 and are conducting preclinical studies in traumatic brain injury for which we expect data in 2014. In 2014, we expect to initiate a Phase 1 clinical trial in type 1 diabetes with Tregs; we also plan to initiate a Phase 1 study in Canada of Treg based therapeutics in support of a steroid resistant asthma indication in 2014. Clinical testing is expensive, difficult to design and implement, and can take many years to complete. Importantly, a failure of one or more clinical trials can occur at any stage of testing. We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to complete our clinical studies, receive regulatory approval or commercialize our CD34 Cell Program and T Regulatory Cell Program product candidates, including the following:

- suspensions, delays or changes in the design, initiation, enrollment, implementation or completion of required clinical trials;
- adverse changes in our financial position or significant and unexpected increases in the cost of our clinical development program;
- changes or uncertainties in, or additions to, the regulatory approval process that require us to alter our current development strategy;
- clinical trial results that are negative, inconclusive or even less than desired as to safety and/or efficacy, which could result in the need for additional clinical studies or the termination of the product's development; and
- delays in the ability to manufacture the product in quantities or in a form that is suitable for any required clinical trials;
- intellectual property constraints that prevent us from making, using, or commercializing any of our CD34 Cell Program or T Regulatory Cell Program product candidates; and
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of these product candidates may be insufficient or inadequate.

During our Phase 1 trial of AMR-001 for post AMI patients, serious adverse events occurred in subjects treated with AMR-001. To date, in our Phase 2 trial of AMR-001 for post AMI patients, serious adverse events occurred which may or may not have been in the group of subjects treated with AMR-001 (which we will be able to confirm once the study is unblinded). There can be no assurance that similar or other additional events will not occur in the Phase 2 or any other future clinical trials, particularly, for AMR-001, in light of the impaired heart function of patients who will be the target subject population of AMR-001. No concerns have been articulated by the Data Safety Monitoring Board ("DSMB"), a group charged with looking at unblinded results during the course of the study and they recommended continuing our PreServe AMI Phase 2 clinical trial.

Even if we are able to successfully complete our clinical development program for our product candidates, including AMR-001, and ultimately receive regulatory approval to market the product, we may, among other things:

- obtain approval for indications that are not as broad as the indications we sought;
- have the product removed from the market after obtaining marketing approval;
- encounter issues with respect to the manufacturing of commercial supplies;
- be subject to additional post-marketing testing requirements; and/or
- be subject to restrictions on how the product is distributed or used.

We may experience delays in enrolling patients in our clinical trials, which could delay or prevent the receipt of necessary regulatory approvals.

We may not be able to initiate or complete as planned any clinical trials if we are unable to identify and enroll a sufficient number of eligible patients to participate in the clinical trials required by the FDA or other regulatory authorities. For example,

we had originally expected to complete enrollment for the PreSERVE AMI Phase 2 trial of AMR-001 earlier than its December 2013 completion. We also may be unable to engage a sufficient number of clinical trial sites to conduct our trials. The challenge of enrolling patients will become more difficult if we are required by the FDA or a similar regulatory agency outside the United States to conduct a trial on a larger population than we currently anticipate. In that event, we might be required to seek patients to participate in our trials from Europe or other foreign jurisdictions, which could raise regulatory uncertainties and increase clinical trial costs. Moreover, because PCT does not currently have manufacturing facilities operating outside of the United States, our ability to conduct trials outside of the U.S. may be constrained by our ability to transport trial materials to foreign destinations within the expiry period of such materials unless, and until we commence operation outside of the United States or find another source of supply.

We may face challenges in enrolling patients to participate in our clinical trials due to the novelty of our cell-based therapies, the size of the patient populations and the eligibility criteria for enrollment in the trial. In addition, some patients may have concerns regarding cell therapy that may negatively affect their perception of therapies under development and their decision to enroll in the trials. Furthermore, patients suffering from diseases within target indications may enroll in competing clinical trials, which could negatively affect our ability to complete enrollment of our trials. Enrollment challenges in clinical trials often result in increased development costs for a product candidate, significant delays and potentially the abandonment of the clinical trial.

The development of our cell therapy product candidates are subject to uncertainty because autologous cell therapy is inherently variable.

When manufacturing an autologous cell therapy, the number and the composition of the cell population varies from patient to patient. Such variability in the number and composition of these cells could adversely affect our ability to manufacture autologous cell therapies in a cost-effective manner and meet acceptable product release specifications for use in a clinical trial or, if approved, for commercial sale. As a consequence, the development and regulatory approval process for autologous cell therapy products could be delayed or may never be completed.

Any disruption to our access to the reagents we are using in the clinical development of our cell therapy product candidates could adversely affect our ability to perform clinical trials and seek future regulatory submissions.

Reagents, devices, materials and systems that we are using in our clinical trials, that we intend to use in our planned clinical trials and that we may need or use in commercial production, are provided by unaffiliated third parties. Any lack of continued availability of these reagents, devices, materials and systems for any reason would have a material adverse effect on our ability to complete these studies and could adversely impact our ability to achieve commercial manufacture of our planned therapeutic products. Although other available sources for these reagents, devices, materials and systems may exist in the marketplace, we have not evaluated their cost, effectiveness, or intellectual property foundation and therefore cannot guaranty the suitability or availability of such other potential sources.

The initiation of a pivotal Phase 3 clinical trial for AMR-001 or any other cell therapy product candidate will require the validation and establishment of manufacturing controls that may delay the products' development timeline.

If the results of our current and planned Phase 2 clinical trials are positive and support Phase 3 development, we expect to initiate and complete one or more pivotal Phase 3 clinical trials. To do so, we are required to have certain validated and established manufacturing controls with respect to the safety, purity and potency of our product when administered to patients. We may not be successful in our efforts to address any chemistry, manufacturing and controls, or CMC, issues raised by the FDA. If we cannot initiate, or if we are delayed in initiating, a pivotal Phase 3 clinical program as a result of our failure to satisfy the FDA's CMC concerns or otherwise, the timing of our planned regulatory submission for commercialization of our product candidates would be delayed, or we may be unable to seek regulatory approval to commercialize our products at all.

We presently lack sufficient manufacturing capabilities to produce our CD34 Cell Program and T Regulatory Cell Program product candidates at commercial scale quantities and do not have an alternate manufacturing supply, which could negatively impact our ability to meet any future demand for the product.

Currently, PCT exclusively provides the cell processing services necessary for clinical production of AMR-001 and will provide the cell processing services for our planned T Regulatory Cell Program clinical trials in type 1 diabetes and asthma and CD34 Cell Program in chronic heart failure. PCT also provides services and produces materials for clinical trials on behalf of unaffiliated third parties. To date, PCT has not produced any products at commercial scale quantities. We expect that we would need to significantly expand our manufacturing capabilities to meet potential commercial demand for AMR-001, our other CD34 Cell Program and T Regulatory Cell Program product candidates, if approved, as well as any of our other product candidates that might attain regulatory approval. Such expansion would require additional regulatory approvals. Even if we increase our manufacturing capabilities, it is possible that we may still lack sufficient capacity to meet demand. Ultimately, if we are unable to supply our products to meet commercial demand, whether because of processing constraints or other disruptions, delays or difficulties that we experience, sales of the products and their long term commercial prospects could be significantly damaged.

We do not presently have any alternate supply for AMR-001 or other CD34 Cell Program our T Regulatory Cell Program product candidates. If our facility where these product candidates are currently being manufactured or equipment were significantly damaged or destroyed, or if there were other disruptions, delays or difficulties affecting manufacturing capacity, our planned and future clinical studies and commercial production for these product candidates would likely be significantly disrupted and delayed. It would be both time consuming and expensive to replace this capacity with third parties, particularly since any new facility would need to comply with the regulatory requirements.

Ultimately, if we are unable to supply our cell product candidates to meet commercial demand, whether because of processing constraints or other disruptions, delays or difficulties that we experience, our production costs could dramatically increase and sales of the product and its long-term commercial prospects could be significantly damaged.

The commercial potential and profitability of our products is unknown and subject to significant risk and uncertainty.

Even if we successfully develop and obtain regulatory approval for our cell therapy product candidates, the market may not understand or accept the product, which could adversely affect both the timing and level of future sales. Ultimately, the degree of market acceptance of our product candidates (or any of our future product candidates) will depend on a number of factors, including:

- the clinical effectiveness, safety and convenience of the product particularly in relation to alternative treatments;
- our ability to distinguish our products from any ethical and political controversies associated with stem cell products derived from human embryonic or fetal tissue; and
- the cost of the product, the reimbursement policies of government and third-party payors and our ability to obtain sufficient third-party coverage or reimbursement.

Even if we are successful in achieving sales of our product candidates consistent with our expectations, it is not clear to what extent, if any, the products will be profitable. The costs of goods associated with production of cell therapy products are significant. While we are working to improve the speed and efficiency and lower the cost of our manufacturing processes, there can be no assurance that we will be successful in these efforts. In addition, some changes in manufacturing processes or procedures generally require FDA or foreign regulatory authority review and approval prior to implementation. We may need to conduct additional preclinical studies and clinical trials to support approval of any such changes. Furthermore, this review process could be costly and time-consuming and could delay or prevent the commercialization of product candidates.

We have limited experience in the development and marketing of cell therapies and may be unsuccessful in our efforts to establish a profitable business.

Over the past three years, we shifted our business plan entirely to focus on capturing a piece of the burgeoning field of cell therapy. Despite being in business for over eight years, we have limited experience in the areas of cell therapy product development and marketing, and in the related regulatory issues and processes. While PCT currently provides services in connection with our development activities as a third party contractor, we cannot assure you that our management will successfully oversee our clinical development efforts and our plans to capture a piece of the cell therapy market.

Our cell therapy business is based on novel technologies that are inherently expensive, risky and may not be understood by or accepted in the marketplace, which could adversely affect our future value.

The clinical development, commercialization and marketing of cell and tissue-based therapies is at an early-stage, substantially research-oriented, and financially speculative. To date, very few companies have been successful in their efforts to develop and commercialize a stem cell product. In general, stem cell products may be susceptible to various risks, including undesirable and unintended side effects, unintended immune system responses, inadequate therapeutic efficacy, or other characteristics that may prevent or limit their approval or commercial use. Furthermore, the number of people who may use cell or tissue-based therapies is difficult to forecast with accuracy. Our future success is dependent on the establishment of a large global market for cell- and tissue-based therapies and our ability to capture a share of this market with our product candidates.

Our development efforts with our cell therapy product candidates are susceptible to the same risks of failure inherent in the development and commercialization of therapeutic products based on new technologies. The novel nature of cellular therapeutics creates significant challenges in the areas of product development and optimization, manufacturing, government regulation, third-party reimbursement and market acceptance. For example, the United States FDA has relatively limited experience regulating therapies based on cells, and there are few approved treatments utilizing cell therapy.

If we are unable or unsuccessful in our efforts to discover or license, develop, receive regulatory approval for and commercialize our product candidates, our long-term prospects will be negatively impacted.

Our product candidates require governmental approvals prior to commercialization. We face the substantial risks of failure inherent in developing cell-based therapies. Our product candidates must satisfy rigorous standards of safety and efficacy before the FDA or foreign regulatory authorities will approve them for commercial use. There can be no assurance that these standards will remain consistent over time, further complicating our ability to obtain marketing approvals for our product candidates. To satisfy these standards, we will need to conduct significant additional research, preclinical testing and clinical trials.

Preclinical testing and clinical development are long, expensive and highly uncertain processes; most product candidates are never approved for commercial use. Failure can occur at any stage of testing. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful or sufficient for regulatory approval. Based on results at any stage of clinical trials, we may decide to discontinue development of our product candidates. Even if we obtain approval and begin marketing a product, ongoing clinical trials, including for other indications, may result in additional information that could affect our ability or decision to continue marketing the product. Even if we receive regulatory approval for our product candidates, we must comply with applicable FDA post-marketing regulations governing manufacturing, promotion, labeling, risk management and reporting of adverse events and other information, as well as other regulatory requirements. Failure to comply with applicable regulatory requirements could subject us to criminal prosecution, civil penalties, recall or seizure of products, withdrawal of marketing approval, total or partial suspension of production or injunction, as well as other regulatory actions against our product or us.

We have limited resources with which to conduct pre-clinical and clinical studies, which may limit or delay our ability to discover new products or develop our product candidates and increase the risk that our long-term business objectives will not be met. While we also seek to obtain government grants and other funding to further our research and development activities, there is no assurance that such monies will be available to us in the future. Without sufficient funding, we may have to significantly reduce the levels of such expenditures.

Despite our limited resources, we intend to explore opportunities to expand our product portfolio by acquiring or in-licensing product candidates. Although we conduct extensive evaluations of product candidate opportunities as part of our due diligence efforts, there can be no assurance that our development efforts for such products will be successful or that we will not become aware of issues or complications that will cause us to alter, delay or terminate these efforts.

We rely on third parties to conduct and oversee our clinical trials and those third parties may fail to perform as expected, which could delay or prevent us from obtaining regulatory approval for or commercializing AMR-001 or other products.

We rely on third-party contract research organizations, or CROs, to conduct and oversee our current Phase 2 PreSERVE AMI clinical trial and expect to engage a CRO for our planned clinical trials. We also rely upon various medical institutions, clinical investigators and contract laboratories to conduct our trials in accordance with our clinical protocols and all applicable regulatory requirements, including the FDA's good clinical practice regulations. These CROs play a significant role in the conduct of these trials and the subsequent collection and analysis of data from the clinical trials. We rely heavily on these parties for the execution of our clinical and preclinical studies, and control only certain aspects of their activities.

We and our CROs are required to comply with the FDA's current good clinical practices requirements, or cGCP, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of clinical trial participants are protected. The FDA enforces these cGCPs through periodic inspections of trial sponsors, principal investigators and clinical trial sites. If we or our CROs fail to comply with applicable cGCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA may require us to perform additional clinical trials before approving any marketing applications. Upon inspection, the FDA may determine that our clinical trials did not comply with cGCPs. If our CROs fail to comply with these regulations or fail to recruit a sufficient number of patients, our clinical trials may be delayed or we may be required to repeat such clinical trials, which would delay the regulatory approval process.

Our CROs are not our employees, and we are not able to control whether or not they devote sufficient time and resources to our clinical trials. These CROs may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials, or other drug development activities which could harm our competitive position. If our CROs do not successfully carry out their contractual duties or obligations, fail to meet expected deadlines, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements, or for any other reasons, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for, or successfully commercialize AMR-001 or our other product candidates. As a result, our financial results and the commercial prospects for AMR-001 or our other products would be harmed, our costs could increase, and our ability to generate revenues could be delayed.

We may rely on third parties to help us develop or commercialize our product candidates, and our ability to commercialize such candidates may be impaired or delayed if our collaborations are unsuccessful.

We may selectively pursue strategic collaborations for the development and commercialization of our product candidates in the United States or abroad, which may require us to share any future profits or revenues, issue our equity securities or transfer certain other material rights. We anticipate that we may need to enter into a collaboration agreement with one or more third parties to conduct and fund Phase 3 clinical trials and to commercialize the products, if approved.

Despite our efforts, there can be no assurance that we will be able to identify suitable collaborators or negotiate collaboration agreements on terms that are acceptable to us, if at all. In any future third-party collaboration, we would be dependent upon the success of the collaborators in performing their responsibilities and their continued cooperation. Such collaborators may not cooperate or perform their obligations under their agreements with us. We may be unable to control the amount and timing of our collaborators' resources that will be devoted to performing their responsibilities under their agreements with us. Collaborators may choose to pursue alternative technologies in preference to those being developed in collaboration with us. The development and commercialization of our product candidates will be delayed if collaborators fail to conduct their responsibilities in a timely manner or in accordance with applicable regulatory requirements or if they breach or terminate their collaboration agreements. Disputes with collaborators also could result in product development delays, decreased revenues and litigation expenses.

Contractual arrangements with licensors or collaborators may require us to pay royalties or make other payments related to the development of a product candidate, which would adversely affect the level of our future revenues and profits.

Even if we obtain all applicable regulatory approvals and successfully commercialize one or more of our cell therapy product candidates, contractual arrangements between us and a licensor, collaborator or other third party in connection with the respective product may require that we make royalty or other payments to the respective third party, and as a result we would not receive all of the revenue derived from commercial sales of such product.

Under the agreement pursuant to which we acquired Amorcyte, we are required to pay to the former Amorcyte shareholders certain earn-out payments following the first commercial sale of AMR-001, generally equal to 10% of net sales (or 30% of any sublicensing fees, royalties and milestone fees or profit sharing payments), less our out-of-pocket clinical development costs not previously paid or reimbursed and other expenses. Also, our license agreements relating to our T Regulatory Cell Program therapeutic product candidates include obligations to pay royalties on net sales of licensed products, maintenance fees and milestone fees upon events such as initiation of clinical trial stages, license application filings and regulatory approvals.

Even if we are successful in developing a therapeutic application using our cell technologies, it is unclear whether cell therapy can serve as the foundation for a commercially viable and profitable business.

The cell therapy industry is rapidly developing and could undergo significant change in the future. Such rapid technological development could result in our technologies becoming obsolete. While we believe our cell therapy programs are promising, such technologies may fail to be successfully commercialized for numerous reasons, including, but not limited to, competing technologies for the same indication. There can be no assurance that we will be able to develop a commercially successful therapeutic application for any potential cell therapy technologies.

Moreover, advances in other treatment methods or in disease prevention techniques could significantly reduce or entirely eliminate the need for our cell therapy services, planned products and therapeutic efforts. There is no assurance that cell therapies will achieve the degree of success envisioned by us in the treatment of disease. Additionally, technological or medical developments may materially alter the commercial viability of our technology or services, and require us to incur significant costs to replace or modify equipment in which we have a substantial investment. We are focused on cell therapy, and if this field is substantially unsuccessful, this could jeopardize our success or future results.

If we are unsuccessful in building or contracting for commercial sales and marketing capabilities in the United States and abroad, our revenues from any future products will be adversely affected.

We currently have no capabilities or experience in the selling, marketing or commercial distribution of cell therapy products. If any of our product candidates are ultimately approved for marketing, we would need to hire and develop an internal sales and marketing organization and/or outsource these functions to one or more third parties.

We may be unable to establish sufficient marketing, sales and distribution capabilities necessary to successfully commercialize and gain market acceptance for any of our product candidates. In addition, co-promotion or other marketing arrangements with third parties to commercialize product candidates could significantly limit the revenues we recognize from such product candidates, and these third parties may fail to commercialize the product candidates successfully.

If competitors develop and market products that are more effective, safer, or less expensive than our product candidates or offer other advantages, our commercial prospects will be limited.

Our cell therapy development programs now face, and will continue to face, intense competition from pharmaceutical, biopharmaceutical and biotechnology companies, as well as numerous academic and research institutions and governmental agencies engaged in drug discovery activities or funding, both in the United States and abroad. Some of these competitors are pursuing the development of drugs and other therapies that target the same diseases and conditions that we are targeting with our product candidates.

Because AMR-001 generally targets patients without other revascularization options, we do not believe it will compete directly with pharmaceutical therapies being developed to treat less severe stages of our target indications. However, to the extent that therapies are developed that reverse the progression of the ischemic damage or improve blood flow to damaged tissue, they could have the effect of reducing demand for our product. In addition, because AMR-001 requires the removal of bone marrow from the patient, potential competing products offering efficacious alternatives through a less invasive procedure may have a competitive advantage in terms of patient appeal. New pharmaceutical agents or devices that improve the repair of cardiac injury after a heart attack, with the result that fewer patients develop ischemic heart failure, would also represent a competitive threat for AMR-001.

Furthermore, cell-based therapies, such as cardiac derived cells, bone marrow-derived stem cells and adipose cells are being pursued by companies such as Cardio3, Capricor, Mesoblast, Aastrom Biosciences, Inc., Angioblast Systems, Inc., Athersys, Inc., Pluristem Therapeutics, Inc., ReNeuron Group, Stemedica Cell Technologies Inc. and Bioheart, Inc. Some other companies, such as Cytori and Miltenyi, are developing medical devices to facilitate the production of therapeutic cell populations by clinicians for the treatment of AMR-001's target indications. Such devices may be approved by the FDA under a less rigorous regulatory process, and less extensive clinical testing and manufacturing controls than we are required to pursue for AMR-001 and thus could reach the market well before AMR-001.

As a general matter, we also face competition from many other companies that are researching and developing cell therapies. Many of these companies have financial and other resources substantially greater than ours. In addition, many of these competitors have significantly greater experience in testing pharmaceutical and other therapeutic products, obtaining FDA and other regulatory approvals, and marketing and selling. If we ultimately obtain regulatory approval for any of our product candidates, we also will be competing with respect to manufacturing efficiency and marketing capabilities, areas in which we have limited or

no commercial-scale experience. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in resources being even more concentrated by our competitors. Competition may increase further as a result of advances made in the commercial applicability of our technologies and greater availability of capital for investment in these fields.

The same factors and competitors above could also impact the commercial prospects for our cell therapy for congestive heart failure. In addition new heart failure devices such as left ventricular assist devices are being advanced that may result in a degree of cardiac repair that obviates the need for cell therapy.

Our T regulatory cell therapy product candidate for recent onset type 1 diabetes and steroid resistant asthma faces competition from other immunomodulatory drugs being developed for other autoimmune diseases as well from other cellular therapies that fall outside of the coverage of our intellectual property. If these therapies are easier to manufacture and have similar safety and efficacy profiles the commercial prospects of our T regulatory cell therapy may be limited.

We may be subject to significant product liability claims and litigation, including potential exposure from the use of our product candidates in human subjects, and our insurance may be inadequate to cover claims that may arise.

Our business exposes us to potential product liability risks inherent in the testing, processing and marketing of cell therapy products. Such liability claims may be expensive to defend and result in large judgments against us. We face an inherent risk of product liability exposure related to the testing of our current and any future product candidates in human clinical trials and will face an even greater risk with respect to any commercial sales of our products should they be approved. No product candidate has been widely used over an extended period of time, and therefore safety data is limited. Cell therapy companies derive the raw materials for manufacturing of product candidates from human cell sources, and therefore the manufacturing process and handling requirements are extensive, which increases the risk of quality failures and subsequent product liability claims. We presently have product liability insurance limited to $5 million per incident and $5 million in annual aggregate.

We will need to increase our insurance coverage when we begin commercializing product candidates, if ever. At that time, we may not be able to obtain or maintain product liability insurance on acceptable terms with adequate coverage or at all, or if claims against us substantially exceed our coverage, then our financial position could be significantly impaired.

Whether or not we are ultimately successful in any product liability litigation that may arise, such litigation could consume substantial amounts of our financial and managerial resources, decreased demand for our products and injure our reputation.

We seek to maintain errors and omissions, directors and officers, workers' compensation and other insurance at levels we believe to be appropriate to our business activities. If, however, we were subject to a claim in excess of this coverage or to a claim not covered by our insurance and the claim succeeded, we would be required to pay the claim from our own limited resources, which could have a material adverse effect on our financial condition, results of operations and business. Additionally, liability or alleged liability could harm our business by diverting the attention and resources of our management and damaging our reputation.

We may be unable to retain key officers or employees or hire new key officers or employees needed to implement our business strategy and develop our products and businesses.

Given the specialized nature of cell therapy and that it is a relatively new field, there is an inherent scarcity of experienced personnel in the field. We are substantially dependent on the skills and efforts of current senior management for their management and operations, as well as for the implementation of our business strategy. In addition, our future success depends upon our ability to attract and retain additional qualified personnel (including medical, scientific, technical, commercial, business and administrative personnel) necessary to support our anticipated growth, develop our business, perform our contractual obligations to third parties and maintain appropriate licensure. There can be no assurance that we will be successful in attracting or retaining personnel required by us to continue to grow our operations. The loss of a key employee, the failure of a key employee to perform in his or her current position or our inability to attract and/or retain skilled employees, as needed, could result in our inability to continue to grow our business or to implement our business strategy, or may have a material adverse effect on our business, financial condition and operating results.

RISKS RELATED TO OUR CONTRACT DEVELOPMENT AND MANUFACTURING BUSINESS

Cell therapy is in its early stages, it is still a developing field and a significant global market for our third party manufacturing services at PCT may never emerge.

Cell therapy is in its early stages and is still a developing area of research, with few cell therapy products approved for clinical use. Many of the existing cellular therapy candidates are based on novel cell technologies that are inherently risky and may not be understood or accepted by the marketplace, making difficult their own funding to enable them to continue their business. At PCT, the current market and our existing contracts principally consist of providing consulting and manufacturing of cell and tissue-based therapeutic products in clinical trials and processing of stem cell products for transplantation programs. The number of people who may use cell or tissue-based therapies and thus the demand for stem cell processing services is difficult to forecast. If cell therapies under development by us or by others to treat disease are not proven effective, demonstrate unacceptable risks or side effects or, where required, fail to receive regulatory approval, our PCT business will be significantly impaired. While the therapeutic application of cells to treat serious diseases is currently being explored by a number of companies, to date there are only a handful of approved products in the United States. Ultimately, our success in developing our contract development and manufacturing business depends on the development and growth of a broad and profitable global market for cell- and tissue-based therapies and services and our ability to capture a share of this market through PCT.

PCT's revenues may vary dramatically from period to period making it difficult to forecast future results.

The nature and duration of PCT's contracts with customers often involve regular renegotiation of the scope, level and price of the services we are providing. If our customers reduce the level of their spending on research and development or marketing or are unsuccessful in attaining or retaining product sales due to market conditions, reimbursement issues or other factors, our results of operations may be materially impacted. In addition, other factors, including the rate of enrollment for clinical studies, will directly impact the level and timing of the products and services we deliver. As such, the levels of our revenues and profitability can fluctuate significantly from one period to another and it can be difficult to forecast the level of future revenues with any certainty.

We have a finite manufacturing capacity at PCT, which could inhibit the long-term growth prospects of this business.

We currently provide services and produce materials for clinical trials at our existing manufacturing facilities in Allendale, New Jersey and Mountain View, California, which we have designed and operated to be compliant with FDA cGMP, and cGTP requirements. While we believe these facilities provide us with sufficient capacity to meet our expected near term demand, it is possible that the demand for our services and products could exceed our existing manufacturing capacity. It may become necessary or desirable for us to expand our manufacturing capabilities for cell therapy services and products in the future, which may require us to invest significant amounts of capital and to obtain regulatory approvals. In this regard, we are reviewing opportunities for expansion to both commercial level and international manufacturing capabilities. If we are unable to meet rising demand for products and services on a timely basis or unable to maintain cGMP compliance standards, then it is likely that our clients and potential clients will elect to obtain the products and services from competitors, which could materially and adversely affect the level of our revenues and our prospects for growth.

Components of therapeutic products approved for commercial sale or used in late-stage clinical trials must be manufactured in accordance with cGMP. Manufacturers of cell-based product candidates such as AMR-001 and Tregs also must comply with the cGTP. In addition, therapeutic products may be required to modify their manufacturing process from time to time in response to FDA requests. Manufacture of live cellular-based products is complex and subjects companies to significant regulatory burdens that may change over time. We may encounter difficulties in the production of our product candidates due to our limited manufacturing experience.

We will need to improve manufacturing efficiency at PCT if we are to realize meaningful gains in PCT's profitability.

Together with our customers, PCT is working to improve the efficiency of cell therapy product development for our own product pipeline as well as our clients through the development of engineering and innovation solutions for the cost of goods sold and the profitability of the business. We cannot provide assurances that we will be able to develop process enhancements that are acceptable to the FDA, on a timely basis, on commercially reasonable terms, or at all, or that any expected improvement in profitability will be realized. If we are unsuccessful in our efforts to develop these improvements, we may be unable to profitably operate the PCT business and could face significantly higher capital expenditures, increased facility and personnel costs and other increased operating expenses.

We have a limited marketing staff and budget for our PCT operations, which could limit our ability to grow this business.

The degree of market acceptance of our products and services depends upon a number of factors, including the strength of our sales and marketing support. If our marketing is not effective, our ability to generate revenues could be significantly impaired. The newness of the industry and capital constraints provide challenges to our marketing and sales activities at PC, and the failure to attract a sufficient base of customers will affect our ability to increase our revenues and operate profitably.

The logistics associated with the distribution of materials produced by PCT for third parties and for us are significant, complex and expensive and may negatively impact our ability to generate and meet future demand for our products and improve profitability.

Current cell therapy products and product candidates, including our own, have a limited shelf life, in certain instances limited to less than 12 hours. Thus, it is necessary to minimize the amount of time between when the cell product is extracted from a patient, arrives at one of our facilities for processing, and is returned for infusion in the patient.

To do so, we need our cell therapy facilities to be located in major population centers in which patients are likely to be located and within close proximity of major airports. In the future, it may be necessary to build new facilities, which would require a significant commitment of capital and may not then be available to us. Even if we are able to establish such new facilities, we may experience challenges in ensuring that they are compliant with cGMP standards, FDA requirements, and/or applicable state or local regulations. We cannot be certain that we would be able to recoup the costs of establishing a facility in a given market. Given these risks, we could choose not to expand our cell processing and manufacturing services into new geographic markets which will limit our future growth prospects.

To effectively and efficiently deliver cell therapy product, we also need to establish and maintain cost-effective relationships with reliable and experienced transportation carriers. Most existing transportation carriers are not optimally designed for the transportation of cell therapy products. For example, these carriers generally lack a true point-to-point chain of control, may have non-controlled X-ray and inspection, do not guarantee package orientation, handling or storage conditions and, in many cases, lack a standard, documented and tracked operating procedures. While reliable ground carriers with experience in the transport of blood products exist in major U.S. metropolitan areas, air carriers meeting such needs are limited. If carriers we currently use should cease medical shipping operations or otherwise become unable to properly meet our transportation needs, the lack of access to safe, reliable and effective transportation options could adversely affect our ability to meet our customers' and our own needs.

RISK RELATED TO OUR CORD BLOOD AND STEM CELL STORAGE BUSINESS

There is no guarantee that the market for our cord blood and adult stem cell collection and storage business will develop, and it exposes us to risks inherent in the collection and long-term storage of these products.

Through NeoStem Family Storage, we provide services related to the collection and storage of umbilical cord blood units and adult stem cells, which we store at our Allendale, New Jersey facility. There currently is no significant global market for stem cell collection and storage, nor is there any guarantee that such markets will develop in the near future, or at all. Major medical institutions currently do not generally recommend private storage, and we believe that the medical community is supportive of the public cord blood collection system. Patients can donate their cord blood to the public cord blood collection system without charge. In addition, the value of our cord blood storage services is related to the higher success rate of autologous cord blood transplants over unrelated ones. If medical research discovers new and more effective medical procedures that make allogeneic cord blood transplants safer and more effective, the clinical advantage of storing a child's umbilical cord blood for his or her own future therapeutic use may significantly decline.

The operation of a cord blood and adult stem cell storage system also exposes us to a number of risks. For example, adverse outcomes or limitations of our stem cell or cord blood collection and storage services, the damage, destruction or a failure in the performance of the cryopreservation storage facility or systems of our service providers, could harm our reputation and business and expose us to significant liability from customers. While we believe that we have procured insurance to cover certain of these risks, we may in fact have insufficient insurance to cover losses beyond the limits on its policies, which could have a material adverse effect on our financial condition.

RISKS RELATED TO GOVERNMENT REGULATION

The development and commercialization of our product candidates is subject to extensive regulation by the FDA and other regulatory agencies in the United States and abroad, and the failure to receive regulatory approvals for our cell therapy product candidates would likely have a material and adverse effect on our business and prospects.

To date, we have not received regulatory approval to market any of our product candidates in any jurisdiction. If we seek approval of our cell therapy product candidates, we will be required to submit to FDA and European regulatory authorities extensive preclinical and clinical data supporting its safety and efficacy, as well as information about the manufacturing process and to undergo inspection of our PCT manufacturing facilities, among other things. The process of obtaining FDA and other regulatory approvals is expensive, generally takes many years and is subject to numerous risks and uncertainties, particularly with complex and/or novel product candidates such as AMR-001 and our other product candidates. Changes in regulatory approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application or may make it easier for our competitors to gain regulatory approval to enter the marketplace. Ultimately, the FDA and other regulatory agencies have substantial discretion in the approval process and may refuse to accept any application or may decide that our product candidate data are insufficient for approval without the submission of additional preclinical, clinical or other studies. In addition, varying agency interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent regulatory approval of a product candidate. Any regulatory approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable.

Any of the following factors, among others, could cause regulatory approval for our product candidates to be delayed, limited or denied:

- the product candidates require significant clinical testing to demonstrate safety and effectiveness before applications for marketing approval can be filed with the FDA and other regulatory authorities;
- data obtained from preclinical and nonclinical animal testing and clinical trials can be interpreted in different ways, and regulatory authorities may not agree with our respective interpretations or may require us to conduct additional testing;
- negative or inconclusive results or the occurrence of serious or unexpected adverse events during a clinical trial could cause us to delay or terminate development efforts for a product candidate; and/or
- FDA and other regulatory authorities may require expansion of the size and scope of the clinical trials.

Any difficulties or failures that we encounter in securing regulatory approval for our product candidates would likely have a substantial adverse impact on our ability to generate product sales, and could make any search for a collaborative partner more difficult.

We may be unsuccessful in our efforts to comply with applicable federal, state and international laws and regulations, which could result in loss of licensure, certification or accreditation or other government enforcement actions or impact our ability to secure regulatory approval of our product candidates.

Although we seek to conduct our business in compliance with applicable governmental healthcare laws and regulations, these laws and regulations are exceedingly complex and often subject to varying interpretations. The cell therapy industry is the topic of significant government interest, and thus the laws and regulations applicable to our business are subject to frequent change and/or reinterpretation. As such, there can be no assurance that we will be able, or will have the resources, to maintain compliance with all such healthcare laws and regulations. Failure to comply with such healthcare laws and regulations, as well as the costs associated with such compliance or with enforcement of such healthcare laws and regulations, may have a material adverse effect on our operations or may require restructuring of our operations or impair our ability to operate profitably.

Facilities engaged in the recovery, processing, storage, labeling, packaging or distribution of any HCT/Ps, or the screening or testing of a donor, are required to register with the FDA. Any third party retained by us to process our samples must be similarly registered with the FDA and comply with HCT/P regulations. We also are required to comply with FDA's cGTP regulations. If we fail to register or update registration information in a timely way, or fail to comply with cGTP regulations, we will be out of compliance with FDA regulations which could adversely affect our business.

Our manufacture of certain cellular therapy products for ourselves or at PCT on behalf of our customers triggers additional FDA requirements applicable to HCT/Ps, or products comprised of HCT/Ps, which are regulated as a drug, biological product, or medical device. FDA's cGMP regulations govern the manufacture, processing, packaging and holding of cell therapy products

regulated as drugs. FDA's Quality System Regulation, or QSR, similarly governs the manufacture, processing, packaging and holding of cell therapy products regulated as medical devices. We must comply with cGMP or QSR requirements including quality control, quality assurance and the maintenance of records and documentation for certain products. We may be unable to comply with these cGMP or QSR requirements and with other FDA, state and foreign regulatory requirements. These requirements may change over time and we or third-party manufacturers may be unable to comply with the revised requirements.

If we are unable to conduct clinical studies in accordance with regulations and accepted standards, we may be delayed in receiving, or may never receive, regulatory approvals of our product candidates from the FDA and other regulatory authorities.

To obtain marketing approvals for our product candidates in the United States and abroad, we must, among other requirements, complete adequate and well-controlled clinical trials sufficient to demonstrate to the FDA and other regulatory bodies that the product candidate is safe and effective for each indication for which approval is sought. If a serious adverse event occurs during one of our clinical studies, the FDA can place one or more of our clinical trials on hold if, among other reasons, it finds that patients enrolled in the trial are or would be exposed to an unreasonable and significant risk of illness or injury. If safety concerns develop, we may, or the FDA or an institutional review board may require us to, stop the affected trials before completion. Our Phase 1 trial of AMR-001 was subject to a clinical hold following the death of a subject in the study. We presented evidence that the death was the result of ventricular fibrillation attributed to recurrent myocardial infarction from stent thrombosis preceding infusion of AMR-001 and the FDA lifted the clinical hold.

The completion of our clinical trials also may be delayed or terminated for a number of other reasons, including if:

- third-party clinical investigators do not perform the clinical trials on the anticipated schedule or consistent with the clinical trial protocol, good clinical practices required by the FDA and other regulatory requirements, or other third parties do not perform data collection and analysis in a timely or accurate manner;
- inspections of clinical trial sites by the FDA or by institutional review boards of research institutions participating in the clinical trials, reveal regulatory violations that require the sponsor of the trial to undertake corrective action, suspend or terminate one or more sites, or prohibit use of some or all of the data in support of marketing applications; or
- the FDA or one or more institutional review boards suspends or terminates the trial at an investigational site, or precludes enrollment of additional subjects.

Our development costs will increase if there are material delays in our clinical trials, or if we are required to modify, suspend, terminate or repeat a clinical trial. If we are unable to conduct our clinical trials properly, we may never receive regulatory approval to market our product candidates.

We will continue to be subject to extensive FDA regulation following any product approvals, and if we fail to comply with these regulations, we may suffer a significant setback in our business.

Even if we are successful in obtaining regulatory approval of our product candidates, we will continue to be subject to the requirements of and review by, the FDA and comparable regulatory authorities in the areas of manufacturing processes, post-approval clinical data, adverse event reporting, labeling, advertising and promotional activities, among other things. In addition, any marketing approval we receive may be limited in terms of the approved product indication or require costly post-marketing testing and surveillance. Discovery after approval of previously unknown problems with a product, manufacturer or manufacturing process, or a failure to comply with regulatory requirements, may result in actions such as:

- warning letters or other actions requiring changes in product manufacturing processes or restrictions on product marketing or distribution;
- product recalls or seizures or the temporary or permanent withdrawal of a product from the market; and
- fines, restitution or disgorgement of profits or revenue, the imposition of civil penalties or criminal prosecution.

The occurrence of any of these actions would likely cause a material adverse effect on our business, financial condition and results of operations.

Health care companies have been the subjects of federal and state investigations, and we could become subject to investigations in the future.

Both federal and state government agencies have heightened civil and criminal enforcement efforts. There are numerous ongoing investigations of health care companies, as well as their executives and managers. In addition, amendments to the Federal False Claims Act, including under Healthcare Reform, have made it easier for private parties to bring "*qui tam*" (whistleblower)

lawsuits against companies under which the whistleblower may be entitled to receive a percentage of any money paid to the government. The Federal False Claims Act provides, in part, that an action can be brought against any person or entity that has knowingly presented, or caused to be presented, a false or fraudulent request for payment from the federal government, or who has made a false statement or used a false record to get a claim approved. The government has taken the position that claims presented in violation of the federal anti-kickback law, Stark Law or other healthcare-related laws, including laws enforced by the FDA, may be considered a violation of the Federal False Claims Act. Penalties include substantial fines for each false claim, plus three times the amount of damages that the federal government sustained because of the act of that person or entity and/or exclusion from the Medicare program. In addition, a majority of states have adopted similar state whistleblower and false claims provisions.

We are not aware of any government investigations involving any of our facilities or management. While we believe that we are in material compliance with applicable governmental healthcare laws and regulations, any future investigations of our business or executives could cause us to incur substantial costs, and result in significant liabilities or penalties, as well as damage to our reputation.

It is uncertain to what extent the government, private health insurers and third-party payors will approve coverage or provide reimbursement for the therapies and products to which our services relate. Availability for such reimbursement may be further limited by an increasing uninsured population and reductions in Medicare and Medicaid funding in the United States.

To the extent that health care providers cannot obtain coverage or reimbursement for our therapies and products, they may elect not to provide such therapies and products to their patients and, thus, may not need our services. Further, as cost containment pressures are increasing in the health care industry, government and private payors may adopt strategies designed to limit the amount of reimbursement paid to health care providers.

Similarly, the trend toward managed health care and bundled pricing for health care services in the United States, which may accelerate under the healthcare reform legislation approved by Congress on March 23, 2010 and thereafter signed into law ("Healthcare Reform"), could significantly influence the purchase of healthcare services and products, resulting in lower prices and reduced demand for our therapeutic products under development.

We may receive a portion of our revenues from services rendered to patients enrolled in federal health care programs, such as Medicare, and we may also directly or indirectly receive revenues from federal health care programs. Federal health care programs are subject to changes in coverage and reimbursement rules and procedures, including retroactive rate adjustments. These contingencies could materially decrease the range of services covered by such programs or the reimbursement rates paid directly or indirectly for our products and services. To the extent that any health care reform favors the reimbursement of other therapies over our therapeutic products under development, such reform could affect our ability to sell our services, which may have a material adverse effect on our revenues.

The limitation on reimbursement available from private and government payors may reduce the demand for, or the price of, our services, which could have a material adverse effect on our revenues. Additional legislation or regulation relating to the health care industry or third-party coverage and reimbursement may be enacted in the future which could adversely affect the revenues generated from the sale of our products and services.

Furthermore, there has been a trend in recent years towards reductions in overall funding for Medicare and Medicaid. There has also been an increase in the number of people who do not have any form of health care coverage in recent years and who are not eligible for or enrolled in Medicare, Medicaid or other governmental programs. The extent to which the reforms brought about under Healthcare Reform may be successful in reducing the number of such uninsured is unclear, and the reduced funding of governmental programs and increase in uninsured populations could have a negative impact on the demand for our services to the extent they relate to products and services which are reimbursed by government and private payors.

Unintended consequences of recently adopted healthcare reform legislation in the U.S. may adversely affect our business.

The healthcare industry is undergoing fundamental changes resulting from political, economic and regulatory influences. In the U.S., comprehensive programs are under consideration that seek to, among other things, increase access to healthcare for the uninsured and control the escalation of healthcare expenditures within the economy. On March 23, 2010, healthcare reform legislation was approved by Congress and has been signed into law. While we do not believe this legislation will have a direct impact on our business, the legislation has only recently been enacted and requires the adoption of implementing regulations, which may have unintended consequences or indirectly impact our business. For instance, the scope and implications of the recent amendments pursuant to the Fraud Enforcement and Recovery Act of 2009 ("FERA"), have yet to be fully determined or adjudicated and as a result it is difficult to predict how future enforcement initiatives may impact our business. Also, in some instances our clients may be health insurers that will be subject to limitations on their administrative expenses and new federal review of

"unreasonable" rate increases that could impact the prices they pay for our services. If the legislation causes such unintended consequences or indirect impact, it could have a material adverse effect on our business, financial condition and results of operations.

Competitor companies or hospitals may be able to take advantage of EU rules permitting sales of unlicensed medicines for individual patients to sell competing products without a marketing authorization.

The EU medicines rules allow individual member states to permit the supply of a medicinal product without a marketing authorization to fulfill special needs, where the product is supplied in response to a bona fide unsolicited order, formulated in accordance with the specifications of a healthcare professional and for use by an individual patient under his direct personal responsibility. This may in certain countries also apply to products manufactured in a country outside the EU and imported to treat specific patients or small groups of patients. In addition, advanced therapy medicinal products do not need a marketing authorization if they are prepared on a non-routine basis and are used within the same EU member state in a hospital in accordance with a medical prescription for an individual patient.

These exemptions could allow our competitors to make sales in the EU without having obtained a marketing authorization and without undergoing the expense of clinical trials, especially if those competitors have cell processing facilities in the relevant EU member state. Similarly, certain hospitals may be able to compete with us on the basis of these rules. Because any such sales would be made without a marketing authorization, there would be no need for the competitor company or hospital to refer to the clinical data in our marketing authorization dossiers, and so any data exclusivity protection that we may obtain for our products would not prevent such competing sales.

RISKS RELATED TO OUR INTELLECTUAL PROPERTY

We may be unable able to obtain or maintain patent protection for our products and product candidates, which could have a material adverse effect on our business.

Our commercial success will depend, in part, on obtaining and maintaining patent protection for new technologies, product candidates, products and processes and successfully defending such patents against third party challenges. To that end, we file patent applications, and have been issued patents, that are intended to cover certain methods and uses of stem cells, including very small embryonic-like stem cells, as well as compositions and methods relating to T regulatory cells and hematopoietic stem cells. These patent applications may never result in the issuance of patents.

The patent positions of biotechnology companies can be highly uncertain and involve complex legal, scientific and factual questions and recent court decisions have introduced significant uncertainty regarding the strength of patents in the industry. Moreover, the legal systems of some foreign countries do not favor the aggressive enforcement of patents and may not protect our intellectual property rights to the same extent as the laws of the United States. Any of the issued patents we own or license may be challenged by third parties and held to be invalid, unenforceable or with a narrower or different scope of coverage that what we currently believe, effectively reducing or eliminating protection we believed we had against competitors with similar products or technologies. If we ultimately engage in and lose any such patent disputes, we could be subject to competition and/or significant liabilities, we could be required to enter into third-party licenses or we could be required to cease using the disputed technology or product. In addition, even if such licenses are available, the terms of any license requested by a third party could be unacceptable to us.

The claims of any current or future patents that may issue or be licensed to us may not contain claims that are sufficiently broad to prevent others from utilizing the covered technologies and thus may provide us with little commercial protection against competing products. For instance, patents relating to our AMR-001 product candidate are limited to an isolated and non-expanded population of autologous mononuclear cells enriched for CD34 cells, which further contains a subpopulation of potent CD34/CXCR4 cells that have CXCR4 mediated chemotactic activity. Products that do not contain enriched CD34/CXCR4 cells, or which contain populations of cells that derive efficacy from a different mechanism of action, may not infringe the existing AMR-001 patents. Consequently, our competitors may independently develop competing products that do not infringe our patents or other intellectual property. To the extent a competitor can develop similar products using a different chemistry, our patents and patent applications may not prevent others from directly competing with us.

Product development and approval timelines in the biotechnology industry are very lengthy. As such, it is possible that any patents that may cover an approved product may have expired at the time of commercialization or only have a short remaining period of exclusivity, thereby reducing the commercial advantages of the patent. In such case, we would then rely solely on other forms of exclusivity, such as regulatory exclusivity provided by the Federal Food, Drug and Cosmetic Act, which may provide less protection to our competitive position.

Litigation relating to intellectual property is expensive, time consuming and uncertain, and we may be unsuccessful in our efforts to protect against infringement by third parties or defend ourselves against claims of infringement.

To protect our intellectual property, we may initiate litigation or other proceedings. In general, intellectual property litigation is costly, time-consuming, diverts the attention of management and technical personnel and could result in substantial uncertainty regarding our future viability, even if we ultimately prevail. Some of our competitors may be able to sustain the costs of such litigation or other proceedings more effectively than can we because of their substantially greater financial resources. The loss or narrowing of our intellectual property protection, the inability to secure or enforce our intellectual property rights or a finding that we have infringed the intellectual property rights of a third party could limit our ability to develop or market our products and services in the future or adversely affect our revenues. Furthermore, any public announcements related to such litigation or regulatory proceedings could adversely affect the price of our common stock.

Third parties may allege that the research, development and commercialization activities we conduct infringe patents or other proprietary rights owned by such parties. While we do not believe any of our current activities infringe the rights of others, we have not conducted an exhaustive search or analysis of third-party patent rights to determine whether our pre-clinical or clinical research and development or activities may infringe or be alleged to infringe any third-party patent rights. If we are found to have infringed the patents of a third party, we may be required to pay substantial damages; we also may be required to seek from such party a license, which may not be available on acceptable terms, if at all, to continue our activities. A judicial finding or infringement or the failure to obtain necessary licenses could prevent us from commercializing our products, which would have a material adverse effect on our business, operating results and financial condition.

If we are unable to maintain our licenses, patents or other intellectual property we could lose important protections that are material to continuing our operations and our future prospects.

To obtain and maintain patent protection and licensing rights under certain of our license agreement, we must, among other things, ensure the timely payment of all applicable filing and maintenance fees. Any failure to do so could result in the loss of some or all of our rights to proprietary technology or the inability to secure or enforce intellectual property protection.

Additionally, our license agreements require us to meet certain diligence obligations in the development of the licensed products. Our failure to meet these diligence obligations could result in the loss of some or all of our rights, which could materially and adversely affect our business and future prospects.

If we are unable to protect the confidentiality of trade secrets, our competitive position could be impaired.

A significant amount of our technology, especially regarding manufacturing processes, is unpatented and is maintained as trade secrets. We expend significant efforts in an effort to protect these trade secrets, including through the use of confidentiality agreement. Even so, improper use or disclosure of our confidential information could occur and in such case adequate remedies may not exist. The disclosure of our trade secrets could impair our Company's competitive position.

In certain countries, patent holders may be required to grant compulsory licenses, which would likely have a significant and detrimental effect on any future revenues in such country.

Many countries, including some countries in Europe, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, most countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may be limited to monetary relief and may be unable to enjoin infringement, which could materially diminish the value of the patent. Compulsory licensing of life-saving products is also becoming increasingly popular in developing countries, either through direct legislation or international initiatives. Such compulsory licenses could be extended to our product candidates, which may limit our potential revenue opportunities, including with respect to any future revenues that may result from AMR-001 or Tregs.

Changes to U.S. Patent Law may have a material adverse effect on our intellectual property rights.

The Leahy-Smith America Invents Act (AIA), which was signed into law on September 16, 2011, significantly changes United States patent law. It may take some time to establish what the law means, since regulations that will govern how the new law is implemented have not yet been established, and since the law has not yet been implemented, it has not yet been interpreted by the lower courts, and reviewed by either the Federal Circuit Court of Appeals or the Supreme Court, a process that will take years. The first major change is that AIA switches the U.S. patent system from a “first to invent” system to a “first to file” system. Once the first to file system is in effect, there is a risk that another company may independently develop identical or similar patents

at approximately the same time, and be awarded the patents instead of us. Once “first to file” is implemented, there will no longer be a need to determine who is the inventor of an invention. As a result, for the second major change, AIA abolishes interference proceedings, and establishes derivation proceedings to replace interference proceedings in all cases in which the time period for instituting an interference proceeding has not lapsed where an inventor named in an earlier application derived the claimed invention from a named inventor. Once derivation proceedings are in effect, there is a risk that the inventorship of any pending patent application can be challenged for reasons of derivation. The third major change is that AIA establishes post-grant opposition proceedings that will apply to patent applications filed after “first to file” becomes effective. Post-grant opposition will enable a person who is not the patent owner to initiate proceedings in the Patent office within 9 months after the grant of a patent that can result in cancellation of a patent as invalid. Therefore there is a risk that any of our patents once granted after the effective date of these provisions of the new law (March 16, 2013) may be subject to post-grant opposition, which will increase uncertainty on the validity of any newly granted patent or may ultimately result in cancellation of the patent.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

Not applicable.

ITEM 2. PROPERTIES.

PCT Facilities

We presently operate two cell therapy manufacturing facilities, in Allendale, New Jersey and in Mountain View, California. Longer-term plans include the acquisition and development of other such buildings within and outside of the United States, to be developed into replicable and scalable manufacturing facilities, strategically located to best serve clients' needs. Inherent in the nature of cell therapy today is the biologic shelf life of the cell therapy product itself. This limits the transit times between the time the cell product is extracted from a patient until it arrives at a manufacturing facility and the time that a processed product leaves the manufacturing facility and arrives for re-infusion in the patient. Therefore, it is preferable for cell therapy manufacturing facilities to be located in major population centers and within close proximity of major airport hubs.

In 2007, PCT acquired the facility in Allendale, New Jersey which has been developed into a cell manufacturing facility. 22,000 square feet of the Allendale facility's approximate 30,000 square feet have been developed. The Allendale facility is comprised of ISO Class 7, Class 10,000 manufacturing suites and one ISO Class 6, Class 1,000 manufacturing suite compliant with EU production standards, in addition to quality control, research and development laboratories and support facilities. It has been designed to meet the accreditation requirements of the Foundation for the Accreditation of Cellular Therapy (FACT) and to comply with the FDA's requirements, including applicable cGMP regulations, and to meet the standards of the American Association of Blood Banks (AABB). The facility is also in compliance with a range of state and federal regulatory and licensing requirements. The Allendale facility is subject to two mortgages in favor of T.D. Bank, N.A. having an aggregate principal amount of approximately $3.2 million as of December 31, 2013. PCT recently completed expansion in the Allendale, New Jersey facility adding laboratory, clean room suites and support facilities.

The Mountain View facility is also a licensed cell therapy manufacturing facility, encompassing 25,024 square feet within a single building, of which 17,425 square feet is developed. The developed space is presently used for manufacturing client products. Mountain View is equipped with ISO Class 7, Class 10,000 manufacturing suites, quality control, research and development laboratories and support facilities. The Mountain View facility is subject to a lease agreement, as amended to date, having a current term that extends through June 2017. The base monthly rent is currently $42,528 subject to annual cost of living adjustments provided, however, that each such annual rental adjustment will not be less than 3% or more than 7% . During 2013, PCT commenced construction at the Mountain View facility and expanded its manufacturing capacity with additional clean rooms, laboratory space and support facilities and the build-out is expected to be completed in 2014. In connection with the July 2011 amendment to the lease, the lessor required that NeoStem, as sole member of PCT, execute a Guaranty of Lease.

The Company is reviewing opportunities for commercial expansion of our manufacturing operations both in the U.S. and internationally.

NeoStem Corporate Headquarters

The Company's corporate headquarters is located in New York City. In January 2014, the Company executed a fourth modification and additional space agreement (the "fourth modification") modifying to its existing lease in order to (1) obtain additional office space adjacent to its current, third floor executive offices and (2) once and if the adjacent, additional office space becomes available to the Company as provided in the fourth modification, extend the lease term for both the existing office space (currently scheduled to terminate on June 30, 2015) and the additional, adjacent space through January 31, 2018. The Company anticipates occupying the additional, adjacent space no later than November 2014. Once the Company acquires the use of the additional, adjacent space pursuant to the fourth lease modification, the Company believes the total leased space, is sufficient for the near future. The base monthly rent for the Company's existing executive offices, which includes storage space but excludes the additional, adjacent space, currently, is approximately $26,000 per month. Once the Company has the ability to occupy the additional, adjacent space, the base monthly rent for the additional, adjacent space will be separately calculated from the existing office space for the remainder of the term of the lease and will initially be approximately, $7,800 per month. The base monthly rent for the Company's existing space (which excludes the additional space) and the base monthly rent for the additional space are each separately subject to specific rent increases throughout extended lease term as provided in the lease as modified by the fourth modification with the maximum base monthly rent increasing to approximately $45,500 during the last month of the extended term (which includes the existing executive offices space, the storage space and the adjacent additional space).

.

ITEM 3. LEGAL PROCEEDINGS.

We hereby incorporate by reference into this Item 3 the disclosure appearing under Item 8.01 of our Current Report on Form 8-K dated October 5, 2012.

ITEM 4. MINE SAFTEY DISCLOSURES.

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

ITEM 5(a). MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS.

Market For Our Common Equity

Our common stock trades on the NASDAQ Capital Market under the symbol "NBS." The following table sets forth the high and low sales prices of our common stock for each quarterly period presented, as reported by the NASDAQ.

2013	High	Low
First Quarter	$7.00	$5.00
Second Quarter	$7.00	$5.00
Third Quarter	$9.89	$5.20
Fourth Quarter	$8.92	$5.98

2012	High	Low
First Quarter	$9.00	$3.70
Second Quarter	$6.10	$3.00
Third Quarter	$8.40	$4.90
Fourth Quarter	$7.80	$5.90

2011	High	Low
First Quarter	$20.10	$11.40
Second Quarter	$20.08	$13.10
Third Quarter	$15.50	$5.50
Fourth Quarter	$7.50	$4.30

Holders

As of March 10, 2014, there were approximately 1,044 stockholders of record of our common stock (which does not include beneficial owners for whom Cede & Co. or others act as nominees).

Dividends and Dividend Policy

We have not paid cash dividends on our common stock during the periods set forth in the stock price table that appears above. The holders of our common stock are each entitled to receive dividends when and if declared by the board of directors out of funds legally available therefor, subject to the terms of any outstanding series of preferred stock. We intend to retain any future earnings to fund the development and growth of our business, and therefore we do not anticipate paying any cash dividends on our common stock in the foreseeable future.

Recent Sales of Unregistered Securities

As previously disclosed, and as follows:

The Company has agreed to issue equity to certain consultants for services. Effective December 2, 2013, pursuant to a two month agreement for consulting services in investor relations and other specified matters, the Company agreed to issue to a consultant 15,000 shares of the Company's restricted common stock, vesting as to 7,500 shares on each of the one month and two month anniversaries of the agreement. Effective December 10, 2013 pursuant a four month agreement for consulting services in financial advisory and investment banking services and other specified matters, the Company agreed to issue to a consultant 19,500 shares of the Company's restricted common stock, vesting as to half two months after the effective date and half on the last day of the term. Effective January 1, 2014, pursuant to a three month extension for consulting services in information technology and accounting systems, the Company agreed to issue to a consultant, 3,300 shares of the Company's restricted common stock, vesting ratably throughout the term of the agreement on a monthly basis. Also effective January 1, 2014, pursuant to a three month extension for consulting services in accounting systems and regulatory compliance, the Company agreed to issue to a consultant,

2,200 shares of the Company's restricted common stock vesting ratably throughout the term of the agreement on a monthly basis. Effective January 7, 2014 pursuant to a four month extension for consulting services in strategic planning and tactical application of those services and other specified matters, the Company agreed to issue to a consultant 16,000 shares of restricted common stock vesting as to 50% on the effective date and 50% at the end of the term. Also effective January 7, 2014 pursuant to a six month extension for consulting services in investor relations and other specified matters, the Company agreed to issue to a consultant 30,000 shares of the Company's restricted common stock, vesting ratably throughout the term of the agreement on a monthly basis. Effective January 9, 2014, pursuant to a three month agreement for consulting services in investor relations, developing implementing and planning presentations to the financial community, and other specified matters, the Company agreed to issue to a consultant 10,000 shares of the Company's restricted common stock, vesting ratably throughout the term of the agreement. Effective January 21, 2014 pursuant to a two week consulting agreement for consulting services in financial and investor relations and other specified matters, the Company agreed to issue to a consultant 1,000 shares of the Company's restricted common stock, vesting in full on the effective date. Effective January 25, 2014, pursuant to a three month consulting agreement for consulting services in investor relations and other specified matters, the Company agreed to issue to a consultant, 7,500 shares of the Company's restricted common stock vesting as to 2,500 shares on each monthly anniversary of the effective date throughout the term of the agreement. Effective March 1, 2014 pursuant to a six month agreement for consulting services in investor communications and other specified matters, the Company agreed to issue to a consultant 36,000 shares of the Company's restricted common stock, vesting as to one third on each of March 30, 2014, April 30, 2014 and the last day of the term.

The offer and sale by the Company of the securities described above were made in reliance upon the exemption from registration provided by Section 4(a)(2) of the Securities Act of 1933, as amended (the “Securities Act”), for transactions by an issuer not involving a public offering. The offer and sale of such securities were made without general solicitation or advertising to “accredited investors” as such term is defined in Rule 501(a) of Regulation D promulgated under the Securities Act and/or pursuant to Regulation D or Regulation S, each promulgated under the Securities Act and may not be resold in the United States or to U.S. persons unless registered under the Securities Act or pursuant to an exemption from registration under the Securities Act.

ITEM 5(b). USE OF PROCEEDS

Not applicable.

ITEM 5(c). REPURCHASES OF EQUITY SECURITIES.

There were no repurchases of equity securities by or on behalf of the Company or any affiliated purchaser during the fourth quarter of the fiscal year ended December 31, 2013 as to which information is required to be furnished.

ITEM 6. SELECTED FINANCIAL DATA.

Not applicable.

ITEM 7. 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 contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Cautionary Note Regarding Forward-Looking Statements" and under "Risk Factors" herein.

Overview

NeoStem, Inc. ("we," "NeoStem" or the "Company") is a leader in the emerging cellular therapy industry. We are pursuing the preservation and enhancement of human health globally through the development of cell based therapeutics that prevent, treat or cure disease by repairing and replacing damaged or aged tissue, cells and organs and restoring their normal function. We believe that cell therapy will play a large role in changing the natural history of diseases as more breakthrough therapies are developed, ultimately lessening the overall burden of disease on patients and their families as well as the economic burden that these diseases impose upon modern society.

Our business includes the development of novel proprietary cell therapy products as well as a revenue generating contract development and manufacturing service business that we not only leverage for the development of our therapeutics but anticipate will benefit from the advancement in the regenerative medicine industry. The combination of our own therapeutic development business and a revenue-generating service provider business provides the Company with unique capabilities for cost effective in-house product development and immediate revenue and cash flow generation.

We are developing therapies to address ischemia through our CD34 Cell Program. Ischemia occurs when the supply of oxygenated blood in the body is restricted. We seek to reverse this restriction through the development and formation of new blood vessels. AMR-001 is our most clinically advanced product candidate in our CD34 Cell Program and is being developed to treat damaged heart muscle following an acute myocardial infarction (heart attack) ("AMI"). In December 2013, the Company completed enrollment in its PreSERVE AMI study. PreSERVE AMI is a randomized, double-blinded, placebo-controlled Phase 2 clinical trial testing AMR-001, an autologous (donor and recipient are the same) adult stem cell product for the treatment of patients with left ventricular dysfunction following acute ST segment elevation myocardial infarction (STEMI). With infusion of the target population of 160 patients complete, the last patient primary endpoint follow-up for this study is expected in June 2014 followed by data lock and analysis with a submission for a possible presentation of the study at the American Heart Association's Scientific Sessions to be held November 15-19, 2014. If approved by Food and Drug Administration (the "FDA ") and/or other worldwide regulatory agencies following successful completion of further trials, AMR-001 would address a significant medical need for which there is currently no effective treatment, potentially improving longevity and quality of life for those suffering a STEMI, and positioning the Company to capture a meaningful share of this worldwide market. We also expect to initiate a Phase 2 clinical trial for chronic heart failure in Europe in 2014 and are conducting preclinical studies in traumatic brain injury for which we expect data in the second half of 2014.

Another platform technology we are developing utilizes T Regulatory Cells ("Tregs") to treat diseases caused by imbalances in the immune system. In collaborating with Becton-Dickinson and the University of California, San Francisco, we are utilizing this technology platform of our majority-owned subsidiary, Athelos Corporation ("Athelos"), to restore immune balance by enhancing Treg cell number and function. Tregs are a natural part of the human immune system and regulate the activity of T effector cells, the cells that are responsible for protecting the body from viruses and other foreign antigen exposure. When Tregs function properly, only foreign materials are attacked by T effector cells. In autoimmune disease it is thought that deficient Treg activity permits the T effector cells to attack the body's own tissues. We plan to initiate a Phase 2 study of Treg based therapeutics to treat type 1 diabetes in 2014. We also plan to initiate a Phase 1 study in Canada of Treg based therapeutics in support of a steroid resistant asthma indication in 2014.

Pre-clinical assets include our VSEL ™ (Very Small Embryonic Like) Technology regenerative medicine platform. Regenerative medicine holds the promise of improving clinical outcomes and reducing overall healthcare costs. We are working on a Department of Defense funded study of VSELs ™ for the treatment of chronic wounds. Other preclinical work with VSELs ™ includes exploring macular degeneration as a target indication.

Progenitor Cell Therapy, LLC ("PCT") is a contract manufacturer that generates revenue. This wholly owned subsidiary, which we acquired in 2011, is an industry leader in providing high quality manufacturing capabilities and support to developers of cell-based therapies to enable them to improve efficiencies and profitability and reduce capital investment for their own development activities. Since its inception more than 15 years ago, PCT has provided pre-clinical and clinical current Good Manufacturing Practice ("cGMP") development and manufacturing services to more than 100 clients. PCT has experience advancing regenerative medicine product candidates from product inception through rigorous quality standards all the way through

to human testing, Biologic License Application ("BLA") filing and FDA product approval. PCT's core competencies in the cellular therapy industry include manufacturing of cell therapy-based products, engineering and innovation services, product and process development, cell and tissue processing, regulatory support, storage, distribution and delivery and consulting services. PCT has two cGMP, state-of-the art cell therapy research, development, and manufacturing facilities in New Jersey and California, serving the cell therapy community with integrated and regulatory compliant distribution capabilities. The Company is pursuing commercial expansion of our manufacturing operations both in the U.S. and internationally.

Effective March 31, 2012, we no longer operated in the former Regenerative Medicine – China segment, which is now reported in discontinued operations (see Note 15). On November 13, 2012, we completed the sale of our 51% interest in Suzhou Erye, which represented the operations in our former Pharmaceutical Manufacturing - China segment, and is also reported in discontinued operations (see Note 15). As a result, we currently operate in a single reporting segment - Cell Therapy, which will focus on contract development and manufacturing and cell therapy development programs.

We believe that NeoStem is ideally positioned to lead the cell therapy industry.

Results of Operations

Year Ended December 31, 2013 Compared to Year Ended December 31, 2012

Net loss for the year ended December 31, 2013 was approximately $39.5 million compared to $66.4 million for the year ended December 31, 2012. Our net losses from continuing operations for the years ended December 31, 2013 and 2012 were approximately $39.5 million and $36.1 million, respectively. The loss from discontinued operations - net for the year ended December 31, 2012 was approximately $30.3 million, and represents the operations of our former Regenerative Medicine – China segment which was deconsolidated in the first quarter of 2012, and the operations of our former Pharmaceutical Manufacturing - China segment, which related to the sale of our 51% interest in Suzhou Erye Pharmaceuticals Company Ltd. ("Suzhu Erye"), in the fourth quarter of 2012.

Revenues

For the year ended December 31, 2013, total revenues were approximately $14.7 million compared to $14.3 million for the year ended December 31, 2012, representing an increase of $0.3 million, or 2%. Revenues were comprised of the following (in thousands):

	Year Ended December 31,	
	2013	2012
Clinical Services	$ 9,146.3	$ 8,034.8
Clinical Services Reimbursables	2,085.4	3,462.2
Processing and Storage Services	3,436.8	2,644.7
Other	—	188.2
	$ 14,668.5	$ 14,329.9

- Clinical Services, representing *process development* and *clinical manufacturing* services provided at PCT to its various clients, were approximately $9.1 million for the year ended December 31, 2013 compared to $8.0 million for the year ended December 31, 2012, representing an increase of approximately $1.1 million or 14%. The increase was primarily due to $2.3 million of higher clinical manufacturing revenue (which is recognized as services are rendered), which was partially offset by $1.2 million lower process development revenue (such revenue being recognized on a "completed contract" basis). Overall, there were approximately 50% more active Clinical Services clients as of December 31, 2013 compared to December 31, 2012.
    - *Clinical Manufacturing Revenue* - Clinical manufacturing revenues were approximately $7.0 million for the year ended December 31, 2013, compared to $4.7 million for the year ended December 31, 2012. The increase is primarily due to an increase in the number of patients our customers enrolled and were treating in clinical trials being conducted by our customers.
    - *Process Development Revenue* - Process development revenues were approximately $2.0 million for the year ended December 31, 2013, compared to $3.2 million for the year ended December 31, 2012. The decrease was

due to the migration of certain customers from the Process Development phase to the Clinical Manufacturing phase, as well as the impact of revenue recognition associated with existing Process Development clients during the year ended December 31, 2013 compared to the year ended December 31, 2012. In accordance with our revenue recognition policy, process development revenue is recognized upon contract completion (i.e., when the services under a particular contract are completed). As a result, there is no revenue recognized for process development contracts that have yet to be completed, regardless of the amount of progress billing. Process development revenue will continue to fluctuate from period to period as a result of this revenue recognition policy.

- Clinical Services Reimbursables, representing reimbursement of expenses for certain consumables incurred on behalf of our clinical service revenue clients, were approximately $2.1 million for the year ended December 31, 2013 compared to $3.5 million for the year ended December 31, 2012, representing a decrease of approximately $1.4 million or 40%. Our reimbursable revenue decrease was partly the result of changes in contractual terms with certain clients that shifted clinical service expense reimbursables to a fully absorbed billing rate which is now reflected in Clinical Manufacturing Revenue. Generally, our terms for billing reimbursable expenses do not include significant mark up in the acquisition cost of such consumables, and as a result the impact of changes in this revenue category has little or no impact on our net loss.

- Processing and Storage Services, representing revenues from our oncology, cord blood, and adult stem cell processing and banking activities, were approximately $3.4 million for the year ended December 31, 2013 compared to $2.6 million for the year ended December 31, 2012, representing an increase of approximately $0.8 million or 30%. The increase is primarily attributable to increased revenue from our oncology stem cell processing service.

- Other Revenue of approximately $0.2 million for the year ended December 31, 2012 represent license fees related to our adult stem cell technology.

Cost of Revenues

For the year ended December 31, 2013, total cost of revenues were approximately $12.9 million compared to $11.9 million for the year ended December 31, 2012, representing an increase of $1.0 million or 8%. The increase is primarily due to increased clinical manufacturing costs to support the number of patients our customers have enrolled and treated in their clinical trials. Overall, gross profit for the year ended December 31, 2013 was $1.7 million or 12% of 2013 revenues, compared to gross profit for the year ended December 31, 2012 of $2.4 million or 17% of 2012 revenues. Gross profit percentages generally will increase as clinical service revenue increases. However, gross profit percentages will also fluctuate from period to period due to the mix of service and reimbursable revenues and costs.

Operating Expenses

For the year ended December 31, 2013 operating expenses totaled $38.5 million compared to $32.8 million for the year ended December 31, 2012, representing an increase of $5.7 million or 18%. Operating expenses were comprised of the following:

- Research and development expenses were approximately $16.9 million for the year ended December 31, 2013 compared to $10.5 million for the year ended December 31, 2012, representing an increase of approximately $6.4 million, or 62%. Research and development expenses associated with our PreSERVE AMI Phase 2 trial increased by approximately $3.7 million for the year ended December 31, 2013 compared to the prior year period. Research and development expenses associated with our T Regulatory Cell Program increased by approximately $1.3 million compared to the prior year period. Research and development associated with our VSEL™ Technology Program, patent-related costs, and engineering and innovation initiatives at PCT to improve scale up, automation, and integration capabilities also increased during year ended December 31, 2013. Equity-based compensation included in research and development expenses for the years ended December 31, 2013 and December 31, 2012 were approximately $0.8 million and $0.4 million, respectively.

- Selling, general and administrative expenses were approximately $21.6 million for the year ended December 31, 2013 compared to $22.3 million for the year ended December 31, 2012, representing a decrease of approximately $0.7 million, or 3%. Equity-based compensation included in selling, general and administrative expenses for the year ended December 31, 2013 was approximately $5.7 million, compared to approximately $6.1 million for the year ended December 31, 2012, representing a decrease of $0.4 million. Non-equity-based general and administrative expenses for the year ended December 31, 2013 were unchanged at approximately $15.6 million, compared to the prior year period. Selling expenses decreased $0.4 million compared to the prior year period.

Historically, to minimize our use of cash, we have used a variety of equity and equity-linked instruments to compensate employees, consultants and other service providers. The use of these instruments has resulted in charges to operations, which has from time to time in the past been significant. In general, these equity and equity-linked instruments were used to pay for employee and consultant compensation, director fees, marketing services, investor relations and other activities.

Other Income (Expense)

Other expense, net for the year ended December 31, 2013 totaled approximately $1.6 million, and primarily represented the increase in the estimated fair value of our contingent consideration liability associated with potential earn out payments on the net sales of our lead product candidate AMR-001 (in the event of and following the date of first commercial sale of AMR-001). Other expense, net for the year ended December 31, 2012 totaled approximately $4.3 million, and also primarily represented the increase in the estimated fair value of our contingent consideration liability associated with potential earn out payments on the net sales of our lead product candidate AMR-001. The changes in estimated fair value is based on the Company's updates of the discounted cash flow model each year using a probability-weighted income approach, taking into account revised assumptions of the market opportunity and development costs, as well as the impact of the time progression through the PreSERVE AMI Phase 2 trial.

For the year ended December 31, 2013 interest expense was $0.3 million compared with $1.6 million for the year ended December 31, 2012. Interest expense in the prior year period was primarily due to the amortization of debt discount related to the Series E Preferred Stock, which was fully redeemed in October 2012.

Discontinued Operations

Regenerative Medicine - China segment

In 2009, we operated our Regenerative Medicine-China business in the People's Republic of China ("China" or "PRC") through our former subsidiary, a wholly foreign owned entity ("WFOE") and entered into contractual arrangements with certain variable interest entities ("VIEs"). Foreign companies have commonly used VIE structures to operate in the PRC, and while such structures are not uncommon, they had drawn greater scrutiny from the local Chinese business community in the PRC who urged the PRC State Council to restrict the use of these structures. In addition, in December 2011, China's Ministry of Health announced its intention to more tightly regulate stem cell clinical trials and stem cell therapeutic treatments in the PRC, which created uncertainty regarding the ultimate regulatory environment in the PRC. Accordingly, we took steps to restrict, and ultimately eliminate our regenerative medicine business in the PRC in the first quarter of 2012. As a result of these steps, we discontinued our operations in our Regenerative Medicine-China business. We determined that any liability arising from the activities of the WFOE and the VIEs will likely be limited to the net assets currently held by each entity.

The operations and cash flows for the Regenerative Medicine - China business in 2012 were reported in discontinued operations. For the year ended December 31, 2012, the loss from discontinued operations was $1.7 million, and included a $1.1 million loss on exit of segment.

Pharmaceutical Manufacturing - China segment

On November 13, 2012, we completed the divestiture (the "Erye Sale") of our 51% interest (the "Erye Interest") in Suzhou Erye Pharmaceuticals Company Ltd., a Sino-foreign equity joint venture with limited liability organized under the laws of the PRC primarily engaged in the manufacture of generic antibiotics ("Erye"), to Suzhou Erye Economy & Trading Co., Ltd., a limited liability company organized under the laws of the PRC ("EET"), and Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands ("Highacheive" and together with EET, each a "Purchaser" and collectively the "Purchasers"). The Erye Sale was consummated pursuant to the terms and conditions of the Equity Purchase Agreement, dated as of June 18, 2012 (as amended, the "Equity Purchase Agreement"), by and among NeoStem, China Biopharmaceuticals Holdings, Inc., then a wholly-owned subsidiary of NeoStem ("CBH"), EET, Highacheive, Fullbright Finance Limited, a limited liability company organized under the laws of the British Virgin Islands ("Fullbright"), and Erye. Pursuant to the Equity Purchase Agreement, the aggregate purchase price paid to us by the Purchasers for the Erye Interest consisted of (i) $12.3 million in cash, (ii) the return to us of 104,000 shares of NeoStem common stock and (iii) the cancellation of 117,000 options and 64,000 warrants

to purchase our common stock. The fair value of the shares was based on our closing price on the date of sale, and was recorded as Treasury Stock in our balance sheet. The fair values of the canceled options and warrants were based on the Black-Scholes values on the date of sale, and were recorded against Additional Paid in Capital in the accompanying balance sheet. This transaction resulted in a loss on exit of segment of $3.4 million, which was recorded in the fourth quarter of 2012.

The operations and cash flows of the Pharmaceutical Manufacturing - China business were eliminated from ongoing operations with the sale of the Company's 51% interest in Erye. The operating results of the Pharmaceutical Manufacturing - China business for the year ended December 31, 2012 were classified as discontinued operations. For the year ended December 31, 2012, the loss from discontinued operations was $28.5 million.

Noncontrolling Interests

In connection with accounting for our 51% interest in Erye, which is reported in discontinued operations, we account for the 49% minority shareholder share of Erye's net income or loss with a charge to Noncontrolling Interests. For the year ended December 31, 2012, Erye's minority shareholders' share of net income totaled approximately $ 12.3 million. On November 13, 2012, we completed the divestiture of our 51% interest in Erye.

In March 2011, we acquired rights to use patents under licenses from Becton, Dickinson and Company ("BD") in exchange for a 19.9% interest in our Athelos subsidiary. Pursuant to the Stock Purchase Agreement signed in March 2011, BD's ownership will be diluted based on new investment in Athelos (subject to certain anti-dilution provisions). As of December 31, 2013, BD's ownership interest in Athelos was decreased to 11.5%, and our ownership increased to 88.5%. For the years ended December 31, 2013 and 2012, BD's minority shareholder's share of Athelos' net loss totaled approximately $ 0.5 million and $0.3 million, respectively.

Warrant Inducements

To raise capital on terms that we deemed favorable, during the year ended December 31, 2012, the Board authorized certain inducements to warrant holders to exercise outstanding common stock purchase warrants significantly before their expiration dates. We determined in each instance that such inducements were modifications of equity instruments, and an incremental fair value of the inducement was determined using the Black-Scholes option pricing model.

For the year ended December 31, 2012, certain warrant holders were induced to exercised warrants to purchase 0.8 million shares of common stock at prices ranging between $5.10 and $18.50 per share, for gross proceeds to the Company of approximately $5.0 million. The incremental fair value of the inducement recorded in 2012 was $1.0 million.

Preferred Dividends

The Company's Convertible Redeemable Series E Preferred Stock, which was fully redeemed in October 2012, called for annual dividends of 7% based on the stated value of the preferred stock. We recorded dividends of approximately $ 0.5 million for the year ended December 31, 2012, including an additional $235,000 early redemption premium upon our election to early redeem all outstanding Series E Preferred Stock in October 2012.

Analysis of Liquidity and Capital Resources

At December 31, 2013 we had a cash balance of approximately $ 46.1 million, working capital of approximately $ 41.0 million, and stockholders' equity of approximately $ 62.5 million.

During the year ended December 31, 2013, we met our immediate cash requirements through revenue generated from our PCT operations, existing cash balances, offerings of our common stock (which raised an aggregate of approximately $ 58.7 million), warrant exercises (which raised approximately $ 3.0 million), and the use of equity and equity-linked instruments to pay for services and compensation.

Net cash provided by or used in operating, financing and investing activities from continuing operations were as follows (in thousands):

	Year Ended December 31,	
	2013	2012
Net cash used in operating activities - continuing operations	$ (27,101.7)	$ (18,759.9)
Net cash (used in) provided by investing activities - continuing operations	(2,691.5)	11,748.7
Net cash provided by financing activities - continuing operations	62,189.5	17,112.0

Operating Activities - Continuing Operations

Our cash used in operating activities -continuing operations in the year ended December 31, 2013 totaled approximately $27.1 million, which is the sum of (i) our net loss from continuing operations of $ 39.5 million, and adjusted for non-cash expenses totaling $ 10.8 million (which includes adjustments for equity-based compensation, depreciation and amortization, and changes in acquisition-related contingent consideration), and (ii) changes in operating assets and liabilities providing approximately $ 1.6 million.

Our cash used in operating activities -continuing operations in the year ended December 31, 2012 totaled approximately $18.8 million, which is the sum of (i) our net loss from continuing operations of $ 36.1 million, and adjusted for non-cash expenses totaling $ 14.3 million (which includes adjustments for equity-based compensation, depreciation and amortization, and changes in acquisition-related contingent consideration), and (ii) changes in operating assets and liabilities providing approximately $ 3.1 million.

Investing Activities - Continuing Operations

During the year ended December 31, 2013, we spent approximately $2.7 million for property and equipment.

During the year ended December 31, 2012, we completed the sale of our 51% interest in Erye for approximately $13.4 million in total consideration, including $12.3 million in cash. In addition, we spent approximately $0.5 million for property and equipment.

Financing Activities - Continuing Operations

During the year ended December 31, 2013, our financing activities consisted of the following:

- We raised $11.5 million (or $10.5 million in net proceeds after deducting underwriting discounts and commissions and offering expenses) through an underwritten offering of 2.3 million shares of our common stock at a public offering price of $5.00 per share in April 2013.
- We raised $40.3 million (or $37.1 million in net proceeds after deducting underwriting discounts and commissions and offering expenses) through an underwritten offering of 5.75 million shares of our common stock at a public offering price of $7.00 per share in October 2013.
- We raised gross proceeds of approximately $11.1 million through the issuance of approximately 1.6 million shares of common stock under the provisions of our common stock purchase agreement with Aspire.
- We raised approximately $0.2 million from the exercise of 0.03 million options.
- We raised approximately $3.0 million from the exercise of 0.6 million warrants. To induce the exercise of certain of these warrants, we provided consideration to the warrant holders in the form of cash.

During the year ended December 31, 2012, our financing activities consisted of the following:

- We raised $6.8 million (or $6.0 million in net proceeds after deducting underwriting discounts and offering expenses) through an underwritten offering of 1.7 million units, each unit consisting of one share of common stock and a five year warrant to purchase one share of common stock at an exercise price of $5.10 per share.
- We raised an aggregate of approximately $7.1 million in private placements through the issuance of approximately 1.3 million shares of common stock and 0.9 million five year warrants at exercise prices ranging from $5.10 to $7.40.

- We raised gross proceeds of approximately $3.3 million through the issuance of 0.5 million shares of common stock under the provisions of our common stock purchase agreement with Aspire.
- We raised approximately $6.6 million from the exercise of approximately 0.8 million warrants. To induce the exercise of certain of these warrants, we provided consideration to the warrant holders in the form of either cash, stock or additional warrants.
- During 2012, we made cash payment totaling $5.7 million for the repayment of our Series E Preferred Stock and dividends.

Liquidity and Capital Requirements Outlook

Liquidity

We anticipate requiring additional capital for strategic transactions and otherwise in order to (i) fund the development of cell therapy product candidates, particularly in our CD34 Cell Program and T Regulatory Cell Program, and (ii) grow the PCT business, including implementing additional automation capabilities and pursuing plans to establish commercial capacity and expand internationally. Additionally, we recently completed expansion in the Allendale, New Jersey facility adding laboratory, clean room suites and support facilities and we commenced construction at the Mountain View facility and expanded its manufacturing capacity with additional clean rooms, laboratory space and support facilities and the build-out is expected to be completed in 2014.

To meet our short and long term liquidity needs, we currently expect to use existing cash balances, our revenue generating activities, and a variety of other means. Those other means include the continued use of a common stock purchase agreement with Aspire. We drew the remaining $5.6 million available under the common stock purchase agreement in January 2014, and entered into a new $30 million common stock purchase agreement with Aspire in March 2014. Other sources of liquidity could include potential issuances of debt or equity securities in public or private financings, additional warrant exercises, option exercises, and/or sale of assets. In addition, we will continue to seek as appropriate grants for scientific and clinical studies from the National Institutes of Health, Department of Defense, and other governmental agencies and foundations, but there can be no assurance that we will be successful in qualifying for or obtaining such grants. Our history of operating losses and liquidity challenges, may make it difficult for us to raise capital on acceptable terms or at all. The demand for the equity and debt of small cap biopharmaceutical companies like ours is dependent upon many factors, including the general state of the financial markets. During times of extreme market volatility, capital may not be available on favorable terms, if at all. Our inability to obtain such additional capital could materially and adversely affect our business operations. We believe that our current cash balances and revenue generating activities will be sufficient to fund the business, as currently operated, into 2015.

While we continue to seek capital through a number of means, there can be no assurance that additional financing will be available or on acceptable terms, if at all, and our negotiating position in capital generating efforts may worsen as existing resources are used. Additional equity financing may be dilutive to our stockholders; debt financing, if available, may involve significant cash payment obligations and covenants that restrict our ability to operate as a business, our stock price may not reach levels necessary to induce option or warrant exercises, and asset sales may not be possible on terms we consider acceptable. If we are unable to raise the funds necessary to meet our long-term liquidity needs, we may have to delay or discontinue the acquisition and development of cell therapies, and/or the expansion of our business or raise funds on terms that we currently consider unfavorable.

Commitments and Contingencies

The following table summarizes our obligations to make future payments under current contracts as of December 31, 2013 (in thousands):

	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Contractual Obligations					
Mortgages Payable	$ 3,236.7	$ 213.1	$ 462.4	$ 2,287.6	$ 273.6
Capital Lease Obligations	912.3	381.1	531.2	—	—
Operating Lease Obligations	2,895.0	1,004.0	1,501.7	389.3	—
	$ 7,044.0	$ 1,598.2	$ 2,495.3	$ 2,676.9	$ 273.6

Under agreements with external clinical research organizations ("CROs"), we will incur expenses relating to our clinical trials for our therapeutic product candidates in development. The timing and amount of these expenses are based on performance of services rendered and expenses are incurred by the CROs and therefore, we cannot reasonably estimate the timing of these payments.

SEASONALITY

NeoStem does not believe that its operations are seasonal in nature.

OFF-BALANCE SHEET ARRANGEMENTS

NeoStem does not have any off-balance sheet arrangements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and judgments that affect the amounts reported in the financial statements. On an ongoing basis, the Company evaluates its estimates and assumptions. The Company bases its estimates on historical experience and other assumptions believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could differ from these estimates.

An accounting policy is considered to be critical if it is important to the Company's financial condition and results of operations and if it requires management's most difficult, subjective and complex judgments in its application. For a summary of all of the Company's significant accounting policies, see Note 2 to the Company's Consolidated Financial Statements.

Revenue Recognition

Clinical Services: The Company recognizes revenue for its (i) cell process development and (ii) cell manufacturing services based on the terms of individual contracts.

Revenues associated with cell process development services generally contain multiple stages that do not have stand-alone values and are dependent upon one another, and are recognized as revenue on a completed contract basis. We recognize revenues for cell development services when all of the following conditions are met:

- persuasive evidence of an arrangement exists;
- delivery has occurred or the services have been rendered;
- the fee is fixed or determinable; and
- collectability is probable.

The Company considers signed contracts as evidence of an arrangement. The Company assesses whether the fee is fixed or determinable based on the payment terms associated with the transaction and whether the payment terms are subject to refund or adjustment. The Company assesses cash collectability based on a number of factors, including past collection history with the client and the client's creditworthiness. If the Company determines that collectability is not reasonably assured, it defers revenue recognition until collectability becomes reasonably assured, which is generally upon receipt of the cash. The Company's arrangements are generally non-cancellable, though clients typically have the right to terminate their agreement for cause if the Company materially fails to perform.

Cell manufacturing services are generally distinct arrangements whereby the Company is paid for time and materials or for fixed monthly amounts. Revenue is recognized when efforts are expended or contractual terms have been met.

Some client agreements include multiple elements, comprised of cell process development and cell manufacturing services. The Company believes that cell process development and cell manufacturing services each have stand-alone value because these services can be provided separately by other companies. In accordance with ASC Update No. 2009-13, "Revenue Recognition (Topic 605): Multiple-Deliverable Revenue Arrangements," the Company (1) separates deliverables into separate

units of accounting when deliverables are sold in a bundled arrangement and (2) allocates the arrangement's consideration to each unit in the arrangement based on its relative selling price.

Clinical Services Reimbursements: The Company separately charges the customers for the expenses associated with certain consumable resources (reimbursable expenses) that are specified in each clinical services contract. On a monthly basis, the Company bills customers for reimbursable expenses and immediately recognizes these billings as revenue, as the revenue is deemed earned as reimbursable expenses are incurred.

Processing and Storage Services: The Company recognizes revenue related to the collection and cryopreservation of cord blood and autologous adult stem cells when the cryopreservation process is completed which is approximately twenty-four hours after cells have been collected. Revenue related to advance payments of storage fees is deferred and recognized ratably over the period covered by the advance payments.

Share-Based Compensation

The Company expenses all share-based payment awards to employees, directors, advisors and consultants, including grants of stock options, warrants, and restricted stock, over the requisite service period based on the grant date fair value of the awards. Advisor and consultant awards are remeasured each reporting period through vesting. For awards with performance-based vesting criteria, the Company estimates the probability of achievement of the performance criteria and recognizes compensation expense related to those awards expected to vest. The Company determines the fair value of certain share-based awards using the Black-Scholes option-pricing model which uses both historical and current market data to estimate the fair value. This method incorporates various assumptions such as the risk-free interest rate, expected volatility, expected dividend yield and expected life of the options or warrants. The fair value of the Company’s restricted stock and restricted stock units is based on the closing market price of the Company’s common stock on the date of grant.

Goodwill and Other Intangible Assets

Goodwill is the excess of purchase price over the fair value of identified net assets of businesses acquired. The Company’s intangible assets with an indefinite life are related to in process research and development ("IPR&D") for AMR-001, the clinical candidate acquired in the Amorcyte acquisition, as the Company expects this research and development to provide the Company with substantial benefit for a period that extends beyond the foreseeable horizon. Intangible assets with indefinite useful lives are measured at their respective fair values as of the acquisition date. The Company does not amortize goodwill and intangible assets with indefinite useful lives. Intangible assets related to IPR&D projects are considered to be indefinite-lived until the completion or abandonment of the associated R&D efforts. If and when development is complete, which generally occurs if and when regulatory approval to market a product is obtained, the associated assets would be deemed finite-lived and would then be amortized based on their respective estimated useful lives at that point in time.

The Company reviews goodwill and indefinite-lived intangible assets at least annually for possible impairment. Goodwill and indefinite-lived intangible assets are reviewed for possible impairment between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of the reporting unit below its carrying value. The Company tests its goodwill and indefinite-lived intangible assets each year on December 31. The Company reviews the carrying value of goodwill and indefinite-lived intangible assets utilizing a discounted cash flow model, and, where appropriate, a market value approach is also utilized to supplement the discounted cash flow model. The Company makes assumptions regarding estimated future cash flows, discount rates, long-term growth rates and market values to determine each reporting unit’s estimated fair value. If these estimates or related assumptions change in the future, the Company may be required to record impairment charges. In accordance with it's accounting policy, the Company tested goodwill for impairment as of December 31, 2013 and 2012 for its two reporting units, and concluded there was no risk of failing step 1 of the goodwill impairment testing evaluation.

Amortized intangible assets consist of customer lists, manufacturing technology, and tradename, as well as patents and rights associated primarily with the VSEL™ Technology. These intangible assets are amortized on a straight line basis over their respective useful lives.

Evaluation of Long-lived Assets

The Company reviews long-lived assets and finite-lived intangibles assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset exceeds the fair value of the asset. If other events or changes in circumstances indicate that the carrying amount of an asset that the Company expects to hold and use may not be recoverable, the Company will estimate the undiscounted future cash flows expected to result from the use of the asset and/or its eventual disposition,

and recognize an impairment loss. The impairment loss, if determined to be necessary, would be measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets. No events were noted in 2013 or 2012.

Recognizing and Measuring Assets Acquired and Liabilities Assumed in Business Combinations at Fair Value

The Company accounts for acquired businesses using the purchase method of accounting, which requires that assets acquired and liabilities assumed be recorded at date of acquisition at their respective fair values. The consolidated financial statements and results of operations reflect an acquired business after the completion of the acquisition. The fair value of the consideration paid, including contingent consideration, is assigned to the underlying net assets of the acquired business based on their respective fair values. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Amounts allocated to IPR&D are included on the balance sheet. Intangible assets, including IPR&D assets upon successful completion of the project and approval of the product, are amortized on a straight-line basis to amortization expense over the expected life of the asset. Significant judgments are used in determining the estimated fair values assigned to the assets acquired and liabilities assumed and in determining estimates of useful lives of long-lived assets. Fair value determinations and useful life estimates are based on, among other factors, estimates of expected future net cash flows, estimates of appropriate discount rates used to present value expected future net cash flow streams, the timing of approvals for IPR&D projects and the timing of related product launch dates, the assessment of each asset's life cycle, the impact of competitive trends on each asset's life cycle and other factors. These judgments can materially impact the estimates used to allocate acquisition date fair values to assets acquired and liabilities assumed and the resulting timing and amount charged to, or recognized in current and future operating results. For these and other reasons, actual results may vary significantly from estimated results.

The Company determines the acquisition date fair value of contingent consideration obligations based on a probability-weighted income approach derived from revenue estimates, post-tax gross profit levels and a probability assessment with respect to the likelihood of achieving contingent obligations including contingent payments such as milestone obligations, royalty obligations and contract earn-out criteria, where applicable. The fair value measurement is based on significant inputs not observable in the market and thus represents a Level 3 measurement as defined in fair value measurement accounting. The resultant probability-weighted cash flows are discounted using an appropriate effective annual interest rate. At each reporting date, the contingent consideration obligation will be revalued to estimated fair value and changes in fair value will be reflected as income or expense in our consolidated statement of operations. Changes in the fair value of the contingent consideration obligations may result from changes in discount periods and rates, changes in the timing and amount of revenue estimates and changes in probability assumptions with respect to the likelihood of achieving the various contingent payment obligations. Changes in assumptions utilized in our contingent consideration fair value estimates could result in an increase or decrease in our contingent consideration obligation and a corresponding charge to operating loss.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The financial statements and notes thereto required to be filed under this Item are presented commencing on page

62
of this Annual Report on Form 10-K.

NeoStem, Inc. and Subsidiaries

Table of Contents

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
NeoStem, Inc.

We have audited the accompanying consolidated balance sheets of NeoStem, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2013 and 2012, and the related consolidated statements of operations, comprehensive loss, equity, and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of NeoStem, Inc. and subsidiaries as of December 31, 2013 and 2012, and the results of their operations and their cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2013, based on criteria established in the 1992 Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 13, 2014 expressed an unqualified opinion.

/s/ GRANT THORNTON LLP

New York, New York
March 13, 2014

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31, 2013	December 31, 2012
ASSETS		
Current Assets		
Cash and cash equivalents	$ 46,133,759	$ 13,737,452
Accounts receivable trade, net of allowance for doubtful accounts of $391,829 and $626,054, respectively	1,860,835	1,053,604
Inventory	1,270,223	1,113,025
Prepaids and other current assets	1,561,933	803,135
Total current assets	50,826,750	16,707,216
Property, plant and equipment, net	12,844,216	11,153,143
Goodwill	11,117,770	11,117,770
Intangible assets, net	13,875,617	14,480,827
Other assets	1,151,729	947,307
Total assets	$ 89,816,082	$ 54,406,263
LIABILITIES AND EQUITY		
Current Liabilities		
Accounts payable	$ 3,354,908	$ 2,555,240
Accrued liabilities	4,018,026	2,284,813
Notes payable	381,097	202,558
Mortgages payable	213,112	3,438,475
Derivative liabilities	23,175	—
Unearned revenues	1,816,601	1,468,341
Total current liabilities	9,806,919	9,949,427
Deferred income taxes	4,379,226	3,599,122
Notes payable	531,164	171,528
Mortgages payable	3,023,609	—
Derivative liabilities	—	101,156
Acquisition-related contingent consideration	9,450,000	7,550,000
Other long-term liabilities	598,729	214,871
Total liabilities	27,789,647	21,586,104
Commitments and Contingencies		
EQUITY		
Stockholders' Equity		
Preferred stock; authorized, 20,000,000 shares Series B convertible redeemable preferred stock liquidation value, 1 share of common stock, $.01 par value; 825,000 shares designated; issued and outstanding, 10,000 shares at December 31, 2013 and December 31, 2012	100	100
common stock, $.001 par value, authorized 500,000,000 shares; issued and outstanding, 27,196,537 and 16,375,365 shares, at December 31, 2013 and December 31, 2012, respectively	27,197	16,375
Additional paid-in capital	299,594,525	231,218,615
Treasury stock, at cost	(705,742)	(665,600)
Accumulated deficit	(236,373,605)	(197,392,361)
Total NeoStem, Inc. stockholders' equity	62,542,475	33,177,129
Noncontrolling interests	(516,040)	(356,970)
Total equity	62,026,435	32,820,159
	$ 89,816,082	$ 54,406,263

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,	
	2013	2012
Revenues	$ 14,668,455	$ 14,329,889
Cost of revenues	12,947,217	11,949,124
Gross profit	1,721,238	2,380,765
Research and development	16,917,396	10,451,070
Selling, general, and administrative	21,612,793	22,315,346
Operating Expenses	38,530,189	32,766,416
Operating loss	(36,808,951)	(30,385,651)
Other income (expense):		
Other expense, net	(1,614,858)	(4,314,228)
Interest expense	(281,421)	(1,576,975)
	(1,896,279)	(5,891,203)
Loss from operations before provision for income taxes and noncontrolling interests	(38,705,230)	(36,276,854)
Provision (benefit) for income taxes	780,104	(175,533)
Net loss from continuing operations	(39,485,334)	(36,101,321)
Loss from discontinued operations - net	—	(30,267,990)
Net loss	(39,485,334)	(66,369,311)
Less - loss from continuing operations attributable to noncontrolling interests	(504,090)	(287,181)
Less - loss from discontinued operations attributable to noncontrolling interests	—	(12,312,646)
Net loss attributable to NeoStem, Inc.	(38,981,244)	(53,769,484)
Warrant inducements	—	(1,012,819)
Preferred dividends	—	(528,023)
Net loss attributable to NeoStem, Inc. common stockholders	$ (38,981,244)	(55,310,326)
Amounts Attributable to NeoStem, Inc. common stockholders:		
Loss from continuing operations	$ (38,981,244)	$ (35,814,140)
Loss from discontinued operations - net of taxes	—	(17,955,344)
Warrant inducements	—	(1,012,819)
Preferred dividends	—	(528,023)
Net loss attributable to NeoStem, Inc. common stockholders	$ (38,981,244)	$ (55,310,326)
Basic and diluted loss per share attributable to NeoStem, Inc. common stockholders:		
Continuing operations	$ (1.90)	$ (2.59)
Discontinued operations	$ —	(1.30)
NeoStem, Inc. common stockholders	$ (1.90)	$ (4.00)
Weighted average common shares outstanding	20,495,771	13,841,997

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Year Ended December 31,	
	2013	2012
Net loss	$ (39,485,334)	$ (66,369,311)
Other comprehensive income (loss):		
Foreign currency translation elimination on exit of segment	—	(169,993)
Foreign currency translation elimination on sale of segment	—	(4,387,371)
Foreign currency translation	—	405,021
Total other comprehensive (loss) income	—	(4,152,343)
Comprehensive loss	(39,485,334)	(70,521,654)
Noncontrolling interests elimination on sale of segment	—	(6,014,981)
Comprehensive loss attributable to noncontrolling interests	(504,090)	(12,448,950)
Comprehensive net loss attributable to NeoStem, Inc. common stockholders	$ (38,981,244)	$ (52,057,723)

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

	Series B Convertible Preferred Stock		Common Stock		Additional Paid in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Treasury Stock	Total NeoStem, Inc. Stockholders' Equity	Non-Controlling Interest in Subsidiary	Total Equity
	Shares	Amount	Shares	Amount							
Balance at December 31, 2011	10,000	$ 100	10,932,959	$ 10,933	$ 200,957,035	$ 4,152,343	$ (143,094,854)	$ —	$ 62,025,557	$ 18,106,961	$ 80,132,518
Net loss	—	—	—	—	—	—	(53,769,484)	—	(53,769,484)	(12,599,827)	(66,369,311)
Foreign currency translation	—	—	—	—	—	235,028	—	—	235,028	150,877	385,905
Share-based compensation	—	—	336,427	336	6,712,200	—	—	—	6,712,536	—	6,712,536
Net proceeds from issuance of common stock	—	—	3,573,229	3,573	16,425,254	—	—	—	16,428,827	—	16,428,827
Proceeds from warrant exercises			1,107,618	1,108	6,603,311				6,604,419		6,604,419
Shares, options and warrants received in Erye Sale	—	—	—	—	(452,301)	—	—	(665,600)	(1,117,901)	—	(1,117,901)
Elimination of Equity upon Erye Sale	—	—	—	—	—	(4,387,371)	—	—	(4,387,371)	(6,014,981)	(10,402,352)
Repayment of Series E Preferred Principal and Dividends	—	—	279,238	279	1,201,938	—	(528,023)	—	674,194	—	674,194
Warrant inducements	—	—	145,895	146	(228,822)	—	—	—	(228,676)	—	(228,676)
Balance at December 31, 2012	10,000	$ 100	16,375,365	$ 16,375	$ 231,218,615	$ —	$ (197,392,361)	$ (665,600)	$ 33,177,129	$ (356,970)	$ 32,820,159
Net loss	—	—	—	—	—	—	(38,981,244)	—	(38,981,244)	(504,090)	(39,485,334)
Share-based compensation	—	—	513,912	514	6,878,187	—	—	(40,142)	6,838,559	—	6,838,559
Net proceeds from issuance of common stock	—	—	9,712,724	9,713	58,726,453	—	—	—	58,736,166	—	58,736,166
Proceeds from option exercises			31,369	31	150,627				150,658		150,658
Proceeds from warrant exercises	—	—	563,167	564	3,027,677	—	—	—	3,028,241	—	3,028,241
Warrant inducements	—	—	—	—	(62,014)	—	—	—	(62,014)	—	(62,014)
Change in Ownership in Subsidiary	—	$ —	—	$ —	(345,020)	$ —	$ —	$ —	(345,020)	345,020	$ —
Balance at December 31, 2013	10,000	$ 100	27,196,537	$ 27,197	$ 299,594,525	$ —	$ (236,373,605)	$ (705,742)	$ 62,542,475	$ (516,040)	$ 62,026,435

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,	
	2013	2012
Cash flows from operating activities:		
Net loss	$ (39,485,334)	$ (66,369,311)
Loss from discontinued operations	—	30,267,990
Adjustments to reconcile net loss to net cash used in operating activities:		
Common stock, stock options and warrants issued as payment for compensation, services rendered and interest expense	6,838,559	6,712,536
Depreciation and amortization	1,605,608	1,550,571
Amortization of preferred stock discount and issuance cost	—	1,609,495
Changes in fair value of derivative liability	(77,981)	(373,307)
Changes in acquisition-related contingent consideration	1,900,000	4,420,000
Loss on disposal of assets	—	13,653
Bad debt (recovery) expense	(234,225)	511,755
Deferred income taxes	780,104	(175,533)
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(758,798)	(178,011)
Accounts receivable	(573,005)	(554,884)
Inventory	(157,198)	(465,280)
Unearned revenues	348,260	178,008
Other assets	(204,422)	2,414,842
Accounts payable, accrued expenses and other liabilities	2,916,739	1,677,551
Net cash used in operating activities - continuing operations	(27,101,693)	(18,759,925)
Net cash provided by operating activities - discontinued operations	—	4,907,407
Net cash used in operating activities	(27,101,693)	(13,852,518)
Cash flows from investing activities:		
Cash received in divestiture	—	12,280,000
Acquisition of property and equipment	(2,691,471)	(531,315)
Net cash provided by (used in) investing activities - continuing operations	(2,691,471)	11,748,685
Net cash used in investing activities - discontinued operations	—	(5,660,305)
Net cash provided by (used in) investing activities	(2,691,471)	6,088,380
Cash flows from financing activities:		
Net proceeds from exercise of options	150,658	—
Net proceeds from exercise of warrants	3,028,241	6,604,418
Net proceeds from issuance of capital stock	58,736,165	16,428,827
Repayment of mortgage loan	(201,754)	(196,585)
Proceeds from notes payable	1,041,347	666,501
Repayment of notes payable	(503,172)	(440,477)
Repayment of preferred stock	—	(5,394,263)
Payment of dividend for preferred stock	—	(327,748)
Payment for warrant inducement	(62,014)	(228,676)
Net cash provided by financing activities - continuing operations	62,189,471	17,111,997
Net cash used in provided by financing activities - discontinued operations	—	(8,370,228)

Net cash provided by financing activities	62,189,471	8,741,769
Impact of changes of foreign exchange rates	—	14,389
Net increase in cash and cash equivalents	32,396,307	992,020
Cash and cash equivalents at beginning of period	13,737,452	12,745,432
Cash and cash equivalents at end of period	$ 46,133,759	$ 13,737,452
Supplemental Disclosure of Cash Flow Information:		
Cash paid during the period for:		
Interest	$ 274,100	$ 1,771,800
Taxes	—	2,100,000
Supplemental Schedule of non-cash investing activities:		
Capitalized interest	—	182,000
Common stock, warrants and options received upon sale of Erye	—	1,117,901
Supplemental schedule of non-cash financing activities		
Common stock issued pursuant to the redemption of Convertible Redeemable Series E 7% Preferred Stock	—	1,026,600
Common stock issued in payment of dividends for the Convertible Redeemable Series E 7% Preferred Stock	—	175,700

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 – The Business

Overview

NeoStem, Inc. (“we,” “NeoStem” or the “Company”) is a leader in the emerging cellular therapy industry. We are pursuing the preservation and enhancement of human health globally through the development of cell based therapeutics that prevent, treat or cure disease by repairing and replacing damaged or aged tissue, cells and organs and restoring their normal function. We believe that cell therapy will play a large role in changing the natural history of diseases as more breakthrough therapies are developed, ultimately lessening the overall burden of disease on patients and their families as well as the economic burden that these diseases impose upon modern society.

Our business includes the development of novel proprietary cell therapy products as well as a revenue generating contract development and manufacturing service business that we not only leverage for the development of our therapeutics but anticipate will benefit from the advancement in the regenerative medicine industry. The combination of our own therapeutic development business and a revenue-generating service provider business provides the Company with unique capabilities for cost effective in-house product development and immediate revenue and cash flow generation.

We are developing therapies to address ischemia through our CD34 Cell Program. Ischemia occurs when the supply of oxygenated blood in the body is restricted. We seek to reverse this restriction through the development and formation of new blood vessels. AMR-001 is our most clinically advanced product candidate in our CD34 Cell Program and is being developed to treat damaged heart muscle following an acute myocardial infarction (heart attack) ("AMI"). In December 2013, the Company completed enrollment in its PreSERVE AMI study. PreSERVE AMI is a randomized, double-blinded, placebo-controlled Phase 2 clinical trial testing AMR-001, an autologous (donor and recipient are the same) adult stem cell product for the treatment of patients with left ventricular dysfunction following acute ST segment elevation myocardial infarction (STEMI). With infusion of the target population of 160 patients complete, the last patient primary endpoint follow-up for this study is expected in June 2014 followed by data lock and analysis with a submission for a possible presentation of the study at the American Heart Association's Scientific Sessions to be held November 15-19, 2014. If approved by Food and Drug Administration (the "FDA ") and/or other worldwide regulatory agencies following successful completion of further trials, AMR-001 would address a significant medical need for which there is currently no effective treatment, potentially improving longevity and quality of life for those suffering a STEMI, and positioning the Company to capture a meaningful share of this worldwide market. We also expect to initiate a Phase 2 clinical trial for chronic heart failure in Europe in 2014 and are conducting preclinical studies in traumatic brain injury for which we expect data in the second half of 2014.

Another platform technology we are developing utilizes T Regulatory Cells ("Tregs") to treat diseases caused by imbalances in the immune system. In collaborating with Becton-Dickinson and the University of California, San Francisco, we are utilizing this technology platform of our majority-owned subsidiary, Athelos Corporation ("Athelos"), to restore immune balance by enhancing Treg cell number and function. Tregs are a natural part of the human immune system and regulate the activity of T effector cells, the cells that are responsible for protecting the body from viruses and other foreign antigen exposure. When Tregs function properly, only foreign materials are attacked by T effector cells. In autoimmune disease it is thought that deficient Treg activity permits the T effector cells to attack the body's own tissues. We plan to initiate a Phase 2 study of Treg based therapeutics to treat type 1 diabetes in 2014. We also plan to initiate a Phase 1 study in Canada of Treg based therapeutics in support of a steroid resistant asthma indication in 2014.

Pre-clinical assets include our VSEL ™ (Very Small Embryonic Like) Technology regenerative medicine platform. Regenerative medicine holds the promise of improving clinical outcomes and reducing overall healthcare costs. We are working on a Department of Defense funded study of VSELs ™ for the treatment of chronic wounds. Other preclinical work with VSELs ™ includes exploring macular degeneration as a target indication.

Progenitor Cell Therapy, LLC ("PCT") is a contract manufacturer that generates revenue. This wholly owned subsidiary, which we acquired in 2011, is an industry leader in providing high quality manufacturing capabilities and support to developers of cell-based therapies to enable them to improve efficiencies and profitability and reduce capital investment for their own development activities. Since its inception more than 15 years ago, PCT has provided pre-clinical and clinical current Good Manufacturing Practice (“cGMP”) development and manufacturing services to more than 100 clients. PCT has experience advancing regenerative medicine product candidates from product inception through rigorous quality standards all the way through to human testing, Biologic License Application ("BLA") filing and FDA product approval. PCT's core competencies in the cellular therapy industry include manufacturing of cell therapy-based products, engineering and innovation services, product and process development, cell and tissue processing, regulatory support, storage, distribution and delivery and consulting services. PCT has

two cGMP, state-of-the art cell therapy research, development, and manufacturing facilities in New Jersey and California, serving the cell therapy community with integrated and regulatory compliant distribution capabilities. The Company is pursuing commercial expansion of our manufacturing operations both in the U.S. and internationally.

Effective March 31, 2012, we no longer operated in the former Regenerative Medicine – China segment, which is now reported in discontinued operations (see Note 15). On November 13, 2012, we completed the sale of our 51% interest in Suzhou Erye, which represented the operations in our former Pharmaceutical Manufacturing - China segment, and is also reported in discontinued operations (see Note 15). As a result, we currently operate in a single reporting segment - Cell Therapy, which will focus on contract development and manufacturing and cell therapy development programs.

We believe that NeoStem is ideally positioned to lead the cell therapy industry.

Basis of Presentation

The accompanying Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("generally accepted accounting principles") and include the accounts of the Company and its wholly owned and partially owned subsidiaries, the operations of our former Regenerative Medicine - China segment through the deconsolidation date on March 31, 2012 (see Note 15), and the operations of our former Pharmaceutical Manufacturing - China segment through November 13, 2012, the date on which the segment was sold (see Note 15). These former segments are reported in discontinued operations. In the opinion of management, the accompanying Consolidated Financial Statements of the Company and its subsidiaries, include all normal and recurring adjustments considered necessary to present fairly the Company's financial position as of December 31, 2013 and 2012, and the results of its operations and its cash flows for the years then ended.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States of America 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. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Examples of estimates include the fair value of goodwill and/or potential goodwill impairments for our reporting units, useful lives of our tangible and intangible assets, allowances for doubtful accounts, and stock-based compensation forfeiture rates. An example of an assumption includes the potential outcome of future tax consequences of events that have been recognized in our financial statements or tax returns. Accordingly, actual results could differ from those estimates and assumptions.

Reclassifications

Certain reclassifications have been made to the Consolidated Financial Statements and Notes to the Consolidated Financial Statements for the year ended December 31, 2012 to conform to the presentation for the year ended December 31, 2013.

Principles of Consolidation

The Consolidated Financial Statements include the accounts of NeoStem, Inc. and its wholly owned and partially owned subsidiaries and affiliates as listed below, as well as the operations of our former Regenerative Medicine - China segment through the deconsolidation date on March 31, 2012 (see Note 15), and the operations of our former Pharmaceutical Manufacturing - China segment through November 13, 2012, representing the date which the segment was sold (see Note 15). These former segments are reported in discontinued operations.

Entity	Percentage of Ownership	Location
NeoStem, Inc.	Parent Company	United States of America
NeoStem Therapies, Inc.	100%	United States of America
Stem Cell Technologies, Inc.	100%	United States of America
Amorcyte, LLC	100%	United States of America
Progenitor Cell Therapy, LLC (PCT)	100%	United States of America
NeoStem Family Storage, LLC	100%	United States of America
Athelos Corporation (1)	88.5%	United States of America
PCT Allendale, LLC	100%	United States of America

(1) Pursuant to the Stock Purchase Agreement signed in March 2011, our initial ownership in Athelos was 80.1%, and Becton Dickinson's ("BD") initial minority ownership was 19.9%. Per the Agreement, BD will be diluted based on new investment in Athelos by us (subject to certain anti-dilution provisions). As of December 31, 2013, BD's ownership interest in Athelos was decreased to 11.5%, and our ownership increased to 88.5%. As a result in the change in ownership, approximately $0.3 million was transferred from additional paid in capital to non-controlling interests.

Note 2 – Summary of Significant Accounting Policies

Cash and Cash Equivalents

Cash and cash equivalents include short-term, highly liquid, investments with maturities of ninety days or less when purchased.

Concentration of Risks

For the year ended December 31, 2013, two customers represented 19% and 11%, respectively, of total revenues recognized.

Accounts Receivable

Accounts receivable are carried at original invoice amount less an estimate made for doubtful accounts. The Company applies judgment in connection with establishing the allowance for doubtful accounts. Specifically, the Company analyzes the aging of accounts receivable balances, historical bad debts, customer concentration and credit-worthiness, current economic trends and changes in the Company's customer payment terms. Significant changes in customer concentrations or payment terms, deterioration of customer credit-worthiness or weakening economic trends could have a significant impact on the collectability of the receivables and the Company's operating results. If the financial condition of the Company's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. Management regularly reviews the aging of receivables and changes in payment trends by its customers, and records a reserve when it believes collection of amounts due are at risk.

Inventories

The Company, through its PCT subsidiary, regularly enters into contracts with clients for services that have multiple stages and are dependent on one another to complete the contract and recognize revenue. The Company's inventory represents work in process for costs incurred on such projects at PCT that have not been completed. The Company reviews these projects periodically to determine that the value of each project is stated at the lower of cost or market.

Property, Plant, and Equipment

The cost of property, plant and equipment is depreciated over the estimated useful lives of the related assets. Depreciation is computed on the straight-line method. Repairs and maintenance expenditures that do not extend original asset lives are charged to expense as incurred. The estimated useful lives of property, plant and equipment are as follows:

Building and improvements	25-30 years
Machinery and equipment	8-12 years
Lab equipment	5-7 years
Furniture and fixtures	5-12 years
Software	3-5 years
Leasehold improvements	Life of lease

Goodwill and Other Intangible Assets

Goodwill is the excess of purchase price over the fair value of identified net assets of businesses acquired. The Company's intangible assets with an indefinite life are related to in process research and development ("IPR&D") for AMR-001, the clinical candidate acquired in the Amorcyte acquisition, as the Company expects this research and development to provide the Company with substantial benefit for a period that extends beyond the foreseeable horizon. Intangible assets with indefinite useful lives are measured at their respective fair values as of the acquisition date. The Company does not amortize goodwill and intangible assets with indefinite useful lives. Intangible assets related to IPR&D projects are considered to be indefinite-lived until the completion or abandonment of the associated R&D efforts. If and when development is complete, which generally occurs if and when regulatory approval to market a product is obtained, the associated assets would be deemed finite-lived and would then be amortized based on their respective estimated useful lives at that point in time.

The Company reviews goodwill and indefinite-lived intangible assets at least annually for possible impairment. Goodwill and indefinite-lived intangible assets are reviewed for possible impairment between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of the reporting unit below its carrying value. The Company tests its goodwill and indefinite-lived intangible assets each year on December 31. The Company reviews the carrying value of goodwill and indefinite-lived intangible assets utilizing a discounted cash flow model, and, where appropriate, a market value approach is also utilized to supplement the discounted cash flow model. The Company makes assumptions regarding estimated future cash flows, discount rates, long-term growth rates and market values to determine each reporting unit's estimated fair value. If these estimates or related assumptions change in the future, the Company may be required to record impairment charges. In accordance with it's accounting policy, the Company tested goodwill for impairment as of December 31, 2013 and 2012 for its two reporting units, and concluded there was no risk of failing step 1 of the goodwill impairment testing evaluation.

Amortized intangible assets consist of customer lists, manufacturing technology, and tradename, as well as patents and rights associated primarily with the VSEL™ Technology. These intangible assets are amortized on a straight line basis over their respective useful lives.

Evaluation of Long-lived Assets

The Company reviews long-lived assets and finite-lived intangibles assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset exceeds the fair value of the asset. If other events or changes in circumstances indicate that the carrying amount of an asset that the Company expects to hold and use may not be recoverable, the Company will estimate the undiscounted future cash flows expected to result from the use of the asset and/or its eventual disposition, and recognize an impairment loss. The impairment loss, if determined to be necessary, would be measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets. No events were noted in 2013 or 2012.

Recognizing and Measuring Assets Acquired and Liabilities Assumed in Business Combinations at Fair Value

The Company accounts for acquired businesses using the purchase method of accounting, which requires that assets acquired and liabilities assumed be recorded at date of acquisition at their respective fair values. The consolidated financial statements and results of operations reflect an acquired business after the completion of the acquisition. The fair value of the consideration paid, including contingent consideration, is assigned to the underlying net assets of the acquired business based on their respective fair values. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Amounts allocated to IPR&D are included on the balance sheet . Intangible assets, including IPR&D assets upon successful completion of the project and approval of the product, are amortized on a straight-line basis to amortization expense over the expected life of the asset. Significant judgments are used in determining the estimated fair values assigned to the assets acquired and liabilities assumed and in determining estimates of useful lives of long-lived assets. Fair value determinations and useful life estimates are based on, among other factors, estimates of expected future net cash flows, estimates of appropriate discount rates used to present value expected future net cash flow streams, the timing of approvals for IPR&D projects and the timing of related product launch

dates, the assessment of each asset's life cycle, the impact of competitive trends on each asset's life cycle and other factors. These judgments can materially impact the estimates used to allocate acquisition date fair values to assets acquired and liabilities assumed and the resulting timing and amount charged to, or recognized in current and future operating results. For these and other reasons, actual results may vary significantly from estimated results.

The Company determines the acquisition date fair value of contingent consideration obligations based on a probability-weighted income approach derived from revenue estimates, post-tax gross profit levels and a probability assessment with respect to the likelihood of achieving contingent obligations including contingent payments such as milestone obligations, royalty obligations and contract earn-out criteria, where applicable. The fair value measurement is based on significant inputs not observable in the market and thus represents a Level 3 measurement as defined in fair value measurement accounting. The resultant probability-weighted cash flows are discounted using an appropriate effective annual interest rate. At each reporting date, the contingent consideration obligation will be revalued to estimated fair value and changes in fair value will be reflected as income or expense in our consolidated statement of operations. Changes in the fair value of the contingent consideration obligations may result from changes in discount periods and rates, changes in the timing and amount of revenue estimates and changes in probability assumptions with respect to the likelihood of achieving the various contingent payment obligations. Changes in assumptions utilized in our contingent consideration fair value estimates could result in an increase or decrease in our contingent consideration obligation and a corresponding charge to operating loss.

Share-Based Compensation

The Company expenses all share-based payment awards to employees, directors, advisors and consultants, including grants of stock options, warrants, and restricted stock, over the requisite service period based on the grant date fair value of the awards. Advisor and consultant awards are remeasured each reporting period through vesting. For awards with performance-based vesting criteria, the Company estimates the probability of achievement of the performance criteria and recognizes compensation expense related to those awards expected to vest. The Company determines the fair value of certain share-based awards using the Black-Scholes option-pricing model which uses both historical and current market data to estimate the fair value. This method incorporates various assumptions such as the risk-free interest rate, expected volatility, expected dividend yield and expected life of the options or warrants. The fair value of the Company's restricted stock and restricted stock units is based on the closing market price of the Company's common stock on the date of grant.

Loss Per Share

Basic loss per share is based on the weighted effect of all common shares issued and outstanding, and is calculated by dividing net loss attributable to common stockholders by the weighted average shares outstanding during the period. Diluted loss per share, which is calculated by dividing net loss attributable to common stockholders by the weighted average number of common shares used in the basic loss per share calculation plus the number of common shares that would be issued assuming conversion of all potentially dilutive securities outstanding, is not presented as such potentially dilutive securities are anti-dilutive in all periods presented due to losses incurred.

Derivatives

Derivative instruments, including derivative instruments embedded in other contracts, are recorded on the balance sheet as either an asset or liability measured at its fair value. Changes in the fair value of derivative instruments are recognized currently in results of operations unless specific hedge accounting criteria are met. The Company has not entered into hedging activities to date. Changes in the derivative value are recorded as other income (expense) on the consolidated statements of operations.

Income Taxes

The Company recognizes (a) the amount of taxes payable or refundable for the current year and (b) deferred tax liabilities and assets for the future tax consequences of events that have been recognized in the Company's financial statements or tax returns. The Company continues to evaluate the accounting for uncertainty in tax positions. The guidance requires companies to recognize in their financial statements the impact of a tax position if the position is more likely than not of being sustained if the position were to be challenged by a taxing authority. The position ascertained inherently requires judgment and estimates by management. The Company recognizes interest and penalties as a component of income tax expense.

Foreign Currency Translation

Results of the the Company's former Chinese operating segments were translated at the average exchange rates during the period, and assets and liabilities were translated at the closing rate at the end of each reporting period. Cash flows were also

translated at average exchange rates for the period, therefore, amounts reported on the consolidated statement of cash flows did not necessarily agree with changes in the corresponding balances on the consolidated balance sheet.

Treasury Stock

Treasury stock purchases are accounted for under the cost method whereby the entire cost of the acquired stock is recorded as treasury stock. Gains or losses on the subsequent reissuance of shares are credited or charged to additional paid in capital.

Revenue Recognition

Clinical Services: The Company recognizes revenue for its (i) cell process development and (ii) cell manufacturing services based on the terms of individual contracts.

Revenues associated with cell process development services generally contain multiple stages that do not have stand-alone values and are dependent upon one another, and are recognized as revenue on a completed contract basis. We recognize revenues for cell development services when all of the following conditions are met:

- persuasive evidence of an arrangement exists;
- delivery has occurred or the services have been rendered;
- the fee is fixed or determinable; and
- collectability is probable.

The Company considers signed contracts as evidence of an arrangement. The Company assesses whether the fee is fixed or determinable based on the payment terms associated with the transaction and whether the payment terms are subject to refund or adjustment. The Company assesses cash collectability based on a number of factors, including past collection history with the client and the client's creditworthiness. If the Company determines that collectability is not reasonably assured, it defers revenue recognition until collectability becomes reasonably assured, which is generally upon receipt of the cash. The Company's arrangements are generally non-cancellable, though clients typically have the right to terminate their agreement for cause if the Company materially fails to perform.

Cell manufacturing services are generally distinct arrangements whereby the Company is paid for time and materials or for fixed monthly amounts. Revenue is recognized when efforts are expended or contractual terms have been met.

Some client agreements include multiple elements, comprised of cell process development and cell manufacturing services. The Company believes that cell process development and cell manufacturing services each have stand-alone value because these services can be provided separately by other companies. In accordance with ASC Update No. 2009-13, “Revenue Recognition (Topic 605): Multiple-Deliverable Revenue Arrangements,” the Company (1) separates deliverables into separate units of accounting when deliverables are sold in a bundled arrangement and (2) allocates the arrangement's consideration to each unit in the arrangement based on its relative selling price.

Clinical Services Reimbursements: The Company separately charges the customers for the expenses associated with certain consumable resources (reimbursable expenses) that are specified in each clinical services contract. On a monthly basis, the Company bills customers for reimbursable expenses and immediately recognizes these billings as revenue, as the revenue is deemed earned as reimbursable expenses are incurred. For the year ended December 31, 2013 and 2012, clinical services reimbursements were $2.1 million and $3.5 million, respectively.

Processing and Storage Services: The Company recognizes revenue related to the collection and cryopreservation of cord blood and autologous adult stem cells when the cryopreservation process is completed which is approximately twenty-four hours after cells have been collected. Revenue related to advance payments of storage fees is deferred and recognized ratably over the period covered by the advance payments.

Research and Development Costs

Research and development ("R&D") expenses include salaries, benefits, and other headcount related costs, clinical trial and related clinical manufacturing costs, contract and other outside service fees including sponsored research agreements, and facilities and overhead costs. The Company expenses the costs associated with research and development activities when incurred.

To further drive the Company's cell therapy initiatives, the Company will continue targeting key governmental agencies, congressional committees and not-for-profit organizations to contribute funds for the Company's research and development programs. The Company accounts for such grants as a deduction to the related expense in research and development operating expenses when earned.

Note 3 – Cash and Cash Equivalents

As of December 31, 2013 and December 31, 2012, the Company had cash and cash equivalents of approximately $46.1 million and $13.7 million, respectively, including bank deposits of approximately $0.7 million and $0.8 million, respectively, covered by the Federal Deposit Insurance Corporation.

Note 4 – Inventories

Inventories, representing work in process for costs incurred on projects at PCT that have not been completed, were $ 1.3 million and $1.1 million as of December 31, 2013 and December 31, 2012, respectively. The Company also has deferred revenue of approximately $ 1.5 million and $1.2 million of billings received as of December 31, 2013 and December 31, 2012, respectively, related to these contracts.

Note 5 – Property, Plant and Equipment

Property, plant, and equipment consisted of the following (in thousands):

	December 31,	
	2013	2012
Building and improvements	$ 11,229.9	$ 9,897.8
Machinery and equipment	58.2	39.5
Lab equipment	2,743.7	1,800.6
Furniture and fixtures	958.0	683.7
Software	203.1	99.5
Leasehold improvements	674.1	654.5
Property, plant and equipment, gross	15,867.0	13,175.6
Accumulated depreciation	(3,022.8)	(2,022.5)
Property, plant and equipment, net	$ 12,844.2	$ 11,153.1

The Company's results included depreciation expense of approximately $ 1.0 million and $1.0 million for the years ended December 31, 2013 and December 31, 2012, respectively.

Note 6 – Loss Per Share

For the year ended December 31, 2013 and 2012, the Company incurred net losses and therefore no common stock equivalents were utilized in the calculation of loss per share. At December 31, 2013 and 2012, the Company excluded the following potentially dilutive securities:

	December 31,	
	2013	2012
Stock Options	2,932,191	2,168,668
Warrants	4,898,266	5,528,761
Restricted Shares	78,500	34,250

Note 7 – Fair Value Measurements

Fair value of financial assets and liabilities that are being measured and reported are defined as the exchange price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in the principal market at the measurement date (exit price). The Company is required to classify fair value measurements in one of the following categories:

Level 1 inputs are defined as quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2 inputs are defined as inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly or indirectly.

Level 3 inputs are defined as unobservable inputs for the assets or liabilities. Financial assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment, and may affect the valuation of the fair value of assets and liabilities and their placement within the fair value hierarchy levels.

The Company determined the fair value of the embedded derivative liabilities and warrant derivative liabilities to be level 3 inputs. These inputs require material subjectivity because value is derived through the use of a lattice model that values the derivatives based on probability weighted discounted cash flows. The following table sets forth by level within the fair value hierarchy the Company's financial assets and liabilities that were accounted for at fair value on a recurring basis as of December 31, 2013, and December 31, 2012 (in thousands):

	December 31, 2013		
	Fair Value Measurements Using Fair Value Hierarchy		
	Level 1	Level 2	Level 3
Warrant derivative liabilities	$ —	$ —	$ 23.2
Contingent consideration	—	—	9,450.0

	December 31, 2012		
	Fair Value Measurements Using Fair Value Hierarchy		
	Level 1	Level 2	Level 3
Warrant derivative liabilities	$ —	$ —	$ 101.2
Contingent consideration	—	—	7,550.0

Contingent consideration was recognized on October 17, 2011 in connection with the Company's acquisition of Amorcyte. The contingent consideration obligations relates to earn out payments equal to 10% of the net sales of Amorcyte's lead product candidate AMR-001 (in the event of and following the date of first commercial sale of AMR-001), provided that in the event NeoStem sublicenses AMR-001, the applicable earn out payment will be equal to 30% of any sublicensing fees, and provided further that NeoStem will be entitled to recover direct out-of-pocket clinical development costs not previously paid or reimbursed and any costs, expenses, liabilities and settlement amounts arising out of claims of patent infringement or otherwise challenging Amorcyte's right to use intellectual property, by reducing any earn out payments due by 50% until such costs have been recouped in full (the "Earn Out Payments").

The fair value of contingent consideration obligations is determined using Level 3 inputs, and is based on a discounted cash flow model using a probability-weighted income approach. The measurement is based upon unobservable inputs supported by little or no market activity based on our own assumptions and experience. We base the timing to complete the development and approval of this product on the current development stage of the product and the inherent difficulties and uncertainties in developing a product candidate, such as obtaining U.S. Food and Drug Administration (FDA) and other regulatory approvals. In determining the probability of regulatory approval and commercial success, we utilize data regarding similar milestone events from several sources, including industry studies and our own experience. These fair value measurements represent Level 3 measurements as they are based on significant inputs not observable in the market. Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period. Accordingly, changes in assumptions

could have a material impact on the amount of contingent consideration expense we record in any given period. Changes in the fair value of the contingent consideration obligations are recorded in our consolidated statement of operations. The contingent consideration fair value increased from $7.6 million as of December 31, 2012 to $9.5 million as of December 31, 2013. The change in estimated fair value is based on the Company's update of the discounted cash flow model using a probability-weighted income approach, taking into account a 18% discount rate, revised collaboration assumptions, and assumptions of the market opportunity and development costs, and the impact of the time progression through the Phase 2 clinical trial from December 31, 2012 to December 31, 2013.

For those financial instruments with significant Level 3 inputs, the following table summarizes the activity for the year ended December 31, 2013 by type of instrument (in thousands):

	Year Ended December 31, 2013	
	Warrants	Contingent Consideration
Beginning liability balance	$ 101.2	$ 7,550.0
Change in fair value recorded in earnings	(78.0)	1,900.0
Ending liability balance	$ 23.2	$ 9,450.0

For those financial instruments with significant Level 3 inputs, the following table summarizes the activity for the year ended December 31, 2012 by type of instrument (in thousands):

	Year Ended December 31, 2012		
	Embedded Derivatives	Warrants	Contingent Consideration
Beginning liability balance	$ 391.7	$ 82.7	$ 3,130.0
Change in fair value recorded in earnings	(391.7)	18.5	4,420.0
Ending liability balance	$ —	$ 101.2	$ 7,550.0

Some of the Company’s financial instruments are not measured at fair value on a recurring basis, but are recorded at amounts that approximate fair value due to their liquid or short-term nature, such as cash and cash equivalents, accounts receivable, accounts payable, and notes payable.

Note 8 – Goodwill and Other Intangible Assets

The Company's goodwill was $11.1 million as of December 31, 2013 and December 31, 2012, respectively.

The Company's intangible assets and related accumulated amortization as of December 31, 2013 and December 31, 2012 consisted of the following (in thousands):

		December 31, 2013			December 31, 2012		
	Useful Life	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Customer list	10 years	$ 1,000.0	$ (295.1)	$ 704.9	$ 1,000.0	$ (195.1)	$ 804.9
Manufacturing technology	10 years	3,900.0	(1,150.9)	2,749.1	3,900.0	(760.9)	3,139.1
Tradename	10 years	800.0	(236.1)	563.9	800.0	(156.1)	643.9
In process R&D	Indefinite	9,400.0	—	9,400.0	9,400.0	—	9,400.0
VSEL patent rights	19 years	669.0	(211.3)	457.7	669.0	(176.1)	492.9
Total Intangible Assets		$ 15,769.0	$ (1,893.4)	$ 13,875.6	$ 15,769.0	$ (1,288.2)	$ 14,480.8

Total intangible amortization expense was classified in the operating expense categories for the periods included below as follows (in thousands):

	Year Ended December 31,	
	2013	2012
Cost of revenue	$ 390.0	$ 390.0
Research and development	35.2	35.2
Selling, general and administrative	180.0	180.0
Total	$ 605.2	$ 605.2

Estimated intangible amortization expense on an annual basis for the succeeding five years is as follow (in thousands):

2014	$ 605.2
2015	605.2
2016	605.2
2017	605.2
2018	605.2
Thereafter	10,849.6
	$ 13,875.6

Note 9 – Accrued Liabilities

Accrued liabilities were as follow (in thousands):

	December 31,	
	2013	2012
Salaries, employee benefits and related taxes	$ 2,325.8	$ 1,597.2
Professional fees	544.8	606.6
License fees	500.0	—
Other	647.4	81.0
	$ 4,018.0	$ 2,284.8

Note 10 – Debt

Notes Payable

As of December 31, 2013 and December 31, 2012, the Company had notes payable of approximately $0.9 million and $0.4 million, respectively. The notes relate to certain insurance policies and equipment financings, require monthly payments, and mature within one to three years.

Mortgages Payable

In October 2007, PCT issued a note to borrow $3.1 million (the "First Mortgage") in connection with its $3.8 million purchase of condominium units in an existing building in Allendale, New Jersey (the "Property") that PCT uses as a laboratory and stem cell processing facility. The First Mortgage is payable in 239 consecutive monthly payments of principal and interest, based on a 20 year amortization schedule; and one final payment of all outstanding principal plus accrued interest then due. The current monthly installment is $20,766, which includes interest at an initial rate of 5.00%; the interest rate and monthly installments payments are subject to adjustment on October 1, 2017. On that date, upon prior written notice, the lender has the option to declare the entire outstanding principal balance, together with all outstanding interest, due and payable in full. The First Mortgage is secured by substantially all of the assets of PCT, including a first mortgage on the Property and assignment of an amount approximately equal to eighteen months debt service held in escrow. The Note matures on October 1, 2027 if not called by the

lender on October 1, 2017. The First Mortgage was subject to certain debt service coverage and total debt to tangible net worth financial covenant ratios measured semi-annually. The outstanding balance was approximately $2.5 million and $2.6 million at December 31, 2013 and December 31, 2012, respectively, of which $126,700 is payable within twelve months as of December 31, 2013.

In December 2010 PCT Allendale, a wholly-owned subsidiary of PCT, entered into a note for a second mortgage in the amount of $1 million (the "Second Mortgage") on the Allendale Property with TD Bank, N.A. This Second Mortgage is guaranteed by PCT, DomaniCell (a wholly-owned subsidiary of PCT, now known as NeoStem Family Storage, LLC), Regional Cancer Care Associates LLC and certain of its partners were subject to an annual financial covenant starting December 31, 2011. PCT was not in compliance with such covenants at the measurement date of December 31, 2012, and obtained a covenant waiver letter from the lender for each period. The Second Mortgage is for 124 months at a fixed rate of 6% for the first 64 months. The loan is callable for a certain period prior to the interest reset date. The outstanding balance was approximately $ 0.8 million and $0.8 million at December 31, 2013 and December 31, 2012, respectively, of which $86,400 is payable within twelve months as of December 31, 2013.

In December 2013, the Company modified both the First Mortgage and Second Mortgage with TD Bank, N.A., whereby (i) prior debt service coverage and total debt to tangible net worth financial covenant ratios were replaced with a minimum unencumbered liquidity covenant, and (ii) prior guarantors were released (see Note 16) and replaced with NeoStem, PCT, and NeoStem Family Storage. Prior to this modification, PCT was not in compliance with such covenants at the June 30, 2012, December 31, 2012, and June 30, 2013 measurement dates, and as a result, classified the entire First Mortgage and Second Mortgage balances as a current liability. PCT also obtained a covenant waiver letter for each period. Subsequent to the modification, as of December 31, 2013, the Company is in compliance with the new minimum unencumbered liquidity covenant, and as a result, will only report mortgage payments due within twelve months as a current liability.

Note 11 – Preferred Stock

Convertible Redeemable Series E 7% Preferred Stock

On November 19, 2010, the Company sold 10,582,011 Preferred Offering Units consisting of (i) one share ("Preferred Share") of Series E 7% Senior Convertible Preferred Stock (the "Series E Preferred Stock"), par value $0.01 per share, of the Company, (ii) a warrant to purchase 0.25 of a share of common stock (consisting of at issuance an aggregate of 132,249 warrants, adjusted to an aggregate of 222,446 as of December 31, 2013); and (iii) 0.0155 of a share of common stock (an aggregate of 16,442 common shares). Each Preferred Offering Unit was priced at $0.945 and total gross and net proceeds received by the Company were $10.0 million and $8.9 million, respectively.

Monthly dividend and principal payments began in March 2011, and continued each month thereafter with the final payment due in May 2013. In October 2012, the Company completed the redemption of all 2,351,558 Series E Preferred Stock shares then remaining outstanding, for an aggregate cash redemption price of approximately $3.4 million, $2.5 million of which was funded by money placed into escrow when the Series E Preferred stock was issued in November 2010. The cash redemption included the repayment of $3.1 million outstanding principal, an additional early redemption premium of $0.2 million, which was included in dividends, and $36,000 of accrued interest.

The Company recorded the fair value of the warrants as a short-term derivative liability as of December 31, 2013, and long-term derivative liability as of December 31,2012. The fair values of the warrant derivatives as of December 31, 2013 and December 31, 2012 were $23,200 and $101,200, respectively. The Company reports changes in the fair value of the warrant derivative in earnings within other income (expense), net (see Note 7).

Note 12 – Stockholders' Equity

Reverse Stock Split

On June 28, 2013, pursuant to prior shareholder authorization, the Company's board of directors unanimously approved a 1-for-10 reverse stock split of the Company's common stock, which the Company effected on July 16, 2013. All share and per share amounts of common stock, options and warrants in the accompanying financial statements have been restated for all periods to give retroactive effect to the reverse stock split. The shares of common stock retained a par value of $0.001 per share. Accordingly, the stockholders' deficit reflects the reverse stock split by reclassifying from "common stock" to "Additional paid-in capital" an amount equal to the par value of the decreased shares resulting from the reverse stock split.

Equity Plans

The Company's 2003 Equity Participation Plan (the "2003 Equity Plan") expired in 2013 and accordingly, equity awards under the 2003 Equity Plan can no longer be issued. Prior to its expiration, the Company's 2003 Equity Participation Plan had permitted the grant of share options and shares to the Company's employees, directors, consultants and advisors for up to 250,000 shares of common stock as stock-based compensation. The 2009 Equity Compensation Plan (the "2009 Equity Plan") makes up to 5,995,000 shares of common stock of the Company (as of December 31, 2013) available for issuance to employees, consultants, advisors and directors of the Company and its subsidiaries pursuant to incentive or non-statutory stock options, restricted and unrestricted stock awards and stock appreciation rights.

All stock options under the 2003 Equity Plan were granted and the 2009 Equity Plan are granted at the fair market value of the common stock at the grant date. Stock options vest either on the date of grant, ratably over a period determined at time of grant, or upon the accomplishment of specified business milestones, and generally expire 2, 3, or 10 years from the grant date depending on the status of the recipient as a consultant, advisor, employee or director of the Company.

The 2009 Equity Plan was originally adopted by the stockholders of the Company on May 8, 2009. On October 29, 2009, the stockholders of the Company approved an amendment to the 2009 Equity Plan to increase the number of shares of common stock available for issuance thereunder from 380,000 to 975,000. At the 2010 Annual Meeting of Stockholders of the Company held on June 2, 2010, the stockholders approved an amendment to increase this number to 1,375,000. At a Special Meeting of Stockholders of the Company held on January 18, 2011, the stockholders approved an amendment to increase this number to 1,775,000 . At the 2011 Annual Meeting of Stockholders of the Company held on October 14, 2011, the stockholders approved an amendment to increase this number to 2,375,000. At the 2012 Annual Meeting of Stockholders of the Company held on October 5, 2012, the stockholders approved an amendment to (i) merge the 570,000 shares reserved for issuance under the Company's 2009 Non-U.S. Based Equity Compensation Plan (the "Non-U.S. Plan") with and into the 2009 Equity Plan, and (ii) increase by 450,000 the aggregate number of shares authorized for issuance under the 2009 Equity Plan (the "2009 Amended & Restated Equity Plan"). At the Company's 2013 Annual Meeting held October 3, 2013, the Company's stockholders approved an amendment to the 2009 Amended & Restated Equity Plan to increase the number of shares authorized for issuance thereafter by 2,600,000. The Non-U.S. Plan was originally adopted by the stockholders of the Company on October 29, 2009, and was subsequently amended on June 2, 2010 to increase the shares from 470,000 to 870,000, and on October 14, 2011 to decrease the shares to 570,000, prior to the merger into the 2009 Equity Plan.

The number of remaining shares authorized to be issued under the various equity plans are as follows:

	2003 Equity Plan	2009 Equity Plan
Shares Authorized for Issuance	250,000	5,995,000
Outstanding Stock Options	(136,480)	(2,795,711)
Exercised Stock Options	(9,250)	(31,869)
Restricted stock or equity grants issued under Equity Plans	(88,993)	(595,852)
Shares Expired	(15,277)	—
Total common shares remaining to be issued under the Equity Plans	—	2,571,568

The Company adopted an employee stock purchase plan effective January 1, 2013, and authorized 500,000 shares under the plan. The plan has two six-month offering periods per year under which eligible employees may contribute up to 15% of their compensation toward the purchase of the Company's common stock per offering period (with a $25,000 cap per calender year). The employee's purchase price is equal to (i) 85% of the closing price of a share of the Company's common stock on the enrollment date of such offering period or (ii) 85% of the closing price of a share of the Company's Common Stock on the Exercise Date of such Offering Period, whichever is lower. During the year ended December 31, 2013, 23,052 shares were issued under the employee stock purchase plan. At December 31, 2013, the Company had 476,948 shares of the Company's common stock available for future grant in connection with these plans.

Equity Issuances

In September 2011, the Company entered into a common stock Purchase Agreement (the "Prior Purchase Agreement") with Aspire Capital Fund, LLC, an Illinois limited liability company ("Aspire Capital"), which provides that, subject to certain terms and conditions, Aspire Capital was committed to purchase up to an aggregate of $20.0 million worth of shares of the Company's common stock over the 24-month term of the Prior Purchase Agreement. At the Company's discretion, it may present Aspire

Capital with purchase notices under the Prior Purchase Agreement from time to time, to purchase the Company's common stock, provided certain price and other requirements are met. The purchase price for the shares of stock was based upon one of two formulas set forth in the Prior Purchase Agreement depending on the type of purchase notice we submit to Aspire Capital from time to time, and was be based on market prices of the Company's common stock (in the case of regular purchases) or a discount of 5% applied to volume weighted average prices (in the case of VWAP purchases), in each case as determined by parameters defined in the agreement. As consideration for entering into the Prior Purchase Agreement, effective September 30, 2011, we issued 99,010 shares of our common stock to Aspire Capital (the "Commitment Shares"). The issuance of shares of common stock to Aspire Capital pursuant to the Prior Purchase Agreement, including the Commitment Shares, and the sale of those shares from time to time by Aspire Capital to the public, are covered by a shelf registration statement on Form S-3.

In August 2012, the Company and Aspire entered into an amendment to the Prior Purchase Agreement dated September 28, 2011, providing for an extension of the 24-month term of the Prior Purchase Agreement until September 30, 2015. Pursuant to the amendment, we agreed to issue to Aspire a five-year warrant to purchase up to 161,290 shares of our common stock at an exercise price of $6.00 per share (the closing price of our common stock on the date the amendment was executed).

For the year ended December 31, 2013, the Company issued 1.6 million shares of common stock under the provisions of its equity line of credit with Aspire for gross proceeds of approximately $11.1 million. As of December 31, 2013, the remaining amount available to the Company under the Prior Purchase Agreement was $5.6 million.

In April 2013, the Company completed an underwritten offering of 2.0 million shares of the Company's common stock, at a public offering price of $5.00 per share. The underwriters also exercised their entire over-allotment option of 0.3 million shares. The Company received gross proceeds of $11.5 million, before deducting underwriting discounts and commissions and offering expenses payable by the Company.

In October 2013, the Company completed an underwritten offering of 5.0 million shares of the Company's common stock, at a public offering price of $7.00 per share. The underwriters also exercised their entire over-allotment option of 0.75 million shares. The Company received gross proceeds of $40.3 million, before deducting underwriting discounts and commissions and offering expenses payable by the Company.

Option Exercises

During the year ended ended December 31, 2013, option holders exercised an aggregate of 0.03 million options at exercise prices between $4.00 and $5.90 per share for gross proceeds of approximately $0.2 million.

Warrant Exercises

To raise capital on terms that we deemed favorable, during the year ended December 31, 2013, the Board authorized certain inducements to warrant holders to exercise outstanding common stock purchase warrants significantly before their expiration dates. The Company determined in each instance that such inducements were modifications of equity instruments, and an incremental fair value of the inducement was determined using the Black-Scholes option pricing model.

During the year ended ended December 31, 2013, warrant holders exercised an aggregate of 0.6 million warrants at exercise prices between $5.10 and $7.40 per share for gross proceeds of approximately $3.0 million. As an inducement to exercise, we paid certain warrant holders $0.30 per share upon each exercise.

Stock Options and Warrants

The following table summarizes the activity for stock options and warrants for the years ended December 31, 2013 and December 31, 2012:

	Stock Options				Warrants			
	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (In Thousands)	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value (In Thousands)
Outstanding at December 31, 2012	2,168,668	$ 12.85	6.8	$ 1,658.1	5,528,761	$ 15.65	3.6	$ 1,300.0
Changes during the Year:								
Granted	959,167	$ 7.01			86,250	$ 6.66		
Exercised	(31,369)	$ 4.80			(563,166)	$ 5.38		
Forfeited	(89,412)	$ 5.54			(17,500)	$ 14.20		
Expired	(74,863)	$ 15.40			(136,079)	$ 20.15		
Outstanding at December 31, 2013	2,932,191	$ 11.19	6.8	$ 1,658.1	4,898,266	$ 16.50	2.6	$ 1,811.0
Vested at December 31, 2013 or expected to vest in the future	2,816,138	$ 11.36	6.7	$ 1,604.0	4,884,957	$ 16.35	2.6	$ 1,811.0
Exercisable at December 31, 2013	2,231,869	$ 12.14	6.4	$ 1,283.3	4,780,658	$ 15.41	2.6	$ 1,811.0

The total intrinsic value of stock options exercised during the years ended December 31, 2013 and December 31, 2012 was $104,360 and $0, respectively.

During the year ended December 31, 2013 and 2012, the Company issued warrants for services as follows ($ in thousands, except share data):

	Year Ended December 31,	
	2013	2012
Number of Common Stock Purchase Warrants Issued	40,407	41,969
Value of Common Stock Purchase Warrants Issued	$ 149.9	$ 172.2

Restricted Stock

During the year ended December 31, 2013 and 2012, the Company issued restricted stock for services as follows ($ in thousands, except share data):

	Year Ended December 31,	
	2013	2012
Number of Restricted Stock Issued	514,700	229,553
Value of Restricted Stock Issued	$ 3,360.0	$ 1,325.1

The weighted average estimated fair value of restricted stock issued for services in the year ended December 31, 2013 and 2012 was $6.53 and $5.77 per share, respectively. The fair value of the restricted stock was determined using the Company's closing stock price on the date of issuance. The vesting terms of restricted stock issuances are generally within one year.

Note 13 – Share-Based Compensation

Share-based Compensation

We utilize share-based compensation in the form of stock options, warrants and restricted stock. The following table summarizes the components of share-based compensation expense for the year ended December 31, 2013 and 2012 ($ in thousands):

	Year Ended December 31,	
	2013	2012
Cost of goods sold	$ 314.0	$ 195.0
Research and development	822.2	432.9
Selling, general and administrative	5,702.5	6,084.6
Total share-based compensation expense	$ 6,838.7	$ 6,712.5

Total compensation cost related to nonvested awards not yet recognized and the weighted-average periods over which the awards are expected to be recognized at December 31, 2013 were as follows ($ in thousands):

	Stock Options	Warrants	Restricted Stock
Unrecognized compensation cost	$ 2,422.2	$ 55.6	$ 335.6
Expected weighted-average period in years of compensation cost to be recognized	3.51	1.54	0.38

Total fair value of shares vested and the weighted average estimated fair values of shares grant for the year ended December 31, 2013 and 2012 were as follows ($ in thousands):

	Stock Options		Warrants	
	Year Ended December 31,		Year Ended December 31,	
	2013	2012	2013	2012
Total fair value of shares vested	$ 3,375.7	$ 5,408.0	$ 129.0	$ 171.6
Weighted average estimated fair value of shares granted	4.29	3.63	3.71	4.10

Valuation Assumptions

The fair value of stock options and warrants at the date of grant was estimated using the Black-Scholes option pricing model. The expected volatility is based upon historical volatility of the Company's stock. The expected term for the options is based upon observation of actual time elapsed between date of grant and exercise of options for all employees. The expected term for the warrants is based upon the contractual term of the warrants.

The range of assumptions made in calculating the fair values of stock options and warrants was as follow:

	Stock Options		Warrants	
	Year Ended December 31,		Year Ended December 31,	
	2013	2012	2013	2012
Expected term - minimum (in years)	1	2	2	2
Expected term - maximum (in years)	10	10	5	5
Expected volatility - minimum	61%	73%	73%	76%
Expected volatility - maximum	79%	84%	79%	83%
Expected dividend yield	—	—	—	—
Risk-free interest rate - minimum	0.13%	0.28%	0.32%	0.27%
Risk-free interest rate - maximum	2.67%	1.99%	1.73%	0.88%

Note 14 – Income Taxes

The provision (benefit) for income taxes is based on loss from operations before provision for income taxes and noncontrolling interests as follows ($ in thousands):

	Years Ended December 31,	
	2,013	2012
United States	$ (38,705.2)	$ (36,276.9)
	$ (38,705.2)	$ (36,276.9)

The provision (benefit) for income taxes was as follows ($ in thousands):

	Years Ended December 31,	
	2013	2012
Current		
US Federal	$ —	$ —
State and local	—	—
	$ —	$ —
Deferred		
US Federal	$ 476.9	$ —
State and local	303.2	(175.5)
	$ 780.1	$ (175.5)
Total		
US Federal	$ 476.9	$ —
State and local	303.2	(175.5)
	$ 780.1	$ (175.5)

The provision (benefit) for income taxes is determined by applying the U.S. Federal statutory rate of 34% to income before income taxes as a result of the following ($ in thousands):

	Years Ended December 31,	
	2013	2012
U.S. Federal benefit at statutory rate	(13,159.8)	(12,334.1)
State and local benefit net of U.S. federal tax	(3,430.9)	(2,154.1)
Permanent non deductible expenses for U.S. taxes	1,798.2	(2,781.4)
True-up of prior year net operating loss	(91.4)	321.6
Return to actual	(3,822.9)	(384.8)
Foreign earnings not permanently reinvested	—	(1,810.3)
Effect of change in deferred tax rate	(1,094.8)	525.7
Valuation allowance for deferred tax assets	20,581.7	18,441.9
Tax provision	$ 780.1	$ (175.5)

Deferred income taxes at December 31, 2013 and 2012 consist of the following ($ in thousands):

	December 31,	
	2013	2012
Deferred Tax Assets:		
Accumulated net operating losses (tax effected)	$ 43,334.8	$ 25,727.7
Deferred revenue	10.5	23.1
Contingent accounts payable	13.6	15.2
Share-based compensation	7,971.9	5,466.7
Intangibles	704.6	287.3
Accumulated depreciation	—	348.7
Charitable contributions	414.9	391.8
Bad debt provision	304.3	239.7
Capital loss carry-forward	7,036.8	6,644.5
Deferred tax assets prior to tax credit carryovers	59,791.4	39,144.7
Deferred Tax Liabilities:		
Accumulated depreciation	$ (64.8)	$ —
Intangible and indefinite lived assets	(4,379.2)	(3,599.1)
Deferred tax liabilities	(4,444)	(3,599.1)
	55,347.4	35,545.6
Valuation reserve	(59,726.6)	(39,144.7)
Net deferred tax liability	$ (4,379.2)	$ (3,599.1)

In assessing the realizability of deferred tax assets, including the net operating loss carryforwards ("NOLs"), the Company assesses the available positive and negative evidence to estimate if sufficient future taxable income will be generated to utilize its existing deferred tax assets. Based on its assessment, the Company has provided a full valuation allowance against its net deferred tax assets as their future utilization remains uncertain at this time.

As of December 31, 2013 and 2012, the Company had approximately $110.6 million and $77.1 million, respectively of Federal NOLs available to offset future taxable income expiring from 2025 through 2033. In accordance with Section 382 of the Internal Revenue code, the usage of the Company's NOLs could be limited in the event of a change in ownership. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the period when those temporary differences become deductible. If a change of ownership did occur there would be an annual limitation on the usage of the Company's losses which are available through 2032.

As of December 31, 2013, management does not believe the Company has any material uncertain tax positions that would require it to measure and reflect the potential lack of sustainability of a position on audit in its financial statements. The Company will continue to evaluate its uncertain tax positions in future periods to determine if measurement and recognition in its financial statements is necessary. The Company does not believe there will be any material changes in its unrecognized tax positions over the next year.

Note 15 – Discontinued Operations

Regenerative Medicine - China segment

In 2009, the Company operated its Regenerative Medicine-China business in the People's Republic of China ("China" or "PRC") through its subsidiary, a wholly foreign owned entity ("WFOE") and entered into contractual arrangements with certain variable interest entities ("VIEs"). Foreign companies have commonly used VIE structures to operate in the PRC, and while such structures are not uncommon, recently they have drawn greater scrutiny from the local Chinese business community in the PRC who have urged the PRC State Council to clamp down on these structures. In addition, in December 2011, China's Ministry of Health announced its intention to more tightly regulate stem cell clinical trials and stem cell therapeutic treatments in the PRC, which has created uncertainty regarding the ultimate regulatory environment in the PRC. Accordingly, the Company took steps to restrict, and ultimately eliminate, its regenerative medicine business in the PRC. As a result of these steps, the Company has discontinued its operations in its Regenerative Medicine-China business. The Company has determined that any liability arising

from the activities of the WFOE and the VIEs will likely be limited to the net assets currently held by each entity. As of March 31, 2012, the Company recognized the following loss on exit of the Regenerative Medicine-China business (in thousands):

Cash	$ 195.1
Prepaid expenses and other current assets	14.9
Property, plant and equipment, net	1,023.7
Other Assets	330.5
Accounts payable	(177.1)
Accrued liabilities	(79.2)
Accumulated comprehensive income	(169.9)
Loss on exit of segment	$ 1,138.0

The operations and cash flows of the Regenerative Medicine - China business were eliminated from ongoing operations as a result of our exit decision, and the Company will not have continuing involvement in this business going forward. The operating results of the Regenerative Medicine – China business for the year ended December 31, 2012, which are included in discontinued operations, were as follows (in thousands):

	Year Ended December 31, 2012
Revenue	$ 52.3
Cost of revenues	(30.6)
Research and development	(103.3)
Selling, general, and administrative	(497.3)
Other income (expense)	(6.8)
Loss on exit of segment	(1,138.0)
Loss from discontinued operations	$ (1,723.7)

Pharmaceutical Manufacturing - China segment

On November 13, 2012, the Company completed the divestiture (the "Erye Sale") of our 51% interest (the "Erye Interest") in Suzhou Erye Pharmaceuticals Company Ltd., a Sino-foreign equity joint venture with limited liability organized under the laws of the PRC primarily engaged in the manufacture of generic antibiotics ("Erye"), to Suzhou Erye Economy & Trading Co., Ltd., a limited liability company organized under the laws of the PRC ("EET"), and Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands ("Highacheive" and together with EET, each a "Purchaser" and collectively the "Purchasers"). The Erye Sale was consummated pursuant to the terms and conditions of the Equity Purchase Agreement, dated as of June 18, 2012 (as amended, the "Equity Purchase Agreement"), by and among our Company, China Biopharmaceuticals Holdings, Inc., a Delaware corporation and a wholly-owned subsidiary of NeoStem ("CBH"), EET, Highacheive, Fullbright Finance Limited, a limited liability company organized under the laws of the British Virgin Islands ("Fullbright"), and Erye. Pursuant to the Equity Purchase Agreement, the aggregate purchase price paid to the Company by the Purchasers for the Erye Interest consisted of (i) approximately $12.3 million in cash, (ii) the return to the Company of 104,000 shares of NeoStem common stock and (iii) the cancellation of 117,000 options and 64,000 warrants to purchase our common stock. The fair value of the shares was based on the Company's closing price on the date of sale, and was recorded as Treasury Stock in our balance sheet. The fair values of the canceled options and warrants were based on the Black-Scholes values on the date of sale, and were recorded against Additional Paid in Capital in the accompanying balance sheet. The Company recognized the following loss on the date of sale of its 51% interest in Erye (in thousands):

Fair value of consideration received	$	13,397.9
Carrying value of segment non-controlling interest		6,015.0
Carrying value of segment accumulated comprehensive income		4,387.4
	$	23,800.3
Less carrying amount of assets and liabilities sold:		
Cash	$	8,457.5
Restricted Cash		2,918.1
Accounts Receivable		6,130.2
Inventories		15,077.7
Prepaid expenses and other current assets		957.8
Property, plant and equipment, net		38,102.0
Other assets		5,946.3
Accounts payable		(9,604.8)
Accrued liabilities		(2,008.8)
Bank loans		(15,133.5)
Notes payable		(6,599.3)
Other liabilities		(9,166.8)
Amount due related party		(7,859.7)
	$	27,216.7
Loss on exit of segment	$	(3,416.4)

The operations and cash flows of the Pharmaceutical Manufacturing - China business were eliminated from ongoing operations with the sale of the Company's Erye Interest. The operating results of the Pharmaceutical Manufacturing - China business for the year ended December 31, 2012, which are included in discontinued operations, were as follows (in thousands):

	Year Ended December 31, 2012
Revenue	$ 61,703.1
Cost of revenues	(40,245.2)
Research and development	(1,836.4)
Selling, general, and administrative	(10,740.0)
Other expense	(1,045.2)
Provision for income taxes	(1,794.1)
Asset impairments	(31,170.1)
Loss on sale of segment	(3,416.4)
Loss from discontinued operations	$ (28,544.3)

Note 16 – Related Party Transactions

On November 13, 2012, we and our subsidiary, CBH, sold our 51% ownership interest in Erye to Fullbright and EET (see Note 15). EET was prior to the sale the holder of the minority 49% ownership interest in Erye, and was a party along with our subsidiary CBH to the Joint Venture Agreement which had governed the ownership of the respective interests in Erye. Fullbright is an affiliate of EET. Mr. Shi Mingsheng (a former member of our Board of Directors, and Chairman of the Board of Erye) and Madam Zhang Jian (the General Manager of Erye, and formerly our Vice President of Pharmaceutical Operations) are the principal equity holders of each of EET and Fullbright. Fullbright assigned all its rights and obligations under the Equity Purchase Agreement (except for its obligations in respect of the return of certain NeoStem securities held by it as part of the purchase price, and its

obligations in respect of closing deliverables) to Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands and an affiliate of Fullbright ("Highacheive"). As a result of the assignment, the Purchasers of our Erye Interest were EET and Highacheive.

In December 2013, the Company modified both the First Mortgage and Second Mortgage with TD Bank, N.A. (see Note 10). Pursuant to the Loan Modifications, Andrew L. Pecora, M.D., Regional Cancer Care Associates LLC (Dr. Pecora's medical practice), and certain partners in such practice, have been released as guarantors of the Second Mortgage Loan, and NeoStem has become a guarantor of the Loans pursuant to a Guaranty of Payment delivered by NeoStem to the Lender. Dr. Pecora, currently currently serves as a NeoStem director, NeoStem's Chief Visionary Officer, PCT's Chief Medical Officer and Amorcyte's Chief Scientific Officer.

Note 17 – Commitments and Contingencies

Lease Commitments

The Company leases offices, of which certain have escalation clauses and renewal options, and also leases equipment under certain noncancelable operating leases that expire from time to time through 2017. In August 2012, the Company signed a new lease for a larger space at its current executive offices at 420 Lexington Avenue, New York, NY 10170. The new lease is believed to provide sufficient space for the near future. The lease term began in September 2012 and shall extend through June 2015. The base monthly rent, which includes storage space, averages approximately $27,000 per month, with subleases that will aggregate approximately $7,500 per month. This property is used as the Company's corporate headquarters.

A summary of future minimum rental payments required under operating leases that have initial or remaining terms in excess of one year as of December 31, 2013 are as follows (in thousands):

Years ended	Operating Leases
2014	$ 1,004.0
2015	829.9
2016	671.8
2017	383.4
2018	5.9
Total minimum lease payments	$ 2,895.0

Expense incurred under operating leases was approximately $1.1 million and $1.5 million for the year ended December 31, 2013 and 2012, respectively.

Contingencies

Under license agreements with third parties the Company is typically required to pay maintenance fees, make milestone payments and/or pay other fees and expenses and pay royalties upon commercialization of products. The Company also sponsors research at various academic institutions, which research agreements generally provide us with an option to license new technology discovered during the course of the sponsored research.

Note 18 – Subsequent Events

Common Stock Issuance

Pursuant to the Purchase Agreement with Aspire (see Note 12), from January 1, 2014 through March 7, 2014, Aspire has purchased 0.8 million shares of the Company's common stock for an aggregate consideration of approximately $5.6 million.

Option and Warrant Exercises

Subsequent to December 31, 2013, warrant holders exercised an aggregate of 250,000 warrants at an exercise price of $5.10 per share for gross proceeds of approximately $1.3 million, and option holders exercised an aggregate of 4,800 options at an exercise price of $6.20 per share for gross proceeds of approximately $0.03 million.

2014 Aspire Agreement

On March 10, 2014, the Company entered into a Common Stock Purchase Agreement with Aspire, whereby Aspire is committed to purchase up to an aggregate of $30.0 million of shares of NeoStem common stock over a 24-month term.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE.

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES.

Disclosure Controls and Procedures

Disclosure controls and procedures are the Company's controls and other procedures that are designed to ensure that information required to be disclosed in the reports that the Company files or submits under the Securities Exchange Act of 1934 (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934), as amended (the "Exchange Act") is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports that the Company files under the Exchange Act is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Due to the inherent limitations of control systems, not all misstatements may be detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. Controls and procedures can only provide reasonable, not absolute, assurance that the above objectives have been met.

As of December 31, 2013, the Company carried out an evaluation, with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective, at the reasonable assurance level, in ensuring that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Internal Control Over Financial Reporting

Management's Annual Report on Internal Control Over Financial Reporting

The management of NeoStem, Inc. and its subsidiaries (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934.

The Company's internal control over financial reporting is a process designed 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 and includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and the board of directors of the Company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in conditions or because of declines in the degree of compliance with policies or procedures.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2013. In making this assessment, the Company's management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework (1992)*.

As of December 31, 2013, based on management's assessment, the Company's internal control over financial reporting was effective.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting that occurred during the quarter ended December 31, 2013 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Attestation Report of the Registered Public Accounting Firm

Our independent registered public accounting firm, Grant Thornton LLP, audited our internal control over financial reporting as of December 31, 2013. Their attestation report, dated March 13, 2014 and which appears below, expressed an unqualified opinion on our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
NeoStem, Inc.

We have audited the internal control over financial reporting of NeoStem, Inc. (a Delaware corporation) and subsidiaries (the "Company") as of December 31, 2013, based on criteria established in the 1992 *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2013, based on criteria established in the 1992 *Internal Control-Integrated Framework* issued by COSO.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements of the Company as of and for the year ended December 31, 2013, and our report dated March 13, 2014 expressed an unqualified opinion on those financial statements.

/s/ GRANT THORNTON LLP

New York, New York
March 13, 2014

ITEM 9B. OTHER INFORMATION.

Common Stock Purchase Agreement

On March 10, 2014, the Company entered into a Common Stock Purchase Agreement (the "2014 Purchase Agreement") with Aspire Capital Fund, LLC, ("Aspire Capital"), pursuant to which Aspire Capital is committed to purchase up to an aggregate of $30.0 million of shares of NeoStem common stock (the "Purchase Shares"). The Company and Aspire Capital were parties to a previous Common Stock Purchase Agreement, dated as of September 28, 2011, as amended August 23, 2012 (the "2011 Purchase Agreement"), which terminated pursuant to its terms in January 2014 upon the sale of the full $20 million of common stock issuable thereunder.

Summary of terms of 2014 Purchase Agreement

On any business day after the Commencement Date (as defined below) and over the 24-month term of the 2014 Purchase Agreement, the Company has the right, in its sole discretion, to present Aspire Capital with a purchase notice (each, a "Purchase Notice") directing Aspire Capital to purchase up to 50,000 Purchase Shares per business day; however, no sale pursuant to such a Purchase Notice may exceed five hundred thousand dollars ($500,000) per business day, unless the Company and Aspire Capital mutually agree. The Company and Aspire Capital also may mutually agree to increase the number of shares that may be sold to as much as an additional 2,000,000 Purchase Shares per business day. The purchase price per Purchase Share pursuant to such Purchase Notice (the "Purchase Price") is the lower of (i) the lowest sale price for the NeoStem common stock on the date of sale or (ii) the average of the three lowest closing sale prices for the NeoStem common stock during the 12 consecutive business days ending on the business day immediately preceding the purchase date. The applicable Purchase Price will be determined prior to delivery of any Purchase Notice.

In addition, on any date on which the Company submits a Purchase Notice to Aspire Capital for at least 50,000 Purchase Shares, the Company also has the right, in its sole discretion, to present Aspire Capital with a volume-weighted average price purchase notice (each, a "VWAP Purchase Notice") directing Aspire Capital to purchase an amount of NeoStem common stock equal to up to 30% of the aggregate shares of common stock traded on the next business day (the "VWAP Purchase Date"), subject to a maximum number of shares determined by the Company (the "VWAP Purchase Share Volume Maximum"). The purchase price per Purchase Share pursuant to such VWAP Purchase Notice (the "VWAP Purchase Price") shall be 95% of the volume weighted average price for NeoStem common stock traded on (i) the VWAP Purchase Date if the aggregate shares to be purchased on that date does not exceed the VWAP Purchase Share Volume Maximum, or (ii) the portion of such business day until such time as the aggregate shares to be purchased will equal the VWAP Purchase Share Volume Maximum. Further, if on the VWAP Purchase Date the sale price of NeoStem common stock falls below the greater of (i) 80% of the closing price of NeoStem common stock on the business day immediately preceding the VWAP Purchase Date or (ii) the price set by the Company in the VWAP Purchase Notice (the "VWAP Minimum Price Threshold"), the VWAP Purchase Amount will be determined using the percentage in the VWAP Purchase Notice of the total shares traded for such portion of the VWAP Purchase Date prior to the time that the sale price of NeoStem common stock fell below the VWAP Minimum Price Threshold and the VWAP Purchase Price will be 95% of the volume weighted average price of our common stock sold during such portion of the VWAP Purchase Date prior to the time that the sale price of our common stock fell below the VWAP Minimum Price Threshold.

The number of Purchase Shares covered by and timing of each Purchase Notice or VWAP Purchase Notice are determined at the Company's discretion. The aggregate number of shares that the Company can sell to Aspire Capital under the 2014 Purchase Agreement may in no case exceed 5,687,942 shares of our common stock (which is equal to approximately 19.9% of the common stock outstanding on the date of the 2014 Purchase Agreement, including the 150,000 shares of the Company's common stock (the "Commitment Shares") to be issued to Aspire Capital in consideration for entering into the 2014 Purchase Agreement) (the "Exchange Cap"), unless (i) shareholder approval is obtained to issue more, in which case the Exchange Cap will not apply, or (ii) stockholder approval has not been obtained and at any time the Exchange Cap is reached and at all times thereafter the average price paid for all shares issued under the 2014 Purchase Agreement (including the Commitment Shares) is equal to or greater than $7.22 (the "Minimum Price"), a price equal to the closing sale price of the Company's common stock on the date of the 2014 Purchase Agreement; provided that at no time shall Aspire Capital (together with its affiliates) beneficially own more than 19.9% of the Company's common stock.

The 2014 Purchase Agreement contains customary representations, warranties, covenants, closing conditions and indemnification and termination provisions. Sales under the 2014 Purchase Agreement may commence only after certain conditions have been satisfied (the date on which all requisite conditions have been satisfied being referred to as the "Commencement Date"), which conditions include the delivery to Aspire Capital of a prospectus supplement covering the Commitment Shares and the Purchase Shares, approval for listing on Nasdaq of the Purchase Shares and the Commitment

Shares, the issuance of the Commitment Shares to Aspire Capital, and the receipt by Aspire Capital of a customary opinion of counsel and other certificates and closing documents. Either party shall have the option to terminate the 2014 Purchase Agreement in the event the Commencement Date has not occurred by July 31, 2014. The 2014 Purchase Agreement may be terminated by the Company at any time, at its discretion, without any cost or penalty.

The Company's net proceeds will depend on the Purchase Price, the VWAP Purchase Price and the frequency of the Company's sales of Purchase Shares to Aspire Capital; subject to the maximum $30.0 million available amount. The Company's delivery of Purchase Notices and VWAP Purchase Notices will be made subject to market conditions, in light of the Company's capital needs from time to time. The Company expects to use proceeds from sales of Purchase Shares for general corporate purposes and working capital requirements.

Registration Rights

In connection with the 2014 Purchase Agreement, the Company also entered into a Registration Rights Agreement (the "Registration Rights Agreement") with Aspire Capital, dated March 10, 2014. The Registration Rights Agreement provides, among other things, that the Company will register the sale of the Commitment Shares and the Purchase Shares to Aspire Capital pursuant to the Company's existing shelf registration statement or a new registration statement (the "Registration Statement"). The Company further agreed to keep the Registration Statement effective and to indemnify Aspire Capital for certain liabilities in connection with the sale of the Securities under the terms of the Registration Rights Agreement.

The foregoing descriptions of the 2014 Purchase Agreement and the Registration Rights Agreement are not complete and are qualified by reference to the full text of such documents, copies of which are filed as Exhibits 10.10 and 4.18, respectively, to this Annual Report on Form 10-K and are incorporated herein by reference. The representations and warranties contained in the 2014 Purchase Agreement, which are qualified by the disclosure schedules thereto, are solely for the purpose of allocating contractual risk between the parties, are not for the benefit of any party other than the parties to such agreements and are not intended as documents for investors and the public to obtain factual information about the current state of affairs of the parties thereto. Rather, investors and the public should look to other disclosures contained in the Company's filings with the SEC.

Employment Agreement Letter Amendments

On February 21, 2014 each of Dr. Robin Smith, the Company's Chairman and CEO and Catherine Vaczy, the Company's General Counsel, entered into a letter agreement confirming their respective current base salaries as approved by the Compensation Committee of $545,000 and $296,000.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

DIRECTORS

The following table sets forth certain information about the current directors of our Company. Directors are elected to hold office until the next annual meeting of stockholders and until their successors are elected and qualified. There are no family relationships among any of our directors and executive officers. For biographical information regarding our directors, see the discussion under "Biographical Information — Directors," below.

Name	Age	Director Since
Robin L. Smith, M.D.(1)	49	2006
Richard Berman	71	2006
Steven S. Myers	67	2006
Eric H.C. Wei	57	2009
Drew Bernstein	56	2009
Andrew Pecora, M.D., FACP(2)	56	2011
Martyn D. Greenacre	72	2011

(1) Since 2006, Dr. Smith has also served as Chief Executive Officer and Chairman of the Board.

(2) Our Company's acquisition of Progenitor Cell Therapy, LLC ("PCT") closed on January 19, 2011 (the "PCT Merger") pursuant to an Agreement and Plan of Merger dated September 23, 2010 (the "PCT Merger Agreement"). Since the PCT Merger, Dr. Pecora also serves as Chief Medical Officer of PCT and since August 5, 2013, the Company's Chief Visionary Officer. Additionally, he serves as Chief Scientific Officer of our subsidiary Amorcyte, LLC ("Amorcyte"), which we acquired on October 17, 2011 (the "Amorcyte Merger") pursuant to an Agreement and Plan of Merger dated as of July 13, 2011 (the "Amorcyte Merger Agreement").

EXECUTIVE OFFICERS AND OTHER KEY OFFICERS

The following table sets forth certain information about the current executive officers and other key officers of our Company. There are no family relationships among any of our directors and executive officers. For biographical information regarding our executive officers, see the discussion under "Biographical Information — Executive and Key Officers," below.

Name	Age	Position
Robin L. Smith, M.D.(1)	49	Chief Executive Officer and Chairman of the Board
Stephen W. Potter (1) (2)	57	Executive Vice President
Andrew L. Pecora, M.D., F.A.C.P.(1)	56	Chief Visionary Officer of NeoStem, Chief Medical Officer of PCT and Chief Scientific Officer of Amorcyte
Robert A. Preti, PhD. (1)	57	President and Chief Scientific Officer of PCT
Robert Dickey IV(1)(3)	58	Chief Financial Officer
Catherine M. Vaczy (1)	52	General Counsel
Joseph Talamo (1)	45	Vice President, Corporate Controller and Chief Accounting Officer
Douglas Losordo (1)	56	Chief Medical Officer
David Schloss	55	Vice President, Human Resources

(1) Executive Officer

(2) Effective July 15, 2013, Mr. Potter was appointed to serve as the Company's Executive Vice President. Prior to his appointment as the Company's Executive Vice President, Mr. Potter had served from February 11, 2013 until July 15, 2013 as a member of the Company's Board of Directors and as a member of the Board's Nominating and Governance Committee. He resigned from the Board upon becoming Executive Vice President.

(3) Effective August 19, 2013, Robert Dickey IV, was appointed to serve as Chief Financial Officer of the Company.

BIOGRAPHICAL INFORMATION

Background on Director Qualifications

We believe that the Company is best served by having a mix of leadership personnel from our largest stockholder (Mr. Wei from RimAsia), members of our executive leadership team (Dr. Smith and Dr. Pecora) and industry experts (Dr. Pecora, Mr. Greenacre and Dr. Smith). Given that we are a growth stage company, we also believe it is important to have directors with experience in finance and strategic transactions (Messrs. Bernstein, Berman, Myers, Greenacre and Wei).

All Board members are expected to possess certain personal characteristics necessary to creating a functional Board: high personal and professional ethics, integrity and values; practical wisdom and mature judgment; an inquisitive and objective perspective; professional experience at a policy-making level in business or medicine; time availability for in-person participation at Board and committee meetings; and a commitment to representing the long-term interests of our stockholders. We look for a range of professional backgrounds including senior management operational experience, accounting and finance capabilities, deep industry-related experience, business development leadership, and medical and scientific proficiencies.

Directors

Robin L. Smith, M.D.

Dr. Robin L. Smith became the Chief Executive Officer and Chairman of the Board of NeoStem effective June 2, 2006, after first joining the Company as Chairman of our Advisory Board in September 2005. Dr. Smith's expertise in business development and medicine includes her extensive and diversified experience serving in executive and board level capacities for various medical enterprises and healthcare-based entities. Under Dr. Smith's leadership, NeoStem has successfully completed five acquisitions, one divestiture and has raised over 180 million dollars for research and development, expansion of business units, and strategic transactions. NeoStem ranked number one (for the second year in a row) in the Tri-State region and number 11 nationally on Deloitte's 2013 Technology Fast 500™, a ranking of the 500 fastest growing technology, media, telecommunications, life sciences and clean technology companies in North America. In 2010, NeoStem was awarded the New Economy "Best Stem Cell Company" award .

Dr. Smith has an extensive and diversified background in health care, sales and marketing, business development and management. From 2000 to 2003, Dr. Smith served as President & Chief Executive Officer of IP2M, a multi-platform media company specializing in healthcare. During her term, the company was selected as being one of the 10 fastest growing technology companies in Houston. IP2M was sold to a publicly-traded company in February 2003. Previously, from 1998 to 2000, she was Executive Vice President and Chief Medical Officer for HealthHelp, Inc., a National Radiology Management company that managed a large percentage of the healthcare dollars spent by large insurance companies. Dr. Smith has acted as a senior advisor to, and investor in, both publicly traded and privately held companies where she has played a significant role in restructuring and/or growing such businesses.

Dr. Smith has extensive experience serving in executive and board level capacities for various medical enterprises and healthcare-based entities. She currently serves on the board of trustees of the NYU Langone Medical Center, and is past Chairman of the Board for the New York University Hospital for Joint Diseases where she headed up new development efforts and board member recruitment. Currently, Dr. Smith is the President and Chairman of The Stem for Life Foundation, a non-profit entity that seeks to raise public awareness of adult stem cell therapies and their therapeutic application. She also serves on the Board of Directors of the Science and Faith STOQ Foundation in Rome, as well as on the Capital Formation Committee of the Alliance for Regenerative Medicine.

Dr. Smith received her M.D. degree from Yale University in 1992 and was presented with the Janet M. Glasgow Memorial Achievement Citation awarded by the American Medical Women's Association to women who graduate first in their class from medical school. She was also elected to Alpha Omega Alpha and chosen to be a Farr Scholar. She received her M.B.A. degree from the Wharton School of Business in the top 10% of her class in 1997. The Board of Directors concluded that Dr. Smith should continue serving as a director based upon her expertise in business development and medicine, including her extensive and diversified experience serving in executive and board capacities in medical enterprises and healthcare-based entities, and her leadership of the Company over the past seven plus years.

Richard Berman

Richard Berman, who joined NeoStem's Board of Directors in November 2006, currently serves as Chairman of the Compensation Committee and a member of the Audit Committee. He previously served as Chairman of the Audit Committee until March 2009, and as a member of the Nominating and Governance Committee until February 2013. Mr. Berman's business career consists of more than 35 years of venture capital, management and merger and acquisitions experience. He currently serves as a director of two other public companies: Advaxis, Inc. (OTC: NIVM.OB), and Lustros, Inc. (OTC: LSLD), and has served as a director and/or officer of more than a dozen public and private companies. His previous experience includes positions at Goldman Sachs and as Senior Vice President of Bankers Trust Company. Some of his more notable positions include his service from 2006-2011 as Chairman of National Investment Managers (OTC: NIVM.OB), a company with $12 billion in pension administration assets. In 2012, he became vice chairman of Energy Smart Resources, Inc., a privately-held company. From 2004-2010, Mr. Berman served as a Director of NexMed Inc., a public biotech company. In 2008, Mr. Berman became as Chairman and CEO . In 2010 he merged the company with Apricus Biosciences. From 1998 to 2000, Mr. Berman was Chairman and CEO of Internet Commerce Corporation (now Easylink Services (NASDAQ: ESIC)), and thereafter, Chairman until 2001. Mr. Berman arranged the company's acquisition of Easylink Services International in 2007. The company was sold for more than $300 million in 2012, and he stayed on as lead director and a member of all three committees. He served as CEO of Prestolite Battery Company of Canada from 1984-1992, and in 1991 he was responsible for creating the largest battery company in the world by merging Prestolite with General Battery and Exide to form Exide Technologies (OTC: XIDEQ), an $800 million company. In 1992 he managed the company's IPO.

Mr. Berman is a past director of the Stern School of Business of NYU, where he received his B.S. and M.B.A. He also holds two law degrees, a J.D. from Boston College and a Special Certificate from The Hague Academy of International Law. The Board of Directors concluded that Mr. Berman should continue serving as a director based upon his financial and business expertise, including his background in biotechnology, international management and banking, and his extensive experience as a director in the public company context.

Steven S. Myers

Steven S. Myers joined our Board of Directors in November 2006 and serves on the Compensation Committee and Audit Committee and chairs the Nominating and Governance Committee. Mr. Myers is the founder, and until his retirement in March 2007 was the Chairman and CEO, of SM&A (Nasdaq:WINS), the world's leading provider of Competition Management Services. SM&A helps businesses win structured competitive procurements and design successful transitions from proposals to programs. Since 1982, SM&A has managed over 1,000 proposals worth more than $340 billion for its clients. SM&A routinely supports clients such as Boeing, Lockheed Martin, Accenture, Raytheon, Northrop Grumman, Motorola, and other Fortune 500 companies. SM&A was publicly traded until 2008.

Mr. Myers graduated from Stanford University with a B.S. in Mathematics and had a successful career in the aerospace and defense sector supporting Department of Defense and NASA programs before founding SM&A. He has a strong technical background in systems engineering and program management. Mr. Myers is also founder, President and CEO of Dolphin Capital Holdings, Inc, which owns, operates and leases business jet aircraft and does private equity investing in innovative enterprises. A serial entrepreneur, Mr. Myers has spearheaded a number of business innovations in aerospace & defense and in business aviation. He is a highly accomplished aviator. The Board of Directors concluded that Mr. Myers should continue serving as a director based upon his technical background and diversified entrepreneurial and business expertise, including his having established and managed innovative enterprises (in the areas of proposal development for competitive procurements, aircraft leasing and private equity investment), together with his technical experience in the aerospace and defense sector.

Drew Bernstein

Drew Bernstein was appointed to our Board of Directors on June 9, 2009. Mr. Bernstein served as Chairman of the Audit Committee. The Board of Directors has determined that Mr. Bernstein qualifies as an "audit committee financial expert" as defined in applicable SEC rules. Mr. Bernstein also serves as a member of our Compensation Committee.

In 1983, Mr. Bernstein co-founded Bernstein & Pinchuk LLP, now the managing member of Marcum Bernstein & Pinchuk (MarcumBP), a PCAOB-registered accounting firm headquartered in New York. Marcum is ranked within the top 15 firms by Inside Public Accounting and Accounting Today and the combined firm is one of the largest middle market accounting firms servicing China-based, US publicly traded companies. Mr. Bernstein's early recognition of the global marketplace and his extensive work in the People's Republic of China resulted in the rapid expansion of his firm's services to that nation, where he has established local offices in Beijing, Shanghai, Hangzhou and Guangzhou, with coordinated services throughout the world. These offices are staffed with over 75 highly experienced SEC personnel dedicated to providing our clients services including audits and assurance, due diligence and transaction advisory. MarcumBP currently represents over 50 Chinese companies and

many of the first and second tier investment banks. In addition, Mr. Bernstein's diverse experience in retail, manufacturing, hospitality, pharmaceutical, professional practices, and real estate have contributed to the growth of the firm's client base abroad. Mr. Bernstein serves as an accountant and business adviser worldwide, providing specialized auditing and accounting services to public and non-public companies throughout the United States, Chine, Europe, and Africa.

Mr. Bernstein also serves as independent director and audit committee chair for Orient Paper, Inc. (NYSE: ONP) and is a frequent speaker at industry, investment banking and university conferences. He is an active member of the board of directors and an officer of a prestigious foundation that was honored with the President's Voluntary Action Award by the late President Ronald Reagan.

Mr. Bernstein received his B.S. degree from the University of Maryland Business School. He is licensed in the State of New York and other states and is a member of the AICPA, the NYSSCPA and the NSA. The Board of Directors concluded that Mr. Bernstein should continue serving as a director based upon his diversified financial, accounting and business expertise, including his extensive background in accounting and auditing services and his knowledge of the global marketplace.

Eric H.C. Wei

Pursuant to the terms of the agreement governing our acquisition our former Erye subsidiary, Eric H.C. Wei was appointed to the NeoStem Board of Directors upon the consummation of the Erye Merger in October 2009. From July 2006 to Mark 2007, Mr. Wei served as a director of CBH . Eric H.C. Wei is one of the founders and the Managing Partner of RimAsia Capital Partners, L.P. a private equity firm focused on the pan-Asian mid-market sector and a greater-than-5% stockholder of NeoStem. Prior to establishing RimAsia in January of 2005, Mr. Wei was a managing director of Gilbert Global Equity Partners, a US$1.2 billion global private equity fund; a founding partner of Crimson Asia Capital Partners, a US$435 million Asian private equity program; a founder and investment committee member of the US$800 million Asian Infrastructure Fund, and an investor and director of The Asian MBO Fund. Mr. Wei has also previously been an investment banker with over 10 years of experience at Peregrine Capital, Prudential Securities, Lazard Freres and Citibank. Mr. Wei received a Bachelor of Science degree in Math and Economics from Amherst College and a Master of Business Administration degree from the Wharton Graduate School of Management at the University of Pennsylvania. The Board of Directors concluded that Mr. Wei should continue serving as a director based upon his diversified financial and business expertise, including his background in investment banking, his extensive experience in managing private equity funds, and his familiarity with the pan-Asian mid-market sector.

Andrew L. Pecora, M.D., F.A.C.P.

Andrew L. Pecora, M.D., F.A.C.P. was appointed to our Board of Directors on December 8, 2011. Dr. Pecora is co-founder and past Chairman and Chief Executive Officer of Progenitor Cell Therapy, LLC ("PCT"), which is a subsidiary of the Company. Dr. Pecora has served as NeoStem's Chief Visionary Officer since August 5, 2013 and as PCT's Chief Medical Officer since January 19, 2011 following the Company's acquisition of PCT. Previously, Dr. Pecora served as NeoStem's Chief Medical Officer from August 2011 to August 2013. Prior to the acquisition, Dr. Pecora had served from 1999 to 2011 as Chairman, Chief Executive Officer and Chief Medical Officer of PCT, and as a member of PCT's Board of Managers. Dr. Pecora is also Chief Scientific Officer of Amorcyte, Inc. ("Amorcyte"), a subsidiary of the Company acquired in October 2011, and held such position prior to the acquisition. Dr. Pecora served as the Chairman and Director of the John Theurer Cancer Center at Hackensack University Medical Center (HUMC) from 2001 to 2011, and commencing 2011 Dr. Pecora serves the John Theurer Cancer Center as Chief Innovations Officer, Professor and Vice President of Cancer Services. Since 1996 Dr. Pecora has been Co-Managing Partner of the Northern New Jersey Cancer Center, which is a private physicians practice group affiliated with HUMC. He has also been a Professor of Medicine at the University of Medicine and Dentistry of New Jersey since 2004. From 2004 to 2014 Dr. Pecora served on the board of Cancer Genetics, Inc. and is currently chairman of the board of Tetralogics, Inc., a company developing small molecules to treat cancer. Dr. Pecora brings a variety of business development and practical business skills to NeoStem. He has worked with numerous companies in developing their products and manages a large clinical practice and the cancer department at a major health care institution. Dr. Pecora also has significant experience in the design of clinical trials (Phase 1 to 3), institutional review board practices, conduct of clinical trials, clinical research, and payor relationships both domestically and on a global basis. Dr. Pecora received an M.D. from the University of Medicine and Dentistry of New Jersey, graduating with honors. He went on to complete his medical education in internal medicine at New York Hospital and in hematology and oncology at Memorial Sloan-Kettering Cancer Center, both in New York City. He is board certified in internal medicine, hematology, and oncology. Dr. Pecora's appointment to the NeoStem Board of Directors was a term of the Company's merger agreement with PCT which closed in January 2011. The Board of Directors has concluded that Dr. Pecora should continue serving as a director based on his diversified experience in healthcare, including his expertise in clinical trial design and product development, and his management experience.

Martyn D. Greenacre

Martyn D. Greenacre was appointed to our Board of Directors on December 8, 2011 and serves on the Audit Committee and Nominating and Governance Committee. Mr. Greenacre has served as Chairman of Life Mist Technologies, Inc. a privately-held fire suppression equipment company, since 2002. He previously was Chairman of the Board of BMP Sunstone Corporation, which was acquired by Sanofi-Aventis in February 2011. Mr. Greenacre also served as a director of Cephalon Inc., a biopharmaceutical company that was acquired by Teva Pharmaceutical Industries in October 2011, and Orchestra Therapeutics, an immuno-pharmaceutical company. He currently has the role of Chairman of the Board of Acusphere, Inc., a drug delivery company, and sits on the board of Curis, Inc., a biotechnology company. From 1997 to 2001, Mr. Greenacre served as Chief Executive Officer and director of Delsys Pharmaceutical Corporation, a formulation and drug delivery system company, where he helped raise more than $50 million in equity and partnership financing and formed three development partnerships with leading pharmaceutical companies. From 1993 to 1997, Mr. Greenacre served as President and Chief Executive Officer of Zynaxis Inc., a biopharmaceutical company, where he was responsible for a critical acquisition, divesting a non-performing business and negotiating a strategic merger. From 1989 to 1992, Mr. Greenacre was Chairman, Europe, SmithKline Beecham Pharmaceutical Company. He joined SmithKline & French in 1973, where he held positions of increasing responsibility in its European organization. Mr. Greenacre received a B.A. from Harvard College and an MBA from Harvard Business School. The Board of Directors has concluded that Mr. Greenacre should continue serving as a director based on his diversified board and management experience, particularly in the biotechnology field.

Executive Officers and Other Key Officers

Robin L. Smith, M.D.

See the discussion under “Biographical Information - Directors,” above.

Andrew L. Pecora, M.D., F.A.C.P.

See the discussion under “Biographical Information - Directors,” above.

Robert A. Preti, Ph.D

Pursuant to an employment agreement that became effective on January 19, 2011, Dr. Preti serves as President of PCT. Dr. Preti also serves as Chief Scientific Officer of PCT and Chief Scientific Officer of NeoStem. Prior to our acquisition of PCT, Dr. Preti had served from 1999 to 2011 as President and Chief Scientific Officer for PCT, and as a member of PCT's Board of Managers.

Dr. Preti was Scientific Director of Hackensack University Medical Center's stem cell laboratory from 1996 - 1999. Prior to that, he served as director at the Clinical Services Division of the New York Blood Center from 1989 to 1996. He is one of the country's leading authorities on cell engineering and the principal investigator for a number of clinical trials relating to stem cell transplantation. He was a founding member and Treasurer of the International Society for Hematotherapy and Graft Engineering and served for 10 years on its Executive Committee and Board of Directors. He is now representing Cellular Therapy as a Director of the American Association of Blood Banks. Dr. Preti has authored numerous papers in the field and has been invited to speak at national and international meetings relating to the manufacturing, regulatory and quality aspects of cell therapy and regenerative medicine. In addition to having served as an inspector for the Foundation for Accreditation of Cellular Therapy, Dr. Preti also serves on professional and state committees charged with the development of regulations for cellular therapy. Dr. Preti received his Doctor of Philosophy degree from New York University, graduating with distinction. During his tenure at NYU, Dr. Preti studied and received his degrees in Cellular Biology, with a specialty in hematology, studying erythropoiesis under the mentorship of Albert S. Gordon, PhD. Immediately following his graduate work, Dr. Preti joined Marrow Tech, Inc. (which later became Advanced Tissue Sciences) where he served as Group Leader in the development Marrow Tech's proprietary three-dimensional, matrix-based hematopoietic culture system for ex vivo expansion of bone marrow stem cells.

Stephen W. Potter

Stephen W. Potter was appointed the Company's Executive Vice President effective July 15, 2013. Prior to his appointment as our Executive Vice President, Mr. Potter had served from February 11, 2013 until July 15, 2013 as a member of Neostem's Board of Directors and Nominating and Governance Committee. He resigned from the Board upon becoming Executive Vice President. During 2011 and 2012, Mr. Potter served as Senior Vice President of Operations and Corporate Development for Osiris Therapeutics, Inc. During his tenure at Osiris, he worked as a member of the senior leadership that achieved approval of the first-

ever stem cell drug therapy, Prochymal®. He was also responsible for the launch and overall management of the Bio-Surgery business unit as well as operational oversight for multiple functional areas including manufacturing, human resources, IT, legal, and business development. Prior to his tenure at Osiris, from 2006 through 2010, Mr. Potter served as Senior Vice President of Corporate and Business Development at Genzyme Corporation and as Vice President of Corporate and Business Development from 2000 through 2006. Over his ten years at Genzyme, he was the senior leader for its global corporate and business development team that provided strategic and transaction support, including support for many of Genyzme's cell therapy opportunities. Mr. Potter has also held positions at DuPont Pharmaceuticals, E.I. Dupont de Nemours and Company, Inc., and Booz Allen & Hamilton. Mr. Potter earned a B.S. from University of Massachusetts and an MBA from Harvard Business School.

Robert Dickey IV

Mr. Dickey has served since August 19, 2013 as NeoStem's Chief Financial Officer. He has over 15 years of management experience at life sciences companies, including positions as a CFO, COO and CEO and board member, following a career as an investment banker. He has specific expertise in financing, M&A, partnering/licensing transactions and project management, as well as international experience. Prior to Mr. Dickey joining NeoStem, he served Hemispherx Biopharma, Inc. (NYSE MKT: HEB) as Senior Vice President from June 2009- 2013. Hemispherx is a publicly-traded company involved in immune-modulatory therapies that is developing treatments for chronic fatigue syndrome and influenza. Prior to Hemispherx from 2007-2008, Mr. Dickey was Senior Vice President, Chief Financial Officer and Business Unit Manager at StemCyte, Inc., an umbilical cord stem cell therapeutics company. Other management experience includes leadership positions at Protarga, Inc., a company developing cancer therapies, and Locus Pharmaceuticals, a company involved in computational drug design. Previously, he spent 18 years as an investment banker, 14 of those at Lehman Brothers, with a background split between M&A and capital markets transactions across a variety of industries. He earned an M.B.A from The Wharton School, University of Pennsylvania, and an A.B. from Princeton University.

Catherine M. Vaczy

Ms. Vaczy has served as the Company's Vice President, legal and General Counsel since 2005. Commencing in 2014, she serves as the Company's General Counsel. She is a senior business executive and counsel with over 20 years of leadership experience in the biotechnology industry. From 1997 to 2003, she held senior positions at ImClone Systems Incorporated, a publicly traded company developing a portfolio of targeted biologic treatments to address the medical needs of patients with a variety of cancers, most recently as its vice president, legal, and associate general counsel. While at ImClone, Ms. Vaczy served as a key advisor in the day-to-day operation of the company and helped forge a number of important strategic alliances, including a $1 billion co-development agreement for Erbitux®, the company’s targeted therapy approved for the treatment of metastatic colorectal and head and neck cancers. ImClone was acquired by Eli Lilly and Company (NYSE: LLY) in 2006. From 1988 through 1996, Ms. Vaczy served as a corporate attorney advising clients in the life science and technology sectors at the New York City law firm of Ross and Hardies. Ms. Vaczy serves on the board of trustees of The Stem for Life Foundation where she also oversees the Foundation’s Student Ambassador Program. She is a member of The Union League Club of New York and serves on its art committee. Ms. Vaczy received a B.A. degree from Boston College and a J.D. degree from St. John’s University School of Law.

Douglas Losordo, M.D.

Dr. Losordo was appointed Chief Medical Officer of the Company effective August 5, 2013. Dr. Losordo served from 2006 to 2013 as a member of the Scientific Advisory Board of NeoStem and since 2012, he has served on the Scientific Advisory Board of The Stem For Life Foundation, the public charity devoted to raising public awareness of adult stem cell therapies and supporting adult stem cell research, development and storage. Dr. Losordo is a leader in cell therapy research and a renowned cardiologist. Prior to his appointment as the Company’s Chief Medical Officer, Dr. Losordo served as Vice President, New Therapies Development, Regenerative Medicine and Baxter Ventures at Baxter International from October 2011 through February 2013. He is an adjunct professor of medicine at Northwestern University in Chicago, Illinois. From 2006 through 2011, Dr. Losordo was the director of the Feinberg Cardiovascular Research Institute and the Eileen M. Foell Professor of Heart Research at Northwestern University’s School of Medicine and director of the Program in Cardiovascular Regenerative Medicine at Northwestern Memorial Hospital. From 2004 through 2006, he was a Professor of Medicine at Tufts University School of Medicine and Chief of Cardiovascular Research at St. Elizabeth’s Medical Center in Boston. He is board-certified in internal medicine, cardiovascular disease, and interventional cardiology. Dr. Losordo’s major research interests encompass angiogenesis/vasculogenesis, progenitor/adult stem cells, tissue repair/regeneration, and vascular biology. He received his medical degree from the University of Vermont.

Dr. Losordo is well regarded for his career-long efforts to develop novel therapeutics and as a scientist he obtained over $35 million in National Institutes of Health funding, for discovering and developing new therapeutic concepts in the laboratory, providing the basis for clinical studies. He has led first in human studies in multiple gene and adult stem cell therapies in patients

with cardiovascular diseases, including therapies now in Phase 3 testing. He is a highly sought after speaker, having given over 200 international lectures. He is an associate editor of Circulation Research, the basic science journal of the American Heart Association and serves on the editorial boards of a number of scientific journals.

Joseph Talamo

Joseph Talamo has been NeoStem's Vice President, Corporate Controller and Chief Accounting Officer since June 2011. From 1996 to 2010, Mr. Talamo held various senior positions at OSI Pharmaceuticals, Inc. ("OSI"), a publicly-traded biopharmaceutical company focused on discovering, developing and commercializing products for the treatment of cancer, diabetes and obesity, and most recently served as its Vice President and Corporate Controller from 2006 to 2010 and its Corporate Controller from 2002 to 2006. While at OSI, Mr. Talamo helped build the accounting and finance infrastructure to support the clinical development and commercial launch of Tarceva®, OSI's targeted therapy approved for the treatment of patients with non-small cell lung cancer and pancreatic cancer. Prior to OSI, Mr. Talamo worked at Bristol-Myers Squibb from 1995 to 1996 in the Financial Reporting and Consolidations Group, and at KPMG from 1993 to 1995 in the Health Care and Life Sciences Audit Group. Mr. Talamo also serves as Treasurer of the Stem For Life Foundation, since 2012. Mr. Talamo also served as Treasurer of the OSI Pharmaceuticals Foundation from 2008 to 2010. Mr. Talamo received a Bachelor of Business Administration in Accounting from Hofstra University in 1991, and a Master of Business Administration in Finance from Hofstra University in 1999. Mr. Talamo is a certified public accountant in the State of New York.

David Schloss

Mr. Schloss, a senior human resources executive and former attorney with over 20 years of leadership experience, joined NeoStem in 2014 as Vice President, Human Resources. At the company, Mr. Schloss is responsible for the development and delivery of compensation; benefits; organizational design and development; recruitment; and employee relations.

Mr. Schloss comes to NeoStem with a strong resume of experience in the pharmaceutical and biotechnology industries. Prior to joining NeoStem, he served as SVP, Human Resources with PLUS Diagnostics (acquired by Miraca Life Sciences). Prior to PLUS Diagnostics, Mr. Schloss led human resources from 2011- 2012 for OraPharma, a private equity owned specialty pharmaceutical company focused on oral health care. Mr. Schloss helped grow the company and was instrumental in its acquisition and integration by Valeant Pharmaceuticals International. Prior to OraPharma, from 2009-2011, Mr. Schloss was Vice President, Human Resources for Eurand Pharmaceuticals, a publicly traded specialty pharmaceutical company based in Italy that develops, manufactures and commercializes pharmaceutical and biopharmaceutical products. While with Eurand, Mr. Schloss helped build the commercial organization that launched Zenpep® for the treatment of exocrine pancreatic insufficiency in patients with cystic fibrosis. Eurand was acquired by Aptalis in 2011.

From 2007-2009, Mr. Schloss led human resources for ImClone Systems, a fully integrated global biopharmaceutical company, engaged in the development and commercialization of a portfolio of targeted biological oncology treatments. He also led ImClone System's human resources through its acquisition by Eli Lilly in 2008. Additionally, Mr. Schloss spent 17 years with GlaxoSmithKline in a number of senior level HR roles across the US and internationally.

Before beginning his career in human resources, Mr. Schloss was an attorney practicing in the representation of management in all phases of labor relations and employment law. He earned a BA from Clark University and a J.D. from the University of Miami School of Law. He currently serves on the Pennsylvania Advisory Board of the Devereux Foundation, a leading nonprofit behavioral health organization that provides support and services to children and adults with intellectual, emotional, developmental, and behavioral challenges.

CORPORATE GOVERNANCE

Director Independence

NeoStem's current Board members consist of Dr. Smith, Dr. Pecora, Mr. Berman, Mr. Myers, Mr. Bernstein, Mr. Wei, and Mr. Greenacre. The Board of Directors has determined that Messrs. Myers, Berman, Bernstein, and Mr. Greenacre are independent applying the definition of independence under the listing standards of the NASDAQ and SEC regulations.

Board Leadership Structure and Role in Risk Oversight

Our Chief Executive Officer also serves as the Chairman of the Board. Steven Myers serves as our lead independent director. Our Chairman of the Board, when present, presides over all meetings of our Board of Directors. We believe this leadership structure is appropriate for our Company at this time because (1) of our size, (2) of the size of our Board, (3) our Chief Executive Officer is responsible for our day-to-day operation and implementing our strategy, and (4) discussion of developments in our business and financial condition and results of operations are important parts of the discussion at Board meetings and it makes sense for our Chief Executive Officer to chair those discussions.

Our Board of Directors oversees our risk management. This oversight is administered primarily through the following:

- The Board's review and approval of our business plans and budget (prepared and presented to the Board by the Chief Executive Officer and other management), including the projected opportunities and challenges facing our business;
- At least quarterly review of our business developments, business plan implementation and financial results;
- Our Audit Committee's oversight of our internal controls over financial reporting and its discussions with management and the independent accountants regarding the quality and adequacy of our internal controls and financial reporting; and
- Our Compensation Committee's review and recommendations to the Board regarding our executive officer compensation and its relationship to our business plans.

Committees

Our Board of Directors has established (i) an Audit Committee, (ii) a Compensation Committee and (iii) a Nominating and Governance Committee. Each Committee has only independent directors as members.

Audit Committee

The Audit Committee consists of four directors: Mssrs. Bernstein (chairman), Myers, Greenacre and Berman. Each member of the committee is independent applying the definition of independence under the listing standards of NASDAQ and SEC regulations. The Audit Committee meets at least four times during the year. The Board has determined that Mr. Bernstein qualifies as an "audit committee financial expert" as defined by Item 407(d)(5)(ii) of Regulation S-K.

Pursuant to the terms of the Audit Committee charter, our Audit Committee is required to consist of at least three of our "independent" directors and shall serve at the pleasure of the Board of Directors. An "independent" director is defined as an individual who (a) is not our officer or salaried employee or an affiliate, (b) does not have any relationship that, in the opinion of the Board of Directors, would interfere with his or her exercise of independent judgment as an Audit Committee member, (c) meets the independence requirements of the SEC and NASDAQ or such other securities exchange or market on which our securities are traded and (d) except as permitted by the SEC and NASDAQ or such other securities exchange or market on which our securities are traded, does not accept any consulting, advisory or other compensatory fee from us.

The Audit Committee has a charter that requires the committee to oversee our accounting and financial reporting process, our system of internal controls regarding finance, accounting, legal compliance and ethics, and the audits of our financial statements, a current copy of which charter is available to stockholders on our website, *www.neostem.com* . The primary duties of the Audit Committee consist of, among other things:

- serving as an independent and objective party to monitor our financial reporting process, internal control system and disclosure control system;
- reviewing and appraising the audit efforts of our independent accountants;
- assuming direct responsibility for the appointment, compensation, retention and oversight of the work of the outside auditors and for the resolution of disputes between the outside auditors and our management regarding financial reporting issues;
- providing an open avenue of communication among the independent accountants, financial and senior management and the Board; and
- reviewing and approving all related party transactions.

Compensation Committee

Our Compensation Committee consists of three directors: Mssrs. Berman (chairman), Myers and Bernstein. Each such

member of the Compensation Committee is independent applying the definition of independence under the listing standards of NASDAQ and SEC regulations. The Compensation Committee meets at least two times during each year.

Each member of our Compensation Committee must (i) be one of our independent directors satisfying the independence requirements of NASDAQ and other applicable regulatory requirements; (ii) qualify as an "outside director" under Section 162(m) of the Internal Revenue Code, as amended; and (iii) meet the requirements of a "non-employee director" for purposes of Section 16 of the Securities Exchange Act of 1934, as amended. Except as permitted by NASDAQ, members of the Compensation Committee must not accept any consulting, advisory or the other compensatory fee from us or any our subsidiaries.

The Compensation Committee oversees the determination of all matters relating to employee compensation and benefits and specifically determines and approves salaries, bonuses and equity-based compensation for our executive officers.

We have adopted a Compensation Committee charter which outlines the Compensation Committee's primary duties which are to:

- evaluate the performance of the Chief Executive Officer in light of our goals and objectives and determine the Chief Executive Officer's compensation based on this evaluation and such other factors as the Committee shall deem appropriate;
- determine and approve all executive officer compensation;
- approve the aggregate amounts and methodology for determination of all salary, bonus, and long-term incentive awards for all employees other than executive officers;
- review and recommend equity-based compensation plans to the full Board of Directors and approve all grants and awards thereunder;
- review and approve changes to our equity-based compensation plans other than those changes that require stockholder approval under the plans, the requirements of NASDAQ or any exchange on which our securities may be listed and/or any applicable law;
- review and recommend to the full Board changes to our equity-based compensation plans that require stockholder approval under the plans, the requirements of NASDAQ or any exchange on which our securities may be listed and/or any applicable law;
- review and approve changes in our retirement, health, welfare and other benefit programs that result in a material change in costs or the benefit levels provided;
- administer our equity-based compensation plans; and
- approve, as required by applicable law, the annual Committee report on executive compensation for inclusion in our proxy statement.

The Compensation committee has the authority, in its sole discretion, to retain or obtain advice from compensation consultants, independent legal counsel and other advisers, and is directly responsible for the retention, termination, compensation and oversight of the work of any such consultant, counsel or other adviser. In selecting a consultant, counsel or other adviser, the Compensation Committee must, as required by NASDAQ rules, take into consideration all factors relevant to such person's independence from management, including all factors that NASDAQ identifies in its listing standards.

A current copy of the Compensation Committee charter is available to stockholders on our website, *www.neostem.com*. The Compensation Committee may form and delegate its authority to subcommittees as appropriate. Additionally, the Chief Executive Officer may make recommendations to the Compensation Committee relating to executive and director compensation, but consistent with NASDAQ rules, she may not be present during deliberations or voting regarding her own compensation.

Nominating and Governance Committee

Our Nominating and Governance Committee consists of two directors: Mssrs. Myers (chairman) and Greenacre. The Nominating and Governance Committee is empowered by the Board of Directors to recommend to the Board of Directors qualified individuals to serve on our Board of Directors and to identify the manner in which the Nominating and Governance Committee evaluates nominees recommended for the Board. All members of the Nominating and Governance Committee of the Board of Directors have been determined to be "independent directors" pursuant to the definition contained in the rules of NASDAQ and SEC regulations. Our Board of Directors has adopted a Nominating and Governance Committee charter to govern the Nominating and Governance Committee, a current copy of which is available to stockholders on our website, *www.neostem.com*.

Other Board Committees

The Board also maintains the following additional committees:

Finance Committee: The Finance Committee is authorized to make determinations from time to time with respect to the Company's financial matters, including with respect to the Company's operating budget, capital raising activities, and related matters.

Mergers and Acquisitions Committee: The Mergers and Acquisitions Committee is authorized to make determinations from time to time with respect to the Company's M&A and strategic activities and related matters.

Qualifications for Board Membership

The charter and guidelines developed by the Nominating and Governance Committee describe the minimum qualifications for nominees and the qualities or skills that are necessary for directors to possess. Each nominee, among other factors listed in the Committee's guidelines:

- should possess the highest personal and professional standards of integrity and ethical values;
- must be committed to promoting and enhancing the long term value of our Company for our stockholders;
- should not have any interests that would materially impair his or her ability to (i) exercise independent judgment or (ii) otherwise discharge the fiduciary duties owed as a director to our Company and our stockholders;
- must have demonstrated achievement in one of more fields of business, professional, governmental, community, scientific or educational endeavor, and possess mature and objective business judgment and expertise;
- must have a general appreciation regarding major issues facing public companies of a size and operational scope similar to ours;
- must have adequate time to devote to the Board of Directors and its committees; and
- is expected to have sound judgment, derived from management or policy-making experience that demonstrates an ability to function effectively in an oversight role.

Diversity Considerations in Director Nominations

We do not have a formal diversity policy. We believe our Board of Directors represents a collection of individuals with a variety of complementary skills which, as a group, possess the appropriate skills and experience to oversee our Company's business. Our directors come from diverse backgrounds including medicine, accounting, private equity, and management of pharmaceutical and healthcare-related companies, including cell therapy.

The charter of our Nominating and Governance Committee provides that “[e]ach nominee will be considered both on his or her individual merits and in relation to existing or other potential members of the Board, with a view to establishing a well-rounded, diverse, knowledgeable, and experienced Board.” In accordance with the mission set out in its charter, our Nominating and Governance Committee considers a wide variety of qualifications, attributes and other factors and recognizes that a diversity of viewpoints and practical experiences can enhance the effectiveness of our Board. As part of its evaluation of each candidate, our Nominating and Governance Committee takes into account how that candidate's background, experience, qualifications, attributes and skills may complement, supplement or duplicate those of other prospective candidates.

Nominating and Governance Committee Procedures

Our Board of Directors believes we are well-served by our current directors. In the ordinary course, absent special circumstances or a material change in the criteria for Board of Directors membership, the Board of Directors will re-nominate incumbent directors who continue to be qualified for Board service and are willing to continue as directors. If an incumbent director is not standing for re-election, if a vacancy on the Board of Directors occurs between annual stockholder meetings or if our Board of Directors believes it is in our best interests to expand its size, the Board of Directors may seek out potential candidates for Board appointment who meet the criteria for selection as a nominee and have the specific qualities or skills being sought. Nominees for director must be discussed by the full Board of Directors and approved for nomination by the affirmative vote of a majority of our Board of Directors, including the affirmative vote of a majority of the independent directors. Three of our directors, Dr. Smith, Mr. Berman and Mr. Wei, were originally nominated in 2006, 2006 and 2009 respectively, pursuant to certain contractual

rights. In addition, the appointment of Dr. Pecora to our Board initially was required pursuant to the terms of the 2011 PCT Merger Agreement.

The Nominating and Governance Committee assists the Board of Directors by identifying qualified candidates for director and recommends to the Board of Directors the director nominees for the annual meeting of stockholders. The Board of Directors will conduct a process of making a preliminary assessment of each proposed nominee based upon the resume and biographical information, an indication of the individual's willingness to serve and other background information. This information is evaluated against the criteria set forth above and our specific needs at that time. Based upon a preliminary assessment of the candidate(s), those who appear best suited to meet our needs may be invited to participate in a series of interviews, which are used as a further means of evaluating potential candidates. On the basis of information learned during this process, the Board of Directors will determine which nominee(s) to include in the slate of candidates that the Board of Directors recommends for election at each annual meeting of our stockholders.

Procedures for Considering Nominations Made by Stockholders

The Nominating and Governance Committee's charter and guidelines describe procedures for nominations to be submitted by stockholders, other than candidates who have previously served on the Board of Directors or who are recommended by the Board of Directors. The guidelines state that a nomination must be delivered to our Secretary at our principal executive offices not later than the 120 th day prior to the date of the proxy statement for the preceding year's annual meeting; *provided, however*, that if the date of the annual meeting is more than 30 days after the anniversary date of the annual meeting, notice to be timely must be so delivered a reasonable time in advance of the mailing of our proxy statement for the annual meeting for the current year. The guidelines require a nomination notice to set forth as to each person whom the proponent proposes to nominate for election as a director, among other things: (a) all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (including such person's written consent to being named in the proxy statement as a nominee and to serving as a director it elected) and (b) information that will enable the Nominating and Governance Committee to determine whether the candidate or candidates satisfy the criteria established pursuant to the charter and the guidelines for director candidates.

There will be no differences in the manner in which our Board of Directors evaluates nominees recommended by stockholders and nominees recommended by the Board of Directors or management, except that no specific process shall be mandated with respect to the nomination of any individuals who have previously served on the Board of Directors.

Stockholder Communications

Our Board of Directors has established a procedure that enables stockholders to communicate in writing with members of the Board of Directors. Any such communication should be addressed to our Secretary and should be sent to such individual c/o NeoStem, Inc. Any such communication must state, in a conspicuous manner, that it is intended for distribution to the entire Board of Directors. Under the procedures established by the Board of Directors, upon our Secretary's receipt of such a communication, a copy of such communication will be sent to each member of the Board of Directors, identifying it as a communication received from a stockholder. Absent unusual circumstances, at the next regularly scheduled meeting of the Board of Directors held more than two days after such communication has been distributed, the Board of Directors will consider the substance of any such communication.

Board and Committee Meeting Attendance

During the year ended December 31, 2013, our Board of Directors held seven meetings, our Audit Committee held four meetings; our Compensation Committee held three meetings and our Nominating and Governance Committee formally held one meeting. Our Board of Directors, our Audit Committee, our Compensation Committee and our Nominating and Governance Committee each took additional actions by written consent. Each director attended (or participated by telephone in) at least 75% of the total number of meetings of the Board and committees on which he or she served.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), requires the Company's directors, certain officers of the Company, and persons who beneficially own more than 10% of a registered class of the Company's equity securities, to file initial reports of ownership and reports of changes in ownership with the Securities and Exchange Commission. These persons are required by the Securities and Exchange Commission to furnish the Company with copies of all Section 16(a) reports that they file.

Based solely on a review of (i) Forms 3 and 4 and amendments thereto furnished to the Company during 2013, (ii) any Forms 5 and amendments thereto furnished to the Company with respect to 2013, and (iii) any written representations that no Form 5 was required, the Company believes that all such parties subject to the reporting requirements of Section 16(a) filed on a timely basis all such reports required during and with respect to the fiscal year ended December 31, 2013, except that Andrew Pecora inadvertently filed one late Form 4.

CODE OF ETHICS

We have adopted a code of ethics that applies to our directors, officers and employees, except to our Chief Executive Officer, Chief Financial Officer, and any principal accounting officer, controller, or persons performing similar functions ("Senior Financial Officers"), who are subject to a separate code of ethics. Both codes of ethics are available on our website, *www.neostem.com.* Our Code of Ethics for Senior Financial Officers is filed as Exhibit 14.1 to our Annual Report on Form 10-K for the year ended December 31, 2010.

ITEM 11. EXECUTIVE COMPENSATION.

Compensation Discussion and Analysis

The Compensation Committee of our Board of Directors, which is comprised solely of independent directors as defined by NASDAQ listing standards, outside directors as defined by Section 162(m) of the Internal Revenue Code and non-employee directors as defined by Rule 16b-3 under the Exchange Act, has been delegated the authority and responsibility to determine and approve all compensation of our executive officers. Our named executive officers for fiscal year 2013 are those six individuals listed in the "*2013 Summary Compensation Table*" below. Other information concerning the structure, roles and responsibilities of our Compensation Committee is set forth in the "*Corporate Governance of NeoStem, Inc.-Compensation Committee*" section of this Annual Report on Form 10-K.

A discussion of the policies and decisions that shape our executive compensation program, including the specific objectives and elements, is set forth below.

Executive Compensation Objectives and Philosophy

The objective of our executive compensation program is to attract, retain and motivate talented executives who are critical for the continued growth and success of NeoStem, to align the interests of these executives with those of our stockholders, and to reward performance in a manner that maximizes our corporate performance without encouraging unnecessary or excessive risks. To this end, our compensation programs for executive officers are designed to achieve the following objectives:

- attract and retain talented and experienced executives;
- motivate, reward and retain executives whose knowledge, skills and performance are critical to our success;
- ensure fairness among the executive management team by recognizing the contributions each executive makes to our success;
- focus executive behavior on achievement of our corporate objectives and strategy;
- build a culture of "pay for performance", while not rewarding unnecessary or excessive risk taking; and
- align the interests of management and stockholders by providing management with longer-term incentives through equity ownership.

The Compensation Committee reviews the allocation of compensation components annually to help ensure alignment with strategic and operating goals, competitive market practices and legislative and regulatory changes. The Compensation Committee does not apply a specific formula to determine the allocation between cash and non-cash forms of compensation, though the Compensation Committee does consider comparative market data provided by its compensation consultant, Markson HRC, LLC ("Markson"), regarding allocations used by comparable companies. Certain compensation components, such as base salaries, benefits and perquisites, are intended primarily to attract and retain qualified executives. Other compensation elements, such as annual and long-term incentive opportunities, are designed to motivate and reward performance. Annual incentives are designed to motivate named executive officers with respect to our Company's objectives and the named executive officers' individual performance and development. Long-term incentives are intended to reward NeoStem's long-term performance and financial achievement and to align named executive officers' interests with those of stockholders.

Elements of Executive Officer Compensation

Our executive officer compensation program is comprised of: (i) base annual salary; (ii) annual incentive compensation, including discretionary bonuses based on individual and overall company performance; and (iii) long-term equity incentive compensation (including periodic and contractual stock option grants), with the objective of aligning our executive officers' long-term interests with those of our stockholders.

In establishing overall executive compensation levels and making specific compensation decisions for the executives in 2013, the Compensation Committee considered a number of criteria, including the executive's position, any applicable employment agreement, prior compensation levels, scope of responsibilities, prior and current period performance, individual and overall Company performance, external market data and retention concerns. In addition, in determining bonus awards for 2013, the Compensation Committee also considered the results of the advisory vote by stockholders on the "say-on-pay" proposal presented to stockholders at NeoStem's 2013 annual meeting of stockholders. There was support at the 2013 annual meeting for the compensation program offered to NeoStem's named executive officers with approximately 95% of votes cast in favor. Accordingly, the Compensation Committee made no direct changes to our executive compensation program as a result of the say-on-pay vote. At the 2013 annual meeting, our stockholders also voted in favor of an annual say-on-pay vote and NeoStem has elected to follow such advisory vote.

In addition to interim actions to review and approve compensation arrangements from time to time (for example, in connection with the hiring of a new executive), the Compensation Committee performs a review of compensation for our executive officers annually. As part of this review, the Compensation Committee takes into consideration their understanding of external market data, including compensation practices of comparable companies (based on size and stage of development). Since 2011, the Compensation Committee has engaged an independent compensation consultant to perform an analysis of the current compensation program. For 2013, the Compensation Committee engaged Markson to provide comparative data on compensation practices in our industry for executive officers, Board members and Board committee members, and to perform an independent review of the compensation of our Chief Executive Officer and senior executive officers (including the named executive officers in the "*2013 Summary Compensation Table*" below). Markson reports directly to the

Compensation Committee. Other than the work it performs for the Compensation Committee, Markson does not provide any consulting services to NeoStem or its executive officers.

Markson's reports presented in late 2012 and in late 2013 (which the Compensation Committee considered in setting 2013 salaries and 2013 bonuses, respectively) provided competitive comparative market data for base salaries, bonuses and equity grants, their observations and their broad recommendations. In preparing their reports, Markson considered, among other data, compensation data for publicly traded companies of similar size in comparable industries (the "Peer Group" below) and the Kenexa compensation database using public and private companies in the biotech industry and with annual revenues of less than $200 million. Although the Compensation Committee considers Markson's advice and recommendations about our executive and director compensation program together with input from management, the Compensation Committee ultimately makes its own decisions about these matters.

Peer Group Companies

NeoStem's Peer Group for 2013	
Aastrom Biosciences	Geron Corporation
Advanced Cell Technology	Immunocellular Therapeutics
Affymax Inc	Mimedx Inc Com
Amicus Therapeutics	Momenta Pharmaceuticals
Athersys	NeuralStem
BioHeart	Opexa Therapeutic
BioTime	Organovo Holdings
Cumberland Pharmaceuticals	Osiris Therapeutics
Cytomedix	Progenics Pharmaceutical
Cytori Therapeutics	Repligen Corp
Dendreon	Sangamo Biosciences
DURECT Corporation	Stemcells Inc
Fibrocell Science	Sucamo Pharmaceuticals

Generally, our Compensation Committee reviews and, as appropriate, approves compensation arrangements for executive officers in the fourth quarter of each year subject to the terms of existing employment agreements with our named executive officers, as discussed below, and the timing of the hiring of new executives. Other than with respect to the compensation of our Chief Executive Officer, our Compensation Committee also takes into consideration the recommendations for executive compensation made by our Chief Executive Officer, which recommendations are generally presented at the time of our Compensation Committee's review of executive compensation arrangements.

Base Salary

The base salaries of our named executive officers are set out in their employment agreements with the Company which, in some cases, provide that the officer may be granted a raise at the Compensation Committee's discretion. The employment agreements of Drs. Pecora, Losordo and Preti and of Mr. Dickey were approved by the Compensation Committee following arms' length negotiation of the terms between members of management and the executive party to the agreement. In the case of the initial employment agreement of each of Dr. Pecora and Dr. Preti, these negotiations occurred in connection with the Company's acquisition of PCT completed in 2011. With respect to the employment agreements of Dr. Losordo and Mr. Dickey, employment terms were negotiated between management and each executive prior to the commencement of employment on August 5, 2013 and August 19, 2013, respectively. Our Compensation Committee performs a review of base salaries for our executive officers annually. We believe that a competitive base salary is a necessary element of any compensation program that is designed to attract and retain talented and experienced executives. We also believe that attractive base salaries can motivate and reward executives for their overall performance. Base salaries are established in part based on the individual experience, skills and expected contributions of our executives and our executives' performance during the prior year.

Pursuant to a November 2012 amendment providing for a two-year extension of her employment agreement, Dr. Smith's base salary was increased to $495,000 for 2013. The Compensation Committee awarded Dr. Smith a 10% raise for 2014. In approving the increases to Dr. Smith's base salary, the Compensation Committee evaluated, with the assistance of Markson's recommendations, the Company's continued development under Dr. Smith's outstanding leadership and performance. In connection with the increase to Dr. Smith's base salary for 2013, the Compensation Committee further considered Markson's evaluation that Dr. Smith's base pay for 2012 was low relative to available market data. The Compensation Committee determined, in part based upon Markson's analysis, that Dr. Pecora's contractual salary for serving as NeoStem's part-time Chief Medical Officer (through July 2013) approximated (on a pro rata basis, given the amount of Dr. Pecora's time devoted to the Company) the market rate for a full time CMO. Pursuant to an amendment of Dr. Pecora's employment agreement effective August 5, 2013, Dr. Pecora's base salary was increased to $240,000 as a result of his additional responsibilities in connection with his appointment as NeoStem's Chief Visionary Officer (while continuing to serve as Chief Medical Officer of PCT and Chief Scientific Officer of Amorcyte). Mr. Dickey, who was appointed the Company's Chief Financial Officer effective August 19, 2013, receives a base salary of $310,000 pursuant to his employment agreement. In approving Mr. Dickey's salary arrangement, the Compensation Committee gave consideration to the breadth of Mr. Dickey's prior experience, including prior experience as a principal financial officer of a public company. Dr. Losordo, who was appointed the Company's Chief Medical Officer effective August 5, 2013, receives a base salary of $385,000 pursuant to his employment agreement. At the time of his appointment and pursuant to his employment agreement, Dr. Losordo also received a signing bonus paid in shares of our common stock valued at $134,000. In approving Dr. Losordo's base salary and signing bonus, the Compensation Committee gave consideration to Dr. Losordo's expertise as a cardiologist and his prior management experience in the medical industry, and the value of these attributes to our Company's business. Dr. Preti's employment agreement provides for an initial salary of $330,000 increasing to $350,000 in January 2012, which the Compensation Committee raised to $364,000 in January 2014. Mr. May served as our Chief Financial Officer until August 19, 2013, at which time he was appointed our Vice President, Strategic Initiatives. The Compensation Committee determined that Mr. May would continue to receive a base salary of $235,000 during 2013 (increased to $239,700 for 2014) in connection with his new role, based on the value to the Company of his new responsibilities and his agreement to devote substantial time to transitioning the CFO role to Mr. Dickey.

Discretionary Bonuses

Our business model includes the development of novel proprietary cell therapy products as well as operating a contract development and manufacturing organization. Our cell therapy products are in the clinical development stage and are based on novel technologies. Given the nature of our business, the determination of annual cash incentive awards and/or discretionary bonuses for our executives is often tied towards developments in our business, including promoting our development programs or other supportive aspects of our business. The employment agreements of most of our named executive officers provide that the executive is eligible for an annual discretionary bonus, which in some cases is based on a target or maximum amount established by contract. In setting the amounts of bonus awards, the Compensation Committee generally undertakes a discretionary assessment of individual and overall corporate performance. The Compensation Committee's determination of cash incentive amounts are designed to include consideration of important operational and financial aspects of the Company's business and the progress of our Company's development. Where a "target" bonus is established (as in the employment agreement of our Chief Executive Officer), if the professional effectiveness of the executive officer helped us achieve specific corporate objectives or otherwise contributed to our overall success, the bonus paid can exceed the target amount.

Pursuant to her employment agreement, for 2013 Dr. Smith was eligible to receive a bonus for 2013 in a target amount of 50% of her base salary assuming good progress toward the accomplishment of objectives set for Dr. Smith and the Company by the Compensation Committee, and with the contractual potential of a higher annual bonus, up to 100% of Dr. Smith's base salary. For 2013, Dr. Smith was awarded a bonus of $450,000 (approximately 91% of base salary), based upon her strong performance, including her leadership in (i) aggregate capital raises of $66.5 million on advantageous terms, and leadership of successful investor relations efforts increasing the Company's institutional and European investor base, (ii) transferring the Company's listing to NASDAQ, (iii) attracting key executive hires to the Company with depth of industry experience, (iv) doubling the number of new clients for PCT and increasing billings over 20%, (v) generating leads for prospective critical business development transactions, (vi) efficiently accelerating the Company's Treg program for type 1 diabetes and steroid resistant asthma, (vii) completing enrollment for the Phase 2 trial for AMR-001 and (viii) the expansion of the Company's intellectual property positions.

Bonuses for Messrs. Dickey and May and Drs. Pecora, Losordo and Preti are determined by the Compensation Committee on a discretionary basis. Dr. Pecora elected to receive his bonus for 2013 in shares of restricted stock rather than cash, which were issued to him in 2014 at an aggregate value of approximately $365,000. In determining the amount of his bonus, the Compensation Committee considered, among other factors, Dr. Pecora's involvement in (i) assisting with capital raises and presenting to institutional investors, (ii) generating leads for prospective critical business development transactions, (iii) efficiently accelerating the Company's Treg program for type 1 diabetes and steroid resistant asthma, (iv) expanding AMR-001's patent protection; (v) proficient oversight of the Phase 2 trial for AMR-001, including completion of enrollment, (vi) assisting with the hiring of Dr. Losordo and the transition of the CMO role, and (vii) positioning the Company in terms of both its development programs and place in the capital markets. For 2013, the Compensation Committee awarded Dr. Preti a cash bonus of $100,000, which was paid in early 2014. The bonus was awarded based on Dr. Preti's instrumental role in (i) doubling the number of new clients for PCT and increasing billings over 20%, (ii) increasing the Company's visibility and role as a thought leader in the cell therapy arena, (iii) focusing on lowering the cost of goods and enhancing manufacturing synergies through automation, innovation and engineering strategy, (iv) overseeing due diligence efforts focused on technology transfer and manufacturing in connection with business development transactions, and (v) bringing key hires to PCT critical for promoting growth and improving quality and customer service, (vi) driving efforts targeting potential expansion of operations internationally.

The employment agreements of Mr. Dickey and Dr. Losordo contemplate discretionary bonuses in an amount up to 30% and 25% of base salary, respectively. For 2013, a $40,000 cash bonus was awarded (and paid in early 2014) to each of Mr. Dickey, Dr. Losordo and Mr. May. In awarding these bonuses, the Compensation Committee recognized the respective roles of the management team members in helping the Company realize significant business developments over the past year including those described above.

In addition, each of Dr. Preti and Mr. May was paid a discretionary bonus of $45,000 early in 2013 because no cash bonuses had been paid to the named executive officers during 2012 (except for Dr. Smith's contractual bonus for 2012) in an effort to conserve cash.

Stock Grants and Long-term Equity Incentive Compensation

Long-term incentive compensation allows the executive officers to share in any appreciation in the value of our common stock. The Compensation Committee believes that stock grants and stock option participation aligns executive officers' interests with those of the stockholders. The amounts of the awards are designed to reward past performance and create incentives to meet long-term objectives. Stock option awards provide our executive officers with the right to purchase shares of our common stock at a fixed exercise price, subject to continued employment with our company. Stock options are earned on the basis of continued service to us and generally vest over a period of years and/or upon the achievement of specified business milestones. All grants need to be approved by our Compensation Committee. All stock options are awarded at fair market value and based on our closing market price on the grant date.

In many cases, the employment agreement that we enter into with an executive officer provides for the grant of a stock award or option in connection with commencement of employment or commencement of the term, in part intended as an inducement to commencing or continuing employment with us. Certain equity awards are issued on a discretionary basis in connection with our Compensation Committee's annual review of our executive compensation; in each of January 2013 and January 2014, option awards were issued to our named executive officers. Option awards granted to our named executive officers in January 2013 vested as to 20% of the option shares on the grant date, and are scheduled to vest as to the remaining option shares in 20% increments upon the achievement of specified business milestones. Option awards granted to our named executive officers in January 2014 vested as to an initial installment of the option shares on the grant date, with further installments of the option shares subject to time vesting and milestone vesting criteria. In January 2014, our CEO also received an award of 94,000 shares of restricted stock, subject to time-based and milestone vesting comparable to the 2014 option awards, The Compensation Committee issued these awards at a level intended to be competitive within the biotechnology industry, with consideration given to the Peer Group discussed above. In issuing these awards, the Compensation Committee considered Markson's reports and recommendations, which provided context

for equity grants in terms of (i) the competitive value of grants made among the Peer Group, (ii) the retention value of unvested equity, (iii) the Company's "burn rate," or the ratio of option-equivalent shares granted in the calendar year to total shares issued and outstanding, and (iv) in terms of grants to our CEO, prior grants and holdings. The Compensation Committee also considered individual performance, which for 2014 grants included the management team members' respective roles in the 2013 business developments described above under the caption "Discretionary Bonuses."

For a further discussion of the particulars of the stock awards and option grants issued to our named executive officers in connection with their current employment agreements, as well as discretionary awards approved by the Compensation Committee, see the discussion appearing below under the caption "*Employment Agreements and Other Arrangements With Executive Officers*," together with the information in the compensation tables below.

Other Compensation

We make available to executive officers certain benefits available to all employees on similar terms including health and welfare benefits, paid time-off, disability insurance, and participation in our Employee Stock Purchase Plan. We may also provide certain perquisites generally available to senior executives of the Company, which may include executive life insurance and payment or reimbursement for cell phone, blackberry and internet service. For newly-hired executives, the Company may provide reimbursement for relocation expenses. Details of the values of these benefits and perquisites may be found in the footnotes and narratives to the "*2013 Summary Compensation Table*", below.

We provide the benefits above to attract and retain our executive officers by offering compensation that is competitive with other companies similar in size and stage of development. These benefits represent a relatively small portion of their total compensation.

2012 Option Program - Description

On April 26, 2012, the Compensation Committee of the Board of Directors adopted a program (the "2012 Option Program") whereby each participating officer was issued on April 26, 2012, an option (the "Option") to purchase that number of shares of common stock equal to that portion of the participating officer's gross salary (the "Participating Salary") for the period May 1, 2012 - July 31, 2012 (the "Election Period") elected by the participating officer divided by $2.50, the Black-Scholes value of an Option issued under the 2012 Option Program. The Option, the issuance of which is in lieu of payment of the Participating Salary, vests at the end of the month in which the Participating Salary to which it relates would have been paid and has a term of ten years despite any termination of employment of the Participating Officer. The per share exercise price is $3.60, the closing price of the common stock on the date of the issuance of the Options. The gross Participating Salary for all Participating Officers is $181,309 and the total number of Options granted under the 2012 Option Program was 72,524. The Options were issued under the Company's 2009 Plan.

Compensation Committee Report

The Compensation Committee has reviewed and discussed the foregoing Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee recommended to our Board of Directors that the Compensation Discussion and Analysis be included in this Annual Report on Form 10-K.

The Compensation Committee of the
Board of Directors of NeoStem, Inc:

Richard Berman (chairman)
Steven S. Myers
Drew Bernstein

This report shall not constitute "soliciting material," shall not be deemed "filed" with the Securities and Exchange Commission and is not to be incorporated by reference into any of our other filings under the Securities Act of 1933, as amended or the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate this report by reference therein.

Compensation Committee Interlocks and Insider Participation

Richard Berman (chairman), Steven S. Myers and Drew Bernstein served as members of the Compensation Committee of the Company's Board of Directors during 2013. None of the members of our Compensation Committee is, or has been, an officer or employee of ours or any of our subsidiaries. During the last fiscal year, none of our executive officers served as: (1) a member of the compensation committee (or other committee of the board of directors performing equivalent functions or, in the absence of any such committee, the entire board of directors) of another entity, one of whose executive officers served on our Compensation Committee; (2) a director of another entity, one of whose executive officers served on our Compensation Committee; or (3) a member of the compensation committee (or other committee of the board of directors performing equivalent functions or, in the absence of any such committee, the entire board of directors) of another entity, one of whose executive officers served as a director on our Board of Directors.

2013 Summary Compensation Table

The following table sets forth certain summary compensation information with respect to our Chief Executive Officer, our Chief Financial Officer, and our three other most highly compensated executive officers, for services as executive officers for the last three fiscal years.

Name and Principal Function	Year	Salary	Bonus	Stock Awards(1)	Option Awards(1)	All Other Compensation	Total Compensation

Robin Smith, Chief Executive Officer	2013	$	495,000		$	450,000		$	—	$	249,718		$	40,782	(2)	$	1,235,500
	2012	$	412,694	(3)	$	363,000	(4)	$	183,840	$	638,941		$	44,927	(5)	$	1,643,402
	2011	$	375,176	(6)	$	330,000	(7)	$	—	$	2,912,100	(8)	$	30,496	(9)	$	3,647,772
Andrew Pecora, Chief Visionary Officer	2013	$	221,538	(10)	$	365,004	(11)	$	—	$	286,472		$	—		$	873,014
	2012	$	183,077	(12)	$	—		$	—	$	61,780		$	—		$	244,857
	2011	$	174,231		$	—		$	—	$	688,741		$	—		$	862,972
Douglas Losordo, Chief Medical Officer	2013	$	291,500		$	40,000		$	—	$	343,070		$	30,846	(13)	$	705,416
	2012	$	—		$	—		$	—	$	—		$	—		$	—
	2011	$	—		$	—		$	—	$	—		$	—		$	—
Robert Preti, President and Chief Scientific Officer of PCT	2013	$	349,231		$	145,000		$	—	$	143,224		$	—		$	637,455
	2012	$	309,880	(14)	$	—		$	—	$	97,578		$	—		$	407,458
	2011	$	300,808	(15)				$	—	$	439,002		$	6,359	(16)	$	746,169
Larry May, Chief Financial Officer (21)	2013	$	234,583		$	85,000		$	—	$	119,353		$	9,016	(17)	$	447,952
	2012	$	225,000	(18)	$	—		$	1,005	$	70,606		$	9,224	(19)	$	305,835
	2011	$	200,000		$	25,000				$	410,909		$	9,000	(20)	$	644,909
Robert Dickey IV, Chief Financial Officer (21)	2013	$	150,626		$	40,000		$	—	$	229,462		$	15,283	(22)	$	435,371
	2012	$	—		$	—		$	—	$	—		$	—		$	—
	2011	$	—		$	—		$	—	$	—		$	—		$	—

(1) Amounts shown under “Stock Awards” and “Option Awards” represent the aggregate grant date fair value computed in accordance with FASB ASC Topic 718, in accordance with SEC rules. See Note 13 to the Notes to the Consolidated Financial Statements for a discussion of assumptions made in such valuations. All stock awards, option awards and other shares discussed in this table were issued under the Company's Amended & Restated 2009 Equity Compensation Plan (the "Plan"), with a per share price generally equal to the fair market value of a share of common stock on the date of grant.

(2) Consisted of (i) a car allowance of $12,000, (ii) approximately $14,696 paid by us on behalf of Dr. Smith for life and disability insurance; (iii) $13,950 for club membership dues; and (iv) $136 for health insurance reimbursement.

(3) Pursuant to an arrangement approved by the Compensation Committee, Dr. Smith elected to receive an aggregate of $218,090 of her 2012 salary in shares of common stock and Options issued under the Plan in lieu of cash.

(4) On March 6, 2013, Dr. Smith elected to receive a portion of her 2012 bonus in shares of NeoStem, Inc.'s common stock. Dr. Smith received 100,000 shares based on a per share purchase price of $5.30, the fair market value at the time of election.

(5) Consisted of (i) a car allowance of $12,000, (ii) approximately $1,903 health insurance reimbursement, (iii) approximately $14,942 paid by us on behalf of Dr. Smith for life and disability insurance; and (iv) $16,083 for club membership dues.

(6) Pursuant to an arrangement approved by the Compensation Committee, Dr. Smith elected to receive an aggregate of $172,761 of her 2011 salary, in shares of common stock of the Company issued under our 2009 Amended & Restated Equity Compensation Plan at the then-market price.

(7) In 2011, Dr. Smith elected to accept her entire bonus in shares of common stock of the Company.

(8) Includes $722,900 attributable to the incremental compensation cost recognized for the acceleration of certain of Dr. Smith's stock options on April 4, 2011 in connection with an amendment to her employment agreement.

(9) Consisted of (i) a car allowance of $12,000, (ii) approximately $15,946 paid by us on behalf of Dr. Smith for life and disability insurance, and (iii) approximately $2,550 for club membership dues.

(10) Pursuant to an arrangement approved by the Compensation Committee, Dr. Pecora elected to receive an aggregate of $80,245 of his 2013 salary in shares of common stock issued under the Plan and in lieu of cash.

(11) Dr. Pecora's 2013 bonus was paid in stock. He received a stock award of 46,976 shares issued under the Plan.

(12) Pursuant to an arrangement approved by the Compensation Committee, Dr. Pecora elected to receive an aggregate of $74,231 of his 2012 salary in shares of common stock and Options issued under the Plan in lieu of cash.

(13) Consisted of (i) relocation reimbursement of $20,000, (ii) $10,000 legal fee reimbursement, and (iii) $846 paid by us on behalf of Dr. Losordo for life insurance.

(14) Pursuant to an arrangement approved by the Compensation Committee, Dr. Preti elected to receive an aggregate of $32,761 of his 2012 salary in shares of common stock and Options issued under the Plan in lieu of cash.

(15) As a result of the PCT Merger and Dr. Preti's employment as President of PCT effective upon the PCT Merger, Dr. Preti is considered to be an executive officer of the Company effective January 19, 2011. Salary reflected in this table is pursuant to an employment agreement effective on such date.

(16) This amount consists of PCT's contribution to Dr. Preti's 401(k).

(17) Consisted of (i) a car allowance of $9,000; and (ii) $16 for health insurance reimbursement.

(18) Pursuant to an arrangement approved by the Compensation Committee, Mr. May elected to receive an aggregate of $14,063 of his 2012 salary in Options issued under the Plan in lieu of cash.

(19) Consisted of (i) a car allowance of $9,000; and (ii) $224 for health insurance reimbursement.

(20) Consisted of a car allowance of $9,000.

(21) Effective August 19, 2013, Robert Dickey IV, was appointed to serve as Chief Financial Officer of the Company. Also effective on August 19, 2013, the Company entered into a letter agreement with Larry May who had been serving as the Company's Chief Financial Officer since 2006. As of the effective date of the agreement, Mr. May's tenure as Chief Financial Officer ended at which time he was appointed as the Company's newly created position of Vice President, Strategic Transactions.

(22) Consists of (i) relocation related reimbursements of approximately $13,608, and (ii) COBRA reimbursement of approximately $1,675.

NEOSTEM EMPLOYMENT AGREEMENTS AND EQUITY GRANTS

Employment Agreements and Other Arrangements with Executive Officers

This section contains a description of the employment agreements and certain other arrangements that NeoStem has (or had during the years ended December 31, 2011, 2012 and 2013) with the officers named in the Summary Compensation Table. All descriptions are qualified in their entirety by reference to such agreements. The descriptions to follow provide further information about the compensation that is shown in the Summary Compensation Table and the Grants of Plan Based Awards Table for these officers. They also give you information about payments that could be received by these officers under certain circumstances at such time as their employment with NeoStem ends, for example, certain severance arrangements.

Robin L. Smith, M.D. - Chief Executive Officer and Chairman of the Board

Dr. Robin L. Smith serves as our Chief Executive Officer pursuant to an employment agreement dated May 26, 2006, which agreement has been subsequently amended from time to time. Under this agreement, as amended through July 29, 2009 (as so amended, the "Agreement"), Dr. Smith was employed through December 31, 2011 and as of September 27, 2009 was entitled to receive a base salary of $332,750 per year (increasing by 10% on each annual anniversary of September 27), an annual bonus determined by the Board of at least $275,000, and certain other perquisites including a car allowance, variable life insurance, and reimbursement for fees for a New York club to be used for business entertaining and meetings. To help conserve cash, Dr. Smith has elected from time to time to receive her net salary and/or bonus in shares of the Company's common stock, pursuant to an arrangement approved by the Compensation Committee. Pursuant to an arrangement approved by the Compensation Committee, Dr. Smith elected to receive an aggregate of $172,761 of her 2011 salary, and continued in 2012 to receive a significant portion of her salary, in shares of common stock of the Company issued under our 2009 Equity Compensation Plan at the then-market price. In 2011, Dr. Smith elected to accept her entire bonus in shares of common stock of the Company. Dr. Smith's Participating Salary in the 2012 Option Program was $100,656, her full gross salary for the Election Period. As of October 29, 2009, the Compensation Committee of the Board approved the reimbursement to Dr. Smith of premiums, up to $4,000 annually, for disability insurance covering Dr. Smith. We maintain key-man life insurance on Dr. Smith in the amount of $5,000,000.

On April 4, 2011, the Company entered into an amendment of the Agreement. Pursuant to the amendment, (i) the term of the Agreement was extended from December 31, 2011 to December 31, 2012; (ii) Dr. Smith was entitled to receive cash bonuses on October 1, 2011 and 2012 in the minimum amount of 110% of the prior year's bonus; (iii) a failure to renew the Agreement at the end of the term regardless of reason shall be treated as a termination by the Company without cause; (iv) the Company shall pay Dr. Smith her base salary and COBRA premiums (a) for one year in the event of a termination of the agreement by Dr. Smith for other than good reason and (b) during any period during which she is bound by non-competition, non-solicitation or similar covenants with the Company (such payments shall not be made during the time Dr. Smith is also receiving payments under (iii) or (iv)(a)); (v) Dr. Smith was granted an option to purchase 150,000 shares of common stock at a per share exercise price based on the closing price of the common stock on the date of the amendment, vesting as to 50,000 shares on each of the date of grant, December 31, 2011 and December 31, 2012; (vi) all other unvested options held by Dr. Smith were immediately vested; (vii) any vested options previously or hereafter granted to Dr. Smith during the remainder of the term shall remain exercisable following termination of employment for the full option term until the expiration date; (viii) the Company agreed that, with the exception of the period of time during which Dr. Smith is a Company affiliate and for 90 days thereafter (during which time any shares owned by or issued to Dr. Smith will bear the Company's standard affiliate legend), the Company will not place legends on shares on common stock owned by Dr. Smith restricting the transfer of such shares so long as such shares are sold under an effective registration statement, pursuant to Rule 144 or are eligible for sale under Rule 144 without volume limitations; and (ix) if Dr. Smith ceases to be employed by the Company and for so long as she continues to own shares of common stock the sale of which would require that the current public information requirement of Rule 144 be met, the Company will use its reasonable best efforts to timely meet those requirements or obtain appropriate extensions or otherwise make available such information as is required. Except as set forth in the amendment, the Agreement remained unchanged.

On November 13, 2012, the Company again amended the Agreement with Dr. Robin L. Smith. Pursuant to the amendment, (i) the term of the Agreement was extended for two years to December 31, 2014; (ii) Dr. Smith's annual base salary was increased to $495,000; (iii) Dr. Smith is eligible to receive a cash bonus for each of 2013 and 2014, based on a target amount of 50% of annual base salary assuming good progress toward the accomplishment of objectives set for Dr. Smith and the Company by the Compensation Committee, and which may be awarded in an amount up to 100% of annual base salary for extraordinary performance, all as determined by the Compensation Committee; (iv) all unvested options held by Dr. Smith as of the date of the amendment were immediately vested; (v) a failure to renew the Agreement at the end of the term regardless of reason shall be treated as a termination by the Company without cause; (vi) upon the Company's termination of Dr. Smith's employment without cause or by Dr. Smith with good reason, (a) the Company is to pay

Dr. Smith her base salary and COBRA premiums for one year following the termination plus the previous year's annual bonus payment, and (b) all of Dr. Smith's stock options which are vested as of the termination date plus any additional options that would have vested by the passage of time during the 12 month period following such date (which additional options shall become immediately and fully vested as of the termination date) shall remain exercisable for the balance of their 10 year term; (vii) in the event the Company terminates Dr. Smith's employment with cause or Dr. Smith resigns, the Company is to pay Dr. Smith her then current base salary and COBRA premiums for one year; and (viii) any vested options previously or hereafter granted to Dr. Smith during the remainder of the term shall remain exercisable notwithstanding any termination of employment for the full option term until the expiration date. The Compensation Committee awarded Dr. Smith a 10% raise to her base salary commencing January 1, 2014, having evaluated the Company's continued development under Dr. Smith's outstanding leadership and performance.

On January 2, 2013, Dr. Smith was awarded an option to purchase 50,000 shares of our common stock at an exercise price of $6.20 per share, which vested as to 20% of the option shares on the date of grant and which is scheduled to vest as to the remaining option shares in 20% increments upon the achievement of specified business milestones. On January 2, 2014, Dr. Smith was awarded (i) an option to purchase 131,000 shares of our common stock at an exercise price of $7.77 per share and (ii) 94,000 shares of restricted stock. Each of the option award and the restricted stock award, vested as to 1/6 of the shares on the grant date, and is scheduled to vest as to 1/6 of the shares on each of the first, second and third anniversaries of the grant date, and as to 1/6 of the option shares upon the occurrence of each of two specified business milestones. The Company agreed to pay the withholding taxes on the restricted stock award. On March 11, 2014, the Company entered into a letter agreement with Dr. Smith confirming her current base salary of $545,000.

Robert Dickey IV - Chief Financial Officer

Effective August 19, 2013 (the "Effective Date"), Robert Dickey IV was appointed to serve as the Company's Chief Financial Officer. Pursuant to Mr. Dickey's employment agreement, which has an initial three-year term, Mr. Dickey (i) is entitled to receive base salary of $310,000; (ii) is eligible for an annual cash bonus of up to 30% of his base salary, as well as any other discretionary bonuses as may be approved by the Compensation Committee from time to time; (iii) was granted on the Effective Date an option to purchase 36,000 shares of the Company's common stock at a per share exercise price equal to the closing price of the common stock on the Effective Date, scheduled to vest subject to Mr. Dickey's continued employment as to 12,000 shares on each of the one year, two year and three year anniversaries of the Effective Date; (iv) received a signing bonus of 5,000 shares of the Company's common stock, subject to forfeiture in the event he resigns or is terminated for "cause" prior to the one-year anniversary of the Effective Date, and an option to purchase 10,000 shares of the Company's common stock at a per share exercise price equal to the closing price of the common stock on the Effective Date scheduled to vest on the one year-anniversary of the Effective Date. Either party may terminate the Employment Agreement upon 60 days' prior written notice to the other party. If Mr. Dickey's employment is terminated for any other reason other than for cause, and provided Mr. Dickey executes a release, (i) Mr. Dickey will be entitled to three months' of then-current base salary as severance and (ii) Mr. Dickey and his eligible dependents shall be entitled to continue participation in the Company's group health plans in accordance with COBRA. On January 2, 2014, Mr. Dickey was awarded an option to purchase 35,000 shares of our common stock at an exercise price of $7.77 per share, which vested as to 1/4 of the option shares on the grant date, and which is scheduled to vest as to 1/4 of the option shares on the one-year anniversary of the grant date and as to 1/4 of the option shares upon the occurrence of each of two specified business milestones.

Andrew L. Pecora, M.D., FACP - Chief Visionary Officer of NeoStem, Chief Medical Officer of PCT and Chief Scientific Officer of Amorcyte

On September 23, 2010, we entered into a four-year employment agreement with Dr. Andrew Pecora which became effective on January 19, 2011 upon the closing of our acquisition of PCT (the "Commencement Date"), governing Dr. Pecora's employment as Chief Medical Officer of PCT. Upon commencement, the employment agreement provided for (i) an annual base salary of $180,000 and (ii) an option to purchase 40,000 shares of our common stock governed by our Amended and Restated 2009 Plan at a per share exercise price of $15.00, vesting as to 10,000 shares on each of the first, second, third and fourth annual anniversaries of the Commencement Date. Dr. Pecora's employment agreement further provides that upon Termination without Cause (as defined) or Resignation for Good Reason (as defined) Dr. Pecora will be entitled to continuation of his base salary for three (3) months in accordance with customary payroll practices in consideration for executing a release and a confidentiality, non-compete, non-solicitation and inventions assignment agreement and compliance therewith.

On August 17, 2011, we entered into a letter agreement with Dr. Pecora pursuant to which his employment agreement was amended to provide that: (a) his title was changed to also include Chief Medical Officer of NeoStem and (b) his annual salary was increased to $210,000. Dr. Pecora was also granted options to purchase an additional 50,000 shares of the Company's common stock under the Amended and Restated 2009 Plan at a per share exercise price of $7.10, vesting as to 10,000 shares on each of the first, second, third, fourth and fifth annual anniversaries of the amendment. Other than as set forth therein, Dr. Pecora's agreement remained in full force and effect. Upon our acquisition of Amorcyte in October 2011, Dr. Pecora agreed to continue to serve as Chief Scientific Officer of Amorcyte for no additional compensation.

Effective April 11, 2012, we entered into a letter agreement with Dr. Pecora providing that Dr. Pecora would devote no less than two days per week to his duties as Chief Medical Officer of PCT and NeoStem, with a corresponding decrease in his annual salary to $140,000. Additionally, pursuant to this letter agreement, Dr. Pecora agreed to accept his net salary through the issuance to him of shares of the Company's common stock at fair market value at the time of issuance, at his election determined on a quarterly basis with such shares issued pursuant to the Company's Amended and Restated 2009 Plan. Pursuant to this arrangement, during 2012 and 2013 Dr. Pecora elected to receive an aggregate of $119,476 of his salary in shares of our common stock. On April 26, 2012, Dr. Pecora elected in lieu of shares of our common stock to participate in the Company's 2012 Option Program with a Participating Salary for the period equal to $35,000, his full gross salary for the Election Period.

Effective August 5, 2013 (the "Effective Date"), the Company entered into further amendment to Dr. Pecora's employment agreement pursuant to which, Dr. Pecora was appointed as the Company's Chief Visionary Officer (while continuing to serve as Chief Medical Officer of PCT, Chief Scientific Officer of Amorcyte, and a member of the Company's Board of Directors). Pursuant to this amendment, which has a term through December 31, 2014, (i) Dr. Pecora's annual base salary was increased to $240,000; (ii) commencing with the pay period ending August 15, 2013, Dr. Pecora agreed to accept his salary (a) as to $210,000, through the issuance of shares of common stock (through participation in the Company's Employee Stock Purchase Plan, and through shares priced at fair market value at the time of issuance pursuant to the Company's Amended and Restated 2009 Plan), and (b) as to $30,000 in cash, subject to Dr. Pecora having the ability to notify the Company on a quarterly basis of any desired changes to the foregoing stock/cash allocation; (iii) Dr. Pecora was

granted on the Effective Date an option to purchase 27,500 shares of the Company's common stock at a per share exercise price equal to the closing price of the common stock on the Effective Date, which vested as to 5,000 shares on the Effective Date and as to 5,000 shares on December 31, 2013, and which is scheduled to vest, subject to Dr. Pecora's continued employment, as to 5,000 shares on December 31, 2014 and as to 12,500 shares upon the occurrence of performance conditions mutually agreed by Dr. Pecora and the Company prior to September 30, 2013, and (iv) options currently held by Dr. Pecora covering 20,000 shares of common stock and scheduled to vest after December 31, 2014, shall vest and become exercisable, subject to Dr. Pecora's continued employment, on December 31, 2014. Pursuant to the arrangement referred to in clause (ii) above, during 2013, Dr. Pecora accepted $80,245 of his salary through the issuance of shares of the Company's common stock pursuant to our Amended and Restated 2009 Plan and our Employee Stock Purchase Plan, respectively, and $141,293 of his salary in cash.

On January 2, 2013, Dr. Pecora was awarded an option to purchase 30,000 shares of our common stock at an exercise price of $6.20 per share, which vested as to 20% of the shares on the date of grant and as to the remaining shares in 20% increments upon the achievement of specified business milestones. On January 2, 2014, Dr. Pecora was awarded an option to purchase 100,000 shares of our common stock at an exercise price of $7.77 per share, which vested as to 1/6 of the option shares on the grant date, and which is scheduled to vest as to 1/6 of the option shares on each of the first, second and third anniversaries of the grant date, and as to 1/6 of the option shares upon the occurrence of each of two specified business milestones.

Douglas W. Losordo, M.D., FACC, FAHA - Chief Medical Officer

Effective August 5, 2013 (the "Commencement Date"), Douglas W. Losordo, M.D., FACC, FAHA, was appointed to serve as the Company's Chief Medical Officer. Pursuant to his employment agreement, which has an initial three-year term, Dr. Losordo (i) is entitled to receive base salary of $385,000; (ii) is eligible to receive an annual cash bonus of up to 25% of base salary, as well as any other discretionary bonuses as may be approved by the Compensation Committee from time to time; (iii) was granted on the Commencement Date an option to purchase 70,000 shares of the Company's common stock at a per share exercise price equal to the closing price of the common stock on the Commencement Date, scheduled to vest subject to Dr. Losordo's continued employment as to 20,000 shares on each of August 5, 2014 and August 5, 2015 and as to 30,000 shares on August 5, 2016; (iv) received a signing bonus of 20,000 shares of the Company's common stock, subject to forfeiture as to 10,000 of such shares in the event Dr. Losordo resigns or is terminated for cause prior to the first anniversary of the Commencement Date; and (v) shall receive a bonus of 10,000 shares of the Company's common stock on each of the first, second and third anniversaries of the Commencement Date provided Dr. Losordo remains employed by the Company on such dates. The employment agreement also provides that Dr. Losordo will receive from the Company reimbursement for up to $10,000 for legal fees associated with preparation of the employment agreement, up to $20,000 for relocation expenses, up to $5,000 annually for supplemental term life insurance coverage and up to $3,500 for supplemental long term disability coverage. Either party may terminate the employment agreement upon 60 days' prior written notice to the other party. If the Company terminates Dr. Losordo's employment other than for cause, Dr. Losordo terminates his employment for good reason (as defined) or Dr. Losordo's employment terminates as a result of the expiration of the term, in addition to any accrued rights under the employment agreement, and provided Dr. Losordo executes a release, (i) Dr. Losordo will be entitled to three months' of then-current base salary as severance; (ii) the Company may, at its option, elect to pay additional severance equal to an additional nine months of then-current base salary; provided that Dr. Losordo's non-competition obligation shall cease if the Company does not make the payments called for by clause (ii); (iii) Dr. Losordo shall be entitled to three months' of COBRA assistance; and (iv) all of Dr. Losordo's options which have vested as of the termination date shall remain exercisable for 12 months following such date but not beyond the original ten-year term of such options. On January 2, 2014, Dr. Losordo was awarded an option to purchase 50,000 shares of our common stock at an exercise price of $7.77 per share, which vested as to 1/6 of the option shares on the grant date, and which is scheduled to vest as to 1/6 of the option shares on each of the first, second and third anniversaries of the grant date, and as to 1/6 of the option shares upon the occurrence of each of two specified business milestones.

Robert A. Preti, Ph.D. - President and Chief Scientific Officer of Progenitor Cell Therapy, LLC

On September 23, 2010 we entered into a four year employment agreement with Robert A. Preti, Ph.D. which became effective on January 19, 2011, upon the closing of our acquisition of PCT (the "Commencement Date"). Pursuant to his employment agreement, Dr. Preti serves as President and Chief Scientific Officer of PCT. The employment agreement provides for, among other things, (i) an initial annual base salary of $330,000, increasing to $350,000 on January 19, 2012, and (ii) an option to purchase 40,000 shares of our common stock under the Amended and Restated 2009 Plan at a per share exercise price of $15.00, vesting as to 10,000 shares on each of the first, second, third and fourth annual anniversaries of the Commencement Date, and (iii) eligibility for cash bonuses as determined by the Compensation Committee. The employment agreement further provides that upon Termination without Cause (as defined) or Resignation for Good Reason (as defined), Dr. Preti will be entitled to certain post-termination benefits in consideration of executing a release and a confidentiality, non-compete, non-solicitation and inventions assignment agreement and compliance therewith, including (i) continuation of his base salary for up to twelve (12) months in accordance with customary payroll practices, (ii) reimbursement of COBRA healthcare premiums for up to twelve (12) months, and (iii) the accelerated vesting for all unvested option shares that would have vested during the twelve (12) months following termination of employment had Dr. Preti remained in the employ of PCT. The Preti Employment Agreement also gives PCT the option, in its sole discretion, to continue Dr. Preti's base salary for an additional twelve (12) months (for a total of twenty-four (24) months) in consideration for a twelve month extension of the non-competition restrictive covenants to which Dr. Preti is subject. Additionally, we maintain key-man life insurance on Dr. Preti in the amount of $3,000,000. On April 26, 2012, Dr. Preti elected to participate in the Company's 2012 Option Program with a Participating Salary equal to $13,750. An additional $20,000 of his annual salary is paid on a quarterly basis through the issuance of shares of our common stock. Effective January 1, 2014, our Compensation Committee increased Dr. Preti's base salary to $364,000. On January 2, 2013, Dr. Preti was awarded an option to purchase 30,000 shares of our common stock at an exercise price of $6.20 per share, which vested as to 20% of the shares on the date of grant and as to the remaining shares in 20% increments upon the achievement of specified business milestones. On January 2, 2014, Dr. Preti was awarded an option to purchase 75,000 shares of our common stock at an exercise price of $7.77 per share, which vested as to 1/6 of the option shares on the grant date, and which is scheduled to vest as to 1/6 of the option shares on each of the first, second and third anniversaries of the grant date, and as to 1/6 of the option shares upon the occurrence of each of two specified business milestones.

Larry A. May - Vice President, Strategic Transactions

Effective August 19, 2013, Mr. May was appointed the Company's Vice President, Strategic Transactions. In connection with this appointment, we and Mr. May executed an offer letter contemplating that in his new role, Mr. May will focus on the Company's various business development and strategic activities, as well as devoting approximately half of his time to transitioning the CFO role to Mr. Dickey. Pursuant to the offer letter, during 2013 Mr. May continued to receive a base salary of $235,000, and remains eligible to participate in the Company benefits in which he participated as Chief Financial Officer.

Effective January 1, 2014, the Compensation Committee raised Mr. May's salary to $239,700. Pursuant to the offer letter, Mr. May's employment is on at-will terms. On January 2, 2013, Mr. May was granted an option to purchase 25,000 shares of our common stock at an exercise price of $6.20 per share, which vested as to 20% of the shares on the grant date and as to the remaining shares in 20% increments upon the achievement of specified business milestones. On January 2, 2014, Mr. May was awarded an option to purchase 35,000 shares of our common stock at an exercise price of $7.77 per share, which vested as to25% of the shares on the grant date and which is scheduled to vest as to 25% on the first anniversary of the grant date and as to 25% of the option shares upon the occurrence of each of two specified business milestones.

Mr. May previously served as our Chief Financial Officer from January 19, 2006 to August 19, 2013. During the first three years of his tenure as our Chief Financial Officer, Mr. May's employment had been governed by an employment agreement which expired by its terms on January 18, 2009. Thereafter, Mr. May continued serving as our CFO on an at-will basis. As approved by the Compensation Committee, Mr. May's base salary for 2011, 2012 and 2013, respectively, was $200,000, $225,000 and $235,000.

Indemnification Agreements

As of October 2, 2009, we entered into indemnification agreements with our Chief Executive Officer, our then Chief Financial Officer, our General Counsel, certain other employees and each of its directors pursuant to which we have agreed to indemnify such party to the full extent permitted by law, subject to certain exceptions, if such party becomes subject to an action because such party is our director, officer, employee, agent or fiduciary.

Acceleration of Vesting Under Stock Option Plans

Generally, in the event of a Change in Control of NeoStem (as defined in our Amended and Restated 2009 Equity Compensation Plan, "2009 Plan"), (a) all outstanding options and stock appreciation rights of each participant granted prior to the change in control shall be fully vested and immediately exercisable in their entirety, and (b) all unvested stock awards, restricted stock units, restricted stock, performance-based awards, and other awards shall become fully vested, including without limitation, the following: (i) the restrictions to which any shares of restricted stock granted prior to the change in control are subject shall lapse as if the applicable restriction period had ended upon such change in control, and (ii) the conditions required for vesting of any unvested performance-based awards shall be deemed to be satisfied upon such change in control.

Termination or Change in Control Payments

The following table sets forth aggregate estimated payment obligations to each of the named executive officers assuming a termination occurred on December 31, 2013:

Name	Benefit	Before Change in Control Termination w/o Cause or for Good Reason ($)	After Change in Control Termination w/o Cause or for Good Reason ($)[1]	Voluntary Termination ($)
Robin Smith	Severance	545,000	—	545,000
Chief Executive Officer	Health Benefits	22,010	—	22,010
	Equity Award Acceleration	—[2]	6,200	—[2]
	Total	567,010	6,200	567,010
Andrew Pecora	Severance	60,000	—	60,000
Chief Visionary Officer	Health Benefits	—	—	—
	Equity Award Acceleration	—	13,169	—
		60,000	13,169	60,000
Douglas Losordo	Severance	32,083	—	32,083
Chief Medical Officer	Health Benefits	26,726	—	26,726
	Equity Award Acceleration	—	136,400	—
		58,809	136,400	58,809
Robert Preti	Severance	364,000	—	364,000
President and Chief	Health Benefits	21,120	—	21,120
Scientific Officer of PCT	Equity Award Acceleration	—	18,645	—
		385,120	18,645	385,120
Larry May	Severance	—	—	—
VP, Strategic Initiatives	Health Benefits	—	—	—
(Former CFO)	Equity Award Acceleration	—	13,901	—
		—	13,901	—
Robert Dickey IV	Severance	77,500	—	—
Chief Financial Officer	Health Benefits	—	—	—
	Equity Award Acceleration	—	34,100	—
		77,500	34,100	—

(1) This represents the cumulative value of the equity awards that would accelerate upon a change in control. The amount represents (1) the value of restricted common stock priced on the last business day of the registrant's last completed fiscal year, and (2) the difference between the price of our common stock at the last business day of the registrant's last completed fiscal year and the exercise price multiplied by the number of options that would accelerate.

(2) Per the terms of the employment agreement, equity awards vesting within one year of termination will be automatically vested. The price of our common stock at the last business day of the registrant's last completed fiscal year is less than the exercise price of the options vesting within one year. As such, no value has been assigned to any acceleration that may occur upon a termination or a change in control.

2013 Grants of Plan-Based Awards

The following table sets forth information regarding grants of stock and option awards made to our Named Executive Officers during fiscal 2013:

(a)	(b)	(c-e)			(f)	(g)	(h)	(i)	(j)
Named Officer	Grant Date	Estimated Future Payouts Under Equity Incentive Plan Awards and Non-Equity Incentive Plan Awards			All Other Stock Awards: Number of Shares of Stock or Units	All Other Option Awards: Number of Securities Underlying Options	Exercise or Base Price of Option Awards	Market Price on Date of Grant	Full Grant Date Fair Value of Stock and Option Awards
		Threshold ($)	Target ($)	Maximum ($)	(#)	(#)	($/Sh)	($/Sh)	($) (1)
Robin Smith	3/6/2013	—	—	—	10,000	—	— $	5.30	53,000
Chief Executive Officer	1/2/2013	—	—	—	—	50,000	$ 6.20	$ 6.20	249,718
Andrew Pecora (2)	1/2/2013	—	—	—	—	30,000	$ 6.20	$ 6.20	143,224
Chief Visionary Officer	8/5/2013	—	—	—	—	27,500	$ 7.29	$ 7.29	143,248
Douglas Losordo	8/5/2013	—	—	—	20,000(3)	—	— $	7.29	145,800
Chief Medical Officer	8/5/2013	—	—	—	—	70,000(3)	$ 7.29	$ 7.29	343,070
Robert Preti	1/2/2013	—	—	—	—	30,000	$ 6.20	$ 6.20	143,224
President and Chief Scientific Officer of PCT									
Larry May	1/2/2013	—	—	—	—	25,000	$ 6.20	$ 6.20	119,353
Chief Financial Officer									
Robert Dickey IV	8/19/2013	—	—	—	5,000(4)	—	— $	7.46	37,300
Chief Financial Officer	8/19/2013	—	—	—	—	36,000(4)	$ 7.46	$ 7.46	181,019
	8/19/2013					10,000(4)	$ 7.46	$ 7.46	48,443

(1) Computed in accordance with FASB ASC Topic 718. See footnote 13 of the financial statements.

(2) Excludes $80,245 of shares issued to Dr. Pecora in lieu of cash compensation as reflected in footnote 10 of the Summary Compensation Table above.

(3) Consists of an award granted to Dr. Losordo pursuant to the terms of his employment agreement.

(4) Consists of an award granted to Mr. Dickey pursuant to the terms of his employment agreement.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table sets forth information on option awards outstanding at December 31, 2013 for NeoStem's named Executive Officers.

Name	Number of Securities Underlying Unexercised Options # Exercisable	Number of Securities Underlying Unexercised Options # Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options	Option Exercise Price**	Option Expiration Date
Robin L. Smith	1,500 (1)	—	—	$ 19.00	12/4/2016
	5,500 (2)	—	—	$ 19.00	1/17/2017
	25,000 (3)	—	—	$ 19.00	9/26/2017
	12,000 (4)	—	—	$ 16.30	2/26/2018
	500 (5)	—	—	$ 11.30	10/30/2018
	10,000 (6)	—	—	$ 19.50	5/20/2019
	50,000 (7)	—	—	$ 17.10	7/7/2019
	75,000 (8)	—	—	$ 20.40	10/28/2019
	22,968 (9)	—	—	$ 19.00	10/29/2016

	20,000 (10)	—	—	$	16.60	11/3/2019
	150,000 (11)	—	—	$	17.40	4/3/2021
	79,000 (12)	—	—	$	5.20	1/3/2022
	40,263 (13)	—	—	$	3.60	4/25/2022
	70,000 (14)	—	—	$	5.20	7/4/2022
	40,000 (15)	10,000 (15)	—	$	6.20	1/1/2023
Andrew Pecora	20,001 (16)	19,999 (16)	—	$	15.00	1/18/2021
	30,000 (17)	20,000 (17)	—	$	7.10	8/16/2021
	11,667 (18)	5,833 (18)	—	$	5.20	1/3/2022
	14,000 (19)	—	—	$	3.60	4/25/2022
	24,000 (20)	6,000 (20)	—	$	6.20	1/1/2023
	13,125 (21)	14,375 (21)	—	$	7.29	8/4/2023
Robert Preti	20,001 (22)	19,999 (22)	—	$	15.00	1/18/2021
	18,427 (23)	9,213 (23)	—	$	5.20	1/3/2022
	5,500 (24)	—	—	$	3.60	4/25/2022
	24,000 (25)	6,000 (25)	—	$	6.20	1/1/2023
Douglas Losordo	296 (26)	—		$	19.00	6/14/2014
	7,500 (27)	—		$	19.50	6/15/2014
	7,500 (28)	—		$	20.50	6/15/2014
	600 (29)	—		$	19.00	10/15/2016
	— (30)	70,000 (30)		$	7.29	8/4/2023
Larry May	100 (31)	— (31)	—	$	19.00	11/15/2014
	1,000 (32)	— (32)	—	$	19.00	6/1/2016
	4,150 (33)	— (33)	—	$	19.00	10/29/2016
	2,000 (34)	— (34)	—	$	19.00	12/4/2016
	2,000 (35)	— (35)	—	$	19.00	9/26/2017
	3,600 (36)	— (36)	—	$	16.30	2/26/2018
	500 (37)	— (37)	—	$	11.30	10/30/2018
	15,000 (38)	— (38)	—	$	20.40	10/28/2019
	35,000 (39)	— (39)	—	$	17.40	4/3/2021
	13,333 (40)	6,667 (40)	—	$	5.20	1/3/2022
	5,625 (41)	— (41)	—	$	3.60	4/25/2022
	20,000 (42)	5,000 (42)	—	$	6.20	1/1/2023
Robert Dickey IV	— (43)	46,000 (43)	—	$	7.46	8/18/2023

** All option awards were made under and are governed by the terms of the Company's 2003 Equity Participation Plan or NeoStem's 2009 Amended & Restated Equity Compensation Plan which was approved by our stockholders at our 2013 annual stockholder meeting on October 3, 2013. the 2009 Amended & Restated Plan increased the aggregate number of shares of the Company's common stock ("Common Stock") available for issuance thereunder by 2,600,000 shares, from 3,395,000 shares to 5,995,000 shares.

(1) Consists of options granted to Dr. Smith by the Compensation Committee on December 5, 2006, which vested as to 1,000 options upon grant and as to 500 options on August 9, 2007 upon our common stock being listed for trading on the American Stock Exchange (now known as the NYSE MKT).

(2) This option was granted to Dr. Smith in connection with her entering into an amendment to her employment agreement on January 26, 2007, and vested as to (i) 2,500 options upon the first closings in NeoStem's January 2007 private placement, (ii) 1,500 options on June 30, 2007 and (iii) 1,500 options on December 31, 2007.

(3) Consists of options granted to Dr. Smith by the Compensation Committee September 27, 2007, which vested as to 15,000 options on the date of grant and as to 10,000 options upon consummation of the Erye Merger on October 30, 2009.

(4) Consists of options granted to Dr. Smith by the Compensation Committee on February 27, 2008, which vested (i) as to 4,000 options on the date of grant, (ii) as to 3,000 options upon consummation of the Erye Merger on October 30, 2009, (iii) as to 3,000 options on September 2, 2008 upon the achievement of a business milestone, and (iv) as to 2,000 options on October 31, 2008 upon the achievement of a business milestone.

(5) This option was granted to Dr. Smith by the Compensation Committee on October 31, 2008 and vested on November 2, 2008 upon the achievement of a business milestone.

(6) This option was granted to Dr. Smith by the Compensation Committee on May 8, 2009 and was vested in its entirety on the date of grant.

(7) This option was granted to Dr. Smith by the Compensation Committee on July 8, 2009 and vested as to 25,000 options on the date of grant and as to an additional 25,000 options upon consummation of the Erye Merger on October 30, 2009.

(8) An option was granted to Dr. Smith by the Compensation Committee effective October 29, 2009 upon approval of the Erye Merger and the increase in shares under the 2009 Equity Compensation Plan consisting of an aggregate of 75,000 option shares, and was scheduled to vest as to 25,000 options upon the achievement of a specific business milestone, 25,000 options on July 8, 2010 and 25,000 options on July 8, 2011. On July 7, 2010, the Compensation Committee accelerated the vesting of the 25,000 options originally scheduled to vest upon achievement of a business milestone and the 20,000 options originally scheduled to vest on July 8, 2011. As a result, as of July 8, 2010, this option was fully vested.

(9) This option was granted to Dr. Smith by the Compensation Committee on October 30, 2009 and was vested in its entirety on the date of grant.

(10) This option was granted to Dr. Smith by the Compensation Committee on November 4, 2009 and originally scheduled to vest as to one-third of option shares on each one year anniversary of the date of grant. Pursuant to Dr. Smith's April 4, 2011 Employment Agreement amendment, the vesting of this option was accelerated and as of that date the option was fully vested.

(11) Consists of options granted to Dr. Smith pursuant to the terms of her April 4, 2011 Employment Agreement Amendment which vested as to 50,000 options on each of the date of grant and December 31, 2011 and was scheduled to vest as to 50,000 options on December 31, 2012. The vesting of this option was accelerated pursuant to Dr. Smith's November 13, 2012 Employment Agreement Amendment.

(12) Consists of options granted to Dr. Smith by the Compensation Committee on January 4, 2012 which vested as to 26,333 options on the date of grant, and was scheduled to vest as to (i) 26,333 options on January 4, 2013, and (ii) 26,334 options on January 4, 2014. The vesting of this option was accelerated pursuant to Dr. Smith's November 13, 2012 Employment Agreement Amendment.

(13) On April 26, 2012, the Compensation Committee adopted a program (the "2012 Option Program") whereby each participating officer was issued on April 26, 2012 an option (the "Option") to purchase that number of shares of common stock equal to that portion of each Participating Officer's gross salary (the "Participating Salary") for the period May 1, 2012 - July 31, 2012 (the "Election Period"). The Option, the issuance of which is in lieu of payment of the Participating Salary vests at the end of the month in which the Participating Salary to which it relates would have been paid and has a term of ten years despite any termination of employment of the Participating Officer. Dr. Smith's Participating Salary for the Election Period was her full salary. Accordingly the options vested as to 13,421 on May 31, 2012, 13,421 on June 30, 2012 and 13,421 on July 31, 2012.

(14) This option was granted to Dr. Smith by the Compensation Committee on July 5, 2012 and was vested in its entirety on the date of grant.

(15) Consists of options granted to Dr. Smith by the Compensation Committee on January 2, 2013 which vested as to 10,000 options on the date of grant, and as to 30,000 options in tranches of 10,000 options upon the achievement of specified milestones; 10,000 options shall vest upon the achievement of a specified milestone.

(16) Consists of options granted to Dr. Pecora pursuant to the terms of his employment agreement dated as of September 23, 2010 and effective on January 19, 2011 upon the closing of the PCT Merger, which are scheduled to vest as to 10,000 options on each of the first and second annual anniversaries of the effective date and is scheduled to vest as to 10,000 options on each of the third and fourth annual anniversaries of the effective date of his employment agreement.

(17) Consists of options granted to Dr. Pecora pursuant to the terms of his August 17, 2011 Employment Agreement Amendment which vested as to 10,000 options on each of the effective date, August 17, 2012 and August 17, 2013, and which is scheduled to vest as to 10,000 options on August 17, 2014 and 10,000 options on August 17, 2015.

(18) Consists of options granted to Dr. Pecora by the Compensation Committee on January 4, 2012 which vested as to 5,834 options on the date of grant, 5,833 options on January 4, 2013 and 5,844 options on January 4, 2014.

(19) On April 26, 2012, the Compensation Committee adopted a program (the "2012 Option Program") whereby each participating officer was issued on April 26, 2012 an option (the "Option") to purchase that number of shares of common stock equal to that portion of each Participating Officer's gross salary (the "Participating Salary") for the period May 1, 2012 - July 31, 2012 (the "Election Period"). The Option, the issuance of which is in lieu of payment of the Participating Salary vests at the end of the month in which the Participating Salary to which it relates would have been paid and has a term of ten years despite any termination of employment of the Participating Officer. Dr. Pecora's Participating Salary for the Election Period was his full salary. Accordingly the options vested as to 4,666 on May 31, 2012, 4,667 on June 30, 2012 and 4,667 on July 31, 2012.

(20) Consists of options granted to Dr. Pecora by the Compensation Committee on January 2, 2013 which vested as to 6,000 options on the date of grant, and as to 24,000 options in tranches of 6,000 options upon the achievement of specified milestones; 6,000 options shall vest upon the achievement of a specified milestone.

(21) Consists of options granted to Dr. Pecora pursuant to the terms of his July 31, 2013 (effective August 5, 2013) Employment Agreement Amendment which vested as to 5,000 options on August 5, 2013, 12,500 options of September 30, 2013, 5,000 option shares on December 31, 2013, 3,125 options vested on December 16, 2013, and is scheduled to vest as to 5,000 option shares on December 31, 2014 and 9,375 options are scheduled to vest in tranches of 3,125 options upon achievement of three specified milestones.

(22) Consists of options granted to Dr. Preti pursuant to the terms of his employment agreement dated as of September 23, 2010 and effective on January 19, 2011 upon the closing of the PCT Merger, which are scheduled to vest as to 10,000 options on each of the first and second annual anniversaries of the effective date and is scheduled to vest as to 10,000 options on each of the third and fourth annual anniversaries of the effective date of his employment agreement.

(23) Consists of options granted to Dr. Preti by the Compensation Committee on January 4, 2012, which vested as to: (i) 9,213 options on January 4, 2012,

(ii) 9,213 options on January 4, 2013 and, (iii) 9,214 options on January 4, 2014.

(24) Consists of options granted to Dr. Preti pursuant to the 2012 Option Program which vested as to 2,750 options on May 31, 2012 and 2,750 options on June 30, 2012.

(25) Consists of options granted to Dr. Preti by the Compensation Committee on January 2, 2013 which vested as to 6,000 options on the date of grant, and as to 24,000 options in tranches of 6,000 options upon the achievement of specified milestones; 6,000 options shall vest upon the achievement of an additional specified milestone.

(26) This option was granted to Dr.Losordo when he was a consultant for the Company, by the Compensation Committee on October 30, 2009 and was vested in its entirety on the date of grant.

(27) Consists of options granted to Dr. Losordo on May 21, 2009 as compensation when he served as a member of the Company's Scientific Advisory Board which fully vested on the date of grant.

(28) Consists of options granted to Dr. Losordo when he was a consultant for the Company on June 16, 2009 which vested as to 2,500 options on June 15, 2009, 2500 options on December 31, 2009 and 2,500 options on December 31, 2010.

(29) Consists of options granted to Dr. Losordo while he was a consultant for the Company on August 19, 2007, which vested as to 200 options on October 16, 2007, 200 options on October 16, 2008 and as to 200 options on October 16, 2009.

(30) Consists of options granted to Dr. Losordo pursuant to the terms of his employment agreement dated as of July 23, 2013 and effective on August 5, 2013, which are scheduled to vest as to 20,000 options on each of the first and second annual anniversaries of the effective date of his employment agreement and as to 30,000 options on the third annual anniversaries of the effective date of his employment.

(31) Consists of options granted to Mr. May by the Compensation Committee on November 15, 2004 and was fully vested on the date of grant.

(32) Consists of options granted to Mr. May by the Compensation Committee on June 2, 2006 and was vested in its entirety on October 31, 2008 upon the achievement of a business milestone.

(33) Consists of options granted to Mr. May by the Compensation Committee on October 30, 2009 and was vested upon the achievement of business milestones.

(34) Consists of options granted to Mr. May by the Compensation Committee on December 5, 2006 and was vested upon the achievement of business milestones.

(35) Consists of options granted to Mr. May by the Compensation Committee September 27, 2007, which vested as to 500 options on the date of grant and as to 1,500 options upon the achievement of business milestones.

(36) Consists of options granted to Mr. May by the Compensation Committee on February 27, 2008, which vested (i) as to 1,000 options on the date of grant, (ii) as to 1,500 options upon consummation of the Erye Merger on October 30, 2009, (iii) as to 500 options on September 2, 2008 upon the achievement of a business milestone, and (iv) as to 600 options on August 15, 2008 upon the achievement of a business milestone.

(37) This option was granted to Mr. May by the Compensation Committee on October 31, 2008 and vested on November 2, 2008 upon the achievement of a business milestone.

(38) This option was granted to Mr. May by the Compensation Committee on October 29, 2009 and was fully vested on the date of grant.

(39) This option was granted to Mr. May by the Compensation Committee on April 4, 2011 and vested as to 17,500 options on the date of grant and 17,500 options on April 4, 2012.

(40) Consists of options granted to Mr. May by the Compensation Committee on January 4, 2012 which vested as to (i) 6,666 options on the date of grant, (ii) 6,667 options on January 4, 2013, and (iii) 6,667 options are scheduled to vest on January 4, 2014.

(41) On April 26, 2012, the Compensation Committee adopted the Option Program whereby each participating officer was issued on April 26, 2012 an option (the "Option") to purchase that number of shares of common stock equal to that portion of each Participating Officer's gross salary (the "Participating Salary") for the period May 1, 2012 - July 31, 2012 (the "Election Period"). The Option, the issuance of which is in lieu of payment of the Participating Salary vests at the end of the month in which the Participating Salary to which it relates would have been paid and has a term of ten years despite any termination of employment of the Participating Officer. Mr. May's Participating Salary for the Election Period was 25% of his full salary. Accordingly the options vested as to 1,875 options on May 31, 2012, June 30, 2012 on July 31, 2012.

(42) Consists of options granted to Mr. May by the Compensation Committee on January 2, 2013 which vested as to 5,000 options on the date of grant, and as to 24,000 options in tranches of 6,000 options upon the achievement of specified milestones; 5,000 options shall vest upon the achievement of an additional specified milestone.

(43) Consists of 36, 000 options granted to Mr. Dickey pursuant to the terms of his employment agreement dated as of August 16, 2013 and effective on August 19, 2013, which are scheduled to vest as to 12,000 shares on each of the first, second and third annual anniversaries of the effective date of his employment, and 10,000 bonus options which is scheduled to vest on the one year anniversary of the effective date of his employment agreement.

Option Exercises and Stock Vested during 2013

The following table sets forth information regarding options exercised and shares of common stock acquired upon vesting by our Named Executive Officers during the fiscal ended December 31, 2013:

(a)	(b)	(c)	(d)	(e)
	Option Award		Stock Award	
Name	Number of Shares Acquired on Exercise	Value Realized on Exercise	Number of Shares Acquired on Vesting	Value Realized on Vesting
	(#)	($)	(#)	($)
Robin Smith Chief Executive Officer	—	—	10,000	53,000
Andrew Pecora Chief Visionary Officer	—	—	—	—
Douglas Losordo Chief Medical Officer	—	—	—	—
Robert Preti President and Chief Scientific Officer of PCT	—	—	—	—
Larry May Chief Financial Officer	—	—	—	—
Robert Dickey IV Chief Financial Officer	—	—	—	—

NEOSTEM DIRECTOR COMPENSATION

General Information

Directors who are employees of NeoStem or its wholly-owned subsidiaries do not receive additional cash compensation for serving as directors. NeoStem's non-employee directors are reimbursed for out-of-pocket travel expenses incurred in their capacity as NeoStem directors. Pursuant to NeoStem's 2009 Amended & Restated Equity Compensation Plan, all directors (including independent directors) are eligible to receive equity awards. There were no option awards granted during 2013 to NeoStem's directors, other than as reflected in the Summary Compensation Table or as reflected below. There were no stock awards granted during 2013 to any of NeoStem's directors.

The following table sets forth information on all compensation to NeoStem's directors (other than as reflected in the Summary Compensation Table) for the year ended December 31, 2013.

Name	Year	Fees Earned or Paid in Cash	Stock Awards[1]	Option Awards[1]	Total Compensation
Richard Berman [2]	2013	$ 30,000	$ 112,200	$ —	142,200
Steven S. Myers [3]	2013	$ 30,000	$ 112,200	$ —	142,200
Drew Bernstein [4]	2013	$ 30,000	$ —	$ 109,866	139,866
Eric C. Wei [5]	2013	$ 30,000	$ 79,200	$ —	109,200
Martyn Greenacre (6)	2013	$ 30,000	$ 79,200	$ —	109,200
Stephen Potter (7)	2013	$ 15,000	$ 38,400	$ 37,303	90,703
		$ 165,000	$ 421,200	$ 147,169	733,369

(1) Amounts shown under " Stock Awards" and "Option Awards" represent the aggregate grant date fair value computed in accordance with FASB ASC Topic 718, in accordance with SEC rules. See Note 14 for a discussion of assumptions made in such valuations. All stock awards, option awards and other shares discussed in this table were issued under the Company's 2003 Equity Participation Plan or the 2009 Amended & Restated Equity Compensation Plan, with a per share price generally equal to the fair market value of a share of common stock on the date of grant.

(2) At December 31, 2013, Mr. Berman had options to purchase 34,939 shares of NeoStem common stock outstanding, all of which were vested.

(3) At December 31, 2013, Mr. Myers had options to purchase 34,939 shares of NeoStem common stock outstanding, all of which were vested. At December 31, 2013, Mr. Myers had a total of 53,031 shares in stock awards outstanding, all of which were vested.

(4) At December 31, 2013, Mr. Bernstein had options to purchase 85,369 shares of NeoStem common stock outstanding, all of which were vested.

(5) At December 31, 2013, Mr. Wei had options to purchase 15,000 shares of NeoStem common stock outstanding, 15,000 of which were vested.

(6) At December 31, 2013, Mr. Greenacre had warrants to purchase 25,000 shares of NeoStem common stock outstanding, 25,000 of which were vested.

(7) At December 31, 2013, Mr. Potter had options to purchase 9,350 shares of the Company's common stock outstanding, 9,350 of which were vested. Mr. Potter ceased being a director on July 15, 2013.

On January 4, 2012 the Compensation Committee, after consultation with the Board, adopted the NeoStem 2012 Board of Directors Compensation Plan (the "Board of Directors Compensation Plan"), which provides that each Board member who is not an employee of NeoStem or one of its wholly-owned subsidiaries shall be authorized to receive, in such Board member's sole discretion, either (i) options to purchase 12,000 shares of the Company's common stock; or (ii) a stock award of 12,000 shares of our common stock, in either case issued under and subject to the terms of the 2009 Plan, for his or her service as a Board member. These options and shares shall vest fully on the date of grant. The Board of Directors Compensation Plan further provides that the Chair of each Board Committee who is not an employee of the Company or any of its wholly-owned subsidiaries shall be authorized to additionally receive, in such Committee Chair's sole discretion, either (i) options to purchase 5,000 shares of our common stock; or (ii) a stock award of 5,000 shares of our common stock, in either case issued under and subject to the terms of the 2009 Plan, for his or her service as a Committee Chair. These options and shares shall vest fully on the date of grant. In each case, the exercise price of options authorized pursuant to the Board of Directors Compensation Plan shall be equal to the closing price of a share of our common stock on the date of grant. The foregoing shall be issued on January 4th of each year during the term of the Board of Directors Compensation Plan, commencing January 4, 2012. Directors who are not employees of NeoStem or its wholly-owned subsidiaries are also entitled to cash fees equal to $7,500 per calendar quarter commencing with the quarterly period ending March 31, 2012. Notwithstanding the foregoing, the Compensation Committee shall have the discretion to renew or adjust, as appropriate, this Board of Directors Compensation Plan at the end of each calendar year, including with respect to whether to continue offering the choice under such plan between options and stock. In accordance with the above, on January 4, 2012 the Company issued an aggregate of 41,000 options to purchase shares of our common stock at a per share exercise price of $5.20 and 58,000 shares of our common stock.

On January 3, 2013 the Compensation Committee, after consultation with the Board, amended the Board of Directors Compensation Plan which provides that for 2013 and thereafter, should a Board member who is not an employee of NeoStem or one of its wholly-owned subsidiaries elect, as their compensation, options to purchase the Company's common stock over a common stock award as referenced above, the option award shall now equal 18,700 options (the common stock award of 12,000 shall remain the same should the Board member elect to receive shares of common stock over options) and should the Chair of a Board Committee elect to receive options over common stock, the Committee Chair shall be granted 7,800 options (the common stock award of 50,000 shall remain the same. All other terms of the Board of Directors Compensation Plan remain the same.

On December 12, 2013 the Compensation Committee was given a report by the Company's outside compensation consultant, MarksonHRC, regarding recommendations for changes to the Board of Directors Compensation Plan beginning in 2014. Based on this report, the Board of Directors Compensation Plan was amended to provide for (i) a $10,000 per calendar quarter cash fee commencing with the quarterly period ending March 31, 2014 (increased from $7,500 per quarter); (ii) an equity award of 1,500 options (or 1,000 shares at the Board member's option) for membership on a Board committee; and (iii) the option to choose cash in lieu of equity payable under the Board of Directors Compensation Plan. Other than the foregoing, no changes were made to the Board of Directors Compensation Plan.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The following table sets forth information regarding the number of shares of NeoStem common stock beneficially owned as

of February 24, 2014 by:

- each of NeoStem's named executive officers;
- each of NeoStem's current directors;
- all of NeoStem's current directors and executive officers as a group; and
- each person who is known by NeoStem to beneficially own 5% or more of the NeoStem common stock.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes any shares over which a person possesses sole or shared voting or investment power. Shares of NeoStem common stock that may be acquired upon exercise of stock options or warrants which are currently exercisable or which become exercisable within 60 days after the date indicated in the table are deemed beneficially owned by the optionees or warrant holders. Unless otherwise indicated, and subject to any applicable community property laws, to NeoStem's knowledge the persons or entities named in the table below have sole voting and investment power with respect to all shares indicated as beneficially owned by them.

Unless otherwise indicated, the address of the beneficial owner is c/o NeoStem, Inc., 420 Lexington Avenue, Suite 350, New York, NY 10170.

As of February 24, 2014, there were 28,546,329 shares of NeoStem common stock outstanding. As of such date, the current directors and executive officers of NeoStem collectively owned beneficially 5,322,417 shares, or approximately 17% of the outstanding shares.

Name and Address of Beneficial Holder	Number of Shares Beneficially Owned	Percentage of Common Stock Beneficially Owned
Robin L. Smith, M.D. Chief Executive Officer and Chairman of the Board	908,212 (1)	3.11%
Robert Dickey IV Chief Financial Officer	13,750 (2)	0.05%
Douglas Losordo, M.D. Chief Medical Officer	46,229 (3)	0.16%
Robert A. Preti, Ph.D. President and Chief Scientific Officer of PCT	317,121 (4)	1.11%
Larry A. May Chief Financial Officer	124,192 (5)	0.43%
Andrew L. Pecora, M.D. Chief Visionary Officer and Director	448,185 (6)	1.56%
Richard Berman Director	34,939 (7)	0.12%
Steven S. Myers Director	205,944 (8)	0.72%
Drew Bernstein Director	113,369 (9)	0.40%
Eric H.C. Wei Director	2,667,988 (10) (11)	9.21%
RimAsia Capital Partners, L.P. RimAsia Capital Partners GP, L.P. RimAsia Capital Partners GP, Ltd. RimAsia Capital Partners Manager, Ltd. 1807 Harbour Centre 25 Harbour Road Wanchai Hong Kong	2,652,988 (11)	9.17%
Martyn Greenacre Director	89,531 (12)	0.31%
All Directors and Executive Officers as a group (fourteen persons)	5,322,417 (13) (14)	17.41%

The address for each officer and director is c/o NeoStem, Inc., 420 Lexington Avenue, Suite 350, New York, NY 10170.

(1) Includes options to purchase up to 623,564 shares of our common stock which are exercisable within 60 days of February 24, 2014.

(2) Includes options to purchase up to 8,750 shares of our common stock which are exercisable within 60 days of February 24, 2014.

(3) Includes options to purchase up to 24,229 shares of our common stock which are exercisable within 60 days of February 24, 2014.

(4) Includes (i) options to purchase up to 99,641 shares of our common stock which are exercisable within 60 days of February 24, 2014 and (ii) warrants to purchase up to 34,305 shares of our common stock which are exercisable within 60 days of February 24, 2014.

(5) Includes options to purchase up to 117,725 shares of our common stock which are exercisable within 60 days of February 24, 2014.

(6) Includes (i) options to purchase up to 145,292 shares of our common stock which are exercisable within 60 days of February 24, 2014 and (ii) warrants to purchase up to 35,860 shares of our common stock which are exercisable within 60 days of February 20, 2013.

(7) Includes options to purchase up to 34,939 shares of our common stock which are exercisable within 60 days of February 24, 2014.

(8) Includes options to purchase up to 34,939 shares of common stock which are exercisable within 60 days of February 24, 2014.

(9) Includes options to purchase up to 113,369 shares of common stock which are exercisable within 60 days of February 24, 2014.

(10) Includes options to purchase up to 15,000 shares of common stock which are exercisable within 60 days of February 24, 2014.

(11) Includes (i) 2,237,988 shares of common stock by RimAsia Capital Partners L.P., a Cayman Islands exempted limited partnership ("RimAsia LP"), (ii) 15,000 shares of common stock by RimAsia Manager; and (iii) warrants to purchase up to 400,000 which are exercisable within 60 days of February 24, 2014 which are held by RimAsia. RimAsia Capital Partners GP, L.P. ("RimAsia GP") is the general partner of RimAsia. RimAsia Capital Partners GP, Ltd. ("RimAsia Ltd.") is the general partner of RimAsia GP. RimAsia Manager is the fund manager of RimAsia GP and the manager of RimAsia. Mr. Wei is the managing partner of RimAsia, and indirect partner of RimAsia GP, a director of RimAsia Ltd. and a director of RimAsia Manager.

(12) Includes warrants to purchase up to 25,000 shares of common stock which are exercisable within 60 days of February 24, 2014.

(13) See footnotes 1 - 12. Includes shares and exercisable rights owned by RimAsia Capital Partners as set forth in footnote 11.

(14) Includes options to purchase up to 309,697 shares of common stock which are exercisable within 60 days of February 24, 2014 held by executive officers not individually listed in this table of the Company and its subsidiaries.

EQUITY COMPENSATION PLAN INFORMATION

The following table gives information about our common stock that may be issued upon the exercise of options, warrants and rights under our equity compensation plans as of December 31, 2013. In the following table, the equity compensation plan approved by security holders includes the NeoStem, Inc. 2009 Amended & Restated Equity Compensation Plan. This plan was our only equity compensation plan approved by security holders in existence as of December 31, 2013.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants, and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in columns (a)) (c)
Equity compensation plans approved by security holders	2,932,191	$ 9.24	2,571,568
Equity compensation plans not approved by security holders (1)	341,268	$ 8.36	—
Total	3,273,459	$ 9.15	2,571,568

(1) Consists of individual grants of warrants to seventeen service providers to the Company, no one of which is individually material.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

In accordance with the PCT Merger Agreement, the stock consideration paid by NeoStem in exchange for the membership interests of PCT was deposited into an escrow account for eventual distribution to the former members of PCT. Dr. Pecora, Dr. Robert A. Preti (PCT's President and Chief Scientific Officer prior to the PCT Merger, and who following the PCT Merger serves as PCT's President pursuant to an employment agreement that became effective upon the PCT Merger closing) and George S. Goldberger (PCT's Chief Business and Financial Officer, Treasurer and Secretary prior to the PCT Merger, and who following the PCT Merger serves as PCT's Vice President - Business Development pursuant to an employment agreement that became effective upon the PCT Merger closing), beneficially owned approximately 17.2%, 17.0% and 2.5%, respectively, of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Certain of the shares of NeoStem common stock issued to these three individuals have been released from escrow earlier than the first release of shares for other members of PCT for the purpose of enabling them to pay taxes that will be due as a result of the PCT Merger. As of February 24, 2014, Dr. Pecora, Dr. Preti and Mr. Goldberger beneficially own 448,185, 317,121 and 81,130 shares, respectively, of the outstanding NeoStem common stock, representing respectively 1.56%, 1.11% and 0.28% of the NeoStem common stock.

Dr. Pecora beneficially owned approximately 17.2% of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Pursuant to the PCT Merger, Dr. Pecora received the right to 184,453 shares of NeoStem common stock (with an aggregate value of $2,766,790 based on the closing price of the NeoStem common stock on the date of closing) and Warrants (with an aggregate estimated value of $342,000) to purchase an aggregate of 52,203 shares of NeoStem common stock, with one-third (17,401) of such Warrants each exercisable at a per share purchase price of $30.00, $50.00 and $70.00, respectively (the $70.00 warrants vesting only upon the achievement of a business milestone). Dr. Preti beneficially owned approximately 17.0% of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Pursuant to the PCT Merger, Dr. Preti received the right to 179,188 shares of NeoStem common stock (with an aggregate value of $2,687,820 based on the closing price of the NeoStem common stock on the date of closing) and Warrants (with an aggregate estimated value of $332,000) to purchase an aggregate of 50,715 shares of NeoStem common stock, with one-third (16,905) of such Warrants each exercisable at a per share purchase price of $30.00, $50.00 and $70.00, respectively (the $70.00 warrants vesting only upon the achievement of a business milestone).

The Company acquired Amorcyte, Inc. (the “Amorcyte Merger”) on October 17, 2011 in accordance with the terms of the Agreement and Plan of Merger, dated as of July 13, 2011 (the “Amorcyte Merger Agreement”). As a result of the consummation of the Amorcyte Merger, Amorcyte is now a wholly-owned subsidiary of NeoStem. Amorcyte had originally been incorporated as a subsidiary of PCT and was spun off to PCT's members prior to NeoStem's January 19, 2011 acquisition of PCT. At the time the Amorcyte Merger Agreement was entered into, Dr. Pecora and George Goldberger were officers of both PCT and Amorcyte. Dr. Pecora was Amorcyte's Chief Scientific Officer prior to the Amorcyte Merger and continues to serve in such capacity for no additional consideration. Mr. Goldberger was Vice President - Business Development of PCT and Chief Financial Officer of Amorcyte. Dr. Pecora, Mr. Goldberger and Dr. Preti were all stockholders of Amorcyte.

In accordance with the terms of the Amorcyte Merger Agreement, the stock consideration paid by NeoStem in exchange for the equity interests of Amorcyte was deposited into an escrow account for eventual distribution to the former security holders of Amorcyte. Dr. Pecora beneficially owned approximately 15.6 % of the common stock, and 0.6% of the Series A preferred stock, respectively, as well as certain options of Amorcyte, that were outstanding immediately prior to the closing of the Amorcyte Merger. Pursuant to the Amorcyte Merger, Dr. Pecora received the right to 3,285 shares of NeoStem common stock (with an aggregate value of $21,025 based on the closing price of the Company's common stock on the date of closing) and Series AMO Warrants (with an estimated aggregate value of $10,000) to purchase 1,058 shares of NeoStem common stock at a per share purchase price of $14.66. Dr. Preti beneficially owned approximately 15.6 % of the common stock, and 0.3% of the Series A preferred stock,

respectively, as well as certain options of Amorcyte, that were outstanding immediately prior to the closing of the Amorcyte Merger. Pursuant to the Amorcyte Merger, Dr. Preti received the right to 1,536 shares of NeoStem common stock (with an aggregate value of $9,833 based on the closing price of the Company's common stock on the date of closing) and Series AMO Warrants (with an estimated aggregate value of $1,771) to purchase 495 shares of NeoStem common stock at a per share purchase price of $14.66. The Amorcyte Merger Agreement additionally provides that the former equity holders of Amorcyte have the right to receive additional shares of NeoStem's common stock, which will be issued only if certain business milestones specified in the Amorcyte Merger Agreement are accomplished, as well as certain earn-out payments upon the commercialization of AMR-001, Amorcyte's lead product candidate for the treatment of acute myocardial infarction.

In order to accelerate Amorcyte's commencement of its Phase 2 clinical trial of AMR-001, NeoStem agreed to provide loans to Amorcyte prior to the closing of the Amorcyte Merger to be used in connection with the Phase 2 trial. Pursuant to a Loan Agreement entered into on September 9, 2011, NeoStem loaned Amorcyte prior to the closing of the Merger an aggregate of $338,500 which was applied towards the commencement of the Phase 2 trial.

One investor in the Company's private placement offering in May 2012 was Martyn Greenacre, a member of the Company's Board of Directors, who purchased 25,000 units for a total subscription amount of $100,000.

In 2011, consistent with NeoStem's previously disclosed intention to provide support for The Stem for Life Foundation (the “Foundation”), a Pennsylvania nonprofit corporation classified as a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the “Code”), whose mission is to promote public awareness, fund research and development and subsidize stem cell collection and storage programs, NeoStem contributed to the Foundation 40,763 shares of previously issued restricted NeoStem common stock with a fair value of approximately $607,000. The contribution of such securities was subject to the approval of the NeoStem Board of Directors and the Audit Committee. In 2012, The Foundation paid NeoStem approximately $150,000 for services associated with joint activities between the Foundation, NeoStem, the Pontifical Council for Culture and the Pontifical Council's foundation, Science, Theology and the Ontological Quest. NeoStem's CEO and Chairman is President and a Trustee of the Foundation, its General Counsel is Secretary and a Trustee of the Foundation and its Chief Accounting Officer is Treasurer of the Foundation.

On November 13, 2012, we and our subsidiary, CBH, sold our 51% ownership interest in Erye to Fullbright and EET. EET was prior to the sale the holder of the minority 49% ownership interest in Erye, and was a party along with our subsidiary CBH to the Joint Venture Agreement which had governed the ownership of the respective interests in Erye. Fullbright is an affiliate of EET. Mr. Shi Mingsheng (a former member of our Board of Directors, and Chairman of the Board of Erye) and Madam Zhang Jian (the General Manager of Erye, and formerly our Vice President of Pharmaceutical Operations) are the principal equity holders of each of EET and Fullbright. Fullbright assigned all its rights and obligations under the Equity Purchase Agreement (except for its obligations in respect of the return of certain NeoStem securities held by it as part of the purchase price, and its obligations in respect of closing deliverables) to Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands and an affiliate of Fullbright (“Highacheive”). As a result of the assignment, the Purchasers of our Erye Interest were EET and Highacheive.

In December 2013, the Company modified both the First Mortgage and Second Mortgage with TD Bank, N.A. (see Note 10). Pursuant to the Loan Modifications, Andrew L. Pecora, M.D., Regional Cancer Care Associates LLC (Dr. Pecora’s medical practice), and certain partners in such practice, have been released as guarantors of the Second Mortgage Loan, and NeoStem has become a guarantor of the Loans pursuant to a Guaranty of Payment delivered by NeoStem to the Lender. Dr. Pecora, currently currently serves as a NeoStem director, NeoStem’s Chief Visionary Officer, PCT’s Chief Medical Officer and Amorcyte’s Chief Scientific Officer.

Director Independence

For information regarding director independence, please refer to the discussion set forth in Item 10 under the caption, "Corporate Governance-Director Independence."

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

Accounting Fees and Other Accounting Matters

Grant Thornton LLP ("Grant Thornton") was engaged to serve as the Company's independent registered public accounting firm in 2013 and 2013, and accordingly, audited the Company's financial statements for the fiscal years ended December 31, 2013 and 2012. The following table sets forth a summary of the fees billed or expected to be billed to us by Grant Thornton for professional services rendered for the fiscal year ended December 31, 2013 and 2012.

Fee Category	Fiscal 2013 Fees	Fiscal 2012 Fees
Audit Fees[1]	$ 674,500	$ 606,037
Audit-Related Fees[2]	$ —	$ —
Tax Fees[3]	$ —	$ —
All Other Fees[4]	$ —	$ —
Total Fees	$ 674,500	$ 606,037

(1) Audit Fees consist of aggregate fees billed or expected to be billed for professional services rendered for the audit of the Company's annual consolidated financial statements included in the Company's Annual Reports on Form 10-K and review of the interim consolidated financial statements included in Quarterly Reports on Form 10-Q or services that are normally provided by the independent registered public accounting firm in connection with statutory and regulatory filings or engagements for the fiscal years ended December 31, 2013 and December 31, 2012, respectively.

(2) Audit-Related Fees consist of aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's consolidated financial statements and are not reported under "Audit Fees."

(3) Tax Fees consist of aggregate fees billed or expected to be billed for professional services rendered for tax compliance, tax advice and tax planning. These fees related to preparation of the Company's federal and state income tax returns and other tax compliance activities.

(4) All Other Fees consist of aggregate fees billed for products and services provided by Grant Thornton (as applicable), other than those disclosed above.

The Audit Committee is responsible for the appointment, compensation and oversight of the work of the independent registered public accounting firm and approves in advance any services to be performed by the independent registered public accounting firm, whether audit-related or not. The Audit Committee reviews each proposed engagement to determine whether the provision of services is compatible with maintaining the independence of the independent registered public accounting firm. All of the fees shown above were pre-approved by the Audit Committee.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

The following documents are being filed as part of this Report:

(a)(1) FINANCIAL STATEMENTS:

Reference is made to the Index to Financial Statements and Financial Statement Schedule on Page

60

.

(a)(2) FINANCIAL STATEMENT SCHEDULE:

Reference is made to the Index to Financial Statements and Financial Statement Schedule on Page

60

.

All other schedules have been omitted because the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the Financial Statements or Notes thereto.

NEOSTEM, INC.
FORM 10K

(a)(3) EXHIBITS:

The following is a list of exhibits filed (or furnished, where specified) as part of this Annual Report on Form 10-K. Exhibits that were previously filed are described below and are incorporated by reference. For exhibits incorporated by reference, the location of the exhibit in the previous filing is indicated.

Exhibit	Description
2.1	Equity Purchase Agreement, dated as of June 18, 2012, by and among NeoStem, Inc., China Biopharmaceuticals Holdings, Inc., Fullbright Finance Limited, Suzhou Erye Economy & Trading Co., Ltd., and Suzhou Erye Pharmaceutical Co., Ltd. (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K dated June 18, 2012).
2.2	Amendment to Equity Purchase Agreement, dated as of August 14, 2012, by and among NeoStem, Inc., China Biopharmaceuticals Holdings, Inc., Highacheive Holdings Limited, Fullbright Finance Limited, Suzhou Erye Economy & Trading Co., Ltd. and Suzhou Erye Pharmaceutical Co., Ltd. (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K dated August 23, 2012).
2.3	Agreement and Plan of Merger, dated as of July 13, 2011, by and among NeoStem, Inc., Amo Acquisition Company I, Inc., Amo Acquisition Company II, LLC and Amorcyte, Inc. (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K dated July 11, 2011).
2.4	Agreement and Plan of Merger, dated as of September 23, 2010, by and among NeoStem, Inc., NBS Acquisition Company LLC, and Progenitor Cell Therapy, LLC (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K dated September 23, 2010).
3.1	Amended and Restated Certificate of Incorporation of NeoStem, Inc., filed with the Secretary of State of the State of Delaware on October 3, 2013 (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K dated October 3, 2013).
3.2	Amended and Restated By-Laws dated August 31, 2006 (filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
4.1	Form of Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. issued to JFS Investments, Inc. (filed as Exhibit 4.15 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
4.2	Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. issued to Solutions in Marketing, Inc. (filed as Exhibit 4.16 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
4.3	Warrant to Purchase Shares of Common Stock of NeoStem, Inc. issued to Wall Street Communications Group, Inc. (filed as Exhibit 4.17 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
4.4	Form of Redeemable Service Provider Warrant (filed as Exhibit 4.19 to the Company's Registration Statement on Form S-3/A, File No. 333.173853, filed with the SEC on September 16, 2011).
4.5	Form of 2011 Redeemable Service Provider Warrant (filed as Exhibit 4.20 to the Company's Registration Statement on Form S-3/A, File No. 333-173853, filed with the SEC on September 16, 2011).
4.6	Form of Redeemable Service Provider Warrant with cashless exercise rights (filed as Exhibit 4.21 to the Company's Registration Statement on Form S-3/A, File No. 333-173853, filed with the SEC on September 16, 2011).
4.7	Form of 2010/2011 Redeemable Service Provider Warrant with cashless exercise rights (filed as Exhibit 4.22 to the Company's Registration Statement on Form S-3/A, File No. 333-173853, filed with the SEC on September 16, 2011).
4.8	Letter Agreement dated December 18, 2008 between NeoStem, Inc. and RimAsia Capital Partners, L.P. (filed as Exhibit 4.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008 as filed with the SEC on March 31, 2009).
4.8	Specimen Certificate for Common Stock (filed as Exhibit 4.1 to the Company's Registration Statement on Form S-3, File No. 333-145988, filed with the SEC on September 11, 2007).
4.9	Form of Warrant issued in connection with April and July 2009 private placements (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K dated April 13, 2009).
4.10	Form of Common Stock Purchase Warrant from June 2010 (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated June 25, 2010 and filed with the SEC on June 28, 2010).

4.11	Form of Placement Agent Warrant from June 2010 (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K dated June 25, 2010 and filed with the SEC on June 28, 2010).
4.12	Amended and Restated Warrant, dated March 15, 2010, issued to RimAsia Capital Partners, L.P. (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated March 15, 2010 and filed with the SEC on March 18, 2010).
4.13	Form of Warrant from the November 2010 Common Stock Offering (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated and filed with the SEC on November 16, 2010).
4.14	Form of Warrant from the November 2010 Preferred Stock Offering (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K dated and filed with the SEC on November 16, 2010).
4.15	Warrant Agreement, dated as of January 19, 2011, between NeoStem, Inc. and Continental Stock Transfer & Trust Company, with the forms of $3.00 Warrant, $5.00 Warrant and $7.00 Warrant attached thereto (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated January 18, 2011 and filed with the SEC on January 24, 2011).
4.16	Warrant Agreement, dated as of July 22, 2011, between NeoStem, Inc. and Continental Stock Transfer & Trust Company, with the form of Series NA Warrant attached thereto (filed as Exhibit 4.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011 as filed with the SEC on November 10, 2011).
4.17	Registration Rights Agreement, dated as of September 28, 2011, by and between NeoStem, Inc. and Aspire Capital Fund, LLC (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated September 28, 2011).
4.18†	Registration Rights Agreement, dated as of March 11, 2014, by and between NeoStem, Inc. and Aspire Capital Fund, LLC.
4.19	Warrant Agreement, dated as of October 17, 2011, between NeoStem, Inc. and Continental Stock Transfer & Trust Company, with the form of Global Series AMO Warrant attached thereto (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated October 14, 2011).
4.20	Form of Common Stock Purchase Warrant from the March 2012 Underwritten Offering (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated March 29, 2012).
4.21	Form of Common Stock Purchase Warrant for the May-July 2012 private placement (filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 as filed with the SEC on August 14, 2012).
4.22	Form of New Warrant from July 2012 (filed as Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 as filed with the SEC on August 14, 2012).
4.23	Form of Warrant from August 2012 private placement (filed as Exhibit 4.6 to the Company's Registration Statement on Form S-3, File No. 333-183542, filed with the SEC on August 24, 2012).
4.24	Form of 2011/2012 Service Provider Warrant (filed as Exhibit 4.10 to the Company's Registration Statement on Form S-3, File No. 333-183542, filed with the SEC on August 24, 2012).
4.25	Warrant issued to Aspire Capital Fund, LLC in August 2012 (filed as Exhibit 4.9 to the Company's Registration Statement on Form S-3, File No. 333-183542, filed with the SEC on August 24, 2012).
4.26	Form of Warrant for November 2012 Unit private placement (filed as Exhibit 4.4 to the Company's Registration Statement on Form S-3, File No. 333-185346, filed with the SEC on December 7, 2012).
10.1	License Agreement between Stem Cell Technologies, Inc. and the University of Louisville Research Foundation, Inc. (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated November 13, 2007). (1)
10.2	Amendment No. 1 to Exclusive License Agreement between Stem Cell Technologies, Inc. and the University of Louisville Research Foundation, Inc. (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2009 as filed with the SEC on May 15, 2009).
10.3	Amendment No. 2 to Exclusive License Agreement between University of Louisville Research Foundation, Inc. and Stem Cell Technologies, Inc. (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 as filed with the SEC on August 16, 2010).
10.4	October 2009 English translation of Joint Venture Contract of Suzhou Erye Pharmaceutical Co., Ltd. (filed as Exhibit 10.www to the Company's Annual Report on Form 10-K for the year ended December 31, 2009 as filed with the SEC on March 31, 2010).
10.5	English Translation of Amendment Agreement to Joint Venture Contract of Suzhou Erye Pharmaceutical Co., Ltd. dated May 21, 2010 approved August 16, 2010 (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010 as filed with the SEC on November 12, 2010).
10.6	Consulting Agreement, dated as of May 11, 2010 between NeoStem, Inc. and RimAsia Capital Partners, LP (filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 as filed with the SEC on August 16, 2010).

10.7	Form of Subscription Agreement with respect to private placement consummated on April 5, 2011 (filed as Exhibit 4.13 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
10.8	Common Stock Purchase Agreement, dated as of September 28, 2011, by and between NeoStem, Inc. and Aspire Capital Fund, LLC (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated September 28, 2011).
10.9	Amendment dated as of August 23, 2012 to Common Stock Purchase Agreement dated as of September 28, 2011, by and between NeoStem, Inc. and Aspire Capital Fund, LLC (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated August 23, 2012).
10.10†	Common Stock Purchase Agreement, dated as of March 11, 2014, by and between NeoStem, Inc. and Aspire Capital Fund, LLC.
10.11	Form of Subscription Agreement from February 2012 private placement (filed as Exhibit 10.46 to the Company's Annual Report on Form 10-K for the year ended December 31, 2011 as filed with the SEC on March 20, 2012).
10.12	Underwriting Agreement, dated March 29, 2012, by and among NeoStem, Inc. and the underwriters named on Schedule I thereto (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated March 29, 2012).
10.13	Form of Subscription Agreement for the May-July 2012 private placement (filed as Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 as filed with the SEC on August 14, 2012).
10.14	Form of Subscription Agreement from the August 2012 private placement (filed as Exhibit 4.7 to the Company's Registration Statement on Form S-3, File No. 333-183542, filed with the SEC on August 24, 2012).
10.15	Form of Subscription Agreement from the October 2012 private placement (filed as Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012 as filed with the SEC on November 13, 2012).
10.16	Form of Subscription Agreement for November 8, 2012 private placement (filed as Exhibit 4.2 to the Company's Registration Statement on Form S-3, File No. 333-185346, filed with the SEC on December 7, 2012).
10.17	Form of Subscription Agreement for November 2012 Unit private placement (filed as Exhibit 4.3 to the Company's Registration Statement on Form S-3, File No. 333-185346, filed with the SEC on December 7, 2012).
10.18	Underwriting Agreement, dated April 29, 2013, between NeoStem, Inc. and Aegis Capital Corp. (filed as Exhibit 1.1 to the Company's Current Report on Form 8-K dated April 29, 2013).
10.19	Underwriting Agreement, dated October 3, 2013, between NeoStem, Inc. and Aegis Capital Corp. (filed as Exhibit 1.1 to the Company's Current Report on Form 8-K dated October 3, 2013).
10.20	Escrow Agreement, dated as of October 17, 2011, among NeoStem, Inc., Amorcyte, Inc., Paul J. Schmitt, as Amorcyte Representative, and Continental Stock Transfer & Trust Company, as Escrow Agent (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 14, 2011).
10.21	Lease dated September 1, 2005 between Vanni Business Park, LLC and Progenitor Cell Therapy, LLC, as amended by First Amendment of Lease effective as of July 1, 2006 (filed as Exhibit 10.48 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.22	Second Amendment of Lease, executed July 11, 2011 and effective July 1, 2011, by and between Vanni Business Park, LLC and Progenitor Cell Therapy, LLC (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated July 11, 2011).
10.23	Guaranty of Lease, executed July 11, 20911 and effective as of July 1, 2011, by NeoStem, Inc. for the benefit of Vanni Business Park, LLC (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated July 11, 2011).
10.24	Bond Agreement dated as of October 1, 2007 by and among the New Jersey Economic Development Authority, PCT Allendale, LLC and Commerce Bank/North (filed as Exhibit 10.49 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.25	Note dated October 31, 2007, made by PCT Allendale, LLC in favor of the New Jersey Economic Development Authority (filed as Exhibit 10.50 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).

10.26	Mortgage and Security Agreement from PCT Allendale, LLC to New Jersey Economic Development Authority and Commerce Bank/North, dated October 31, 2007 (filed as Exhibit 10.51 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.27	Mortgage Loan Note dated November 30, 2010, made by PCT Allendale, LLC in favor of TD Bank, N.A. (filed as Exhibit 10.52 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.28	Mortgage, Security Agreement and Fixture Filing made as of the 30th day of November 2010, between PCT Allendale, LLC and TD Bank, N.A. (filed as Exhibit 10.53 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.29	Note and Mortgage Modification Agreement, dated as of December 10, 2013, by and between PCT Allendale, LLC, TD Bank, N.A. and the New Jersey Economic Development Authority (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated December 10, 2013).
10.30	Note and Mortgage Modification Agreement, dated as of December 10, 2013, by and between PCT Allendale, LLC and TD Bank, N.A. (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated December 10, 2013).
10.31	Pledge and Security Agreement, dated as of December 10, 2013, made by PCT Allendale, LLC in favor of TD Bank, N.A. (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K dated December 10, 2013).
10.32	Guaranty of Payment, made as of December 10, 2013, by NeoStem, Inc. in favor of TD Bank, N.A. (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K dated December 10, 2013).
10.33	Stock Purchase and Assignment Agreement dated March 28, 2011, by and among Progenitor Cell Therapy, LLC, Athelos Corporation and Becton Dickinson and Company (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011 as filed with the SEC on May 17, 2011).
10.34	Stockholders' Agreement dated March 28, 2011, by and among Progenitor Cell Therapy, LLC, Athelos Corporation and Becton Dickinson and Company (filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011 as filed with the SEC on May 17, 2011).
10.35	NeoStem, Inc. 2003 Equity Participation Plan, as amended (filed as Exhibit 10.2 to the Company's Registration Statement on Form S-1/A, File No. 333-137045, filed with the SEC on November 3, 2006). +
10.36	Form of Stock Option Agreement (filed as Exhibit 10.2 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003 as filed with the SEC on March 30, 2004). +
10.37	Form of Option Agreement dated July 20, 2005 (filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2005 as filed with the SEC on August 15, 2005). +
10.38	Amended and Restated NeoStem, Inc. 2009 Equity Compensation Plan, as amended (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 3, 2013). +
10.39	Form of Stock Option Grant Agreement under NeoStem, Inc. 2009 Equity Compensation Plan (filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 as filed with the SEC on August 16, 2010). +
10.40	Description of the NeoStem, Inc. Board of Directors Compensation Plan (incorporated by reference to the first paragraph of Item 5.02 contained within the Company's Current Report on Form 8-K dated January 4, 2012, and the last paragraph appearing under Item 11 of this Annual Report on Form 10-K for the fiscal year ended December 31, 2012). +
10.41	NeoStem, Inc. 2012 Employee Stock Purchase Plan (filed as Appendix A to the Company's Definitive Proxy Statement on Schedule 14A for the 2012 Annual Meeting of Stockholders as filed with the SEC on September 7, 2012). +
10.42	Employment Agreement between Phase III Medical, Inc. and Dr. Robin L. Smith, dated May 26, 2006 (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K dated June 2, 2006). +
10.43	January 26, 2007 Amendment to Employment Agreement of Dr. Robin L. Smith (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated January 26, 2007). +
10.44	September 27, 2007 Amendment to Employment Agreement of Dr. Robin L. Smith (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated September 27, 2007). +
10.45	Letter agreement dated January 9, 2008 with Dr. Robin L. Smith (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated January 9, 2008). +
10.46	Amendment dated July 29, 2009 to Employment Agreement dated May 26, 2006 between NeoStem, Inc. and Dr. Robin L. Smith (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated July 29, 2009). +

10.47	Amendment dated April 4, 2011 to Employment Agreement dated May 26, 2006 between NeoStem, Inc. and Dr. Robin L. Smith (filed as Exhibit 10.66 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011). +
10.48	Amendment dated November 13, 2012 to Employment Agreement dated May 26, 2006 between NeoStem, Inc. and Dr. Robin L. Smith (filed as Exhibit 10.43 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012 as filed with the SEC on March 8, 2013). +
10.49†	Letter Agreement dated March 11, 2014 to Employment Agreement dated May 26, 2006 between NeoStem, Inc. and Dr. Robin L. Smith. +
10.5	January 26, 2007 Employment Agreement with Catherine M. Vaczy (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K dated January 26, 2007). +
10.51	Letter agreement dated January 9, 2008 with Catherine M. Vaczy (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated January 9, 2008). +
10.52	Letter Agreement dated July 8, 2009 between NeoStem, Inc. and Catherine M. Vaczy, Esq. (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated July 6, 2009). +
10.53	Letter Agreement dated July 7, 2010 between NeoStem, Inc. and Catherine M. Vaczy, Esq. (filed as Exhibit 10(a) to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010 as filed with the SEC on November 12, 2010). +
10.54	Letter Agreement dated January 6, 2012 between NeoStem, Inc. and Catherine M. Vaczy, Esq. (filed as Exhibit 10.92 to the Company's Annual Report on Form 10-K for the year ended December 31, 2011 as filed with the SEC on March 20, 2012). +
10.55	Letter Agreement dated November 13, 2012 between NeoStem, Inc. and Catherine M. Vaczy, Esq. (filed as Exhibit 10.57 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012 as filed with the SEC on March 8, 2013). +
10.56	Letter Agreement, dated July 12, 2013, between NeoStem, Inc. and Catherine M. Vaczy, Esq. (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated July 12, 2013). +
10.57†	Letter Agreement, dated March 11, 2014, between NeoStem, Inc. and Catherine M. Vaczy, Esq.+
10.58	Employment Agreement, dated as of September 23, 2010 and effective on January 19, 2011, by and between Progenitor Cell Therapy, LLC, NeoStem, Inc. and Andrew L. Pecora (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated January 18, 2011 and filed with the SEC on January 24, 2011). +
10.59	Amendment dated August 17, 2011 to Employment Agreement dated September 23, 2010 and effective January 19, 2011 between Progenitor Cell Therapy, LLC, NeoStem, Inc. and Andrew L. Pecora (filed as Exhibit 10.95 to the Company's Registration Statement on Form S-4, File No. 333-176673, filed with the SEC on September 2, 2011). +
10.60	Letter Agreement dated April 11, 2012 between NeoStem, Inc. and Andrew Pecora, M.D., F.A.C.P. (filed as Exhibit 10.107 to the Company's Annual Report on Form 10-K/A for the year ended December 31, 2011 as filed with the SEC on April 27, 2012). +
10.61	Amendment dated July 31, 2013 and effective August 5, 2013, by and among Andrew L. Pecora, M.D., FACP, NeoStem, Inc., Progenitor Cell Therapy, LLC and Amorcyte, LLC (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated August 5, 2013). +
10.61	Employment Agreement, dated as of September 23, 2010 and effective on January 19, 2011, by and between Progenitor Cell Therapy, LLC, NeoStem, Inc. and Robert A. Preti (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated January 18, 2011 and filed with the SEC on January 24, 2011). +
10.62	Form of Indemnification Agreement for directors, officers and certain other employees (filed as Exhibit 10.2 to the Company's Registration Statement on Form S-4/A, File No. 333-160578, filed with the SEC on October 6, 2009).
10.63	Letter Agreement dated June 28, 2011 between NeoStem, Inc. and Joseph Talamo (filed as Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2011 as filed with the SEC on August 12, 2011). +
10.64	Employment Agreement, dated as of July 15, 2013, by and between NeoStem, Inc. and Stephen W. Potter (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated July 15, 2013). +
10.65	Employment Agreement, dated as of July 23, 2013 and effective August 5, 2013, by and between NeoStem, Inc. and Douglas W. Losordo, M.D. (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated August 5, 2013). +
10.66	Employment Agreement, dated as of August 16, 2013 and effective August 19, 2013, by and between NeoStem, Inc. and Robert Dickey IV (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated August 19, 2013). +

10.67	Offer Letter dated August 14, 2013 and effective August 19, 2013, by and between NeoStem, Inc. and Larry May (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated August 19, 2013). +
14.1	Code of Ethics for Senior Financial Officers (filed as Exhibit 14.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
21.1†	Subsidiaries of NeoStem, Inc.
23.1†	Consent of Grant Thornton LLP
31.1†	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2†	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1††	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2††	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document***
101.SCH	XBRL Taxonomy Extension Schema***
101.CAL	XBRL Taxonomy Extension Calculation Linkbase***
101.DEF	XBRL Taxonomy Extension Definition Linkbase***
101.LAB	XBRL Taxonomy Extension Label Linkbase***
101.PRE	XBRL Taxonomy Extension Presentation Linkbase***

\+ Management contract or compensatory plan, contract or arrangement required to be filed as an exhibit to this Form 10-K pursuant to Item 15(b) of Form 10-K.

*** Users of this interactive data file are advised pursuant to Rule 406T of Regulations S-T that this interactive data file is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, and otherwise is not subject to liability under these sections.

† Filed herewith.

†† Furnished herewith.

(1) Certain portions of this exhibit were omitted based upon a request for confidential treatment, and the omitted portions were filed separately with the SEC on a confidential basis.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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, in the City of New York, State of New York, on March 13, 2014.

NEOSTEM, INC.
By:
/s/ Robin L. Smith, M.D.

Name: Robin L. Smith, M.D.
Title: Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Robin L. Smith, M.D. Robin L. Smith, M.D.	Director, Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	March 13, 2014
/s/ Robert Dickey IV Robert Dickey IV	Chief Financial Officer (Principal Financial Officer)	March 13, 2014
/s/ Joseph Talamo Joseph Talamo	Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	March 13, 2014
/s/ Richard Berman Richard Berman	Director	March 13, 2014
/s/ Steven S. Myers Steven S. Myers	Director	March 13, 2014
/s/ Drew Bernstein Drew Bernstein	Director	March 13, 2014
/s/ Eric Wei Eric Wei	Director	March 13, 2014
/s/ Andrew L. Pecora, M.D. Andrew L. Pecora, M.D.	Director	March 13, 2014
/s/ Martyn D. Greenacre Martyn D. Greenacre	Director	March 13, 2014

Exhibit 4.18

REGISTRATION RIGHTS AGREEMENT

REGISTRATION RIGHTS AGREEMENT (this "**Agreement**"), dated as of March 10, 2014, by and between **NEOSTEM, INC.,** a Delaware corporation (the "**Company**"), and **ASPIRE CAPITAL FUND, LLC,** an Illinois limited liability company (together with it permitted assigns, the "**Buyer**"). Capitalized terms used herein and not otherwise defined herein shall have the respective meanings set forth in the Common Stock Purchase Agreement by and between the parties hereto, dated as of the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the "**Purchase Agreement**").

WHEREAS:

A. Upon the terms and subject to the conditions of the Purchase Agreement, the Company has agreed to issue to the Buyer, and the Buyer has agreed to purchase, (i) up to Thirty Million Dollars ($30,000,000) of the Company's common stock, par value $0.001 (the " **Common Stock**") (the "**Purchase Shares**"), and (ii) 150,000 shares of Common Stock as is required pursuant to Section 4(e) of the Purchase Agreement (the **"Commitment Shares"**); and

B. To induce the Buyer to enter into the Purchase Agreement, the Company has agreed to provide certain registration rights under the Securities Act of 1933, as amended, and the rules and regulations there under, or any similar successor statute (collectively, the " **1933 Act**"), and applicable state securities laws.

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the Buyer hereby agree as follows:

1. DEFINITIONS.

As used in this Agreement, the following terms shall have the following meanings:

a. "**New Registration Statement**" means a Registration Statement filed after the date of this Agreement.

b. "**Person**" means any person or entity including any corporation, a limited liability company, an association, a partnership, an organization, a business, an individual, a governmental or political subdivision thereof or a governmental agency.

c. **"Prospectus"** means the base prospectus, including all documents incorporated therein by reference, included in the Shelf Registration Statement or a New Registration Statement (each as hereinafter defined), as it may be supplemented by the Prospectus Supplement (as hereinafter defined), in the form in which such prospectus and/or Prospectus Supplement have most recently been filed by the Company with the SEC pursuant to Rule 424(b) under the 1933 Act, together with any then issued "issuer free writing prospectus(es)," as defined in Rule 433 of the 1933 Act, relating to the Registrable Securities.

d. "**Register**," "**registered**," and "**registration**" refer to a registration effected by preparing and filing one or more registration statements of the Company in compliance with the 1933 Act and pursuant to Rule 415 under the 1933 Act or any successor rule providing for offering securities on a continuous basis ("**Rule 415**"), and the declaration or ordering of effectiveness of such registration statement(s) by the U.S. Securities and Exchange Commission (the "**SEC**").

e. "**Registrable Securities**" means the Purchase Shares which may from time to time be, issued or issuable to the Buyer upon purchases of the Available Amount under the Purchase Agreement (without regard to any limitation or restriction on purchases) and the Commitment Shares issued or issuable to the Buyer and any shares of capital stock issued or issuable with respect to the Purchase Shares, the Commitment Shares or the Purchase Agreement as a result of any stock split, stock dividend, recapitalization, exchange or similar event or otherwise, without regard to any limitation on purchases under the Purchase Agreement.

f. "**Registration Statement**" means any registration statement of the Company, as amended when it became or becomes effective, including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus subsequently filed with the Commission pursuant to Rule 424(b) under the 1933 Act

or deemed to be a part of such registration statement pursuant to Rule 430B or 462(b) of the 1933 Act, covering the sale of the Registrable Securities, which may be either the Shelf Registration Statement or a New Registration Statement.

g. "**Shelf Registration Statement**" means the Company's existing registration statement on Form S-3 (File No. 333-183543).

2. REGISTRATION.

a. Mandatory Registration. The Company shall within one (1) Business Day from the date the Commitment Shares are issued to the Buyer file with the SEC a prospectus supplement to the Registration Statement, which prospectus supplement shall specifically relate to the Registrable Securities (the "**Prospectus Supplement**"). The Buyer and its counsel have had a reasonable opportunity to review and comment upon such Prospectus Supplement prior to its filing with the SEC. Buyer shall furnish all information reasonably requested by the Company for inclusion therein. The Company shall use reasonable best efforts to keep the Registration Statement effective pursuant to Rule 415 promulgated under the 1933 Act and available for sales of all of the Registrable Securities at all times until the earlier of (i) the date as of which the Buyer may sell all of the Registrable Securities without restriction pursuant to Rule 144 promulgated under the 1933 Act (or successor thereto), (ii) the date on which (A) the Company shall have sold all the Registrable Securities and no Available Amount remains under the Purchase Agreement, or (iii) the date on which the Purchase Agreement is terminated (the "**Registration Period**"). The Registration Statement (including any amendments or supplements thereto and prospectuses contained therein) shall not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein, or necessary to make the statements therein, in light of the circumstances in which they were made, not misleading.

b. Rule 424 Prospectus. The Company shall, as required by applicable securities regulations, file with the SEC, pursuant to Rule 424 promulgated under the 1933 Act, the Prospectus, including any amendments or supplements thereto, to be used in connection with sales of the Registrable Securities under the Registration Statement. The Buyer and its counsel shall have a reasonable opportunity to review and comment upon such prospectus prior to its filing with the SEC. The Buyer shall use its reasonable best efforts to comment upon such prospectus within one (1) Business Day from the date the Buyer receives the final version of such prospectus.

c. Sufficient Number of Shares Registered. In the event the number of shares available under the Registration Statement is insufficient to cover the Registrable Securities, the Company shall, to the extent necessary and permissible, amend the Registration Statement or file a New Registration Statement so as to cover all of such Registrable Securities as soon as practicable, but in any event not later than ten (10) Business Days after the necessity therefor arises. The Company shall use its reasonable best efforts to cause such amendment and/or New Registration Statement to become effective as soon as practicable following the filing thereof.

3. RELATED OBLIGATIONS.

With respect to the Registration Statement and whenever any Registrable Securities are to be registered pursuant to Sections 2(a) and (c), including on the Shelf Registration Statement or on any New Registration Statement, the Company shall use its reasonable best efforts to effect the registration of the Registrable Securities in accordance with the intended method of disposition thereof and, pursuant thereto, the Company shall have the following obligations:

a. The Company shall prepare and file with the SEC such amendments (including post-effective amendments) and supplements to the Shelf Registration Statement and any New Registration Statement and any Prospectus used in connection with such Registration Statement, as may be necessary to keep the Shelf Registration Statement or any New Registration Statement effective at all times during the Registration Period, and, during such period, comply with the provisions of the 1933 Act with respect to the disposition of all Registrable Securities of the Company covered by the Shelf Registration Statement or any New Registration Statement until such time as all of such Registrable Securities shall have been disposed of in accordance with the intended methods of disposition by the seller or sellers thereof as set forth in such Registration Statement.

b. The Company shall submit to the Buyer for review and comment any disclosure in the Registration Statement and all amendments and supplements thereto containing information provided by the Buyer for inclusion in such document and any descriptions or disclosure regarding the Buyer, the Purchase Agreement, including the transaction contemplated thereby, or this Agreement at least two (2) Business Days prior to their filing with the SEC, and not file any document in a form to which Buyer reasonably objects. Upon request of the Buyer, the Company shall provide to the Buyer all disclosure in the Registration Statement and all amendments and supplements thereto (other than prospectus supplements that consist only of a copy of a filed Form 10-Q) at least two (2) Business Days prior to their filing with the SEC, and not file any document in a form to which Buyer reasonably and timely objects. The Buyer shall use its reasonable best efforts to comment upon the Registration

Statement and any amendments or supplements thereto within two (2) Business Days from the date the Buyer receives the final version thereof. The Company shall furnish to the Buyer, without charge, any correspondence from the SEC or the staff of the SEC to the Company or its representatives relating to the Shelf Registration Statement or any New Registration Statement.

c. Upon request of the Buyer, the Company shall furnish to the Buyer, (i) promptly after the same is prepared and filed with the SEC, at least one copy of the Registration Statement and any amendment(s) thereto, including all financial statements and schedules, all documents incorporated therein by reference and all exhibits, (ii) upon the effectiveness of any amendment(s) to a Registration Statement, a copy of the Prospectus included in such Registration Statement (or such other number of copies as the Buyer may reasonably request) and (iii) such other documents, including copies of any preliminary or final prospectus, as the Buyer may reasonably request from time to time in order to facilitate the disposition of the Registrable Securities owned by the Buyer.

d. The Company shall use reasonable best efforts to (i) register and qualify, unless an exemption from registration and qualification is available, the Registrable Securities covered by a Registration Statement under such other securities or "blue sky" laws of such jurisdictions in the United States as the Buyer reasonably requests, (ii) prepare and file in those jurisdictions, such amendments (including post-effective amendments) and supplements to such registrations and qualifications as may be necessary to maintain the effectiveness thereof during the Registration Period, (iii) take such other actions as may be necessary to maintain such registrations and qualifications in effect at all times during the Registration Period, and (iv) take all other actions reasonably necessary or advisable to qualify the Registrable Securities for sale in such jurisdictions; provided, however, that the Company shall not be required in connection therewith or as a condition thereto to (x) qualify to do business in any jurisdiction where it would not otherwise be required to qualify but for this Section 3(d), (y) subject itself to general taxation in any such jurisdiction, or (z) file a general consent to service of process in any such jurisdiction. The Company shall promptly notify the Buyer who holds Registrable Securities of the receipt by the Company of any notification with respect to the suspension of the registration or qualification of any of the Registrable Securities for sale under the securities or "blue sky" laws of any jurisdiction in the United States or its receipt of actual notice of the initiation or threatening of any proceeding for such purpose.

e. As promptly as practicable after becoming aware of such event or facts, the Company shall notify the Buyer in writing if the Company has determined that the Prospectus included in any Registration Statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, and promptly prepare a supplement or amendment to such Registration Statement to correct such untrue statement or omission, and, upon the Buyer's request, deliver a copy of such supplement or amendment to the Buyer. In providing this notice to the Buyer, the Company shall not include any other information about the facts underlying the Company's determination and shall not in any way communicate any material nonpublic information about the Company or the Common Stock to the Buyer. The Company shall also promptly notify the Buyer in writing (i) when a prospectus or any prospectus supplement or post-effective amendment has been filed, and when a Registration Statement or any post-effective amendment has become effective (notification of such effectiveness shall be delivered to the Buyer by facsimile or e-mail on the same day of such effectiveness), (ii) of any request by the SEC for amendments or supplements to any Registration Statement or related prospectus or related information, and (iii) of the Company's reasonable determination that a post-effective amendment to a Registration Statement would be appropriate.

f. The Company shall use its reasonable best efforts to prevent the issuance of any stop order or other suspension of effectiveness of any Registration Statement, or the suspension of the qualification of any Registrable Securities for sale in any jurisdiction and, if such an order or suspension is issued, to obtain the withdrawal of such order or suspension at the earliest practicable time and to notify the Buyer of the issuance of such order and the resolution thereof or its receipt of actual notice of the initiation or threat of any proceeding for such purpose.

g. The Company shall (i) cause all the Registrable Securities to be listed on each securities exchange on which securities of the same class or series issued by the Company are then listed, if any, if the listing of such Registrable Securities is then permitted under the rules of such exchange, or (ii) secure designation and quotation of all the Registrable Securities on the Principal Market (as such term is defined in the Purchase Agreement). The Company shall pay all fees and expenses in connection with satisfying its obligation under this Section.

h. The Company shall cooperate with the Buyer to facilitate the timely preparation and delivery of certificates (not bearing any restrictive legend) representing the Registrable Securities to be offered pursuant to any Registration Statement and enable such certificates to be in such denominations or amounts as the Buyer may reasonably request and registered in such names as the Buyer may request.

i. The Company shall at all times provide a transfer agent and registrar with respect to its Common Stock.

j. If reasonably requested by the Buyer, the Company shall (i) immediately incorporate in a prospectus supplement or post-effective amendment such information as the Buyer believes should be included therein relating to the sale and distribution of Registrable Securities, including, without limitation, information with respect to the number of Registrable Securities being sold, the purchase price being paid therefor and any other terms of the offering of the Registrable Securities; (ii) make all required filings of such prospectus supplement or post-effective amendment as soon as notified of the matters to be incorporated in such prospectus supplement or post-effective amendment; and (iii) supplement or make amendments to any Registration Statement.

k. The Company shall use its reasonable best efforts to cause the Registrable Securities covered by any Registration Statement to be registered with or approved by such other governmental agencies or authorities as may be necessary to consummate the disposition of such Registrable Securities.

l. If requested by the Buyer at any time, the Company shall require its counsel to deliver to the Buyer a written confirmation of whether or not the effectiveness of a Registration Statement has lapsed at any time for any reason (including, without limitation, the issuance of a stop order) and whether or not the Registration Statement is current and available to the Company for sale of all of the Registrable Securities.

m. The Company shall take all other reasonable actions necessary to expedite and facilitate disposition by the Buyer of Registrable Securities pursuant to any Registration Statement.

4. OBLIGATIONS OF THE BUYER.

a. The Company shall notify the Buyer in writing of the information the Company reasonably requires from the Buyer in connection with any Registration Statement hereunder. The Buyer shall furnish to the Company such information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it as shall be reasonably required to effect the registration of such Registrable Securities and shall execute such documents in connection with such registration as the Company may reasonably request.

b. The Buyer agrees to cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of any amendments and supplements to any Registration Statement hereunder.

5. EXPENSES OF REGISTRATION.

All reasonable expenses, other than sales or brokerage commissions, incurred in connection with registrations, filings or qualifications pursuant to Sections 2 and 3, including, without limitation, all registration, listing and qualifications fees, printers and accounting fees, and fees and disbursements of counsel for the Company, shall be paid by the Company.

6. INDEMNIFICATION.

a. To the fullest extent permitted by law, the Company will, and hereby does, indemnify, hold harmless and defend the Buyer, each Person, if any, who controls the Buyer, the members, the directors, officers, partners, employees, agents, representatives of the Buyer and each Person, if any, who controls the Buyer within the meaning of the 1933 Act or the Securities Exchange Act of 1934, as amended (the " **1934 Act**") (each, an "**Indemnified Person**"), against any losses, claims, damages, liabilities, judgments, fines, penalties, charges, costs, attorneys' fees, amounts paid in settlement or expenses, joint or several, (collectively, "**Claims**") incurred in investigating, preparing or defending any action, claim, suit, inquiry, proceeding, investigation or appeal taken from the foregoing by or before any court or governmental, administrative or other regulatory agency, body or the SEC, whether pending or threatened, whether or not an indemnified party is or may be a party thereto (" **Indemnified Damages**"), to which any of them may become subject insofar as such Claims (or actions or proceedings, whether commenced or threatened, in respect thereof) arise out of or are based upon: (i) any untrue statement or alleged untrue statement of a material fact in the Registration Statement, any New Registration Statement or any post-effective amendment thereto or in any filing made in connection with the qualification of the offering under the securities or other "blue sky" laws of any jurisdiction in which Registrable Securities are offered ("**Blue Sky Filing**"), or the omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) any untrue statement or alleged untrue statement of a material fact contained in the final Prospectus or the omission or alleged omission to state therein any material fact necessary to make the statements made therein, in light of the circumstances under which the statements therein were made, not misleading, (iii) any violation or alleged violation by the Company of the 1933 Act, the 1934 Act, any other law, including, without limitation, any state securities law, or any rule or regulation thereunder relating to the offer or sale of the Registrable Securities pursuant to the Registration Statement or any New Registration Statement, or (iv) any material violation by the Company of this Agreement (the matters in the foregoing clauses (i) through (iv) being, collectively, "**Violations**"). The Company shall reimburse each

Indemnified Person promptly as such expenses are incurred and are due and payable, for any reasonable legal fees or other reasonable expenses incurred by them in connection with investigating or defending any such Claim. Notwithstanding anything to the contrary contained herein, the indemnification agreement contained in this Section 6(a): (i) shall not apply to a Claim by an Indemnified Person arising out of or based upon a Violation which occurs in reliance upon and in conformity with information furnished in writing to the Company by such Indemnified Person expressly for use in connection with the preparation of the Registration Statement, any New Registration Statement, the Prospectus or any such amendment thereof or supplement thereto, if such prospectus was timely made available by the Company pursuant to Section 3(c) or Section 3(e); (ii) with respect to any superseded prospectus, shall not inure to the benefit of any such person from whom the person asserting any such Claim purchased the Registrable Securities that are the subject thereof (or to the benefit of any person controlling such person) if the untrue statement or omission of material fact contained in the superseded prospectus was corrected in the revised prospectus, as then amended or supplemented, if such revised prospectus was timely made available by the Company pursuant to Section 3(c) or Section 3(e), and the Indemnified Person was promptly advised in writing not to use the incorrect prospectus prior to the use giving rise to a violation and such Indemnified Person, notwithstanding such advice, used it; (iii) shall not be available to the extent such Claim is based on a failure of the Buyer to deliver or to cause to be delivered the prospectus made available by the Company, if such prospectus was timely made available by the Company pursuant to Section 3(c) or Section 3(e); and (iv) shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of the Company, which consent shall not be unreasonably withheld. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of the Indemnified Person and shall survive the transfer of the Registrable Securities by the Buyer pursuant to Section 9.

b. In connection with the Registration Statement, any New Registration Statement or Prospectus, the Buyer agrees to severally and not jointly indemnify, hold harmless and defend, to the same extent and in the same manner as is set forth in Section 6(a), the Company, each of its directors, each of its officers who signed the Registration Statement or signs any New Registration Statement, each Person, if any, who controls the Company within the meaning of the 1933 Act or the 1934 Act (collectively and together with an Indemnified Person, an " **Indemnified Party**"), against any Claim or Indemnified Damages to which any of them may become subject, under the 1933 Act, the 1934 Act or otherwise, insofar as such Claim or Indemnified Damages arise out of or are based upon any Violation, in each case to the extent, and only to the extent, that such Violation occurs in reliance upon and in conformity with written information about the Buyer set forth on **Exhibit A** attached hereto or updated from time to time in writing by the Buyer and furnished to the Company by the Buyer expressly for inclusion in the Shelf Registration Statement or Prospectus or any New Registration Statement; and, subject to Section 6(d), the Buyer will reimburse any legal or other expenses reasonably incurred by them in connection with investigating or defending any such Claim; provided, however, that the indemnity agreement contained in this Section 6(b) and the agreement with respect to contribution contained in Section 7 shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of the Buyer, which consent shall not be unreasonably withheld. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such Indemnified Party and shall survive the transfer of the Registrable Securities by the Buyer pursuant to Section 9.

c. Promptly after receipt by an Indemnified Person or Indemnified Party under this Section 6 of notice of the commencement of any action or proceeding (including any governmental action or proceeding) involving a Claim, such Indemnified Person or Indemnified Party shall, if a Claim in respect thereof is to be made against any indemnifying party under this Section 6, deliver to the indemnifying party a written notice of the commencement thereof, and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume control of the defense thereof with counsel mutually satisfactory to the indemnifying party and the Indemnified Person or the Indemnified Party, as the case may be; provided, however, that an Indemnified Person or Indemnified Party shall have the right to retain its own counsel with the fees and expenses to be paid by the indemnifying party, if, in the reasonable opinion of counsel retained by the indemnifying party, the representation by such counsel of the Indemnified Person or Indemnified Party and the indemnifying party would be inappropriate due to actual or potential differing interests between such Indemnified Person or Indemnified Party and any other party represented by such counsel in such proceeding. The Indemnified Party or Indemnified Person shall cooperate fully with the indemnifying party in connection with any negotiation or defense of any such action or claim by the indemnifying party and shall furnish to the indemnifying party all information reasonably available to the Indemnified Party or Indemnified Person which relates to such action or claim. The indemnifying party shall keep the Indemnified Party or Indemnified Person fully apprised at all times as to the status of the defense or any settlement negotiations with respect thereto. No indemnifying party shall be liable for any settlement of any action, claim or proceeding effected without its written consent, provided, however, that the indemnifying party shall not unreasonably withhold, delay or condition its consent. No indemnifying party shall, without the consent of the Indemnified Party or Indemnified Person, consent to entry of any judgment or enter into any settlement or other compromise which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party or Indemnified Person of a release from all liability in respect to such claim or litigation. Following indemnification as provided for hereunder, the indemnifying party shall be subrogated to all rights of the Indemnified Party or Indemnified Person with respect to all third parties, firms or corporations relating to the matter for which indemnification

has been made. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action shall not relieve such indemnifying party of any liability to the Indemnified Person or Indemnified Party under this Section 6, except to the extent that the indemnifying party is prejudiced in its ability to defend such action.

d. The indemnification required by this Section 6 shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or Indemnified Damages are incurred.

e. The indemnity agreements contained herein shall be in addition to (i) any cause of action or similar right of the Indemnified Party or Indemnified Person against the indemnifying party or others, and (ii) any liabilities the indemnifying party may be subject to pursuant to the law.

7. CONTRIBUTION.

To the extent any indemnification by an indemnifying party is prohibited or limited by law, the indemnifying party agrees to make the maximum contribution with respect to any amounts for which it would otherwise be liable under Section 6 to the fullest extent permitted by law; provided, however, that: (i) no seller of Registrable Securities guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) shall be entitled to contribution from any seller of Registrable Securities who was not guilty of fraudulent misrepresentation; and (ii) contribution by any seller of Registrable Securities shall be limited in amount to the net amount of proceeds received by such seller from the sale of such Registrable Securities.

8. ASSIGNMENT OF REGISTRATION RIGHTS.

The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Buyer. The Buyer may not assign its rights under this Agreement without the written consent of the Company.

9. AMENDMENT OF REGISTRATION RIGHTS.

Provisions of this Agreement may be amended and the observance thereof may be waived (either generally or in a particular instance and either retroactively or prospectively) only with the written consent of the Company and the Buyer.

10. MISCELLANEOUS.

a. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon receipt, when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); or (iii) one (1) Business Day after deposit with a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses and facsimile numbers for such communications shall be:

If to the Company:
NeoStem, Inc.
420 Lexington Avenue
Suite 350
New York, New York 10170
Telephone: 212-584-4180
Facsimile: 646-607-4672
Attention: Catherine M. Vaczy, Esq.
Vice President and General Counsel
Email: cvaczy@neostem.com

With a copy to:
Lowenstein Sandler LLP
65 Livingston Avenue
Roseland, New Jersey 07068
Telephone: 973-597-2500
Facsimile: 973-597-2565
Attention: Alan Wovsaniker, Esq.
Email: awovsaniker@lowenstein.com

If to the Buyer:

Aspire Capital Fund, LLC
155 North Wacker Drive, Suite 1600
Chicago, IL 60606
Telephone: 312-658-0400
Facsimile: 312-658-4005
Attention: Steven G. Martin
Email: smartin@aspirecapital.com

With a copy to:

Morrison & Foerster LLP
2000 Pennsylvania Avenue, NW, Suite 6000
Washington, DC 20006-1888
Telephone: 202-778-1611
Facsimile: 202-887-0763
Attention: Martin P. Dunn, Esq.
Email: mdunn@mofo.com

or at such other address and/or facsimile number and/or to the attention of such other person as the recipient party has specified by written notice given to each other party three (3) Business Days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent, waiver or other communication, (B) mechanically or electronically generated by the sender's facsimile machine containing the time, date, recipient facsimile number and an image of the first page of such transmission or (C) provided by a nationally recognized overnight delivery service, shall be rebuttable evidence of personal service, receipt by facsimile or receipt from a nationally recognized overnight delivery service in accordance with clause (i), (ii) or (iii) above, respectively. Any party to this Agreement may give any notice or other communication hereunder using any other means (including messenger service, ordinary mail or electronic mail), but no such notice or other communication shall be deemed to have been duly given unless it actually is received by the party for whom it is intended.

b. No failure or delay in the exercise of any power, right or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such power, right or privilege preclude other or further exercise thereof or of any other right, power or privilege.

c. The corporate laws of the State of Delaware shall govern all issues concerning the relative rights of the Company and its stockholders. All other questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of Illinois, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Illinois or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Illinois. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of Chicago for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address for such notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction. **EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

d. This Agreement**,** the Purchase Agreement and the other Transaction Documents constitute the entire understanding among the parties hereto with respect to the subject matter hereof and thereof. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein and therein. This Agreement**,** the Purchase Agreement and the other Transaction Documents supersede all other prior oral or written agreements between the Buyer, the Company, their affiliates and persons acting on their behalf with respect to the subject matter hereof and thereof.

e. Subject to the requirements of Section 9, this Agreement shall inure to the benefit of and be binding upon the permitted successors and assigns of each of the parties hereto.

f. The headings in this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement.

g. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party; provided that a facsimile signature shall be considered due execution and shall be binding upon the signatory thereto with the same force and effect as if the signature were an original, not a facsimile signature.

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

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

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

* * * * * *

IN WITNESS WHEREOF, the parties have caused this Registration Rights Agreement to be duly executed as of day and year first above written.

THE COMPANY:

NEOSTEM, INC.

By:/s/ Robin L. Smith
Name: Robin L. Smith, M.D.
Title: Chief Executive Officer and Chairman of the Board

BUYER:

ASPIRE CAPITAL FUND, LLC
BY: ASPIRE CAPITAL PARTNERS, LLC

By: /s/ Steven G. Martin
Name: Steven G. Martin
Title: President

EXHIBIT A

TO REGISTRATION RIGHTS AGREEMENT

Information About The Buyer Furnished To The Company By The Buyer
Expressly For Use In Connection With The Registration Statement and Prospectus

Aspire Capital Partners, LLC is the managing member of Aspire Capital Fund, LLC. SGM Holdings Corp. is the managing member of Aspire Capital Partners, LLC. Steven G. Martin is the president and sole shareholder of SGM Holdings Corp. Erik J. Brown is a principal of Aspire Capital Partners, LLC. Christos Komissopoulos is a principal of Aspire Capital Partners, LLC. Each may be deemed to have shared voting and investment power over shares owned by Aspire Capital Fund, LLC. Each of Aspire Capital Partners, LLC, SGM Holdings Corp., Mr. Martin, Mr. Brown and Mr. Komissopoulos disclaim beneficial ownership of the shares of common stock held by Aspire Capital Fund, LLC. Aspire Capital is not a licensed broker dealer or an affiliate of a licensed broker dealer.

Exhibit 10.10

COMMON STOCK PURCHASE AGREEMENT

COMMON STOCK PURCHASE AGREEMENT (the "**Agreement**"), dated as of March 10, 2014, by and between **NEOSTEM, INC.**, a Delaware corporation (the "**Company**"), and **ASPIRE CAPITAL FUND, LLC**, an Illinois limited liability company (the "**Buyer**"). Capitalized terms used herein and not otherwise defined herein are defined in Section 10 hereof.

WHEREAS: Subject to the terms and conditions set forth in this Agreement, the Company wishes to sell to the Buyer, and the Buyer wishes to buy from the Company, up to Thirty Million Dollars ($30,000,000) of the Company's common stock, par value $0.001 (the " **Common Stock**"). The shares of Common Stock to be purchased hereunder are referred to herein as the " **Purchase Shares**."

NOW THEREFORE, the Company and the Buyer hereby agree as follows:

1. PURCHASE OF COMMON STOCK.

Subject to the terms and conditions set forth in this Agreement, the Company has the right to sell to the Buyer, and the Buyer has the obligation to purchase from the Company, Purchase Shares as follows:

(a) Commencement of Purchases of Common Stock. After the Commencement Date (as defined below), the purchase and sale of Purchase Shares hereunder shall occur from time to time upon written notices by the Company to the Buyer on the terms and conditions as set forth herein following the satisfaction of the conditions (the "**Commencement**") as set forth in Sections 6 and 7 below (the date of satisfaction of such conditions, the "**Commencement Date**").

(b) The Company's Right to Require Regular Purchases. Subject to the terms and conditions of this Agreement, on any given Business Day after the Commencement Date, the Company shall have the right but not the obligation to direct the Buyer by its delivery to the Buyer of a Purchase Notice from time to time, and the Buyer thereupon shall have the obligation, to buy the number of Purchase Shares specified in such notice, up to a maximum of 50,000 Purchase Shares, on such Business Day (as long as such notice is delivered on or before 5:00 p.m. eastern time on such Business Day) (each such purchase, a "**Regular Purchase**") at the Purchase Price on the Purchase Date; however, in no event shall the Purchase Amount of a Regular Purchase exceed five hundred thousand dollars ($500,000) per Business Day, unless the Buyer and the Company mutually agree. The Company and the Buyer may mutually agree to increase the number of Purchase Shares that may be sold per Regular Purchase to as much as an additional 2,000,000 Purchase Shares per Business Day. The Company may deliver additional Purchase Notices to the Buyer from time to time so long as the most recent purchase has been completed. The share amounts in the first sentence of this Section 1(b) this Agreement shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split, or other similar transaction.

(c) VWAP Purchases. Subject to the terms and conditions of this Agreement, in addition to purchases of Purchase Shares as described in Section 1(b) above, with one Business Day's prior written notice, the Company shall also have the right but not the obligation to direct Buyer by the Company's delivery to Buyer of a VWAP Purchase Notice from time to time, and Buyer thereupon shall have the obligation, to buy the VWAP Purchase Share Percentage of the trading volume of the Common Stock on the VWAP Purchase Date up to the VWAP Purchase Share Volume Maximum on the VWAP Purchase Date (as long as such notice is delivered on or before 5:00 p.m. eastern time on the Business Day immediately preceding the VWAP Purchase Date) (each such purchase, a "**VWAP Purchase**") at the VWAP Purchase Price. The Company may deliver a VWAP Purchase Notice to the Buyer only on a date on which the Company also submitted a Purchase Notice for a Regular Purchase of at least 50,000 Purchase Shares to the Buyer. A VWAP Purchase shall automatically be deemed completed at such time on the VWAP Purchase Date that the sale price of the Common Stock falls below the VWAP Minimum Price Threshold; in such circumstance, the VWAP Purchase Amount shall be calculated using the VWAP Purchase Share Percentage of the aggregate shares traded for such portion of the VWAP Purchase Date prior to the time that the sale price of the Common Stock fell below the VWAP Minimum Price Threshold and the VWAP Purchase Price shall be calculated using the volume weighted average price of Common Stock sold during such portion of the VWAP Purchase Date prior to the time that the sale price of the Common Stock fell below the VWAP Minimum Price Threshold. Each VWAP Purchase Notice must be accompanied by instructions to the Company's transfer Agent to immediately issue to the Buyer an amount of Common Stock equal to the VWAP Purchase Share Estimate, a good faith estimate by the Company of the number of Purchase Shares that the Buyer shall have the obligation to buy pursuant to the VWAP Purchase Notice. In no event shall the Buyer pursuant to any VWAP Purchase, purchase a number of Purchase Shares that exceeds the VWAP Purchase Share Estimate issued on the VWAP Purchase Date in connection with such VWAP Purchase Notice; however, the Buyer will immediately return to the Company any amount of Common Stock issued pursuant to the VWAP Purchase Share Estimate that exceeds the number of Purchase Shares the Buyer actually purchases in connection with such VWAP Purchase. Upon completion of each VWAP Purchase Date, the Buyer shall submit to the Company a confirmation of the VWAP Purchase

in form and substance reasonably acceptable to the Company. The Company may deliver additional VWAP Purchase Notices to the Buyer from time to time so long as the most recent purchase has been completed.

(d) Payment for Purchase Shares. For each Regular Purchase, the Buyer shall pay to the Company an amount equal to the Purchase Amount as full payment for such Purchase Shares via wire transfer of immediately available funds on the same Business Day that the Buyer receives such Purchase Shares. For each VWAP Purchase, the Buyer shall pay to the Company an amount equal to the VWAP Purchase Amount as full payment for such Purchase Shares via wire transfer of immediately available funds on the third Business Day following the VWAP Purchase Date. All payments made under this Agreement shall be made in lawful money of the United States of America via wire transfer of immediately available funds to such account as the Company may from time to time designate by written notice in accordance with the provisions of this Agreement. Whenever any amount expressed to be due by the terms of this Agreement is due on any day that is not a Business Day, the same shall instead be due on the next succeeding day that is a Business Day.

(f) Records of Purchases. The Buyer and the Company shall each maintain records showing the remaining Available Amount at any given time and the dates and purchase amounts for each purchase, or shall use such other method reasonably satisfactory to the Buyer and the Company to reconcile the remaining Available Amount.

(g) Taxes. The Company shall pay any and all transfer, stamp or similar taxes that may be payable with respect to the issuance and delivery of any shares of Common Stock to the Buyer made under this Agreement.

(h) Compliance with Principal Market Rules Notwithstanding anything in this Agreement to the contrary, and in addition to the limitations set forth in Section 1(e), the total number of shares of Common Stock that may be issued under this Agreement, including the Commitment Shares (as defined in Section 4(e) hereof), shall be limited to 5,687,942 shares of Common Stock (the " **Exchange Cap**"), which equals 19.9% of the Company's outstanding shares of Common Stock as of the date hereof, unless stockholder approval is obtained to issue more than such 19.9%. The Exchange Cap shall be appropriately adjusted for any stock dividend, stock split, reverse stock split or similar transaction. The foregoing limitation shall not apply if stockholder approval has not been obtained and at any time the Exchange Cap is reached and at all times thereafter the average price paid for all shares of Common Stock issued under this Agreement (including the Commitment Shares) is equal to or greater than $7.22 (the " **Minimum Price**"), a price equal to the Closing Sale Price on the date hereof (in such circumstance, for purposes of the Principal Market, the transaction contemplated hereby would not be "below market" and the Exchange Cap would not apply). Notwithstanding the foregoing, the Company shall not be required or permitted to issue, and the Buyer shall not be required to purchase, any shares of Common Stock under this Agreement if such issuance would violate the rules or regulations of the Principal Market.

(i) Beneficial Ownership Limitation. The Company shall not issue and the Buyer shall not purchase any shares of Common Stock under this Agreement if such shares proposed to be issued and sold, when aggregated with all other shares of Common Stock then owned beneficially (as calculated pursuant to Section 13(d) of the Exchange Act and Rule 13d-3 promulgated thereunder) by the Buyer and its affiliates would result in the beneficial ownership by the Buyer and its affiliates of more than 19.99% of the then issued and outstanding shares of Common Stock.

2. BUYER'S REPRESENTATIONS AND WARRANTIES.

The Buyer represents and warrants to the Company that as of the date hereof and as of the Commencement Date:

(a) Investment Purpose. The Buyer is entering into this Agreement and acquiring the Commitment Shares (as defined in Section 4(e) hereof) and the Purchase Shares (the Purchase Shares and the Commitment Shares are collectively referred to herein as the " **Securities**"), for its own account for investment only and not with a view towards, or for resale in connection with, the public sale or distribution thereof; provided however, by making the representations herein, the Buyer does not agree to hold any of the Securities for any minimum or other specific term.

(b) Accredited Investor Status. The Buyer is an "accredited investor" as that term is defined in Rule 501(a)(3) of Regulation D.

(c) [Intentionally Omitted.]

(d) Information. The Buyer has been furnished with all materials relating to the business, finances and operations of the Company and materials relating to the offer and sale of the Securities that have been reasonably requested by the Buyer, including, without limitation, the SEC Documents (as defined in Section 3(f) hereof). The Buyer understands that its investment in the Securities involves a high degree of risk. The Buyer (i) is able to bear the economic risk of an investment in the Securities

including a total loss, (ii) has such knowledge and experience in financial and business matters that it is capable of evaluating the merits and risks of the proposed investment in the Securities and (iii) has had an opportunity to ask questions of and receive answers from the officers of the Company concerning the financial condition and business of the Company and others matters related to an investment in the Securities. Neither such inquiries nor any other due diligence investigations conducted by the Buyer or its representatives shall modify, amend or affect the Buyer's right to rely on the Company's representations and warranties contained in Section 3 below. The Buyer has sought such accounting, legal and tax advice as it has considered necessary to make an informed investment decision with respect to its acquisition of the Securities.

(e) No Governmental Review. The Buyer understands that no United States federal or state agency or any other government or governmental agency has passed on or made any recommendation or endorsement of the Securities or the fairness or suitability of the investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

(f) [Intentionally Omitted.]

(g) Validity; Enforcement. This Agreement has been duly and validly authorized, executed and delivered on behalf of the Buyer and is a valid and binding agreement of the Buyer enforceable against the Buyer in accordance with its terms, subject as to enforceability to general principles of equity and to applicable bankruptcy, insolvency, reorganization, moratorium, liquidation and other similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies.

(h) Residency. The Buyer is a resident of the State of Illinois.

(i) No Prior Short Selling. The Buyer represents and warrants to the Company that at no time prior to the date of this Agreement has any of the Buyer, its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any (i) "short sale" (as such term is defined in Section 242.200 of Regulation SHO of the Securities Exchange Act of 1934, as amended (the " **1934 Act**")) of the Common Stock or (ii) hedging transaction, which establishes a net short position with respect to the Common Stock.

3. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.

The Company represents and warrants to the Buyer that, except as set forth on the disclosure schedules, as of the date hereof and as of the Commencement Date:

(a) Organization and Qualification. The Company and its "Subsidiaries" (which for purposes of this Agreement means any entity in which the Company, directly or indirectly, owns 50% or more of the voting stock or capital stock or other similar equity interests) are corporations or limited liability companies duly organized and validly existing in good standing under the laws of the jurisdiction in which they are incorporated or organized, and have the requisite corporate or organizational power and authority to own their properties and to carry on their business as now being conducted. Each of the Company and its Subsidiaries is duly qualified as a foreign corporation or limited liability company to do business and is in good standing in every jurisdiction in which its ownership of property or the nature of the business conducted by it makes such qualification necessary, except to the extent that the failure to be so qualified or be in good standing could not reasonably be expected to have a Material Adverse Effect. As used in this Agreement, "Material Adverse Effect" means any material adverse effect on any of: (i) the business, properties, assets, operations, results of operations or financial condition of the Company and its Subsidiaries, if any, taken as a whole, or (ii) the authority or ability of the Company to perform its obligations under the Transaction Documents (as defined in Section 3(b) hereof). The Company has no material Subsidiaries except as set forth on Schedule 3(a).

(b) Authorization; Enforcement; Validity. (i) The Company has the requisite corporate power and authority to enter into and perform its obligations under this Agreement, the Registration Rights Agreement and each of the other agreements entered into by the parties on the Commencement Date and attached hereto as exhibits to this Agreement (collectively, the "**Transaction Documents**"), and to issue the Securities in accordance with the terms hereof and thereof, (ii) the execution and delivery of the Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby, including without limitation, the issuance of the Commitment Shares and the reservation for issuance and the issuance of the Purchase Shares issuable under this Agreement, have been duly authorized by the Company's Board of Directors or duly authorized committee thereof, do not conflict with the Company's Certificate of Incorporation or Bylaws, and do not require further consent or authorization is required by the Company, its Board of Directors or its shareholders, (iii) this Agreement has been, and each other Transaction Document shall be on the Commencement Date, duly executed and delivered by the Company and (iv) this Agreement constitutes, and each other Transaction Document upon its execution on behalf of the Company, shall constitute, the valid and binding obligations of the Company enforceable against the Company in accordance with their terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or

similar laws relating to, or affecting generally, the enforcement of creditors' rights and remedies. The Board of Directors of the Company or duly authorized committee thereof has approved the resolutions (the "**Signing Resolutions**") substantially in the form as set forth as Exhibit C attached hereto to authorize this Agreement and the transactions contemplated hereby. The Signing Resolutions are valid, in full force and effect and have not been modified or supplemented in any manner. The Company has delivered to the Buyer a true and correct copy of the Signing Resolutions as adopted by the Board of Directors of the Company or an appropriate Board Committee.

(c) Capitalization. As of the date hereof, the authorized capital stock of the Company consists of (i) 500,000,000 shares of Common Stock, par value $0.001, of which as of the date hereof 28,582,625 shares are issued and outstanding, 5,304,446 shares are reserved for future issuance pursuant to the Company's equity incentive plans of which approximately 1,375,037 shares remain available for future option grants or stock awards, 476,948 shares are reserved for future issuance pursuant to the Company's employee stock purchase plan, and 4,490,806 shares are issuable and reserved for issuance pursuant to securities (other than stock options or equity based awards issued pursuant to the Company's stock incentive plans) exercisable or exchangeable for, or convertible into, shares of Common Stock and (ii) 20,000,000 shares of preferred stock, with per share liquidation preferences set forth on Schedule 3(c), of which as of the date hereof 825,000 shares are designated as Series B Preferred Stock and 10,000 are issued and outstanding. All of such outstanding shares have been, or upon issuance will be, validly issued and are fully paid and nonassessable. Except as disclosed in Schedule 3(c), (i) no shares of the Company's capital stock are subject to preemptive rights or any other similar rights or any liens or encumbrances suffered or permitted by the Company, (ii) there are no outstanding debt securities, (iii) there are no outstanding options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, any shares of capital stock of the Company or any of its Subsidiaries, or contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to issue additional shares of capital stock of the Company or any of its Subsidiaries or options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, any shares of capital stock of the Company or any of its Subsidiaries, (iv) there are no material agreements or arrangements under which the Company or any of its Subsidiaries is obligated to register the sale of any of their securities under the 1933 Act (except the Registration Rights Agreement), (v) there are no outstanding securities or instruments of the Company or any of its Subsidiaries which contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any of its Subsidiaries is or may become bound to redeem a security of the Company or any of its Subsidiaries, (vi) there are no securities or instruments containing anti-dilution or similar provisions that will be triggered by the issuance of the Securities as described in this Agreement and (vii) the Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement. The Company has furnished or made available to the Buyer true and correct copies of the Company's Certificate of Incorporation, as amended and as in effect on the date hereof (the "**Certificate of Incorporation**"), and the Company's Bylaws, as amended and as in effect on the date hereof (the "**Bylaws**"), and summaries of the terms of all securities convertible into or exercisable for Common Stock, if any, and copies of any documents containing the material rights of the holders thereof in respect thereto.

(d) Issuance of Securities. The Commitment Shares have been duly authorized and, upon issuance in accordance with the terms hereof, the Commitment Shares shall be (i) validly issued, fully paid and non-assessable and (ii) free from all taxes, liens and charges with respect to the issue thereof. Upon issuance and payment therefore in accordance with the terms and conditions of this Agreement, the Purchase Shares shall be validly issued, fully paid and nonassessable and free from all taxes, liens and charges with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock.

(e) No Conflicts. Except as disclosed in Schedule 3(e), the execution, delivery and performance of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the reservation for issuance and issuance of the Purchase Shares) will not (i) result in a violation of the Certificate of Incorporation, any Certificate of Designations, Preferences and Rights of any outstanding series of preferred stock of the Company or the Bylaws or (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, indenture or instrument to which the Company or any of its Subsidiaries is a party, or result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws and regulations and the rules and regulations of the Principal Market applicable to the Company or any of its Subsidiaries) or by which any property or asset of the Company or any of its Subsidiaries is bound or affected, except in the case of conflicts, defaults, terminations, amendments, accelerations, cancellations and violations under clause (ii), which could not reasonably be expected to result in a Material Adverse Effect. Except as disclosed in Schedule 3(e), neither the Company nor its Subsidiaries is in violation of any term of or in default under its Certificate of Incorporation, any Certificate of Designation, Preferences and Rights of any outstanding series of preferred stock of the Company or Bylaws or their organizational charter or bylaws, respectively. Except as disclosed in Schedule 3(e), neither the Company nor any of its Subsidiaries is in violation of any term of or is in default under any material contract, agreement, mortgage, indebtedness, indenture, instrument, judgment, decree or order or any statute, rule or regulation applicable to the Company or its Subsidiaries,

except for possible conflicts, defaults, terminations or amendments which could not reasonably be expected to have a Material Adverse Effect. The business of the Company and its Subsidiaries is not being conducted, and shall not be conducted, in violation of any law, ordinance, or regulation of any governmental entity, except for possible violations, the sanctions for which either individually or in the aggregate could not reasonably be expected to have a Material Adverse Effect. Except as specifically contemplated by this Agreement and as required under the 1933 Act or applicable state securities laws, the Company is not required to obtain any consent, authorization or order of, or make any filing or registration with, any court or governmental agency or any regulatory or self-regulatory agency in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents in accordance with the terms hereof or thereof. Except as disclosed in Schedule 3(e), all consents, authorizations, orders, filings and registrations which the Company is required to obtain pursuant to the preceding sentence shall be obtained or effected on or prior to the Commencement Date. The Company is not subject to any notices or actions from or to the Principal Market. The Principal Market has not commenced any delisting proceedings against the Company.

(f) SEC Documents; Financial Statements. Except as disclosed in Schedule 3(f), since January 1, 2013, the Company has filed all reports, schedules, forms, statements and other documents required to be filed by it with the SEC pursuant to the reporting requirements of the 1934 Act (all of the foregoing filed prior to the date hereof and all exhibits included therein and financial statements and schedules thereto and documents incorporated by reference therein being hereinafter referred to as the "**SEC Documents**"). As of their respective dates (except as they have been correctly amended), the SEC Documents complied in all material respects with the requirements of the 1934 Act and the rules and regulations of the SEC promulgated thereunder applicable to the SEC Documents, and none of the SEC Documents, at the time they were filed with the SEC (except as they may have been properly amended), contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. As of their respective dates (except as they have been properly amended), the financial statements of the Company included in the SEC Documents complied as to form in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto. Such financial statements have been prepared in accordance with generally accepted accounting principles, consistently applied, during the periods involved (except (i) as may be otherwise indicated in such financial statements or the notes thereto or (ii) in the case of unaudited interim statements, to the extent they may exclude footnotes or may be condensed or summary statements) and fairly present in all material respects the financial position of the Company as of the dates thereof and the results of its operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal year-end audit adjustments). Except as disclosed in Schedule 3(f) or routine correspondence, such as comment letters and notices of effectiveness in connection with previously filed registration statements, the Company or any of its subsidiaries are not presently the subject of any inquiry, investigation or action by the SEC.

(g) Absence of Certain Changes. Except as disclosed in Schedule 3(g), since September 30, 2013, there has been no material adverse change in the business, properties, operations, financial condition or results of operations of the Company or its Subsidiaries. For purposes of this Agreement, neither a decrease in cash or cash equivalents nor losses incurred in the ordinary course of the Company's business shall be deemed or considered a material adverse change. The Company has not taken any steps, and does not currently expect to take any steps, to seek protection pursuant to any Bankruptcy Law nor does the Company or any of its Subsidiaries have any knowledge or reason to believe that its creditors intend to initiate involuntary bankruptcy or insolvency proceedings. The Company is financially solvent and is generally able to pay its debts as they become due .

(h) Absence of Litigation. There is no action, suit, proceeding, inquiry or investigation before or by any court, public board, government agency, self-regulatory organization or body pending or, to the knowledge of the Company or any of its Subsidiaries, threatened against or affecting the Company, the Common Stock or any of the Company's Subsidiaries or any of the Company's or the Company's Subsidiaries' officers or directors in their capacities as such, which could reasonably be expected to have a Material Adverse Effect. A description of each action, suit, proceeding, inquiry or investigation before or by any court, public board, government agency, self-regulatory organization or body which, as of the date of this Agreement, is pending or threatened in writing against or affecting the Company, the Common Stock or any of the Company's Subsidiaries or any of the Company's or the Company's Subsidiaries' officers or directors in their capacities as such, is set forth in Schedule 3(h).

(i) Acknowledgment Regarding Buyer's Status. The Company acknowledges and agrees that the Buyer is acting solely in the capacity of arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby. The Company further acknowledges that the Buyer is not acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby and any advice given by the Buyer or any of its representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to the Buyer's purchase of the Securities. The Company further represents to the Buyer that the Company's decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives and advisors.

(j) Intellectual Property Rights. The Company and its Subsidiaries own or possess adequate rights or licenses to use all material trademarks, trade names, service marks, service mark registrations, service names, patents, patent rights, copyrights, inventions, licenses, approvals, governmental authorizations, trade secrets and other intellectual property rights (collectively, "**Intellectual Property**") necessary to conduct their respective businesses as now conducted, except as set forth in Schedule 3(j) or to the extent that the failure to own, possess, license or otherwise hold adequate rights to use Intellectual Property would not, individually or in the aggregate, have a Material Adverse Effect. The Company and its Subsidiaries do not have any knowledge of any infringement by the Company or its Subsidiaries of any material trademark, trade name rights, patents, patent rights, copyrights, inventions, licenses, service names, service marks, service mark registrations, trade secret or other similar rights of others, or of any such development of similar or identical trade secrets or technical information by others and, except as set forth on Schedule 3(j), there is no claim, action or proceeding being made or brought against, or to the Company's knowledge, being threatened against, the Company or its Subsidiaries regarding trademark, trade name, patents, patent rights, invention, copyright, license, service names, service marks, service mark registrations, trade secrets or other intellectual property rights, which could reasonably be expected to have a Material Adverse Effect.

(k) Environmental Laws. The Company and its Subsidiaries (i) are in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("**Environmental Laws**"), (ii) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) are in compliance with all terms and conditions of any such permit, license or approval, except where, in each of the three foregoing clauses, the failure to so comply or receive such approvals could not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

(l) Title. The Company and its Subsidiaries have good and marketable title in fee simple to all real property and good and marketable title to all personal property owned by them which is material to the business of the Company and its Subsidiaries, in each case free and clear of all liens, encumbrances and defects except such as are described in Schedule 3(l) or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and any of its Subsidiaries. Any real property and facilities held under lease by the Company and any of its Subsidiaries are held by them under valid, subsisting and enforceable leases with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company and its Subsidiaries.

(m) Insurance. The Company and each of its Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as management of the Company believes to be prudent and customary in the businesses in which the Company and its Subsidiaries are engaged. Neither the Company nor any such Subsidiary has been refused any insurance coverage sought or applied for and neither the Company nor any such Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not materially and adversely affect the condition, financial or otherwise, or the earnings, business or operations of the Company and its Subsidiaries, taken as a whole.

(n) Regulatory Permits. The Company and its Subsidiaries possess all material certificates, authorizations and permits issued by the appropriate federal, state or foreign regulatory authorities necessary to conduct their respective businesses as currently conducted, and neither the Company nor any such Subsidiary has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit.

(o) Tax Status. The Company and each of its Subsidiaries has made or filed all federal and state income and all other material tax returns, reports and declarations required by any jurisdiction to which it is subject (unless and only to the extent that the Company and each of its Subsidiaries has set aside on its books reserves reasonably adequate for the payment of all unpaid and unreported taxes) and has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations, except those being contested in good faith and has set aside on its books reserves reasonably adequate for the payment of all taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company know of no basis for any such claim.

(p) Transactions With Affiliates. Except as set forth on Schedule 3(p) and other than the grant or exercise of stock options pursuant to duly adopted stock or incentive compensation plans, none of the officers, directors, or employees of the Company is presently a party to any transaction with the Company or any of its Subsidiaries (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any corporation, partnership, trust or other entity in which any officer, director, or any such employee has an interest or is an officer, director, trustee or partner.

(q) [Intentionally omitted.]

(r) Registration Statement. The Shelf Registration Statement (as defined in Section 4(a) hereof) has been declared effective by the SEC, and no stop order has been issued or is pending or threatened by the SEC with respect thereto. As of the date hereof, the Company has a maximum dollar amount of securities registered and unsold under the Shelf Registration Statement, which is not less than the sum of (i) the Available Amount and (ii) the market value of the Commitment Shares on the date hereof.

4. COVENANTS.

(a) Filing of Form 8-K and Prospectus Supplement. The Company agrees that it shall, within the time required under the 1934 Act, file a Current Report on Form 8-K (or provide substantially equivalent disclosure in the Company's Annual Report on Form 10-K or Quarterly Report on Form 10-Q to be filed within that time period) disclosing this Agreement and the transaction contemplated hereby. Prior to the issuance of any shares hereunder, the Company shall file a prospectus supplement to the Company's existing shelf registration statement on Form S-3 (File No. 333-183543) or a new registration statement (either, the "**Shelf Registration Statement**") covering the issuance of the Commitment Shares and Purchase Shares (the " **Prospectus Supplement**") in accordance with the terms of the Registration Rights Agreement between the Company and the Buyer, dated as of the date hereof (the " **Registration Rights Agreement**"). The Company shall use commercially reasonable efforts to keep the Shelf Registration Statement and any New Registration Statement (as defined in the Registration Rights Agreement) effective pursuant to Rule 415 promulgated under the 1933 Act and available for sales of all Securities to the Buyer until such time as (i) it no longer qualifies to make sales under the Shelf Registration Statement, (ii) the date on which all the Securities have been sold under this Agreement and no Available Amount remains thereunder, or (iii) the Agreement has been terminated. The Shelf Registration Statement (including any amendments or supplements thereto and prospectuses or prospectus supplements, including the Prospectus Supplement, contained therein) shall not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein, or necessary to make the statements therein, in light of the circumstances in which they were made, not misleading.

(b) Blue Sky. The Company shall take such action, if any, as is reasonably necessary in order to obtain an exemption for or to qualify (i) the initial sale of the Securities to the Buyer under this Agreement and (ii) any subsequent sale of the Securities by the Buyer, in each case, under applicable securities or "Blue Sky" laws of the states of the United States in such states as is reasonably requested by the Buyer from time to time, and shall provide evidence of any such action so taken to the Buyer.

(c) Listing. The Company shall secure the listing of all of the Securities upon each national securities exchange and automated quotation system, if any, upon which shares of Common Stock are then listed (subject to official notice of issuance) and shall maintain such listing so long as any other shares of Common Stock shall be so listed. The Company shall maintain the Common Stock's listing on the Principal Market. Neither the Company nor any of its Subsidiaries shall take any action that would be reasonably expected to result in the delisting or suspension of the Common Stock on the Principal Market, unless the Common Stock is immediately thereafter traded on the New York Stock Exchange, the NYSE MKT, the Nasdaq Global Select Market, the Nasdaq Global Market or the OTC Bulletin Board. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section.

(d) Limitation on Short Sales and Hedging Transactions. The Buyer agrees that beginning on the date of this Agreement and ending on the date of termination of this Agreement as provided in Section 11(k), the Buyer and its agents, representatives and affiliates shall not in any manner whatsoever enter into or effect, directly or indirectly, any (i) "short sale" (as such term is defined in Section 242.200 of Regulation SHO of the 1934 Act) of the Common Stock or (ii) hedging transaction, which establishes a net short position with respect to the Common Stock.

(e) Issuance of Commitment Shares. In connection with the Commencement, the Company shall issue to the Buyer as consideration for the Buyer entering into this Agreement 150,000 shares of Common Stock (the "**Commitment Shares**"). The Commitment Shares shall be issued without any restrictive legend whatsoever or prior sale requirement.

(f) Due Diligence. The Buyer shall have the right, from time to time as the Buyer may reasonably deem appropriate, to perform reasonable due diligence on the Company during normal business hours. The Company and its officers and employees shall provide information and reasonably cooperate with the Buyer in connection with any reasonable request by the Buyer related to the Buyer's due diligence of the Company, including, but not limited to, any such request made by the Buyer in connection with (i) the filing of the registration statement described in Section 4(a) hereof and (ii) the Commencement; provided, however, that at no time is the Company required or permitted to disclose material nonpublic information to the Buyer. Each party hereto agrees not to disclose any Confidential Information of the other party to any third party and shall not use the Confidential Information of such other party for any purpose other than in connection with, or in furtherance of, the transactions contemplated hereby. Each

party hereto acknowledges that the Confidential Information shall remain the property of the disclosing party and agrees that it shall take all reasonable measures to protect the secrecy of any Confidential Information disclosed by the other party.

5. TRANSFER AGENT INSTRUCTIONS.

All of the Purchase Shares to be issued under this Agreement shall be issued without any restrictive legend unless the Buyer expressly consents otherwise. The Company shall issue irrevocable instructions to the Transfer Agent, and any subsequent transfer agent, to issue Common Stock in the name of the Buyer for the Purchase Shares (the "**Irrevocable Transfer Agent Instructions**"). The Company warrants to the Buyer that no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 5, will be given by the Company to the Transfer Agent with respect to the Purchase Shares and that the Commitment Shares and the Purchase Shares shall otherwise be freely transferable on the books and records of the Company as and to the extent provided in this Agreement and the Registration Rights Agreement.

6. CONDITIONS TO THE COMPANY'S RIGHT TO COMMENCE SALES OF SHARES OF COMMON STOCK UNDER THIS AGREEMENT.

The right of the Company hereunder to commence sales of the Purchase Shares is subject to the satisfaction of each of the following conditions on or before the Commencement Date (the date that the Company may begin sales):

(a) The Buyer shall have executed each of the Transaction Documents and delivered the same to the Company;

(b) The representations and warranties of the Buyer shall be true and correct and the Buyer shall have performed, satisfied and complied in all material respects with the covenants and agreements required by this Agreement to be performed, satisfied or complied with by the Buyer at or prior to the Commencement Date; and

(c) The Prospectus Supplement shall have been delivered to the Buyer and no stop order with respect to the registration statement covering the sale of shares to the Buyer shall be pending or threatened by the SEC.

7. CONDITIONS TO THE BUYER'S OBLIGATION TO MAKE PURCHASES OF SHARES OF COMMON STOCK.

The obligation of the Buyer to buy Purchase Shares under this Agreement is subject to the satisfaction of each of the following conditions on or before the Commencement Date (the date that the Company may begin sales of Purchase Shares) and once such conditions have been initially satisfied, there shall not be any ongoing obligation to satisfy such conditions after the Commencement has occurred:

(a) The Company shall have executed each of the Transaction Documents and delivered the same to the Buyer;

(b) The Company shall have issued to the Buyer the Commitment Shares;

(c) The Common Stock shall be authorized for quotation on the Principal Market, trading in the Common Stock shall not have been within the last 365 days suspended by the SEC or the Principal Market and the Securities shall be approved for listing upon the Principal Market;

(d) The Buyer shall have received the opinion and negative assurance letter of the Company's legal counsel dated as of the Commencement Date in form and substance substantially similar to the forms provided to the Buyer by the Company's legal counsel prior to the execution of this Agreement;

(e) The representations and warranties of the Company shall be true and correct in all material respects (except to the extent that any of such representations and warranties is already qualified as to materiality in Section 3 above, in which case, such representations and warranties shall be true and correct without further qualification) as of the date when made and as of the Commencement Date as though made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct in all material respects as of such specific date) and the Company shall have performed, satisfied and complied with the covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by the Company at or prior to the Commencement Date. The Buyer shall have received a certificate, executed by the CEO, President or CFO of the Company, dated as of the Commencement Date, to the foregoing effect in the form attached hereto as **Exhibit B**;

(f) The Board of Directors of the Company or a duly authorized committee thereof shall have adopted resolutions in the form attached hereto as **Exhibit C** which shall be in full force and effect without any amendment or supplement thereto as of the Commencement Date;

(g) [Intentionally Omitted];

(h) The Irrevocable Transfer Agent Instructions, in form acceptable to the Buyer shall have been executed by the Buyer and the Company and delivered to the Company's Transfer Agent;

(i) The Company shall have delivered to the Buyer a certificate evidencing the incorporation and good standing of the Company in the State of Delaware issued by the Secretary of State of the State of Delaware as of a date within ten (10) Business Days of the Commencement Date;

(j) The Company shall have delivered to the Buyer a certified copy of the Certificate of Incorporation, as certified by the Secretary of State of the State of Delaware within ten (10) Business Days of the Commencement Date;

(k) The Company shall have delivered to the Buyer a secretary's certificate executed by the Secretary of the Company, dated as of the Commencement Date, in the form attached hereto as **Exhibit D**;

(l) The Shelf Registration Statement shall have been declared effective under the 1933 Act by the SEC and no stop order with respect thereto shall be pending or threatened by the SEC. The Company shall have prepared and delivered to the Buyer a final and complete form of prospectus supplement, dated and current as of the Commencement Date, to be used in connection with any issuances of any Commitment Shares or any Purchase Shares to the Buyer, and to be filed by the Company one Business Day after the Commencement Date. The Company shall have made all filings under all applicable federal and state securities laws necessary to consummate the issuance of the Commitment Shares and the Purchase Shares pursuant to this Agreement in compliance with such laws;

(m) No Event of Default has occurred, or any event which, after notice and/or lapse of time, would become an Event of Default has occurred; and

(n) [Intentionally omitted.]

(o) The Company shall have provided the Buyer with the information reasonably requested by the Buyer in connection with its due diligence requests made prior to, or in connection with, the Commencement, in accordance with the terms of Section 4(f) hereof.

8. INDEMNIFICATION.

In consideration of the Buyer's execution and delivery of the Transaction Documents and acquiring the Securities hereunder and in addition to all of the Company's other obligations under the Transaction Documents, the Company shall defend, protect, indemnify and hold harmless the Buyer and all of its affiliates, shareholders, officers, directors, and employees, and any of the foregoing person's agents or other representatives (including, without limitation, those retained in connection with the transactions contemplated by this Agreement) (collectively, the " **Indemnitees**") from and against any and all actions, causes of action, suits, claims, losses, costs, penalties, fees, liabilities and damages, and expenses in connection therewith (irrespective of whether any such Indemnitee is a party to the action for which indemnification hereunder is sought), and including reasonable attorneys' fees and disbursements (the "**Indemnified Liabilities**"), incurred by any Indemnitee as a result of, or arising out of, or relating to (a) any misrepresentation or breach of any representation or warranty made by the Company in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (b) any breach of any covenant, agreement or obligation of the Company contained in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, or (c) any cause of action, suit or claim brought or made against such Indemnitee and arising out of or resulting from the execution, delivery, performance or enforcement of the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, other than with respect to Indemnified Liabilities which directly and primarily result from (A) a breach of any of the Buyer's representations and warranties, covenants or agreements contained in this Agreement, or (B) the gross negligence or willful misconduct of the Buyer or any other Indemnitee. To the extent that the foregoing undertaking by the Company may be unenforceable for any reason, the Company shall make the maximum contribution to the payment and satisfaction of each of the Indemnified Liabilities which is permissible under applicable law.

9. EVENTS OF DEFAULT.

An "**Event of Default**" shall be deemed to have occurred at any time as any of the following events occurs:

(a) during any period in which the effectiveness of any registration statement is required to be maintained pursuant to the terms of the Registration Rights Agreement, the effectiveness of such registration statement lapses for any reason (including, without limitation, the issuance of a stop order) or is unavailable to the Company for sale of all of the Registrable Securities (as defined in the Registration Rights Agreement) to the Buyer in accordance with the terms of the Registration Rights Agreement, and such lapse or unavailability continues for a period of ten (10) consecutive Business Days or for more than an aggregate of thirty (30) Business Days in any 365-day period;

(b) the suspension from trading or failure of the Common Stock to be listed on a Principal Market for a period of three (3) consecutive Business Days;

(c) the delisting of the Common Stock from the Principal Market, provided, however, that the Common Stock is not immediately thereafter trading on the New York Stock Exchange, the NYSE MKT, the Nasdaq Global Select Market, the Nasdaq Global Market or the OTC Bulletin Board;

(d) the failure for any reason by the Transfer Agent to issue Purchase Shares to the Buyer within five (5) Business Days after the applicable Purchase Date which the Buyer is entitled to receive;

(e) the breach of any representation, warranty, covenant or other term or condition under any Transaction Document if such breach could have a Material Adverse Effect and except, in the case of a breach of a covenant which is reasonably curable, only if such breach continues for a period of at least five (5) Business Days;

(f) if any Person commences a proceeding against the Company pursuant to or within the meaning of any Bankruptcy Law;

(g) if the Company pursuant to or within the meaning of any Bankruptcy Law; (A) commences a voluntary case, (B) consents to the entry of an order for relief against it in an involuntary case, (C) consents to the appointment of a Custodian of it or for all or substantially all of its property, (D) makes a general assignment for the benefit of its creditors, (E) becomes insolvent, or (F) is generally unable to pay its debts as the same become due; or

(h) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that (A) is for relief against the Company in an involuntary case, (B) appoints a Custodian of the Company or for all or substantially all of its property, or (C) orders the liquidation of the Company or any Subsidiary.

In addition to any other rights and remedies under applicable law and this Agreement, including the Buyer termination rights under Section 11(k) hereof, so long as an Event of Default has occurred and is continuing, or if any event which, after notice and/or lapse of time, would become an Event of Default, has occurred and is continuing, or so long as the Closing Sale Price is below the Floor Price, the Company may not require and the Buyer shall not be obligated or permitted to purchase any shares of Common Stock under this Agreement. If pursuant to or within the meaning of any Bankruptcy Law, the Company commences a voluntary case or any Person commences a proceeding against the Company, a Custodian is appointed for the Company or for all or substantially all of its property, or the Company makes a general assignment for the benefit of its creditors, (any of which would be an Event of Default as described in Sections 9(f), 9(g) and 9(h) hereof) this Agreement shall automatically terminate without any liability or payment to the Company without further action or notice by any Person. No such termination of this Agreement under Section 11(k)(i) shall affect the Company's or the Buyer's obligations under this Agreement with respect to pending purchases and the Company and the Buyer shall complete their respective obligations with respect to any pending purchases under this Agreement.

10. CERTAIN DEFINED TERMS.

For purposes of this Agreement, the following terms shall have the following meanings:

(a) "**1933 Act**" means the Securities Act of 1933, as amended.

(b) "**Available Amount**" means initially Thirty Million Dollars ($30,000,000) in the aggregate which amount shall be reduced by the Purchase Amount each time the Buyer purchases shares of Common Stock pursuant to Section 1 hereof.

(c) "**Bankruptcy Law**" means Title 11, U.S. Code, or any similar federal or state law for the relief of debtors.

(d) "**Business Day**" means any day on which the Principal Market is open for trading during normal trading hours (i.e., 9:30 a.m. to 4:00 p.m. Eastern Time), including any day on which the Principal Market is open for trading for a period of time less than the customary time.

(e) "**Closing Sale Price**" means the last closing trade price for the Common Stock on the Principal Market as reported by the Principal Market.

(f) "**Confidential Information**" means any information disclosed by either party to the other party, either directly or indirectly, in writing, orally or by inspection of tangible objects (including, without limitation, documents, prototypes, samples, plant and equipment), which is designated as "Confidential," "Proprietary" or some similar designation. Information communicated orally shall be considered Confidential Information if such information is confirmed in writing as being Confidential Information within ten (10) Business Days after the initial disclosure. Confidential Information may also include information disclosed to a disclosing party by third parties. Confidential Information shall not, however, include any information which (i) was publicly known and made generally available in the public domain prior to the time of disclosure by the disclosing party; (ii) becomes publicly known and made generally available after disclosure by the disclosing party to the receiving party through no action or inaction of the receiving party; (iii) is already in the possession of the receiving party at the time of disclosure by the disclosing party as shown by the receiving party's files and records immediately prior to the time of disclosure; (iv) is obtained by the receiving party from a third party without a breach of such third party's obligations of confidentiality; (v) is independently developed by the receiving party without use of or reference to the disclosing party's Confidential Information, as shown by documents and other competent evidence in the receiving party's possession; or (vi) is required by law to be disclosed by the receiving party, provided that the receiving party gives the disclosing party prompt written notice of such requirement prior to such disclosure and assistance in obtaining an order protecting the information from public disclosure.

(g) "**Custodian**" means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.

(h) "**Maturity Date**" means the date that is twenty-four (24) months from the Commencement Date.

(i) "**Person**" means an individual or entity including any limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization and a government or any department or agency thereof.

(j) "**Principal Market**" means the Nasdaq Capital Market; provided however, that in the event the Company's Common Stock is ever listed or traded on the Nasdaq Global Select Market, Nasdaq Global Market, the New York Stock Exchange, the NYSE MKT or the OTC Bulletin Board, then the "Principal Market" shall mean such other market or exchange on which the Company's Common Stock is then listed or traded.

(k) "**Purchase Amount**" means, with respect to any particular purchase made hereunder, the portion of the Available Amount to be purchased by the Buyer pursuant to Section 1 hereof as set forth in a valid Purchase Notice or VWAP Purchase Notice which the Company delivers to the Buyer.

(l) "**Purchase Date**" means with respect to any Regular Purchase made hereunder, the Business Day of receipt by the Buyer of a valid Purchase Notice that the Buyer is to buy Purchase Shares pursuant to Section 1(b) hereof.

(m) "**Purchase Notice**" shall mean an irrevocable written notice from the Company to the Buyer directing the Buyer to buy Purchase Shares pursuant to Section 1(b) hereof as specified by the Company therein at the applicable Purchase Price on the Purchase Date.

(n) "**Purchase Price**" means the lower of (i) the lowest Sale Price of the Common Stock on the Purchase Date or (ii) the arithmetic average of the three (3) lowest Closing Sale Prices for the Common Stock during the twelve (12) consecutive Business Days ending on the Business Day immediately preceding such Purchase Date (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

(o) "**Sale Price**" means any trade price for the shares of Common Stock on the Principal Market as reported by the Principal Market.

(p) "**SEC**" means the United States Securities and Exchange Commission.

(q) "**Transfer Agent**" means the transfer agent of the Company as set forth in Section 11(f) hereof or such other person who is then serving as the transfer agent for the Company in respect of the Common Stock.

(r) "**VWAP Minimum Price Threshold**" means, with respect to any particular VWAP Purchase Notice, the sale price of the Common Stock as traded on the Principal Market on the VWAP Purchase Date equal to the greater of (i) 80% of the closing price on of the Common Stock on the Business Day immediately preceding the VWAP Purchase Date or (ii) such higher price as set forth by the Company in the VWAP Purchase Notice.

(s) "**VWAP Purchase Amount**" means, with respect to any particular VWAP Purchase Notice, the portion of the Available Amount to be purchased by the Buyer pursuant to Section 1(c) hereof as set forth in a valid VWAP Purchase Notice which requires the Buyer to buy the VWAP Purchase Share Percentage of the aggregate shares traded on the VWAP Purchase Date up to the VWAP Purchase Share Volume Maximum, subject to the VWAP Minimum Price Threshold.

(t) "**VWAP Purchase Date**" means, with respect to any VWAP Purchase made hereunder, the Business Day following the receipt by the Buyer of a valid VWAP Purchase Notice that the Buyer is to buy Purchase Shares pursuant to Section 1(c) hereof.

(u) "**VWAP Purchase Notice**" shall mean an irrevocable written notice from the Company to the Buyer directing the Buyer to buy Purchase Shares on the VWAP Purchase Date pursuant to Section 1(c) hereof as specified by the Company therein at the applicable VWAP Purchase Price with the applicable VWAP Purchase Share Percentage specified therein.

(v) "**VWAP Purchase Share Percentage**" means, with respect to any particular VWAP Purchase Notice pursuant to Section 1(c) hereof, the percentage set forth in the VWAP Purchase Notice which the Buyer will be required to buy as a specified percentage of the aggregate shares traded up to the VWAP Purchase Share Volume Maximum on the VWAP Purchase Date subject to Section 1(c) hereof but in no event shall this percentage exceed a maximum of thirty percent (30%) of such VWAP Purchase Date's share trading volume of the Common Stock.

(w) "**VWAP Purchase Price**" means ninety-five percent (95%) of volume weighted average price for the Common Stock traded on:

(A) the VWAP Purchase Date if the aggregate shares traded on the VWAP Purchase Date has not exceeded the VWAP Purchase Share Volume Maximum; or

(B) the portion of the VWAP Purchase Date until such time as the sooner to occur of:

(1) the time at which the aggregate shares traded has exceeded the VWAP Purchase Share Volume Maximum, or

(2) the time at which the sale price of Common Stock falls below the VWAP Minimum Price Threshold.

(x) "**VWAP Purchase Share Estimate**" means the number of shares of Common Stock that the Company has in its sole discretion irrevocably instructed its transfer agent to issue to the Buyer in connection with a VWAP Purchase Notice pursuant to Section 1(c) hereof and issued to the Buyer on the VWAP Purchase Date (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

(y) "**VWAP Purchase Share Volume Maximum**" means a number of shares of Common Stock traded on the VWAP Purchase Date equal to: (i) the VWAP Purchase Share Estimate, divided by (ii) the VWAP Purchase Share Percentage (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

11. MISCELLANEOUS.

(a) Governing Law; Jurisdiction; Jury Trial. The corporate laws of the State of Delaware shall govern all issues concerning the relative rights of the Company and its shareholders. All other questions concerning the construction, validity, enforcement and interpretation of this Agreement and the other Transaction Documents shall be governed by the internal laws of the State of Illinois, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Illinois or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Illinois. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of Chicago, for the

adjudication of any dispute hereunder or under the other Transaction Documents or in connection herewith or therewith, or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof to such party at the address for such notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. **EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

(b) Counterparts. This Agreement may be executed in two or more identical counterparts, all of which shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party; provided that a facsimile signature shall be considered due execution and shall be binding upon the signatory thereto with the same force and effect as if the signature were an original, not a facsimile signature.

(c) Headings. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement.

(d) Severability. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction.

(e) Entire Agreement. This Agreement and the Registration Rights Agreement supersede all other prior oral or written agreements between the Buyer, the Company, their affiliates and persons acting on their behalf with respect to the matters discussed herein, and this Agreement, the other Transaction Documents and the instruments referenced herein contain the entire understanding of the parties with respect to the matters covered herein and therein and, except as specifically set forth herein or therein, neither the Company nor the Buyer makes any representation, warranty, covenant or undertaking with respect to such matters. The Company acknowledges and agrees that is has not relied on, in any manner whatsoever, any representations or statements, written or oral, other than as expressly set forth in this Agreement.

(f) Notices. Any notices, consents or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt when delivered personally; (ii) upon receipt when sent by facsimile (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); or (iii) one Business Day after deposit with a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses and facsimile numbers for such communications shall be:

If to the Company:

NeoStem, Inc.
420 Lexington Avenue
Suite 350
New York, New York 10170
Telephone: 212-584-4180
Facsimile: 646-607-4672
Attention: Catherine M. Vaczy, Esq.
Vice President and General Counsel
Email: cvaczy@neostem.com

With a copy to:

Lowenstein Sandler LLP
65 Livingston Avenue
Roseland, New Jersey 07068
Telephone: 973-597-2500
Facsimile: 973-597-2565
Attention: Alan Wovsaniker, Esq.
Email: awovsaniker@lowenstein.com

If to the Buyer:

Aspire Capital Fund, LLC
155 North Wacker Drive, Suite 1600
Chicago, IL 60606
Telephone: 312-658-0400
Facsimile: 312-658-4005
Attention: Steven G. Martin
Email: smartin@aspirecapital.com

With a copy to:

Morrison & Foerster LLP
2000 Pennsylvania Avenue, NW, Suite 6000
Washington, DC 20006-1888
Telephone: 202-778-1611
Facsimile: 202-887-0763
Attention: Martin P. Dunn, Esq.
Email: mdunn@mofo.com

If to the Transfer Agent:

Continental Stock Transfer & Trust Company
17 Battery Place
New York, New York 10004
Telephone: (212) 509-4000
Facsimile: _____
Attention: John Comer
Email: jcomer@continentalstock.com

or at such other address and/or facsimile number and/or to the attention of such other person as the recipient party has specified by written notice given to each other party one (1) Business Day prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent or other communication, (B) mechanically or electronically generated by the sender's facsimile machine containing the time, date, and recipient facsimile number or (C) provided by a nationally recognized overnight delivery service, shall be rebuttable evidence of receipt in accordance with clause (i), (ii) or (iii) above, respectively.

(g) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns. The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Buyer, including by merger or consolidation. The Buyer may not assign its rights or obligations under this Agreement.

(h) No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other person.

(i) Publicity. The Buyer shall have the right to approve before issuance any press release, SEC filing or any other public disclosure made by or on behalf of the Company whatsoever with respect to, in any manner, the Buyer, its purchases hereunder or any aspect of this Agreement or the transactions contemplated hereby; provided, however, that the Company shall be entitled, without the prior approval of the Buyer, to make any press release or other public disclosure (including any filings with the SEC) with respect to such transactions as is required by applicable law and regulations so long as the Company and its counsel consult with the Buyer in connection with any such press release or other public disclosure at least two (2) Business Days prior to its release. The Buyer must be provided with a copy thereof at least two (2) Business Days prior to any release or use by the Company thereof.

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

(k) Termination. This Agreement may be terminated only as follows:

(i) By the Buyer any time an Event of Default exists without any liability or payment to the Company. However, if pursuant to or within the meaning of any Bankruptcy Law, the Company commences a voluntary case or any Person commences a proceeding against the Company, a Custodian is appointed for the Company or for all or substantially all of its property, or the Company makes a general assignment for the benefit of its creditors, (any of which would be an Event of Default as described in Sections 9(f), 9(g) and 9(h) hereof) this Agreement shall automatically terminate without any liability or payment to the Company without further action or notice by any Person. No such termination of this Agreement under this Section 11(k)(i) shall affect the Company's or the Buyer's obligations under this Agreement with respect to pending purchases and the Company and the Buyer shall complete their respective obligations with respect to any pending purchases under this Agreement.

(ii) In the event that the Commencement shall not have occurred, the Company shall have the option to terminate this Agreement for any reason or for no reason without any liability whatsoever of either party to the other party under this Agreement except as set forth in Section 11(k)(viii) hereof.

(iii) In the event that the Commencement shall not have occurred on or before July 31, 2014, due to the failure to satisfy any of the conditions set forth in Sections 6 and 7 above with respect to the Commencement, either party shall have the option to terminate this Agreement at the close of business on such date or thereafter without liability of either party to any other party; provided, however, that the right to terminate this Agreement under this Section 11(k)(iii) shall not be available to either party if such failure to satisfy any of the conditions set forth in Sections 6 and 7 is the result of a breach of this Agreement by such party or the failure of any representation or warranty of such party included in this Agreement to be true and correct.

(iv) At any time after the Commencement Date, the Company shall have the option to terminate this Agreement for any reason or for no reason by delivering notice (a "**Company Termination Notice**") to the Buyer electing to terminate this Agreement without any liability whatsoever of either party to the other party under this Agreement except as set forth in Section 11(k)(viii) hereof. The Company Termination Notice shall not be effective until one (1) Business Day after it has been received by the Buyer.

(v) This Agreement shall automatically terminate on the earlier of (i) the date that the Company sells and the Buyer purchases the full Available Amount as provided herein and (ii) the date on which the Exchange Cap is reached if shareholder approval to exceed the Exchange Cap has not previously been obtained, in each case without any action or notice on the part of any party and without any liability whatsoever of any party to any other party under this Agreement except as set forth in Section 11(k)(viii) hereof.

(vi) If by the Maturity Date for any reason or for no reason the full Available Amount under this Agreement has not been purchased as provided for in Section 1 of this Agreement, this Agreement shall automatically terminate on the Maturity Date, without any action or notice on the part of any party and without any liability whatsoever of any party to any other party under this Agreement except as set forth in Section 11(k)(viii) hereof.

(vii) Except as set forth in Sections 11(k)(i) (in respect of an Event of Default under Sections 9(f), 9(g) and 9(h)), 11(k)(v) and 11(k)(vi), any termination of this Agreement pursuant to this Section 11(k) shall be effected by written notice from the Company to the Buyer, or the Buyer to the Company, as the case may be, setting forth the basis for the termination hereof.

(viii) The representations and warranties of the Company and the Buyer contained in Sections 2, 3 and 5 hereof, the indemnification provisions set forth in Section 8 hereof and the agreements and covenants set forth in Sections 4(e) and 11, shall survive the Commencement and any termination of this Agreement. No termination of this Agreement shall affect the Company's or the Buyer's rights or obligations (i) under the Registration Rights Agreement which shall survive any such termination or (ii) under this Agreement with respect to pending purchases and the Company and the Buyer shall complete their respective obligations with respect to any pending purchases under this Agreement.

(l) No Financial Advisor, Placement Agent, Broker or Finder . The Company represents and warrants to the Buyer that it has not engaged any financial advisor, placement agent, broker or finder in connection with the transactions contemplated hereby. The Buyer represents and warrants to the Company that it has not engaged any financial advisor, placement agent, broker or finder in connection with the transactions contemplated hereby. Each party shall be responsible for the payment of any fees or commissions, if any, of any financial advisor, placement agent, broker or finder engaged by such party relating to or arising out of the transactions contemplated hereby. Each party shall pay, and hold the other party harmless against, any liability, loss or expense (including, without limitation, attorneys' fees and out of pocket expenses) arising in connection with any such claim.

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

(n) Failure or Indulgence Not Waiver. No failure or delay in the exercise of any power, right or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such power, right or privilege preclude other or further exercise thereof or of any other right, power or privilege.

* * * * *

IN WITNESS WHEREOF, the Buyer and the Company have caused this Common Stock Purchase Agreement to be duly executed as of the date first written above.

THE COMPANY:

NEOSTEM, INC.

By:/s/ Robin L. Smith
Name: Robin L. Smith, M.D.
Title: Chief Executive Officer and Chairman of the Board

BUYER:

ASPIRE CAPITAL FUND, LLC
BY: ASPIRE CAPITAL PARTNERS, LLC

By: /s/ Steven G. Martin
Name: Steven G. Martin
Title: President

SCHEDULES

Schedule 3(a) Subsidiaries

Schedule 3(c) Capitalization
Schedule 3(e) Conflicts
Schedule 3(f) 1934 Act Filings
Schedule 3(g) Material Changes
Schedule 3(h) Litigation
Schedule 3(j) Intellectual Property
Schedule 3(l) Liens
Schedule 3(p) Certain Transactions

EXHIBITS

Exhibit A	[Intentionally omitted.]
Exhibit B	Form of Officer's Certificate
Exhibit C	Form of Resolutions of Board of Directors of the Company
Exhibit D	Form of Secretary's Certificate

DISCLOSURE SCHEDULES

The following schedules are provided in connection with the various representations and warranties contained in Section 3 of the Common Stock Purchase Agreement dated as of March 10, 2014, (the "Agreement") by and between NeoStem, Inc., a Delaware corporation (the "Company") and Aspire Capital Fund, LLC, an Illinois limited liability company (the "Buyer"). These disclosure schedules are an integral part of the Agreement. Any terms defined in the Agreement shall have the same meaning when used in these schedules, unless the context indicates otherwise. Any disclosure herein shall constitute a disclosure under other disclosure schedules, where such disclosure is appropriate and reasonably apparent.

Nothing in these schedules is intended to broaden the scope of any representation or warranty contained in the Agreement or create any covenant thereunder. Matters reflected in these schedules are not necessarily limited to matters required by the Agreement to be disclosed, and such additional matters are set forth for informational purposes only. For instance, no reference to or disclosure of any item or other matter in these schedules shall be deemed to be an admission, or evidence of the materiality of such item, nor shall it establish a standard of materiality for any purpose whatsoever. No disclosure in these schedules relating to any possible breach or violation of or conflict with any contract or legal requirement shall be construed as an admission thereof nor an indication that the possible breach or violation exists or has actually occurred, nor shall otherwise be deemed an admission against our interest.

The representations and warranties contained in the Agreement are solely for the purpose of allocating contractual risk between the parties and not as a means of establishing facts. No third party may rely on these schedules.

The section headings and subheadings in these schedules are for convenience of reference only and shall not be deemed to alter or affect the express description of the sections of the disclosure required under the Agreement. Each exception set forth in these schedules shall also be deemed to be disclosed with respect to any other section of the Agreement to which the relevance of such item is reasonably apparent. References in these schedules to disclosures in our filings with the SEC are not intended to be a complete statement of the full disclosure in our SEC filings, but are merely being provided to refer you to the relevant disclosures in those filings.

In disclosing information in these schedules, we do not waive any attorney-client privilege associated with such information or any protection afforded by the work-product doctrine with respect to any of the matters disclosed or discussed herein.

The information contained in these schedules is in all respects subject to the confidentiality obligations between us.

Schedule 3(a) - Subsidiaries

NeoStem Therapies, Inc.
Stem Cell Technologies, Inc.
Progenitor Cell Therapy, LLC
PCT Allendale, LLC (1)
NeoStem Family Storage, LLC (1) (2)
Athelos Corporation (3)
Amo Acquisition Company I, Inc.
Amo Acquisition Company II, LLC
Amorcyte, LLC

(1) This entity is a wholly-owned subsidiary of Progenitor Cell Therapy, LLC.
(2) Formerly known as DomaniCell, LLC.
(3) Progenitor Cell Therapy, LLC holds approximately an 88% interest in this entity.

Schedule 3(c) - Capitalization

Our capitalization through September 30, 2013, is set forth in our quarterly report on Form 10-Q filed in November 2013 (including the Subsequent Events footnote to our financial Statements). There have been no material securities issuances since that filing other than an aggregate of approximately 7,393,157 shares (inclusive of 431,751 shares issued upon the exercise of warrants or options outstanding at September 30, 2013) and the issuance of, 1,197,450 warrants and options. As of this date we have shares reserved for issuance upon the exercise of 8,304,247 outstanding warrants and stock options, as well as shares reserved

for contingent issuance to the former shareholders of Amorcyte as described in our SEC filings.

Schedule 3(e) - Conflicts

None.

Schedule 3(f) - 1934 Act Filings

None.

Schedule 3(g) - Absence of Certain Changes

None.

Schedule 3(h) - Litigation

On September 20, 2012, William Schumacher, a holder of 200 NeoStem shares, filed a lawsuit against us and our directors in New York state court seeking class action status and asserting that our proxy statement for our October 5, 2012 annual meeting was misleading and incomplete with respect to Proposal Number 3, the proposal to amend and restate of our 2009 Equity Compensation Plan. The lawsuit sought a variety of relief including an injunction delaying the vote on Proposal 3.

We believe that our proxy statement fully complied with applicable disclosure standards and do not believe there were any deficiencies with respect to our proxy disclosures. However, to avoid the expense of litigation and any disruption to our scheduled meeting, we reached an agreement in principle to settle the matter in exchange for certain undertakings with respect to our corporate governance practices in the future. Under the settlement, the litigation will be dismissed with prejudice, no corrective disclosure was required, we continue to deny that we have breached any disclosure duty and there will be no admission of liability. The settlement is subject to court approval.

We also have received two letters from FINRA indicating that they were conducting a review of trading related to our two registered public offerings in 2013 and asking for a chronology of events from the Company, which has been provided.

Schedule 3(j) - Intellectual Property

None.

Schedule 3(l) - Liens

PCT’s Allendale, New Jersey facility is subject to two mortgages as described in our SEC filings.

Schedule 3(p) - Certain Transactions

In accordance with the PCT Merger Agreement, the stock consideration paid by NeoStem in exchange for the membership interests of PCT was deposited into an escrow account for eventual distribution to the former members of PCT. Dr. Pecora, Dr. Robert A. Preti (PCT's President and Chief Scientific Officer prior to the PCT Merger, and who following the PCT Merger serves as PCT's President pursuant to an employment agreement that became effective upon the PCT Merger closing) and George S. Goldberger (PCT's Chief Business and Financial Officer, Treasurer and Secretary prior to the PCT Merger, and who following the PCT Merger serves as PCT's Vice President - Business Development pursuant to an employment agreement that became effective upon the PCT Merger closing), beneficially owned approximately 17.2%, 17.0% and 2.5%, respectively, of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Certain of the shares of NeoStem common stock issued to these three individuals have been released from escrow earlier than the first release of shares for other members of PCT for the purpose of enabling them to pay taxes that will be due as a result of the PCT Merger. As of February 24, 2014, Dr. Pecora, Dr. Preti and Mr. Goldberger beneficially own 448,185, 317,121 and 81,130 shares, respectively, of the outstanding NeoStem common stock, representing respectively 1.6%, 1.1% and 0.3% of the

NeoStem common stock on that date.

Dr. Pecora beneficially owned approximately 17.2% of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Pursuant to the PCT Merger, Dr. Pecora received the right to 184,453 shares of NeoStem common stock (with an aggregate value of $2,766,790 based on the closing price of the NeoStem common stock on the date of closing) and Warrants (with an aggregate estimated value of $342,000) to purchase an aggregate of 52,203 shares of NeoStem common stock, with one-third (17,401) of such Warrants each exercisable at a per share purchase price of $30.00, $50.00 and $70.00, respectively (the $70.00 warrants vesting only upon the achievement of a business milestone). Dr. Preti beneficially owned approximately 17.0% of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Pursuant to the PCT Merger, Dr. Preti received the right to 179,188 shares of NeoStem common stock (with an aggregate value of $2,687,820 based on the closing price of the NeoStem common stock on the date of closing) and Warrants (with an aggregate estimated value of $332,000) to purchase an aggregate of 50,715 shares of NeoStem common stock, with one-third (16,905) of such Warrants each exercisable at a per share purchase price of $30.00, $50.00 and $70.00, respectively (the $70.00 warrants vesting only upon the achievement of a business milestone).

The Company acquired Amorcyte, Inc. (the “Amorcyte Merger”) on October 17, 2011 in accordance with the terms of the Agreement and Plan of Merger, dated as of July 13, 2011 (the “Amorcyte Merger Agreement”). As a result of the consummation of the Amorcyte Merger, Amorcyte is now a wholly-owned subsidiary of NeoStem. Amorcyte had originally been incorporated as a subsidiary of PCT and was spun off to PCT's members prior to NeoStem's January 19, 2011 acquisition of PCT. At the time the Amorcyte Merger Agreement was entered into, Dr. Pecora and George Goldberger were officers of both PCT and Amorcyte. Dr. Pecora was Amorcyte's Chief Scientific Officer prior to the Amorcyte Merger and continues to serve in such capacity for no additional consideration. Mr. Goldberger was Vice President - Business Development of PCT and Chief Financial Officer of Amorcyte. Dr. Pecora, Mr. Goldberger and Dr. Preti were all stockholders of Amorcyte.

In accordance with the terms of the Amorcyte Merger Agreement, the stock consideration paid by NeoStem in exchange for the equity interests of Amorcyte was deposited into an escrow account for eventual distribution to the former security holders of Amorcyte. Dr. Pecora beneficially owned approximately 15.6 % of the common stock, and 0.6% of the Series A preferred stock, respectively, as well as certain options of Amorcyte, that were outstanding immediately prior to the closing of the Amorcyte Merger. Pursuant to the Amorcyte Merger, Dr. Pecora received the right to 3,285 shares of NeoStem common stock (with an aggregate value of $21,025 based on the closing price of the Company's common stock on the date of closing) and Series AMO Warrants (with an estimated aggregate value of $10,000) to purchase 1,058 shares of NeoStem common stock at a per share purchase price of $14.66. Dr. Preti beneficially owned approximately 15.6 % of the common stock, and 0.3% of the Series A preferred stock, respectively, as well as certain options of Amorcyte, that were outstanding immediately prior to the closing of the Amorcyte Merger. Pursuant to the Amorcyte Merger, Dr. Preti received the right to 1,536 shares of NeoStem common stock (with an aggregate value of $9,833 based on the closing price of the Company's common stock on the date of closing) and Series AMO Warrants (with an estimated aggregate value of $1,771) to purchase 495 shares of NeoStem common stock at a per share purchase price of $14.66. The Amorcyte Merger Agreement additionally provides that the former equity holders of Amorcyte have the right to receive additional shares of NeoStem's common stock, which will be issued only if certain business milestones specified in the Amorcyte Merger Agreement are accomplished, as well as certain earn-out payments upon the commercialization of AMR-001, Amorcyte's lead product candidate for the treatment of acute myocardial infarction.

In order to accelerate Amorcyte's commencement of its Phase 2 clinical trial of AMR-001, NeoStem agreed to provide loans to Amorcyte prior to the closing of the Amorcyte Merger to be used in connection with the Phase 2 trial. Pursuant to a Loan Agreement entered into on September 9, 2011, NeoStem loaned Amorcyte prior to the closing of the Merger an aggregate of $338,500 which was applied towards the commencement of the Phase 2 trial.

One investor in the Company's private placement offering in May 2012 was Martyn Greenacre, a member of the Company's Board of Directors, who purchased 25,000 units for a total subscription amount of $100,000.

In 2011, consistent with NeoStem's previously disclosed intention to provide support for The Stem for Life Foundation (the “Foundation”), a Pennsylvania nonprofit corporation classified as a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the “Code”), whose mission is to promote public awareness, fund research and development and subsidize stem cell collection and storage programs, NeoStem contributed to the Foundation 40,763 shares of previously issued restricted NeoStem common stock with a fair value of approximately $607,000. The contribution of such securities was subject to the approval of the NeoStem Board of Directors and the Audit Committee. In 2012, The Foundation paid NeoStem approximately $150,000 for services associated with joint activities between the Foundation, NeoStem, the Pontifical Council for Culture and the Pontifical Council's foundation, Science, Theology and the Ontological Quest. NeoStem's CEO and Chairman is President and a Trustee of the Foundation, its General Counsel is Secretary and a Trustee of

the Foundation and its Chief Accounting Officer is Treasurer of the Foundation.

On November 13, 2012, we and our subsidiary, CBH, sold our 51% ownership interest in Erye to Fullbright and EET. EET was prior to the sale the holder of the minority 49% ownership interest in Erye, and was a party along with our subsidiary CBH to the Joint Venture Agreement which had governed the ownership of the respective interests in Erye. Fullbright is an affiliate of EET. Mr. Shi Mingsheng (a former member of our Board of Directors, and Chairman of the Board of Erye) and Madam Zhang Jian (the General Manager of Erye, and formerly our Vice President of Pharmaceutical Operations) are the principal equity holders of each of EET and Fullbright. Fullbright assigned all its rights and obligations under the Equity Purchase Agreement (except for its obligations in respect of the return of certain NeoStem securities held by it as part of the purchase price, and its obligations in respect of closing deliverables) to Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands and an affiliate of Fullbright ("Highacheive"). As a result of the assignment, the Purchasers of our Erye Interest were EET and Highacheive.

In December 2013, the Company modified both the First Mortgage and Second Mortgage with TD Bank, N.A. (see the Company's Current Report on Form 8-K dated December 10, 2014). Pursuant to the Loan Modifications, Andrew L. Pecora, M.D., Regional Cancer Care Associates LLC (Dr. Pecora's medical practice), and certain partners in such practice, have been released as guarantors of the Second Mortgage Loan, and NeoStem has become a guarantor of the Loans pursuant to a Guaranty of Payment delivered by NeoStem to the Lender. Dr. Pecora, currently currently serves as a NeoStem director, NeoStem's Chief Visionary Officer, PCT's Chief Medical Officer and Amorcyte's Chief Scientific Officer.

EXHIBIT A

[Intentionally Omitted.]

EXHIBIT B

FORM OF OFFICER'S CERTIFICATE

This Officer's Certificate ("**Certificate**") is being delivered pursuant to Section 7(e) of that certain Common Stock Purchase Agreement dated as of March 10, 2014 (the "**Common Stock Purchase Agreement**"), by and between **NEOSTEM, INC.**, a Delaware corporation (the "**Company**"), and **ASPIRE CAPITAL FUND, LLC**, an Illinois limited liability company (the "**Buyer**"). Terms used herein and not otherwise defined shall have the meanings ascribed to them in the Common Stock Purchase Agreement.

The undersigned, Robin L. Smith, M.D., Chief Executive Officer of the Company, hereby certifies in her capacity as an officer of the Company and not in her individual capacity as follows:

1. I am the Chief Executive Officer of the Company and make the statements contained in this Certificate in such capacity.

2. The representations and warranties of the Company are true and correct in all material respects (except to the extent that any of such representations and warranties is already qualified as to materiality in Section 3 of the Common Stock Purchase Agreement, in which case, such representations and warranties are true and correct without further qualification) as of the date when made and as of the Commencement Date as though made at that time (except for representations and warranties that speak as of a specific date).

3. The Company has performed, satisfied and complied in all material respects with covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by the Company at or prior to the Commencement Date.

4. The Company has not taken any steps, and does not currently expect to take any steps, to seek protection pursuant to any Bankruptcy Law nor does the Company or any of its Subsidiaries have any knowledge or reason to believe that its creditors intend to initiate involuntary bankruptcy or insolvency proceedings. The Company is financially solvent and is generally able to pay its debts as they become due.

IN WITNESS WHEREOF, I have hereunder signed my name on this ___ day of _____, 2014.

_____

Name: Robin L. Smith, M.D.
Title: Chief Executive Officer

The undersigned as Secretary of **NEOSTEM, INC.**, a Delaware corporation, hereby certifies that Robin L. Smith, M.D. is the duly elected, appointed, qualified and acting Chief Executive Officer of NeoStem, Inc. and that the signature appearing above is her genuine signature.

_____

Name: Catherine M. Vaczy, Secretary

EXHIBIT C

FORM OF COMPANY RESOLUTIONS
FOR SIGNING PURCHASE AGREEMENT

WHEREAS, there has been presented to the Board of Directors of the Corporation a draft of the Common Stock Purchase Agreement (the " **Purchase Agreement**") by and between the Corporation and Aspire Capital Fund, LLC (" **Aspire**"), providing for the purchase by Aspire of up to Thirty Million Dollars ($30,000,000) of the Corporation's common stock, par value $0.001 (the " **Common Stock**"); and

WHEREAS, after careful consideration of the Purchase Agreement, the documents incident thereto and other factors deemed relevant by the Board of Directors, the Board of Directors has determined that it is advisable and in the best interests of the Corporation to engage in the transactions contemplated by the Purchase Agreement, including, but not limited to, the issuance of 150,000 shares of Common Stock to Aspire as a commitment fee (the "**Commitment Shares**") and the sale of shares of Common Stock to Aspire up to the available amount under the Purchase Agreement (the " **Purchase Shares**").

Transaction Documents

NOW, THEREFORE, BE IT RESOLVED, that the transactions described in the Purchase Agreement are hereby approved and the Chairman, Chief Executive Officer and Chief Financial Officer (the "**Authorized Officers**") are severally authorized to execute and deliver the Purchase Agreement, and any other agreements or documents contemplated thereby including, without limitation, a registration rights agreement (the " **Registration Rights Agreement**") providing for the registration of the shares of the Company's Common Stock issuable in respect of the Purchase Agreement on behalf of the Corporation, with such amendments, changes, additions and deletions as the Authorized Officers may deem to be appropriate and approve on behalf of, the Corporation, such approval to be conclusively evidenced by the signature of an Authorized Officer thereon; and

FURTHER RESOLVED, that the terms and provisions of the Registration Rights Agreement by and among the Corporation and Aspire are hereby approved and the Authorized Officers are authorized to execute and deliver the Registration Rights Agreement (pursuant to the terms of the Purchase Agreement), with such amendments, changes, additions and deletions as the Authorized Officer may deem appropriate and approve on behalf of, the Corporation, such approval to be conclusively evidenced by the signature of an Authorized Officer thereon; and

FURTHER RESOLVED, that the terms and provisions of the Form of Transfer Agent Instructions (the "**Instructions**") are hereby approved and the Authorized Officers are authorized to execute and deliver the Instructions (pursuant to the terms of the Purchase Agreement), with such amendments, changes, additions and deletions as the Authorized Officers may deem appropriate and approve on behalf of, the Corporation, such approval to be conclusively evidenced by the signature of an Authorized Officer thereon; and

Execution of Purchase Agreement

FURTHER RESOLVED, that the Corporation be and it hereby is authorized to execute the Purchase Agreement providing for the purchase of common stock of the Corporation having an aggregate value of up to $30,000,000; and

Issuance of Common Stock

FURTHER RESOLVED, that the Corporation is hereby authorized to issue the Commitment Shares to Aspire Capital Fund, LLC as Commitment Shares and that upon issuance of the Commitment Shares pursuant to the Purchase Agreement, the Commitment Shares shall be duly authorized, validly issued, fully paid and nonassessable with no personal liability attaching to the ownership thereof; and

FURTHER RESOLVED, that the Corporation is hereby authorized to issue shares of Common Stock upon the purchase of Purchase Shares up to the available amount under the Purchase Agreement in accordance with the terms of the Purchase Agreement and that, upon issuance of the Purchase Shares pursuant to the Purchase Agreement, the Purchase Shares will be duly authorized, validly issued, fully paid and nonassessable with no personal liability attaching to the ownership thereof; and

Listing of Shares on the NASDAQ Capital Market

FURTHER RESOLVED, that the officers of the Corporation with the assistance of counsel be, and each of them hereby is, authorized and directed to take all necessary steps and do all other things necessary and appropriate to effect the listing of the Commitment Shares and Purchase Shares on the NASDAQ Capital Market; and

Approval of Actions

FURTHER RESOLVED, that, without limiting the foregoing, the Authorized Officers are, and each of them hereby is, authorized and directed to proceed on behalf of the Corporation and to take all such steps as deemed necessary or appropriate, with the advice and assistance of counsel, to cause the Corporation to consummate the agreements referred to herein and to perform its obligations under such agreements; and

FURTHER RESOLVED, that the Authorized Officers be, and each of them hereby is, authorized, empowered and directed on behalf of and in the name of the Corporation, to take or cause to be taken all such further actions and to execute and deliver or cause to be executed and delivered all such further agreements, amendments, documents, certificates, reports, schedules, applications, notices, letters and undertakings and to incur and pay all such fees and expenses as in their judgment shall be necessary, proper or desirable to carry into effect the purpose and intent of any and all of the foregoing resolutions, and that all actions heretofore taken by any officer or director of the Corporation in connection with the transactions contemplated by the agreements described herein are hereby approved, ratified and confirmed in all respects.

EXHIBIT D

FORM OF SECRETARY'S CERTIFICATE

This Secretary's Certificate (the "**Certificate**") is being delivered pursuant to Section 7(k) of that certain Common Stock Purchase Agreement dated as of March 10, 2014 (the "**Common Stock Purchase Agreement**"), by and between **NEOSTEM, Inc.**, a Delaware corporation (the "**Company**") and **ASPIRE CAPITAL FUND, LLC**, an Illinois limited liability company (the "**Buyer**"), pursuant to which the Company may sell to the Buyer up to Thirty Million Dollars ($30,000,000) of the Company's Common Stock, par value $0.001 (the " **Common Stock**"). Terms used herein and not otherwise defined shall have the meanings ascribed to them in the Common Stock Purchase Agreement.

The undersigned, Catherine M. Vaczy, Secretary of the Company, hereby certifies as follows:

1. I am the Secretary of the Company and make the statements contained in this Secretary's Certificate.

2. Attached hereto as Exhibit A and Exhibit B are true, correct and complete copies of the Company's bylaws ("**Bylaws**") and Certificate of Incorporation ("**Articles**"), in each case, as amended through the date hereof, and no action has been taken by the Company, its directors, officers or shareholders, in contemplation of the filing of any further amendment relating to or affecting the Bylaws or Articles.

3. Attached hereto as Exhibit C are true, correct and complete copies of the Signing Resolutions duly adopted by the Board of Directors of the Company on _____, 2014, at which a quorum was present and acting throughout. Such resolutions have not been amended, modified or rescinded and remain in full force and effect and such resolutions are the only resolutions adopted by the Company's Board of Directors, or any committee thereof, or the shareholders of the Company relating to or affecting (i) the entering into and performance of the Common Stock Purchase Agreement, or the issuance, offering and sale of the Purchase Shares and the Commitment Shares and (ii) and the performance of the Company of its obligation under the Transaction Documents as contemplated therein.

4. As of the date of the Common Stock Purchase Agreement, the authorized, issued and reserved capital stock of the Company is as set forth in Section 3(c) of the Common Stock Purchase Agreement.

IN WITNESS WHEREOF, I have hereunder signed my name on this ___ day of _____, 2014.

_____

Catherine M. Vaczy, Secretary

The undersigned as Chief Executive Officer of NEOSTEM, INC. **,** a Delaware corporation, hereby certifies that Catherine M. Vaczy is the duly elected, appointed, qualified and acting Secretary of NEOSTEM, INC., and that the signature appearing above is her genuine signature.

_____

Robin L. Smith, M.D., Chief Executive Officer

Exhibit 10.49

March 11, 2014

Dr. Robin L. Smith
930 Fifth Avenue
Suite 8H
New York, New York 10021

Dear Robin:

This letter serves as an amendment (the "Amendment") to the employment agreement between you and NeoStem, Inc. (the "Company") dated May 26, 2006 (as amended on each of January 26, 2007, September 27, 2007, January 9, 2008, August 29, 2008, July 29, 2009, April 4, 2011, and November 13, 2012) pursuant to which you serve as the Company's Chairman of the Board and Chief Executive Officer (the "Agreement"). Except as set forth herein, the Agreement shall remain unchanged. Initially capitalized terms used herein but not defined shall have the meaning set forth in the Agreement.

Base Salary. As of January 1, 2014 your annual Base Salary was increased to $545,000.00 and shall remain as such through December 31, 2014.

The Company represents that this Amendment has been approved by the Company's Compensation Committee.

If the terms of this Amendment are acceptable to you please sign where indicated below. It is understood and acknowledged that a fax signature will be considered to be valid as an original.

Very truly yours,

NEOSTEM, INC.

By: /s/ Richard Berman
Name: Richard Berman
Title: Director

Agreed to and accepted:

/s/ Robin L. Smith
_____
Robin L. Smith, M.D.

Exhibit 10.57

March 11, 2014

Ms. Catherine M. Vaczy, Esq.
140 East 28th Street
#11C
New York, New York 10021

Dear Catherine:

This letter serves as an amendment (the "Amendment") to the employment agreement between you and NeoStem, Inc. (the "Company") dated as of January 26, 2007 (the "2007 Agreement"), as thereafter amended by amendments on January 9, 2008, August 29, 2008, reinstated and extended on July 8, 2009, extended on July 7, 2010, extended on January 6, 2012, extended on November 13, 2012 and extended and further amended on July 12, 2013 (the 2007 Agreement as so amended and extended, the "Original Agreement") pursuant to which you serve as the Company's General Counsel. Except as set forth herein, the Original Agreement shall remain unchanged. Initially capitalized terms used herein but not defined shall have the meaning set forth in the Original Agreement.

Base Salary. As of January 1, 2014 your annual Base Salary was increased to $296,000.00 and shall remain as such through December 31, 2014.

The Company represents that this Amendment has been approved by the Company's Compensation Committee.

If the terms of this Amendment are acceptable to you please sign where indicated below. It is understood and acknowledged that a fax signature will be considered to be valid as an original.

Very truly yours,

NEOSTEM, INC.

By: /s/ Robin L. Smith
Name: Robin L. Smith, M.D.
Title: Chief Executive Officer

Agreed to and accepted:

/s/ Catherine Vaczy
Catherine M. Vaczy, Esq.

Exhibit 21.1

Subsidiaries of NeoStem, Inc.

Entity	Percentage of Ownership
NeoStem, Inc.	Parent Company
NeoStem Therapies, Inc.	100%
Stem Cell Technologies, Inc.	100%
Amorcyte, LLC	100%
Progenitor Cell Therapy, LLC (PCT)	100%
NeoStem Family Storage, LLC	100%
Athelos Corporation (1)	88.5%
PCT Allendale, LLC	100%

(1) Pursuant to the Stock Purchase Agreement signed in March 2011, our initial ownership in Athelos was 80.1%, and Becton Dickinson's ("BD") initial minority ownership was 19.9%. Per the Agreement, BD will be diluted based on new investment in Athelos by us (subject to certain anti-dilution provisions). As of December 31, 2013, BD's ownership interest in Athelos was decreased to 11.5%, and our ownership increased to 88.5%. As a result in the change in ownership, approximately $0.3 million was transferred from additional paid in capital to non-controlling interests.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 13, 2014, with respect to the consolidated financial statements and internal control over financial reporting included in the Annual Report of NeoStem, Inc. on Form 10-K for the year ended December 31, 2013. We hereby consent to the incorporation by reference of said reports in the Registration Statements of NeoStem, Inc. on Forms S-3 (File No. 333-145988, File No. 333-173853, File No. 333-173855, File No. 333-183542, File No. 333-183543, File No. 333-176673, File No. 333-185346, File No. 333-188486) and on Forms S-8 (File No. 333-107438, File No. 333-144265, File No. 333-159282, File No. 333-162733, File No. 333-173854, File No. 333-181365, File No. 333-184927, and File No. 333-191572).

/s/ GRANT THORNTON LLP

New York, New York
March 13, 2014

Exhibit 31.1

CERTIFICATION

I, Robin Smith, M.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of NeoStem, 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 officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 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 this report is 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 (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer 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 the 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: March 13, 2014

/s/ Robin Smith, M.D.
Name: Robin Smith, M.D.
Title: Chief Executive Officer of NeoStem, Inc.

A signed original of this written statement required by Section 302 has been provided to NeoStem, Inc. and will be retained by NeoStem, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 31.2

CERTIFICATION

I, Robert Dickey IV, certify that:

1. I have reviewed this Annual Report on Form 10-K of NeoStem, 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 officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 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 this report is 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 (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer 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 the 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: March 13, 2014

/s/ Robert Dickey IV
Name: Robert Dickey IV
Title: Chief Financial Officer of NeoStem, Inc.

A signed original of this written statement required by Section 302 has been provided to NeoStem, Inc. and will be retained by NeoStem, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.1

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 Annual Report of NeoStem, Inc. (the "Company") on Form 10-K for the year ended December 31, 2013 filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Robin Smith, M.D., Chief Executive 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, to my knowledge 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 of the Company as of the dates presented and the results of operations of the Company for the periods presented.

Dated: March 13, 2014

/s/ Robin Smith, M.D.
Robin Smith, M.D.
Chief Executive Officer

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) and is not being filed as part of the Form 10-K or as a separate disclosure document.

A signed original of this written statement required by Section 906 has been provided to NeoStem, Inc. and will be retained by NeoStem, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

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 Annual Report of NeoStem, Inc. (the "Company") on Form 10-K for the year ended December 31, 2013 filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Robert Dickey IV, 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, to my knowledge 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 of the Company as of the dates presented and the results of operations of the Company for the periods presented.

Dated: March 13, 2014

/s/ Robert Dickey IV
Robert Dickey IV
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) and is not being filed as part of the Form 10-K or as a separate disclosure document.

A signed original of this written statement required by Section 906 has been provided to NeoStem, Inc. and will be retained by NeoStem, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.