



# CAPITAL MARKET REPORT

## NeoStem, Inc. (NYSE AMEX: NBS)

Neo Stem, Inc. is a company in transitional growth mode. Recent strategic acquisitions have positioned the company to become a leader in the cell-based therapy industry - one of the most promising and fastest growing sectors of medicine today, and a market expected to reach close to \$100 billion by 2015 (*Cell Therapy - Technologies, Markets and Companies* - Lead Discovery, UK.)

The field of cell therapy includes regenerative medicine and stem cell therapy, along with cell-based approaches to oncology and immunological disorders. NeoStem is becoming a single source for collection, storage, manufacturing, therapeutic development and transportation of cells for cell based medicine and regenerative science globally.

**". . . the adult stem cell space is being hailed as the next multibillion dollar market." - Cambridge Consultants**

The company was incorporated in the State of Delaware in 1980 under the name Fidelity Medical Services, Inc. The company went public in 2006 through a reverse merger and emerged as NeoStem, Inc. Since that time, NeoStem has been growing into a global corporation with operations in the U.S. and China. Originally a cell collection, storage and transportation company, it has diversified into biopharmaceuticals, regenerative medicine, cell manufacturing, and is becoming active in autologous, allogenic, immunological, and oncology therapies.

### Ending the Stem Cell Controversy

NeoStem only works with adult stem cells. There is none of the controversy surrounding embryonic stem cells where NeoStem is concerned. In fact, the company has received a grant from the Catholic Church for the advancement of adult stem cell research.

NeoStem holds the worldwide exclusive license to VSEL™ Technology, which uses very small embryonic-like stem cells, shown to have several physical characteristics that are generally found in embryonic stem cells, and is pursuing the licensing of other technologies for therapeutic use. NeoStem believes that the VSEL platform is unique in that the cells themselves have unique properties and represent a rare form of adult stem cells. They appear to have many of the physical characteristics typically found in embryonic stem cells, including the ability to differentiate into specialized cells and tissue throughout the body.

VSEL technology is now being tested in animal models of age-related-macular degeneration (AMD) and glaucoma in collaboration with the Schepens Eye Research Institute, a charitable corporation of Massachusetts and an affiliate of Harvard Medical School. VSEL cells collected from the peripheral blood will be studied as a potential new method for vision repair through tissue regeneration.



### Company Statistics

Publicly Traded: Symbol NBS  
Stock Price (5/20/2011): \$1.62\*  
52-week High/Low: \$1.10 - \$3.17\*  
2010 Revenues: \$69.8 million\*\*  
Market Capitalization: \$127.27 million\*  
Cash (March 31, 2011): \$9.4 million\*\*\*  
Development Stage: Growth

\*Source: Yahoo! Finance as of close of business May 20, 2011

\*\*Source: SEC 10K Filing April 6, 2011

\*\*\* Source: SEC 10Q Filing May 17, 2011

Autologous stem cells are derived from the patient themselves, while allogenic stem cells come from somebody else. Adult stem cell transplants (bone marrow transplants) have been used for over 40 years in successfully treating cancers such as leukemia, multiple myeloma and lymphomas and the door is opening for regenerative and reparative therapeutics. The use of autologous cells to create vaccines directed against tumor cells in the body has been demonstrated to be effective and safe in clinical trials. The Dendreon Corporation's Provenge therapy for prostate cancer received Food and Drug Administration ("FDA") approval in early 2010, propelling the company's market cap to over \$5 billion.

### Adult Stem Cell Therapies

It has been known for about 30 years that stem cells are present in the tissue of the adult, but it was assumed that they could only form cells of a particular tissue. That is, reprogramming them was considered impossible. In recent years, however, pluripotent stem cells were discovered in various human tissues—in the spinal cord, in the brain, in the mesenchyme (connective tissue) of various organs, and in the blood of the umbilical cord. These pluripotent stem cells are capable of forming several cell types—principally blood, muscle, and nerve cells.



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**"Regenerative medicine is the vanguard of 21st century healthcare. We are on the cusp of a worldwide explosion of activity in this rapidly growing field of biomedicine that will revolutionize health care treatment."**

U.S. Department of Health and Human Services

### Stem Cell Banking

Adult stem cell collection and storage is the best insurance against future accidents or illnesses. "Banking" your stem cells while healthy provides increased medical options should you contract many illnesses that will not respond to traditional therapies. It is also particularly effective in cases of radiation exposure or other industrial accidents. For example, if the workers exposed to extreme radiation doses in Japan's recent catastrophe had banked their stem cells ahead of time, their chances for leading a normal life would greatly increase.

Patients regardless of age can choose stem cell and immune system cell collection and storage as personal insurance that their stem cells will be available for their own use if needed in the future. Based on current science, the preferable time for collection is when one is healthy and unlikely to have stem cells already programmed for disease or before the immune system is damaged by disease or toxins (drugs including chemotherapy or radiation).

Just as you would plan for your financial future, you can plan for your health future by storing your stem cells for your own use. Regardless of your age, you can choose to collect your Adult Stem Cells and store them so that your stem cells will be available for your use if needed in the future. The time for collection is NOW, when you're healthy and unlikely to have stem cells already programmed for disease.

### NeoStem, Inc.

In order to fully understand all of the pieces in NeoStem, we must break down the company into its components, and then look at how they work together.




## Progenitor™

Cell Therapy



The most exciting and recent component added to NeoStem is **Progenitor Cell Therapy (PCT)**, which it acquired in January of 2011. Progenitor Cell Therapy is a client-based cell therapy services company that supports the development of cellular therapies by providing cGMP-compliant cell manufacturing and consulting services that address regulatory, financial, technical, process, and quality systems strategies.

The acquisition of PCT gives NeoStem not only access to a world class contract manufacturing cell therapy company but provides a platform and expertise around the evaluation, development and regulatory requirements to develop autologous, allogeneic, immunomodulatory and vaccine-based therapeutics. This is the foundation upon which NeoStem's cell therapies will be built.

Progenitor Cell Therapy addresses the unique challenges of cell processing, product manufacturing, and transportation by focusing on the development of a scalable, nationwide network of cell and tissue processing centers, logistical infrastructure, and dedicated transportation capability. Services offered include: contract manufacturing, product and process development, consulting, clinical services and product testing services, and distribution and transportation. It owns two manufacturing facilities, one in California and one in New Jersey.

PCT was founded by nationally recognized leaders with unparalleled experience in cell manufacturing, engineering, regulatory issues, and cell and gene therapies. They are supported by clinicians, scientists, and business executives with significant accomplishments in both the general field of health care and specifically within the field of cell-based therapeutics. Collectively, the management team has experience in all aspects of cell therapy product and clinical development and use (other than with the use of embryonic stem cells), covering cancer, autoimmunity, infectious diseases, cardiovascular diseases, and spinal, brain, corneal, orthopedic, hormonal and skin regenerative therapies.



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**Much of the manufacturing data of Dendreon's BLA submission was generated by Progenitor Cell Therapy in its phase III production of PROVENGE.**

PCT has served over 100 clients and is experienced with more 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, T, B, NK and dendritic cells and monocytes for cancer treatment, cord blood, peripheral blood, bone marrow CD34+ selected cells for transplantation and islet cells for diabetes. Clients of PCT include most of the leaders in the cell therapy arena, including Dendreon and Prima BioMed.

Through PCT, NeoStem has exposure to new therapeutics. **Amorcyte Therapeutics** was founded by PCT and is pursuing cell-based therapies for cardiovascular diseases such as acute myocardial infarction (AMI). When you experience an AMI, your heart muscle is damaged. Without treatment, the damage will spread until you experience failure. Amorcyte has developed an autologous cell line that is the first stem cell trial to show dose-related improvements in limiting the spread of muscle damage. Amorcyte was spun out of PCT, and PCT continues to own a small percentage (less than 1%) of the company and is contracted to manufacture the cells for the Phase IIa clinical trial.



**Cell Manufacturing**

Another company that is now a wholly-owned (80.1%) subsidiary of NeoStem through PCT is **Athelos**. This company has licensed intellectual property to develop T regulatory cells as a therapeutic to treat disorders of the immune system (i.e. steroid resistant asthma, lupus, rheumatoid arthritis, Type 1 diabetes, multiple sclerosis and inflammatory bowel disease), graft-versus-host disease resulting from allogeneic stem cell transplantation and treatment and prevention of solid organ transplant rejection. While in Phase I trials currently, this is another promising piece of the NeoStem universe, as independent investigators have demonstrated the potential of T regulatory cells to down modulate graft-versus-host disease after allogeneic transplantation.

Also through the acquisition of PCT, NeoStem acquired **DomaniCell**, a wholly owned subsidiary of PCT, which assists hospitals with providing umbilical cord blood unit collection, and long-term storage services to patients for potential future therapeutic

use. DomaniCell provides the front-end interface and support services to hospitals and in turn employs PCT's cell therapy manufacturing facilities for the processing and long-term storage of umbilical cord blood units.

PCT is currently generating approximately \$10 million in revenue per year, with expenses running about even with revenues. As clients' clinical trials advance to Phase III, there will be more work required - generating greater revenues to PCT. However, the costs associated with this increased work load are variable and incremental revenue should become more profitable.

### **Bloomberg Businessweek**

Sunday May 22, 2011

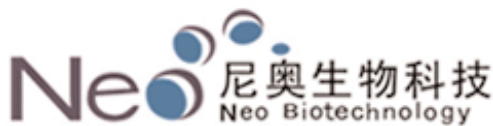
**Teva Bets on Stem Cells, Cancer in \$6.2 Billion Cephalon Bid**

Having the experience, expertise, facilities and network of a PCT in-house elevates NeoStem to a prominent position in the cell therapy space. **The company plans to build around this base by acquiring companies that are in clinical trials but have run out of capital to complete their work.**

The addition of Jason Kolbert to the team earlier this year is key to this strategy. As an analyst on Wall Street who has covered this sector for many years, he knows the private and public companies that would make the best acquisition targets. Being able to offer companies in need both financial resources and the PCT platform gives NeoStem a strong competitive advantage.

### **China**

NeoStem has created a wholly foreign-owned entity, or WFOE, NeoStem (China), to implement its expansion initiatives in China. To comply with China's foreign investment regulations with respect to stem cell-related activities, these business initiatives in China are conducted via Chinese domestic entities that are controlled by the WFOE through various contractual arrangements and under the principles of consolidation the Company consolidates 100% of their operations.



Working in China can accelerate research, the development of stem cell-based therapies, and the creation of intellectual property positions in the stem cell field because of China's regulatory and scientific environment and its culture, which are more readily accepting of stem cell-based therapies. In fact, many patients from the United States travel to China for treatments that are not yet available in the U.S.



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**The global stem cell market is estimated to be \$88.3 billion by 2014, growing at a CAGR of 14.8 % from 2009 to 2014. - ChinaGrid.com**

Additionally, China has a large population with a rapidly growing middle and upper class who are interested in regenerative medicine and can afford such services. The ability of the company to commercialize therapies in China rapidly while obtaining valuable clinical data from these applications should help NeoStem attain leadership in cell-based therapy.

Advances in cell technology and therapies are being deployed more rapidly in Asia than in the U.S. NeoStem recognized this early on, and in 2009, the Company began several China-based, Regenerative Medicine initiatives including:

- creating a separate China-based cell therapy operation,
- constructing a stem cell research and development laboratory and processing facility in Beijing,
- establishing relationships with hospitals to provide cell-based therapies
- obtaining product licenses covering several adult stem cell therapeutics focused on regenerative medicine.

The company signed an exclusive license with Regenerative Sciences around technology that utilizes autologous adult stem cells to treat musculoskeletal diseases. The resulting product, known as **"Regenexx"** is being used in hospitals in China to treat various orthopedic conditions including osteoarthritis. NeoStem recently announced the addition of a new hospital in Tianjin, China and plans to have as many as a dozen hospitals in China offering Regenexx in 2011. The company expects to generate approximately \$1 million in revenue from each hospital offering Regenexx, and plans to deliver more therapeutic solutions through this network as they are developed.

NeoStem (China) also intends to advance regenerative medicine business in China by the acquisition of a world-wide, exclusive license from Dr. Vincent Giampapa to certain innovative stem cell technology and applications for cosmetic facial and body procedures and skin rejuvenation. One of the key initial anticipated therapies is an autologous adult stem cell-based skin rejuvenation therapy. In collaboration with Dr. Giampapa, the company intends to develop and launch a range of cosmetic and anti-aging applications in China.

In June 2009, the company signed an agreement with Enhance BioMedical Holdings Limited, a multinational conglomerate with businesses in various market sectors including healthcare. Pursuant to the agreement, the companies intend to develop an adult stem cell collection and treatment network using NeoStem's proprietary stem cell technologies in Shanghai and Taiwan as well as the Chinese provinces of Jiangsu, Zhejiang, Fujian, Anhui and Jiangxi, or the Network Territory. Enhance BioMedical has healthcare provider relationships with numerous hospitals and doctors in these areas. It also operates the Anti-Aging and Prevention Medical Center in Taipei, Taiwan, with facilities focused on stem cell research and development and anti-aging therapies.



Also in 2009, NeoStem acquired 51% ownership in Suzhou Erye, a Chinese pharmaceutical manufacturer. Suzhou Erye was founded more than 50 years ago and represents an established, vertically-integrated pharmaceutical business. Erye sells over 100 products and last year grossed over \$70 million in revenues. A majority of the drugs that Erye manufactures (70%) are on China's "essential drug" list, and Erye's new facility under construction will enable greater production. The company currently sells a broad portfolio of anti-infective drugs with no single product accounting for more than 10% of total revenues and has seven products in its pipeline, including two SFDA approved drugs.



### MURRIETA

## Walk to benefit girl with cerebral palsy

Proceeds to help 9-year-old travel to China for treatment

By CRAIG SHULTZ  
cshultz@californian.com

When meeting Diane Ramirez, you can't help but notice her smile.

The 9-year-old third-grader at Antelope Hills Elementary in Murrieta can't speak, but boy, can

she smile. Cerebral palsy has taken Diane's motor skills, but her mind is as sharp as that of any other third-grader, teacher's assistant Erin Furlong said.

Diane can identify words and solve math problems using her eyes. Furlong wrote "3 x 5" on a white board with three possible answers, and Diane's eyes quickly darted to "15," the correct answer.

Diane's family is trying to raise \$40,000 so she can travel to China for stem

cell treatments.

Diane's mother, Angel, said \$12,200 has been raised so far. She hopes to raise the rest with "Do It For Diane," a walk at The Diamond baseball stadium in Lake Elsinore on Saturday.

Similar stem cell treatments are not available in the United States, hence the trip to China.

Angel Ramirez hopes they can travel to China in the fall, where they would spend 35 days and



Diane Ramirez gets a kiss from her mother, Angel, at Antelope Hills Elementary School in Murrieta.  
BILL WECHTER | bwechter@californian.com

See Girl, B4

### Investment Considerations

- Market Leading Platform (PCT)
- Validating Partnerships
  - Dept. of Defense
  - Vatican
  - Leading Universities
- Multiple Global Revenue Streams
- World Class Management
- 51% Ownership Suzhou Erye
- High Growth Industry
- Accretive Acquisition Opptys
- China Hospital Network



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**China is projected to become the largest consumer of generic APIs in 2013 capturing a 26% share of the total generic API market.**  
- Chemical Pharmaceutical Association

The current senior executive management team at Erye, Mr. Shi, Chairman, and Madame Zhang, General Manager, joined Erye in 1998, who in conjunction with others bought it from the PRC government in 2003 and, in the years that followed, transformed it into a profitable private enterprise. Erye had approximately 835 employees as of December 31, 2010, of which approximately 526 were full-time.

China has a large population with a rapidly growing demand for pharmaceutical drugs and has committed to providing increased governmental insurance to provide a larger segment of the population greater access to pharmaceuticals. The antibiotics market in China was approximately \$8.8 billion in 2007, with an annual average growth rate of approximately 24 percent for the previous three years. The overall pharmaceuticals market in China is forecasted to reach \$78 billion by 2013, becoming the third largest drug market in the world behind the U.S. and Japan.

NeoStem considers Suzhou Erye to be a key non-strategic asset. The core value of this asset is its ability to generate free cash flow to the company. While dividends are currently being reinvested in the building of the new facilities and relocation, significant cash flow is expected to be generated in 2012. NeoStem may at some point decide to divest itself of this asset, which could add between \$50 million to \$100 million of cash to NeoStem's balance sheet.



### Summary

NeoStem is committed to advancing the vast therapeutic and diagnostic applications of adult stem cells. With support from diverse groups including the Vatican and the Department of Defense, the company is capturing the paradigm shift to cell-based medicine. Its goal is to become a single source for collection, storage, manufacturing, therapeutic development and transportation of cells for cell based medicine and regenerative science globally.

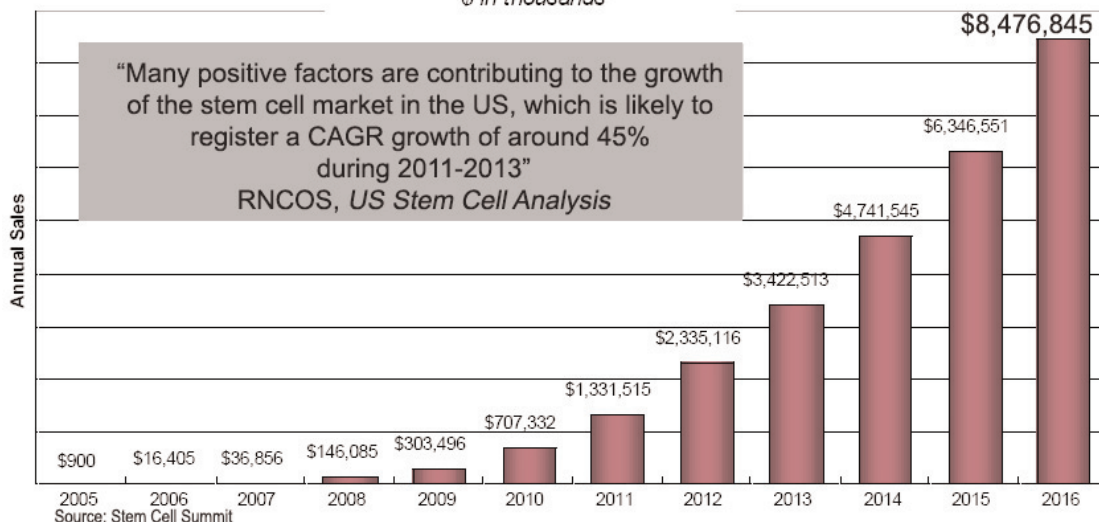
Comparables			
Company	Symbol	2010 Revenues	Market Cap
Athersys	ATHX	\$8.9 million	\$62.28 million
Cytori	CYTX	\$8.3 million	\$277 million
Dendreon	DNDN	\$48.1 million	\$5.6 billion
Osirus	OSIR	\$43.2 million	\$233.7 million
Geron	GERN	\$3.6 million	\$599.8 million
<b>NeoStem</b>	<b>NBS</b>	<b>\$69.8 million</b>	<b>\$127.7 million</b>

NeoStem has the opportunity to bring a substantial impact to the medical industry. With PCT, the company can help hundreds of therapeutic companies further their research and clinical trials. In China, the company can introduce new technologies and medical solutions to the marketplace while gathering important data. The opportunity to create products that offers substantial clinical benefits to a large number of patients is within reach. A large number of cell-based therapeutic companies are in need of both capital and the ability of a PCT to bring their products to clinical trial, providing NeoStem with an enviable opportunity for accretive growth.

NeoStem has transformed itself over the last year and half with two acquisitions, multiple financings and its expansion into China. It has created a unique platform that has short- term and long- term value drivers. There is a strong focus on revenues and using its profitable pharmaceutical company in China to help drive the growth of its stem cell business in the United States and China.

Capital Market Relations believes that there is a great opportunity for growth, profits and increasing shareholder value.

**Stem Cell Therapy Sales 2005-2016**  
\$ in thousands





**“Your Cells -- Your Use -- Your Life.**

At NeoStem, we are committed to advancing the vast therapeutic and diagnostic applications of adult stem cells.”

- from website

## Management

**Dr. Robin L. Smith**, CEO and Chairman of the Board, received a medical degree from Yale University in 1992 and a master's degree in business administration from the Wharton School in 1997. Dr. Smith previously served as President and Chief Executive Officer of IP2M, a multi-platform media company specializing in healthcare. She currently serves on the Board of Trustees of the NYU Medical Center Board, is past Chairman of the Board of Directors for the New York University Hospital for Joint Diseases where she headed up new development efforts and board member recruitment, and served on the Board of Choose Living. Dr. Smith is the President and serves on the Board of Directors of The Stem for Life Foundation.

**Larry May**, CFO, has worked in the areas of life sciences and biotechnology for the last 25 years. He is the former Treasurer of Amgen (NasdaqGS: AMGN), one of the world's largest biotechnology companies, and worked there from 1983 to 1998, where he helped build Amgen's accounting, finance and IT organizations. From 2000 to May 2003, Mr. May served as the Chief Financial Officer of Saronyx, Inc., a company focused on developing productivity tools and secure communication systems for research scientists. From August 2003 to January 2005, Mr. May served as the Chief Financial Officer of NS California.

**Dr. Andrew L. Pecora**, Chief Medical Officer, PCT

Dr. Pecora currently serves as Vice President of Cancer Services and Chief Innovations Officer of the John Theurer Cancer Center at Hackensack University Medical Center, and Co-Managing Partner of the Northern New Jersey Cancer Center (NNJCC), which is a private physicians practice group affiliated with HUMC. Dr. Pecora is a Professor of Medicine at the University of Medicine and Dentistry of New Jersey. He is a scientific advisor for numerous state, national, and international organizations, and he has served on the Board of Directors for the International Society of Hematotherapy and Graft Engineering (ISHAGE), the Accreditation Committee of the Affiliated Physicians Network; and as an Inspector for the Foundation for Accreditation of Hematopoietic Cell Therapy (FACT).

**Dr. Robert A. Preti**, President and Chief Scientific Officer, PCT

Previous positions held by Dr. Preti include Scientific and Laboratory Director of Hackensack University Medical Center's stem cell processing and research laboratory and Scientific Director of the Clinical Services Division at the New York Blood Center. Dr. Preti is a founding member of the International Society for Cellular Therapies and has served on its Executive Committee and Board of Directors for over 10 years. He has authored numerous papers, book chapters and white papers in the field of cell and tissue processing, cell production, and clinical research. Dr. Preti also serves on professional, state and federal regulatory committees charged with the development and refinement of regulations for the developing field of cellular therapy.

**Dr. Alan G. Harris**, Vice President of Regenerative Medicine, Drug Development and Regulatory Affairs

Prior to joining NeoStem, Dr. Harris was Senior Vice President and Chief Medical Officer of NPS Pharmaceuticals Inc, a Biotechnology Company focused on the development of therapeutics for rare gastrointestinal and endocrine disorders with high-unmet medical needs. He was previously Chief Medical Officer of Manhattan Pharmaceuticals, Inc., a specialty healthcare product company focused on developing products for obesity and psoriasis. Prior to this, from January 2004, Dr. Harris was head of the Worldwide Medical Endocrine Care group at Pfizer, Inc.

**Anthony Salerno**, Vice President of Strategic Development and Academic Affairs

Mr. Salerno has more than 25 years of experience as an executive and entrepreneur in the life sciences industry. From 2008 to 2009, he served as Vice President Strategic Business Development with GenomeQuest, Inc. From 2002 through 2007, Mr. Salerno was Director, Market and Business Intelligence with Agilent Technologies, Inc. (NYSE: A) where he was charged with providing strategic insights to their \$2 billion Life Science and Chemical Analysis division.

**Jason Kolbert**, Vice President of Strategic Business Development

Mr. Kolbert was formerly a managing director of National Securities where he founded the firm's research effort in emerging biotechnology companies. He has spent the past 16 years on Wall Street, where his coverage universe has been focused on cell therapeutic companies focused in oncology and regenerative medicine, and NeoStem was one of his covered companies.

The statements included in this executive summary concerning predictions of economic performance and management's plans and objectives constitute forward-looking statements made pursuant to the safe harbor provisions of Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended. These statements involve risks and uncertainties that could cause actual results to differ materially from the forward-looking statements. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this summary. NeoStem, Inc. undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Readers should refer to NeoStem filings with the Securities and Exchange Commission, available at [www.sec.gov](http://www.sec.gov) for more information regarding NeoStem and its business. Capital Market Relations has been compensated by NeoStem, Inc. in the amount of \$6,000 per month and may earn a performance bonus of 50,000 warrants to purchase common shares of NBS stock at \$2.50 per share.

### More Information:

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