

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 8-K

CURRENT REPORT  
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): October 31, 2006

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

Delaware  
(State Or Other  
Jurisdiction Of  
Incorporation)

0-10909  
(Commission  
File Number)

22-2343568  
(IRS Employer  
Identification No.)

420 Lexington Avenue, Suite 450  
New York, New York  
(Address of principal executive offices)

10170  
(Zip Code)

Registrant's telephone number, including area code: (212)-584-4814

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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**Item 7.01. Regulation FD Disclosure.**

NeoStem, Inc. (the "Company"), is furnishing presentation materials, included as Exhibit 99.1 to this current report and incorporated into this item by reference, which will be used by the Company at a healthcare conference on November 6, 2006.

**Item 9.01. Financial Statements and Exhibits.**

(d) Exhibits.

Exhibit 99.1 Presentation to Investors

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**SIGNATURE**

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

**NEOSTEM, INC.**

By: /s/ Catherine M. Vaczy

Catherine M. Vaczy  
Vice President and General Counsel

Dated: October 31, 2006



# **First Long-Term Autologous Adult Stem Cell Storage Bank**

NEOI.OB

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# FORWARD LOOKING STATEMENTS

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This presentation contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of NeoStem, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. When used in this presentation, statements that are not statements of current or historical fact may be deemed to be forward-looking statements. Additionally, statements concerning: the Company’s ability to develop the adult stem cell business, the future of regenerative medicine and the role of adult stem cells in that future, the future use of adult stem cells as a treatment option and the potential revenue growth of such business are forward-looking statements. The Company’s ability to enter the adult stem cell arena and future operating results are dependent upon many factors including but not limited to (i) the Company’s ability to obtain sufficient capital or a strategic business arrangement to fund its expansion plans; (ii) the Company’s ability to build the management and human resources and infrastructure necessary to support the growth of its business and obtain appropriate state and other licenses; (iii) competitive factors and developments beyond the Company’s control; (iv) scientific and medical developments beyond the Company’s control and (v) other risk factors discussed in the Company’s periodic filings with the Securities and Exchange Commission which are available for review at [www.sec.gov](http://www.sec.gov) under “Search for Company Filings.” You are cautioned not to place undue reliance on these forward looking statements, which speak only as of the date hereof.

*Over 40 million Americans suffer from  
Congestive Heart failure, Coronary Artery  
Disease, Diabetes, Osteoporosis, Rheumatoid  
Arthritis, and Systemic Lupus Erythomatosus*

**All of them should have their Stem Cells  
banked for future therapeutic treatments!**

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# **NeoStem Offers Adults:**

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- The ability to collect their stem cells through a painless non-invasive technique
- The ability to keep them stored in packaging so that there can be multiple uses later in life
- The ability to have Stem Cells immediately available for future therapies that they will not reject, because they originate from themselves – no Graft vs. Host disease

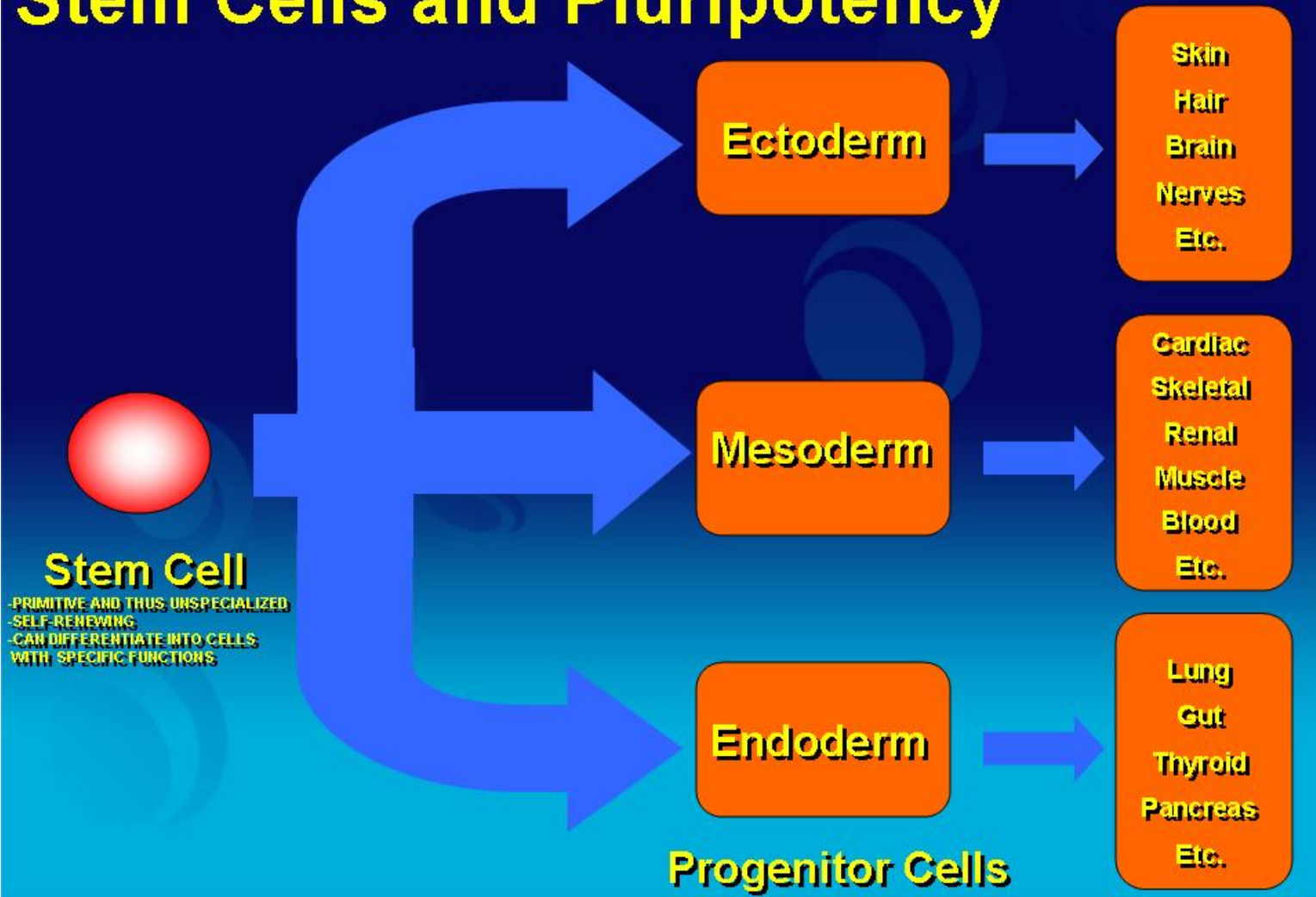
# **This is Bio-Insurance**

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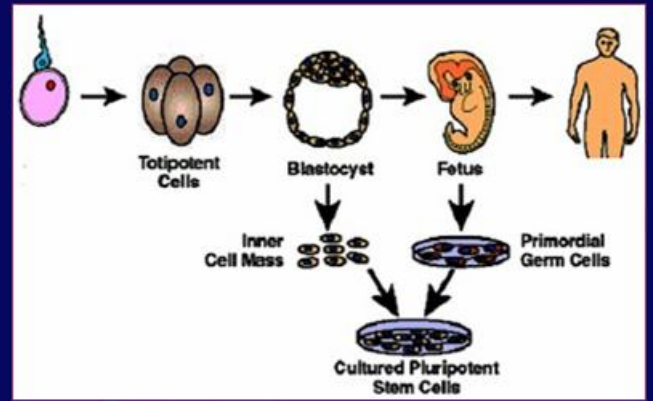
**Be prepared for regenerative medicine...**



# Stem Cells and Pluripotency



# Embryonic Stem Cells



Typically derived from 4-5 day old embryos and are a hollow microscopic ball of cells called the Blastocyst

No current therapeutic uses

# Adult Stem Cells

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An Adult Stem Cell is an undifferentiated cell found among differentiated cells in a tissue or organ

The principal sources of Adult Stem Cells are:

Cord Blood

Bone Marrow

Peripheral Blood

Numerous current therapeutic uses

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# Pluripotency of mesenchymal stem cells derived from adult marrow

Yuehua Jiang<sup>\*†</sup>, Balkrishna N. Jahagirdar<sup>\*†‡</sup>, R. Lee Reinhardt<sup>§</sup>, Robert E. Schwartz<sup>\*</sup>, C. Dirk Keene<sup>||</sup>, Xilma R. Ortiz-Gonzalez<sup>||</sup>, Morayma Reyes<sup>\*</sup>, Todd Lenvik<sup>\*</sup>, Troy Lund<sup>\*</sup>, Mark Blackstad<sup>\*</sup>, Jingbo Du<sup>\*</sup>, Sara Aldrich<sup>\*</sup>, Aaron Lisberg<sup>\*</sup>, Walter C. Low<sup>||</sup>, David A. Largaespada<sup>¶</sup> & Catherine M. Verfaillie<sup>\*‡</sup>

<sup>\*</sup> Stem Cell Institute, <sup>‡</sup> Division of Hematology, Oncology and Transplantation, Department of Medicine, <sup>§</sup> Department of Microbiology, Center for Immunology, <sup>||</sup> Department of Neurosurgery, and <sup>¶</sup> Department of Genetics, Cell Biology and Development, University of Minnesota Medical School, Minneapolis, Minnesota 55455, USA

<sup>†</sup> These authors contributed equally to this work

We report here that cells co-purifying with mesenchymal stem cells—termed here **multipotent adult progenitor cells** or MAPCs—**differentiate**, at the single cell level, not only into mesenchymal cells, but also cells with visceral **mesoderm**, **neuroectoderm** and **endoderm** characteristics *in vitro*. When injected into an early blastocyst, single MAPCs contribute to most, if not all, somatic cell types. On transplantation into a non-irradiated host, MAPCs engraft and differentiate to the haematopoietic lineage, in addition to the epithelium of liver, lung and gut. Engraftment in the haematopoietic system as well as the gastrointestinal tract is increased when MAPCs are transplanted in a minimally irradiated host. As MAPCs proliferate extensively without obvious senescence or loss of differentiation potential, they may be an ideal cell source for therapy of inherited or degenerative diseases.

Nature 418; 4 July 2002

# Diseases Treatable with Stem Cells

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## TODAY

- Leukemias
- Lymphoma
- Multiple Myeloma
- Coronary Heart Disease
- Radiation Sickness
- Anemia
- Tissue Repair & Burns

## FUTURE POSSIBILITIES

- Spinal Cord Injuries
- Stroke
- Parkinson Disease
- Lou Gehrig's Disease (ALS)
- Breast and Ovarian Cancer
- Diabetes
- Osteoporosis
- Autoimmune Diseases
  - Multiple Sclerosis (MS)
  - Systemic Lupus Erythematosus (SLE)
  - Rheumatoid Arthritis (RA)
- Amyloidosis
- Sickle Cell Anemia
- Orthopedics

# Outside the U.S.

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Argentina: Treated Type 2 diabetes with Adult Stem Cells (66% were able to stop taking insulin and oral drugs)

Germany, Thailand, Switzerland, Russia & India: Treated heart disease with Adult Stem Cells (Dr. Patel from the University of Pittsburg Medical Center flew overseas to treat singer Don Ho)

Japan: Treated babies with cardiac malformations with Adult Stem Cells

# Companies Focused on Adult Stem Cell Therapeutics

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Prime Cell  
Therapeutics

Adult Stem Cells from testes are being reprogrammed to create human heart, brain and bone cartilage

Stemnion

Placental stem cells for wound healing

Cellerent  
Therapeutics

Adult Stem Cells from bone marrow to treat patients with Sickle Cell

Osiris

Adult Stem Cells to treat Crohn's Disease

# Clinical Trials

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- 549 Clinical Trials using Stem Cells
- 162 Clinical Trials using Autologous Stem Cells

Source: [www.clinicaltrials.gov](http://www.clinicaltrials.gov)



# Acute Myocardial Infarction Trials

**Table 1. Randomized, Controlled Trials of BMC for Cardiac Disease.\***

Trial or Investigator Group	Setting	Design	No. of Cells Administered in Treatment Group	Results
BOOST <sup>4,9</sup>	PCI after acute myocardial infarction	Randomized trial 30 patients received BMC; 30 received no infusion LVEF assessed by MRI	Approximately $2.5 \times 10^9$ unfractionated BMC	At 6 mo: LVEF 6% greater in BMC group than in control group At 18 mo: no significant difference in LVEF between the 2 groups
Janssens et al. <sup>8</sup>	PCI after acute myocardial infarction	Randomized, double-blind trial 33 patients received BMC; 34 received placebo infusion LVEF was assessed by MRI	Approximately $3 \times 10^8$ Ficoll-separated BMC	At 4 mo: no significant difference in overall LVEF; decreased infarct size and better regional function in BMC group
TOPCARE-CHD <sup>6</sup>	Chronic left ventricular dysfunction	Randomized, crossover trial In the second phase, 24 patients received CPC, 28 received BMC, 23 received no infusion LVEF assessed by left ventricular angiography	Approximately $2 \times 10^8$ Ficoll-separated BMC or approximately $2 \times 10^7$ Ficoll-separated, cultured CPC	At 3 mo: greater increase in LVEF (2.9 percentage points) in BMC group than in CPC group or control group
ASTAMI <sup>7</sup>	PCI after acute myocardial infarction	Randomized trial 47 patients received BMC; 50 received no infusion LVEF assessed by SPECT, echocardiography, and MRI	Approximately $7 \times 10^7$ Ficoll-separated BMC	At 6 mo: no significant difference in LVEF between the 2 groups
REPAIR-AMI <sup>5</sup>	PCI after acute myocardial infarction	Randomized, double-blind trial 101 patients received BMC; 98 received placebo infusion LVEF assessed by left ventricular angiography	Approximately $2.4 \times 10^8$ Ficoll-separated BMC	At 4 mo: greater absolute increase in LVEF in BMC group than in placebo group (5.5% vs. 3.0%) At 1 yr: reduction in combined adverse clinical events in BMC group as compared with placebo group

\* BOOST denotes Bone Marrow Transfer to Enhance ST-Elevation Infarct Regeneration, PCI percutaneous coronary intervention, MRI magnetic resonance imaging, TOPCARE-CHD Transplantation of Progenitor Cells and Recovery of LV Function in Patients with Chronic Ischemic Heart Disease, CPC progenitor cells derived from circulating blood, ASTAMI Autologous Stem-Cell Transplantation in Acute Myocardial Infarction, SPECT single-photon-emission computed tomography, and REPAIR-AMI Reinfusion of Enriched Progenitor Cells and Infarct Remodeling in Acute Myocardial Infarction.

# Auto Bone-Marrow Treatment for Severe Autoimmune Disease

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- Fassas (J. Neurol. 2002) Rx 188 pts with MS including 99 pts 2<sup>nd</sup> progressive, 19 primary progressive, 41 relapsing forms – 34 % sustained improvement
- Snowden (J. Rheumatol. 2004) All 78 pts with RA showed significant improvement, 10% remained drug free, 73% easily controlled by drugs
- Burt (JAMA 2006) Rx 48 pts with severe SLE, 5 year survival 84%, disease-free 5 yr survival 50%

# Treatment of Chronic Wounds With Bone-Marrow Derived Cells

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Autologous bone-marrow derived cells were used in the treatment of 3 patients with non-healing chronic wounds.

- ◆ Complete closure and evidence of dermal rebuilding
- ◆ Clinical and histologic evidence of reduced scarring

Evangelos V. Badiavas and Vincent Falanga. Arch.Dermatol. 139:510, 2003

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# Percutaneous Autologous Bone Marrow Grafting for Nonunions

Hernigou P et al. J Bone & Joint Surg 87A: 1430, 2005



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# Radiation Sickness (Hematopoietic Syndrome)

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- ⚡ At 3.5 Gy 50% will die within 60 days w/o intervention
- ⚡ Primary cause of death is infection
- ⚡ Individuals exposed to 0.7 – 4.0 grays (Gy) will develop syndrome
- ⚡ Rescue through Stem Cell transplant – treatment of choice
- ⚡ Success rate very high when administered within 7-10 days following exposure
- ⚡ Banking Stem Cells for autologous use critical to First Responders, Military, etc.

# Stem Cell Infusion (Transplant)

Autologous = Self

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Allogeneic = Non-Self

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- Odds of finding compatible Stem Cell donor match is 1 in 100,000
- 18% of those needing a match are able to find one from Bone Marrow Donor Registry

# Autologous vs. Allogeneic Stem Cells

*Autologous*    *Allogeneic*

<b>Tissue Matching</b>	<b>Not Required</b>	<b>Required</b>
<b>Rejection</b>	<b>No</b>	<b>Yes</b>
<b>Graft v. Host</b>	<b>No</b>	<b>Yes</b>
<b>Engraftment</b>	<b>Faster</b>	<b>Slower</b>
<b>Immune Recon.</b>	<b>Faster</b>	<b>Slower</b>
<b>HIV, Hepatitis etc. from Donor</b>	<b>None</b>	<b>Possible</b>

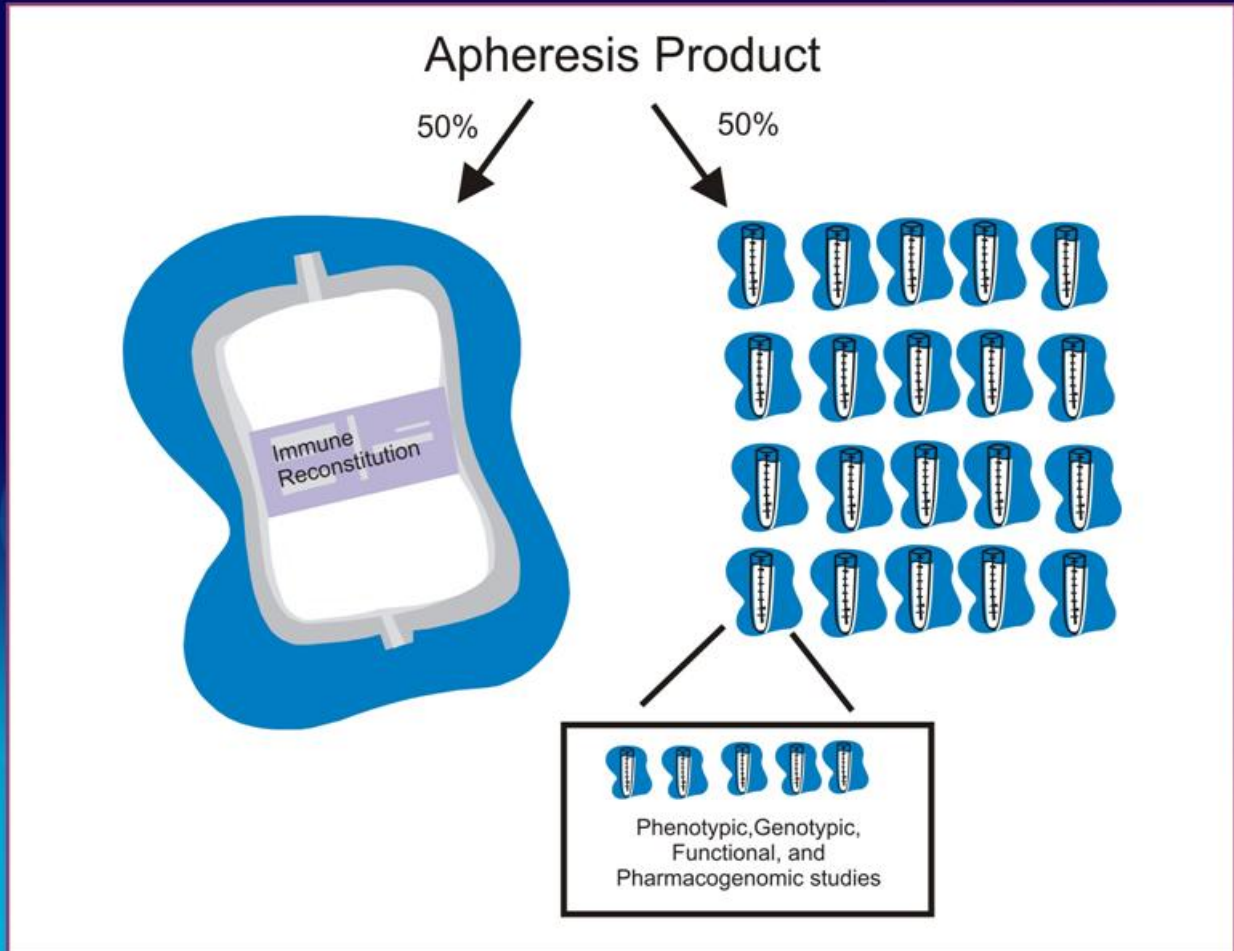
# NeoStem

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- G-CSF (480 ug) Mobilization of Adult Stem Cells
- Extracted using Apheresis
  - Non-Invasive
  - Done in doctor's office
  - Under 3 hours
- Stored in controlled rate freezer (liquid nitrogen)
- Collection includes Stem Cells, Progenitor Cells, Mononuclear Cells
- Stored in containers that allow multiple future uses



# NeoStem Cell Processing and Storage



# Intellectual Property

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NeoStem has two pending U.S. patent applications describing key aspects of our process. These applications are:

1. Elective Collection and Banking of Autologous Peripheral Blood Stem Cells. Publication Number 20040258673, Application Number 10/819,342, Priority Date April 2003
  - This pending patent application addresses the process by which NeoStem prepares and stores stem cells collected from the peripheral blood by an aphaeresis process
  - Our methodology is to separate primary stem cells and store them in numerous aliquots in order to be used for individual disease-related therapies
  - This enables the client to maintain sufficient primary stem cells in the bank for future use without the need and possible complications of *in vitro* stem cell expansion. As a result, each collection results in multiple doses of stem cells

# Intellectual Property (Cont.)

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2. System Capable of Treating and Defining Various Disease States Using Stem Cells. Publication Number 20040265281, Application Number 10/819,398 Priority Date April 2003
  - This pending application addresses the use of stored stem cells to form the basis for a data set that will provide statistical information on the etiology of disease
  - The establishment of a broad bank of stem cells will allow the Company to capitalize on the information contained within these cells, which can be sold to pharmaceutical companies in connection with pre-clinical research and discovery
  - Each client is asked to donate a small number of cells to this data bank

*There can be no assurance that either of these pending U.S. patent applications will ultimately issue as patents*

# Appeal to Health Care System - Savings

	<i>Autologous</i>	<i>Allogeneic</i>
<b>Hospitalization</b>	Short (<5 days)	Long (>30 days)
<b>Time to T<sub>x</sub></b>	1-2 days	90 days (avg.)
<b>Cost of Cells</b>	~\$6,000	>\$22,000
<b>Total Cost of T<sub>x</sub></b>	~\$50,000	\$300 - \$500 K
<b>Minority Avail.</b>	With Storage	Very Low
<b>Match Avail.</b>	Not Applicable	<50%
<b>Post-T<sub>x</sub> Drugs</b>	None	~\$4,000/ yr.

# Comparison of Different Sources of Adult Stem Cells

	Typical Collection			Published Dosage Information		
	Gross* Volume	Total Nucleated Cells	CD34+ Stem Cells	Diabetic Foot Ulcers (A)	Cardiac Repair (B)	Immune Reconstitution (C)
Adult/NeoStem	300ml	$28 \times 10^9$	$.1 \times 10^9$	$.005 \times 10^9$	$.016 \times 10^9$	$.05 \times 10^9$ MNC/kg (C) $.0012 \times 10^9$ CD34+/kg
Micro Collections of Stem Cells	300ml**	$1 \times 10^9$	$.005 \times 10^9$	$.005 \times 10^9$	$.016 \times 10^9$	$.18 \times 10^9$
Stem Cells from Adipose Tissue	100ml to 1.2 liters	$4 \times 10^9$	$4 \times 10^9$ ***	$.005 \times 10^9$	$.016 \times 10^9$	$.18 \times 10^9$
Cord Blood	75 ml	$.75 \times 10^9$	$.0037 \times 10^9$			$.025 \times 10^9$ MNC/kg $.00017 \times 10^9$ CD34+/kg
*Primarily Buffy Coat						
**Whole Blood						
***Estimate, no known published data						
(A) Badiavas & Falanga, Arch. Derm 139:510, 2003						
(B) Zeiher (Schachinger et al) J. Amer. Coll. Cardiology 44:1690, 2004						
(C) Zubair et al. Transfusion 44:253, 2004						
(D) Schoemans et al Bone Marrow Transplantation 38:83, 2006						

# Long-Term Viability of Stored Stem Cells

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One study has shown no significant loss of cell viability in Stem Cells stored for up to ten years

McCullough J, Clay M, Wagner JE. Cord blood stem cells. In Ball ED, Lister J, Law P, editors: *Hematopoietic Stem Cell Therapy*. Philadelphia: Churchill Livingstone, 2000: 287-297.

# Comparables

## Comparable Public Companies

(\*Source Yahoo! Finance)

(10/24/06* Market Cap/Revenue/Net Income)		All Numbers in Millions of Dollars	All Numbers in Millions of Dollars	All Numbers in Millions of Dollars
	Symbol	Market Value	Sales	Profit/(Loss)
NeoStem, Inc.	(NEOI)	16.6	0.0	(1.7)
Aastrom BioScience, Inc.	(ASTM)	163.7	0.9	(16.5)
Advanced Cell Technology, Inc.	(ACTC)	21.4	0.4	(9.4)
BioMatrix	(BMSN)	0.4	0.0	0.0
CalbaTech	(CLBE)	4.9	1.3	(5.0)
Celgene Corporation	(CELG)	1,500.9B	536.9	63.7
Cord Blood America, Inc.	(CBAI)	5.1	2.3	(6.1)
Cryo-Cell International, Inc.	(CCEL)	26.8	14.5	1.0
Cytori Therapeutics, Inc.	(CYTX)	72.9	5.6	(26.5)
Geron Corporation	(GREN)	499.5	6.2	(33.5)
Opexa Therapeutics (formerly Pharmafrontier)	(OPXA)	44.9	0.0	(15.5)
ReNeuron Holding PLC	(RENE)	10.6	0.0	(12.0)
Stem Cell Therapeutics	(SSS)	8.0	0.0	(4.0)
StemCells, Inc.	(STEM)	220.9	0.2	(11.7)
Thermogenesis Corp	(KOOL)	226.7	12.0	(6.1)
ViaCell, Inc.	(VIAC)	191.9	44.4	(15.7)

# Potential Market and Opportunity

## Cord Blood and Placenta Market

4.2 million births in U.S. annually

21 cord/placenta banking companies

\$200 million-dollar-a-year business

Disease	Prevalence
Leukemia	208,080
Lymphoma & Multiple Myeloma	192,155
Coronary Artery Disease	6 million
Congestive Heart Failure	5 million (550,000 new cases per year)
Multiple Sclerosis	388,571
Lupus	1.4 million
Crohns	500,000
Rheumatoid Arthritis	2.1 million
Stroke	4.7 million stroke survivors (500,000 new cases per year)
Spinal Cord Injury	253,000
Diabetes	20.8 million
Sickle Cell Anemia	200,000
Parkinson	1.5 million
Osteoporosis	10 million
Breast Cancer	204,999 diagnosed new cases per year
<b>Total</b>	<b>53,000,000 Potential NeoStem Clients</b>



# NeoStem Milestones

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Over the last 5 months:

- Closed on just under 4 million dollars
- 10:1 Reverse stock split
- Sustained post split increase in stock price
- Received License of California Stem Cell Bank
- Signed first Collection Center Agreement
- Hired a seasoned Sales and Marketing Director

Over the next 13 months:

- Continue to expand management team with prominent medical and business leaders
  - Assemble Advisory Board of Therapeutic Experts
  - Build Board of Directors
  - Establish strategic relationships with pharmaceutical companies
  - Partner with academic institutions
  - Add collection centers to network
  - Market to those educated in the value of stem cells
  - Target populations of individuals at risk for disease and exposure (e.g. first responders) who would benefit from Stem Cell storage
  - Launch 1-888-StemBank call center
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# Comp Table

NeoStem, Inc.

Capitalization Table October 18, 2006

	Shares
Common Stock	19,477,708
Stock Options	2,895,998
Warrants	6,117,219
Shares required for Convertible Promissory Notes	<u>227,204</u>
	28,718,129

# Management/Directors/Senior Staff

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- **Robin Smith, M.D., MBA**, NeoStem Chairman of the Board and CEO. Chairman of Advisory Board for China Biopharmaceuticals (OTC BB: CHBP), Chairman of NYU-Hospital for Joint Diseases
- **Mark Weinreb**, NeoStem Director and President. Former Owner, Bio Health Laboratories
- **Larry A. May**, NeoStem Chief Financial Officer. Former Treasurer, Amgen (NASDAQ: AMGN)
- **Wayne A. Marasco, M.D., Ph.D.**, NeoStem Director, Senior Scientific Advisor. Associate Professor-Department of Cancer and Immunology, Dana-Farber Cancer Institute, Associate Professor of Medicine, Harvard Medical School
- **Julio C. Guerra, M.D., ABP**, NeoStem Director of Sales & Marketing. Former Senior VP of Marketing and New Program Development of Anthrogenis, which was bought by Celgene; formerly with Gerber, Ross Products and Mead Johnson
- **Denis Rodgerson, Ph.D.**, NeoStem Director of Stem Cell Science. Founder of NeoStem, Former Founder of StemCyte, Former Head of Clinical Chemistry and Toxicology and Clinical Laboratory Computing, UCLA Medical Center
- **George Smith, M.D.**, NeoStem Medical Director of Laboratory Operations in California. Among his many distinguished career accomplishments, Dr Smith is cofounder of UCLA Bone Marrow Transplant Center
- **Catherine M. Vaczy**, NeoStem VP & General Counsel. Former VP and Associate General Counsel, ImClone (NASDAQ: IMCL)
- **Joseph Zuckerman, M.D.**, NeoStem Director. Chairman of NYU-Hospital for Joint Diseases, Department of Orthopaedic Surgery