**UNITED STATES**
**SECURITIES AND EXCHANGE COMMISSION**
**Washington, D.C. 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): August 3, 2011

## NEOSTEM, INC.
(Exact Name of Registrant as Specified in Charter)

| Delaware | 001-33650 | 22-2343568 |
|---|---|---|
| (State or Other Jurisdiction of Incorporation) | (Commission File Number) | (IRS Employer Identification No.) |

420 Lexington Avenue, Suite 450, New York, New York 10170
(Address of Principal Executive Offices)(Zip Code)

(212) 584-4180
Registrant's Telephone Number

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):

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

o Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

**Item 7.01. Regulation FD Disclosure.**

NeoStem, Inc. (“NeoStem” or the “Company”) intends, from time to time, to utilize at various industry and other conferences a slide presentation. The slide presentation is accessible on NeoStem’s website at www.neostem.com and is being furnished as Exhibit 99.1 hereto. NeoStem undertakes no obligation to update, supplement or amend the materials attached hereto as Exhibit 99.1.

The information in this Current Report on Form 8-K under Item 7.01 is being furnished pursuant to Item 7.01 of Form 8-K. In accordance with General Instruction B.2 of Form 8-K, the information in this Current Report on Form 8-K, including, without limitation, Exhibit 99.1, shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that section. The information in this Current Report on Form 8-K, including, without limitation, Exhibit 99.1, shall not be incorporated by reference into any filing or other document pursuant to the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such filing or document.

***Forward-Looking Statements***

This Current Report on Form 8-K, including Exhibit 99.1 hereto, contains “forward-looking” statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are typically preceded by words such as “believes,” “expects,” “anticipates,” “intends,” “will,” “may,” “should,” or similar expressions, although some forward-looking statements are expressed differently. Forward-looking statements represent the Company's management's judgment regarding future events. Although the Company believes that the expectations reflected in such forward-looking statements are reasonable, the Company can give no assurance that such expectations will prove to be correct. All statements other than statements of historical fact included in the Current Report on Form 8-K are forward-looking statements. The Company cannot guarantee the accuracy of the forward-looking statements, and you should be aware that the Company's actual results could differ materially from those contained in the forward-looking statements due to a number of factors, including the statements under "Risk Factors" contained in the Company's reports filed with the Securities and Exchange Commission.

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

(d) Exhibits.

| Exhibit No. | Description |
|---|---|
| 99.1 | Slide Presentation of NeoStem, Inc., dated August 2011 |

*Exhibit 99.1 is furnished as part of this Current Report on Form 8-K.

**SIGNATURES**

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

**NEOSTEM, INC.**

By: /s/ Catherine M. Vaczy
Name: Catherine M. Vaczy
Title: Vice President and General Counsel

Date: August 3, 2011

# NeoStem, Inc. ("NBS")

## Investor Presentation

NeoStem®

YOUR CELLS • YOUR USE • YOUR LIFE

WWW.NEOSTEM.COM

***August 2011***

# Forward-Looking Statements

Included in this presentation are "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 the actual results, performance or achievements of NeoStem, Inc. and its subsidiaries (collectively, the "Company"), 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 presentation, 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. Additionally, statements regarding our ability to successfully develop, integrate and grow the businesses at home and abroad, including with regard to the Company's research and development efforts in cellular therapy, its adult stem cell and umbilical cord blood collection, processing and storage business, contract manufacturing and process development of cellular based medicines, and the pharmaceuticals manufacturing operations conducted in China, the future of regenerative medicine and the role of stem cells in that future, the future use of stem cells as a treatment option and the role of VSEL™ Technology in that future and the potential revenue growth of such businesses, are forward-looking statements. Our future operating results are dependent upon many factors and our further development is highly dependent on future medical and research developments and market acceptance, which is outside our control. Forward-looking statements, including with respect to the successful execution of the Company's strategy, may not be realized due to a variety of factors and we cannot guarantee their accuracy or that our expectations about future events will prove to be correct. Such factors include, without limitation, (i) our ability to manage the business despite operating losses and cash outflows; (ii) 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 and the successful commercialization of the relevant technology; (iii) our ability to build the management and human resources and infrastructure necessary to support the growth of the business; (iv) our ability to integrate the Company's acquired businesses successfully and grow such acquired businesses as anticipated; (v) whether a large global market is established for our cellular-based products and services and our ability to capture a share of this market; (vi) competitive factors and developments beyond our control; (vii) scientific and medical developments beyond our control; (viii) our ability to obtain 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 the business; (ix) whether any of our current or future patent applications result in issued patents and our ability to obtain and maintain other rights to technology required or desirable for the conduct of our business; (x) 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; (xi) our ability to successfully divest our 51% ownership of our Erye subsidiary; (xii) factors regarding our business and initiatives in China and, generally, regarding doing business in China, including through our variable interest entity structure, including (a) costs related to funding these initiatives, (b) the successful application under Chinese law of the variable interest entity structure to the Company's business, which structure the Company is relying on to conduct its business in China, (c) the ability to integrate the Company and the business operations in China successfully and grow such integrated businesses as anticipated, (d) the need for outside financing to meet capital requirements, and (e) the ability of the Company to realize on its investment in Erye through distributions, divestiture or other strategic alternatives; and (xiii) other risk factors disclosed in the Company's periodic filings with the Securities and Exchange Commission which are available for review at www.sec.gov under "Search for Company Filings."

All forward-looking statements attributable to us are expressly qualified in their entirety by these and other factors. We undertake no obligation to update or revise these forward-looking statements, whether to reflect events or circumstances after the date initially filed or published, to reflect the occurrence of unanticipated events or otherwise, except to the extent required by federal securities laws.

The contents of this PowerPoint presentation reflect the proposed merger of Amorcyte, Inc., a clinical stage therapeutics company pursuing cell-based therapies for cardiovascular diseases, with and into a wholly-owned subsidiary of NeoStem. NeoStem and Amorcyte entered into a definitive merger agreement on July 13, 2011. Important factors that might cause a difference relating to the Amorcyte merger include, but are not limited to, failure to obtain the necessary approvals of the stockholders of NeoStem and Amorcyte; NeoStem's or Amorcyte's inability to satisfy the conditions of the merger agreement; costs related to the merger; the inability to integrate the Company's and Amorcyte's businesses successfully; the need for outside financing to meet capital requirements; the highly speculative nature of therapeutics companies and risks related to clinical development activities; other events and factors described above and in a Form 8-K filed with the SEC on July 14th, 2011.

# Investment Highlights

- PCT - a leading cell therapy developer and contract manufacturer
- Robust proprietary product pipeline
  - AMR-001 for AMI entering Phase 2 & CHF entering Phase 1
  - Athelos 001 entering Phase 1 in GvHD
  - Athelos 002 entering Phase 1 in Asthma and Diabetes
- Adult stem cell technology platform, VSEL™, with multiple regenerative product opportunities
- Commercializing MSCs in China through a growing network of hospital partnerships
- Pursuing divestiture of 51% ownership interest of Suzhou Erye
- Experienced management team

# Leader in Cell Therapy Development and Contract Manufacturing

**In January 2011, completed the acquisition of Progenitor Cell Therapy (PCT) adding market leading manufacturing and regulatory expertise as well as proprietary therapeutics**

- CMO - manufacturing, regulatory and commercialization expertise for therapeutics development
- East Coast, West Coast and Asian cGMP manufacturing facilities is an attractive footprint for CMO clients and NeoStem's own development needs
- "Who's who" list of the cell therapy industry's top clients
- Developed the manufacturing process for Provenge
- Founded Athelos (T-reg programs) and Amorcyte (AMI and CHF programs)
- As the products of PCT's clients advance through clinical development and commercialization, revenues will grow and generate free cash flow

# Cell Therapy Industry

## Revenue Potential: Grows as Client's Product Advances

| | Phase 2 | | Phase 3 | | Commercial | |
|---|---|---|---|---|---|---|
| **Client A** | **Patients** | **Revenue** | **Patients** | **Revenue** | **Patients** | **Revenue** |
| **Oncology** | 25 | $625,000 | 100 | $2,000,000 | 30,000 | $450,000,000 |

# Amorcyte Acquisition

Amorcyte™

- $10 million of NBS common stock
- $2 million of warrants
- $6 million of NBS vesting upon achievement of AMR-001 milestones
  - 33% upon completion of Phase 2 clinical trial
  - 33% upon satisfaction of the Phase 2 Primary Endpoint
  - 33% upon Phase 3 readiness

# AMR-001 – Preservation of Heart Muscle Function and Decrease in MACE

**An autologous bone marrow derived pharmaceutical grade product enriched for $CD34^+CXCR4^+$ cells intended to preserve heart muscle function and limit MACE following acute myocardial infarction.**

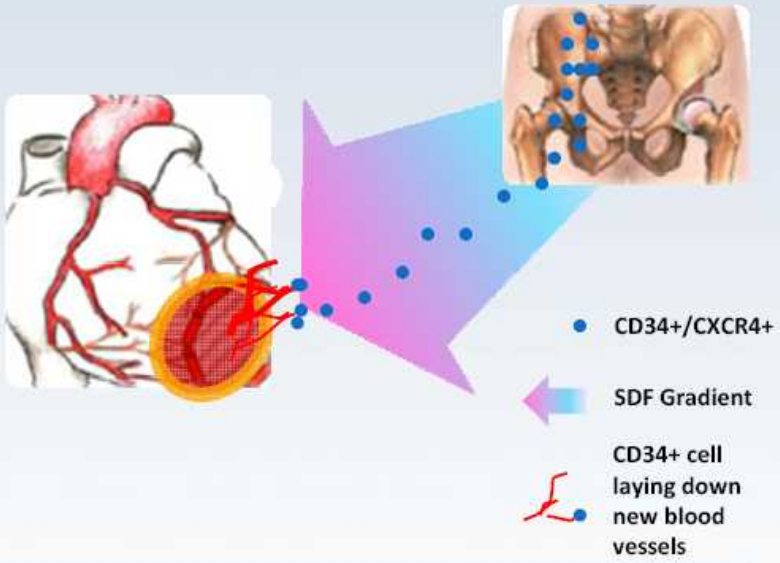
- Homogeneous and highly purified cell population enriched for $CD34^+CXCR4^+$ cells
- Confirmed mechanism of action
- Threshold dose for efficacy established
- Infusion in 6-10 days post AMI - within the critical time frame for repair
- Active cell population defined by response to a hypoxic environment
- Phase 2 to start 1Q12

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

# Cell Type: CD34⁺CXCR4⁺ Cells are a Natural Repair Mechanism

**The body attempts to rescue damaged tissue to prevent ventricular remodeling:**

- A distress signal (HIF) is induced by hypoxia in the peri-infarct zone
- HIF induces synthesis of SDF and VEGF, which mobilize $CD34^{+}CXCR4^{+}$ cells
- The mobilized cells are trophic to the peri-infarct zone, preventing apoptosis and effecting neoangiogenesis



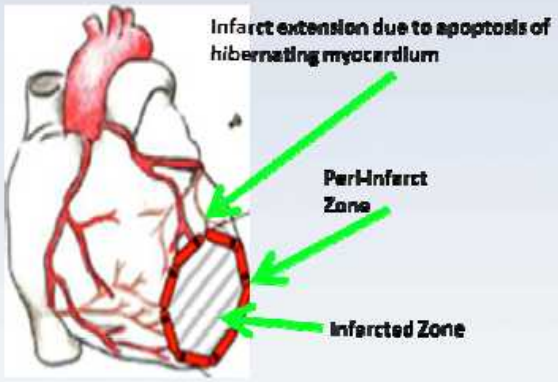

**AMR-001: Highly purified ($CD34^{+}$) and active ($CXCR4^{+}$) cell population**

# Clear Unmet Medical Need for AMI Patients

20% (160,000 annually in US) of MI patients **experience progressive deterioration in heart muscle function** (↓ LVEF, ↑ ESV, ↓ LVWM) and an increase in Major Adverse Cardiac Events (MACE)

- Premature Death
- Recurrent Myocardial Infarction
- Congestive Heart Failure

Inadequate perfusion (microvascular insufficiency) leading to hibernating cardiomyocytes and progressive cardiomyocyte loss due to apoptosis




**A solution to fill the treatment gap is needed to:**

- **Improve microvascular density** (perfusion) to rescue at-risk cardiomyocytes from hibernation and apoptosis
- **Preserve heart muscle function**
- **Prevent downstream MACE**
- **Improve QOL & longevity**

References:
American Heart Association
Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

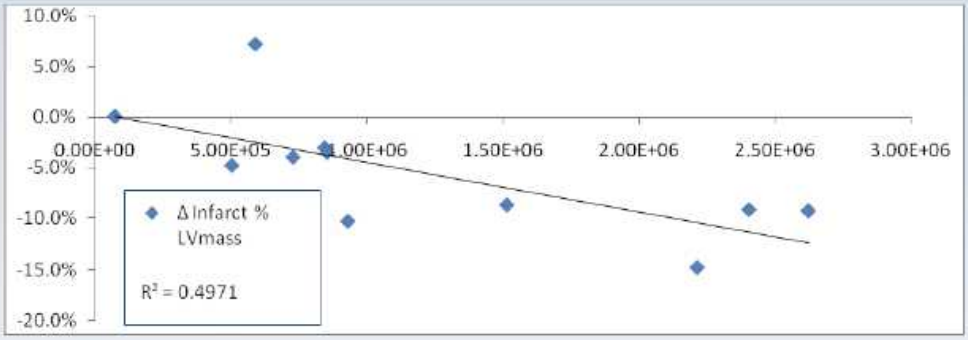
# AMR-001 Phase 1 Clinical Trial Protocol

| | |
|---|---|
| **Indication** | Post-AMI with LVEF ≤50% and Wall Motion Abnormality in the myocardium of the IRA |
| **Primary Endpoint** | Safety in post-AMI Patients |
| **Other Endpoints** | RTSS (Perfusion); LVEF; ESV; SDF Mobility |
| **Key Inclusion Criteria** | Confirmation of ST Elevation MI; Ejection fraction ≤ 50% |
| **Dosing Frequency** | Single dose |
| **Groups and Randomization** | 3 dose cohorts (5,10,15 Million) (randomized 1:1) |
| **Number of Subjects** | N=31 |
| **Number of Sites** | 4 |
| **Geography** | United States |
| **Trial Duration** | 6 months |

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

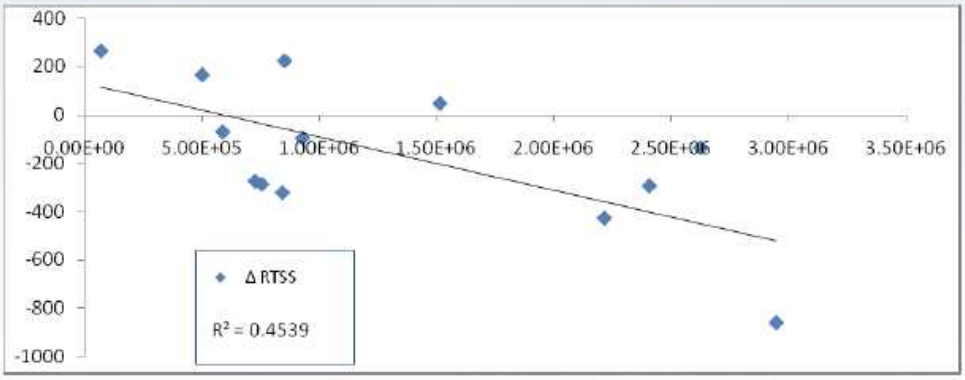
# Dose Response Established

## Y = Δ Infarct % LV Mass, X = Dose of SDF1 mobile CD34 cells




Increasing doses of AMR-001 reduced the size of the infarct region

## Y= Δ RTSS, X = Dose of SDF1 mobile CD34 cells




Increasing doses of AMR-001 reduced RTSS (hypoperfusion)

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

# Threshold Dose for Efficacy Established

| RTSS (Hypoperfusion) | | | | |
|---|---|---|---|---|
| Cohort | Base Line | 6 months | Delta | % Change |
| Control | 259.0 | 273.5 | +14.5 | **+5.6** |
| 5 M | 714.2 | 722.0 | +7.8 | **+1.1** |
| 10 M | 998.6 | 635.8 | -362.8 | **-36.4** |
| 15 M | 584.0 | 462.0 | -122.0 | **-20.9** |

**Patients dosed >= the threshold dose of 10 million cells showed significant improvement in perfusion**

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

# Subgroup Analyses: Additional Cardiac Function Test Results

## RTSS (Hypoperfusion)

| | 6 month | | | |
|---|---|---|---|---|
| | Base Line | 6 Mo. | Δ | % Δ |
| Below Threshold | 385.4 | 398.1 | +12.6 | +3.3 |
| Above Threshold | 814.3 | 558.6 | -255.8 | -31.4 (p=0.01)* |

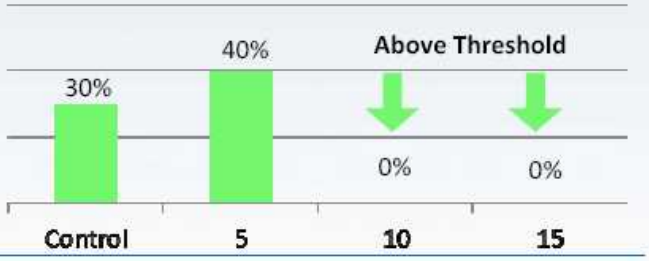
## Ejection Fraction

| | 6 month | | | |
|---|---|---|---|---|
| | BL | 6 Mo. | Δ% | % Δ |
| Below Threshold | 51.0 | 51.8 | 0.7 | +1.3 |
| Above Threshold | 48.2 | 52.7 | +4.5 | +9.4 |

## End Systolic Volume

| | 6 month | | | |
|---|---|---|---|---|
| | BL | 6 Mo. | Δml | % Δ |
| Below Threshold | 77.7 | 81.3 | +3.6 | +4.6 |
| Above Threshold | 94.1 | 88.4 | -5.7 | -6.1 |

## Drop in Ejection Fraction




GROUPS POOLED:
BELOW THRESHOLD = 5 & CONTROL
ABOVE THRESHOLD = 10 & 15

**The overall composite data and individual scores (EF) support potential best in class product**

* change in 10/15 group significant compared to 5M/Control

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105


13

# Serious Adverse Events

| | All Treated (N=15) | Control Group (N=15) |
|---|---|---|
| **SAEs before hospital discharge** | | |
| Acute stent thrombosis | 1 | 0 |
| Death | 1 | 0 |
| **SAEs at 1 year follow up** | | |
| Re-hospitalization for heart failure | 1 | 0 |
| Cerebral infarction | 0 | 1 |
| Chest pain requiring admission | 1 | 1 |
| Chronic myeloid leukemia | 1 | 0 |
| In-stent restenosis resulting in revascularization | 2 | 1 |
| Septic thrombophlebitis | 0 | 1 |
| **Total SAEs** | 7 | 4 |

**None of the SAEs were judged by investigators to be treatment related**

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

# Phase 2 Clinical Plan

| | |
|---|---|
| **Indication** | Post-AMI Preservation of Cardiac Function |
| **Primary Endpoint** | Increased Cardiac Perfusion (RTSS) measured by SPECT and preservation of LVEF by CMR |
| **Other Endpoints** | Reduction in cumulative MACE at 12 months and 18 months, KCCQ & SAQ improvement |
| **Dosing Frequency** | Single dose |
| **Dosing and Randomization** | Minimum dose for release $\geq$10 M cells |
| | Randomized 1:1 treatment to sham placebo control |
| **Number of Subjects** | 150 patients |
| **Number of Sites** | 25 |
| **Geography** | United States |
| **Trial Duration** | PEs read out at 18 months (12 months enrollment and 6 months treatment) |
| | MACE read outs at end of 12, 18, 24 and 36 months post-treatment |

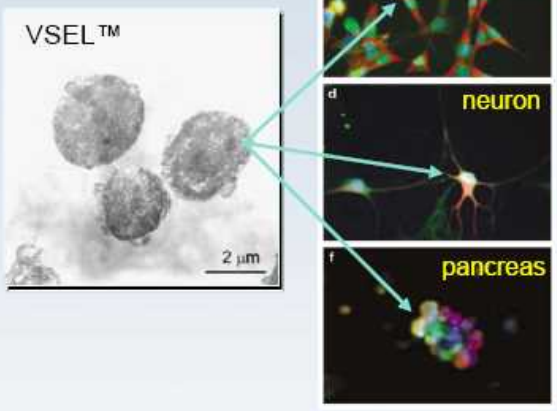
# T-reg Cells - Restoring Immune Balance

- Immune mediate diseases such as GVHD, autoimmune diseases and allergic diseases are a result of imbalance between T effector cells and T regulatory cells (T-reg)
- T-reg therapy represents a novel approach for restoring immune balance by enhancing T-regulatory cell number and function
- T-reg cells are collected by apheresis, **isolated using surface markers (for example: CD4+, CD25+, FoxP3+), activated and expanded** *ex vivo* approximately 500 fold in 20 days[1]
- Partnership with Becton Dickinson which owns 20% of the Athelos subsidiary
- Phase 1 work is ongoing globally under several independent physician INDs, results of which will guide NeoStem's future clinical direction
- NeoStem Phase 1 trials set for 2012
    - Athelos 001 - a cord blood or peripheral blood derived T-reg to prevent and treat GvHD and solid organ rejection
    - Athelos 002 - a peripheral blood derived T-reg for autoimmune disease such as asthma and diabetes

1) Chai, Jian-Guo et al, Journal of Immunology 2008; 180;858-869

# VSEL™ Pluripotent Adult Stem Cells

- VSEL™ (Very Small Embryonic-Like) Technology is NeoStem's proprietary adult stem cell technology platform
- Believed to be naturally pluripotent – no manipulation required
- iPSCs (Induced Pluripotent Stem Cells) are recognized as manipulated and destroyed by the immune system (even as an autologous product)
- VSEL™s have been shown in animal research to home to sites of injury, up-regulate angiogenesis, down-regulate inflammation ("the Paracrine Effect"), BUT, importantly, go one step further and differentiate into target cell types
- VSEL™s are unique versus other cell types




VSEL™s potentially represent the most powerful regenerative cell as they are pluripotent, autologous, "natural", powerful "paracrine" cells.

Rodgerson DO, Harris AG, "A Comparison of Stem Cells for Therapeutic Use", Stem Cell Rev. 2011 Mar 2.

# Patents & Patent Applications

- **NeoStem aggressively pursues domestic and international patent protection, building a dominant IP portfolio within the field of cell therapy to protect its cutting edge technologies**
- **Composition of Matter patents granted for Athelos (2023) & AMR-001 (2028)**
- **NeoStem's patent estate includes:**
  - 31 issues patents
  - Over 90 pending patent applications
  - Composition of matter and methods claims
  - Geographic breadth of filings including North America, Europe, Asia, Australia, Israel and South Africa
- **Cell therapy focus of NeoStem's IP include:**
  - Immunology
  - Cardiology
  - Orthopedic
  - Wound healing
  - Age related tissue restoration
  - Stem cell isolation, collection and Storage
  - VSEL pluripotent stem cell discovery and applications

# NeoStem's Asia Entities

- **PCT-CMO Laboratory & Plant in Beijing**
  - Complements sister facilities in Mountain View California and Allendale, New Jersey
  - Laboratory Facility for processing, banking, and manufacturing comparable to U.S.
  - Built to same design and standards
- **Network of Hospitals delivering NeoStem's Asia-licensed Adult Stem Cell technology for Orthopedics using MSCs**
  - Wendeng Hospital – Launched June 2010
  - Shijiazhuang Third Hospital - Signed December 2010
  - Tianjin Nankai Hospital - Signed May 2011
- **Pursuing Divesture of Suzhou Erye**
  - Acquired 51% of Chinese generic therapeutics company, Suzhou Erye in October 2009 for approximately $32 million
  - Built and validated a new manufacturing facility, thereby doubling capacity
  - Sales have grown from $32M in 2007 to $69M in 2010

# Key Financial Metrics (1) (2)

## Historical Income Statement ($000s)

| | Year Ended December 31, 2010 | Quarter Ended March 31, 2011 |
|---|---|---|
| Revenue | | |
| Pharmaceuticals* | $ 69,584 | $ 18,142 |
| Stem cell and others | $ 237 | $ 1,499 |
| Total Revenue | $ 69,821 | $ 19,641 |
| Gross Profit | $ 20,153 | $ 5,346 |
| R&D expenses | $ 7,684 | $ 2,913 |
| SG&A expenses | $ 31,347 | $ 10,425 |
| Operating loss | $ (18,878) | $ (7,992) |
| Net Loss | $ (23,544) | $ (10,360) |

## Balance Sheet ($000s)

| | As of December 31, 2010 | As of March 31, 2011 |
|---|---|---|
| Cash & equivalents | $ 15,613 | $ 9,412 |
| Current assets | $ 46,883 | $ 50,438 |
| Total assets | $ 143,025 | $ 175,810 |
| Current liabilities | $ 32,845 | $ 40,949 |
| Total liabilities | $ 56,537 | $ 79,543 |
| Total equity | $ 86,488 | $ 96,267 |
| Total liabilities & equity | $ 143,025 | $ 175,810 |

* 51% Stake in Suzhou Erye with historic earning of $4-10 million annually

**(1) These key Financial Metrics should be read in conjunction with the Company's full financial statements which are available at sec.gov.**

**(2) On July 22, 2011 the Company closed on $16,500,000 in gross proceeds from the sale of units consisting of common stock and warrants.**

# Capitalization Table

## NeoStem Capitalization Table

| Capitalization (Common Share Equivalent in 000s) | Shares Outstanding | % Outstanding |
|---|---|---|
| Common Stock | 97,049* | 61.9% |
| Total Preferred Shares (common share equivalents) | 5,204[1] | 3.3% |
| Total Warrants (average exercise price $2.44) | 35,319*[2] | 22.5% |
| Total Options (average exercise price $1.79) | 19,111 | 12.2% |
| Fully-diluted Shares Outstanding | 156,683 | 100.0% |

***Equity Data (as of 7/22/2011)***

*(1)Includes Series B and Series E convertible redeemable preferred stock*
*(2)If all warrants are exercised for cash, result could be as much as $86 million in proceeds to NeoStem*
**Does not include 6,821,283 shares of common stock and 1,881,008 warrant shares to be issued upon Amorcyte closing*

# Key Executives

## NeoStem Management Team

| | |
|---|---|
| **Robin Smith, MD MBA**<br>*CEO & Chairman of the Board* | • MD – Yale; MBA – Wharton<br>• Formerly President & CEO IP2M (HC multimedia), EVP & CMO HealthHelp (radiology management)<br>• Trustee of NYU Medical Center; Chairman of the Board of NYU Hospital for Joint Diseases (through November 2009) and Stem for Life Foundation |
| **Jian Zhang**<br>*General Manager, Suzhou Erye Pharmaceuticals Co., Ltd* | • Joined Erye in 2003; extensive experience in the Chinese pharmaceutical industry<br>• Degree in Finance and Accounting from Central Television University<br>• Certified Public Accountant in China |
| **Ian Zhang, PhD MBA**<br>*President and Managing Director NeoStem (China), Inc* | • PhD in Biotechnology –MBA – University of Chicago<br>• Management and scientific positions in healthcare and biotech industries for past 20 years<br>• Formerly with Life Technology Corporation; Dynal Biotech (Beijing) Ltd (subsidiary of Invitrogen) |
| **Larry May**<br>*Chief Financial Officer* | • BS Business Administration – University of Missouri<br>• Formerly Treasurer & Controller at Amgen; SVP Finance & CFO at BioSource Intl<br>• Extensive experience building accounting, finance and IT operations |
| **Catherine Vaczy, Esq**<br>*VP and General Counsel* | • BA – Boston College; JD – St. John's University<br>• Formerly VP of Legal and Associate General Counsel for Imclone Systems Inc.<br>• Formerly Corporate Counsel at Ross & Hardies, New York Office, Life Science Practice<br>• Member of the Board of Stem for Life Foundation |
| **Alan Harris,**<br>*MD PhD FACP FRCP*<br>VP, *Regenerative Medicine, Drug Development and Regulatory Affairs* | • MD – University of Strasbourg (France); PhD – Erasmus University (Netherlands)<br>• Currently Adjunct Prof of Pharmacology NYU Medical School; Formerly Assoc Prof of Medicine UCLA School of Medicine, Dir of Clinical Pharmacology Cedars-Sinai Medical Center<br>• Formerly with NPS Pharmaceuticals; Pfizer; Schering-Plough; Novartis |
| **Andrew Pecora, MD, FACP**<br>CMO of PCT | • MD – University of Medicine and Dentistry of New Jersey<br>• Chairman and Director of the cancer center at Hackensack University Medical Center, and Managing Partner of the Northern New Jersey Cancer Center |
| **Robert Preti, PhD**<br>President of PCT | • PhD and MS in Cellular Biology / Hematology - New York University<br>• One of the country's leading authorities on cell engineering and the principle investigator for a number of clinical trials relating to stem cell transplantation<br>• 10 years experience as Director of Hematopoietic Stem Cell Processing & Research Laboratory |
| **George S. Goldberger, MBA**<br>VP of Business Development of PCT | • BS Systems Engineering – Polytechnic Institute of NYU; MBA – Wharton<br>• Formerly CEO of Goldberger & Associates Inc. |
| **Jason Kolbert, MBA**<br>VP of Strategic Business Development | • BS Chemistry – SUNY New Paltz, MBA University of New Haven<br>• 17 years experience on Wall Street as Research Analyst in biotechnology in US and Asia<br>• 6 years in the pharmaceutical industry with Schering-Plough in Japan |

# Board of Directors

## NeoStem Board Members

| | |
|---|---|
| **Robin Smith, MD, MBA**<br>*CEO & Chairman of the Board* | • MD – Yale; MBA – Wharton<br>• Formerly President & CEO IP2M (HC multimedia), EVP & CMO HealthHelp (radiology management)<br>• Trustee of NYU Medical Center; Chairman of the Board of NYU Hospital for Joint Diseases (through November 2009) and Stem for Life Foundation |
| **Eric Wei**<br>*Managing Partner, RimAsia Capital Partners* | • BS Mathematics & Economics – Amherst College; MBA – Wharton<br>• Experience – Founder/Managing Partner of RimAsia Capital Partners (private equity); Peregrine Capital, Prudential Securities, Lazard Freres, Citibank; Gilbert Global Equity PartnersCrimson Asia Capital Partners |
| **Mingsheng Shi**<br>*Chairman of the Board of Suzhou Erye Pharmaceutical* | • BSc Economics & Management – Party School of the Communist Party of China<br>• Professional title of Senior Economist<br>• Extensive experience in pharmaceutical industry in China |
| **Steven Myers**<br>*(Independent)* | • BS Mathematics – Stanford University<br>• Experience – Founder/Chairman/CEO SM&A (competition management services); career in aerospace and defense sectors supporting DoD & NASA programs |
| **Drew Bernstein, CPA**<br>*(Independent)* | • BS – University of Maryland Business School<br>• Licensed in State of New York; member AICPA, NYSSCPA and NSA<br>• Experience – Bernstein & Pinchuk LLP (member of BDO Seidman Alliance); PRC auditing; 200+ real estate transactions with $3B+ aggregate value; accountant and business advisor |
| **Richard Berman**<br>*(Independent)* | • Over 35 years of venture capital, management, M&A experience<br>• Experience – Current Board of Directors of Apricus Biosciences, Easylink Services International, Inc., Advaxis, Inc., Broadcaster, Inc., National Investment Managers |
| **Edward Geehr, MD**<br>*(Independent)* | • BS – Yale University; MD – Duke University<br>• Experience – Abraxis Bio-Science; Allez Spine; IPC-The Hospitalist Company |
| **Andrew Pecora[1], MD, FACP** | • MD — University of Medicine and Dentistry of New Jersey<br>• Chairman and Director of the cancer center at Hackensack University Medical Center, and Managing Partner of the Northern New Jersey Cancer Center |

*(1) Expected 2011*

# Near Term Catalysts

- AMR-001
  - Start of Phase 2 trial in AMI in 1Q12
  - Start of P1 trial in CHF in 1Q12
- Partnerships, licensing agreements and or acquisitions of Phase 2/3 ready cell therapy assets in oncology, regenerative medicine and immunology are in active discussions now
- Monetization of 51% ownership in Suzhou Erye
- Growth in CMO revenues as existing clients products move to the next phase of clinical development and as China comes on-line
- Acquisition and organic growth opportunities in cell collection and storage
- Early stage internally developed clinical candidates to enter clinic in 2012
- Athelos 001 & 002: Start of P1 trials with Athelos 001 in GvHD and 002 in Asthma in 2012

# Investment Highlights

- PCT - a leading cell therapy developer and contract manufacturer
- Robust proprietary product pipeline
  - AMR-001 for AMI entering Phase 2 & CHF entering Phase 1
  - Athelos 001 entering Phase 1 in GvHD
  - Athelos 002 entering Phase 1 in Asthma and Diabetes
- Adult stem cell technology platform, VSEL™, with multiple regenerative product opportunities
- Commercializing MSCs in China through a growing network of hospital partnerships
- Pursuing divestiture of 51% ownership interest of Suzhou Erye
- Experienced management team

# Appendix

# AMR-001 Advantages in the Landscape

| | AMORCYTE | Athersys/Angiomed | Mesoblast / Cephalon | Cytori | Osiris | Aastrom | Aldagen | Bioheart |
|---|---|---|---|---|---|---|---|---|
| Clinical Development Stage | PII | PI | PI | PII | PII | PII | PI | PII |
| Field of Use | AMI | AMI | AMI | AMI | AMI | HF | HF | CMI |
| Defined Mechanism of Action | ✓ | | | ✓ | | | ✓ | ✓ |
| Autologous | ✓ | | | ✓ | | ✓ | ✓ | ✓ |
| Potential Toxicities /Safety Signals | | | ✓ | | ✓ | ✓ | | |
| Centralized Manufacturing | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| cGMP Defined Product | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Threshold Dose | ✓ | ✓ | ✓ | | | | | ✓ |
| Cells Expanded | | ✓ | ✓ | | ✓ | ✓ | | |
| Strong IP | ✓ | | | | | | | |

AMI = Acute Myocardial Infarction
HF = Heart Failure
CMI = Chronic Myocardial Ischemia

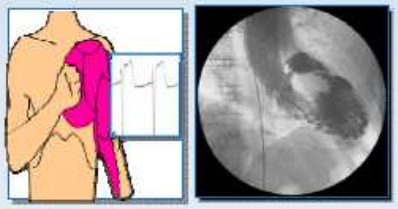
## *AMR-001 Advantages*

- Functionality of CD34+CXCR4 cells
- Confirmed mechanism of action
- cGMP processing and manufacturing that stabilizes the CD34+CXCR4+ cells
- Potency, viability, stability, sterility, and variability assays
- Threshold dose is established at 10 million cells
- Dominant IP
  - composition of matter
  - methods and processes
  - catheter delivery

# Phase 2 Clinical Trial Process

1. Patient presents with chest pain + STEMI, and is assessed via Ventriculography (EF <45%)

Ventriculography



Day 1

2. Patient receives stenting and usual medical Rx

Day 1 - 3

3. Patient screened, and enrolled in trial if Ejection Fraction (EF) ≤ 48%

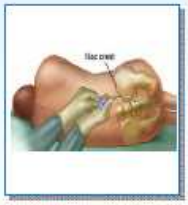
CMR

Day 4

4. Patient randomized into Treatment or Control

Day 4

5. Patient Bone Marrow Harvested

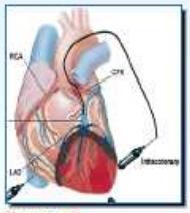


Day 5-8

6. $CD34^{+CXCR4+}$ isolated using patented technology

Day 6-8

7. Intracoronary $CD34^{+CXCR4+}$ cell product infusion or media




Day 6-10

8. Cardiac function measures by SPECT MPI and MRI

- RTSS
- EF
- ESV
- EDV

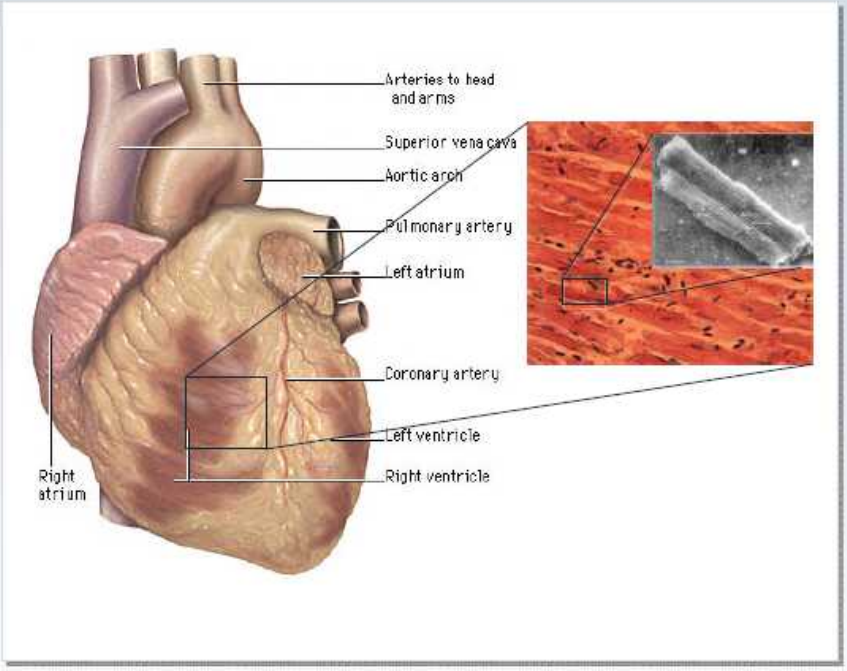
6 Months

9. Major Adverse Cardiac Events

- Mortality
- AMI
- Admission for CHF

12,18 Months

# Once Lost, Cardiomyocytes are Unable to Significantly Regenerate to Restore Cardiac Function




- $10^8 – 10^9$ cardiomyocytes may be lost after sub-lethal AMI in humans (1)
- Bermann, et al (2), measured the integration of carbon-14, into DNA of cardiomyocytes in humans
- They report that cardiomyocytes regenerate at 1% each year up to the age of 25 and then annual regeneration rates gradually fall to 0.45% at the age of 75.

**Cardiomyocyte Renewal is Very Limited Over the Course of a Normal Life Span, and Decreases with Age**

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

# Post STEMI Complications Are a Function of Left Ventricular Ejection Fraction

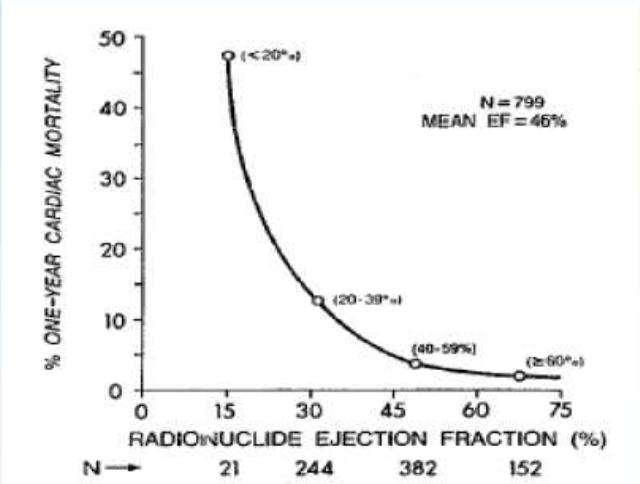
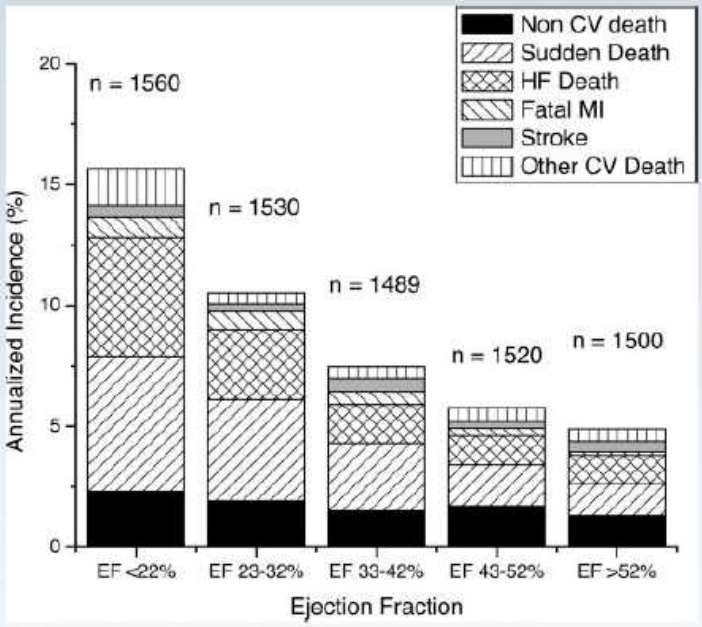



Figure 1. Cardiac Mortality Rate in Four Categories of Radionuclide Ejection Fraction (EF) Determined before Discharge. N denotes the number of patients in the total population and in each category. Of 811 patients in whom the ejection fraction was recorded, 12 were lost to follow-up during the first year after hospitalization.




**1-year survival declines dramatically when left ventricular ejection fraction is <45%**
**The increase in mortality is driven by sudden cardiac death and progressive pump failure**

Solomon, 2006
NEJM, 2003

# Cell Type: Circulating CD34⁺Cell Levels and Migratory Capacity Correlate with Cardiac Function

- Circulating $CD34^+$ cell quantity 1 year post MI significantly correlates (positive) to left ventricular ejection fraction (LVEF), wall motion score index, end diastolic volume and end systolic volume
- The number of circulating stem cells mobilized early (<12 hours) in AMI was significantly correlated with LVEF for $CD34^+$ cells, for $CXCR4^+$ cells, for $CD117^+$ cells and c-met+ cells (P value < 0.004) [1]
- In patients with LVEF less than or equal to 40%, the peak circulating number of $CD34^+$, $CXCR4^+$ $CD117^+$ and c-met+ cells was significantly lower when compared to patients with LVEF greater than 40% (p=0.02) [2,3]
- The only cytokine independently associated with significant increases in circulating $CD34^+$ cells is SDF (not VEGF. [4]
- In the TOPCARE-AMI study, the migratory capacity of infused $CXCR4^+$ progenitors induced by SDF-1 was the strongest independent predictor of the reduction of the infarct size assessed by contrast MRI[5]


1. Ceradini et al. Nature Medicine 2004: 10: 858-863 *Progenitor Cell Trafficking is regulated by hypoxic gradients through HIF induction of SDF-1*
2. Wojciech Wojakowski et al. European Heart Journal 2006; 27: 283-289. *Mobilization of CD34+, CD117+, c-met+ stem cells is correlated with left ventricular ejection fraction and plasma NT-proBNP levels in patients with acute myocardial infarction*
3. Leone Am, et al. Eur Heart J 2005; 26: 1196-1204 *Mobilization of bone marrow derived stem cells after myocardial infarction and left ventricular function*
4. Tomoda et al Clin Cardiol 2003: 26: 455-457 *Bone Marrow stimulation and left ventricular function in acute myocardial infarction*
5. Britten Mb, et al. Circulation 2003: 108; 2122-2218 *Remodeling after intracoronary progenitor cell treatment in patients with acute myocardial infarction*

# IRA Infusion of Bone Marrow-MNCs Preserve Cardiac Function Reduce MACE in a Dose-Dependent Fashion in Patients Early and Late Post AMI The Benefits Persist Out to Five Years

- **Over 1000 AMI patients have received IRA Infusion of Bone Marrow MNC (BMNC) Post AMI and have had significant improvements in:[1]**
  - LVEF (absolute increase by 3-7%)
  - LVESV (decrease by 5-8 ml)
  - Infarct size (absolute decrease by 4-6%)
  - MACE (decreased incidence of recurrent AMI, new onset CHF and death)

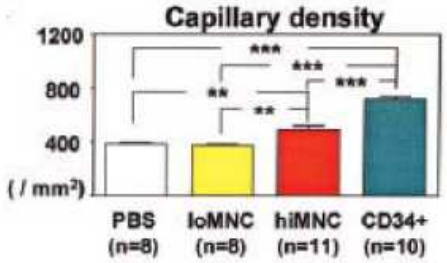
- **Significant Improvement in cardiac function and reduction in MACE dependant on:[2,3]**
  - IRA infusion of B-MNC 5 or more days post STEMI (avoid hot phase)
  - IRA infusion of more than $10^8$ and ideally more than $10^9$ BMNC
  - IRA infusion of BMNC with migratory potential in an SDF-1 gradient

- **Durability of significant effect is long term (4-5 years) whether BMNC are administered acutely (4-21) or late (median 8 years) after a STEMI:[4,5]**
  - Acute BMNC administration preserves cardiac function for up to 4 years and reduces MACE at two years
  - Late BMNC administration restores cardiac function and reduces mortality four fold at 5 years (15.6% versus 3.7% p<0.001)


1. Rendon E.M. et al Eur Heart J. 2008; 29: 1807-1818:
2. Huikuri H.V. et al Eur Heart J. 2008 29: 2723-2732:
3. Schachinger V. N Eng J Med 2006; 355: 1210-1221:
4. Cao F. et al Eur Heart J 2009: 30: 1986-1994:
5. Strauer B.E. Eur J of Heart Failure 2010: 12

# Cell Type: Isolated CD34⁺Cells Most Able to Improve Perfusion, Prevent Apoptosis and Rescue Hibernating Cardiomyocytes

CD34⁺ Cells Exhibit Increased Potency and Safety for Therapeutic Neovascularization after AMI Compared with Total Mononuclear Cells in Nude Rats:




*PBS = Phosphate-buffered saline*
*loMNCs = 5x10^5 MNC*
*hiMNCs = contains 5x10^5 CD34⁺ cells within MNCs*
*CD34+ = 5x10^5 CD34+ cells*

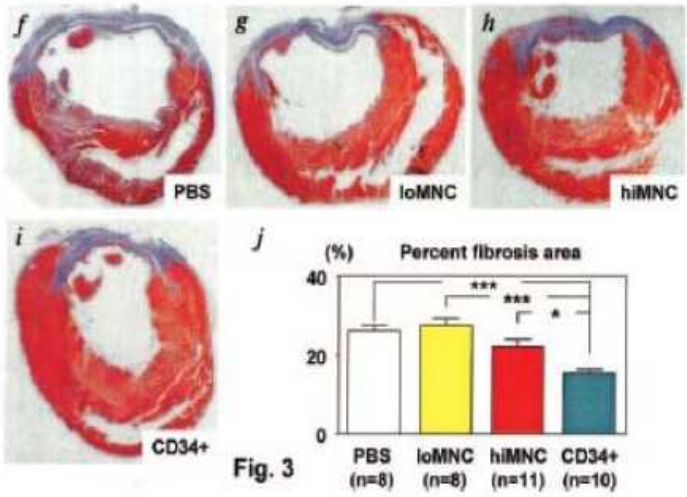



Fig. 3

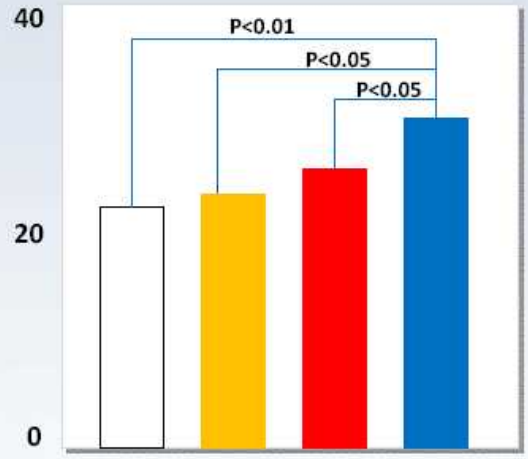
**Capillary Density (perfusion) is greatest in CD34⁺ cell cohort, and this correlates with decreased incidence of fibrosis**
**Effect increases with dose**

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

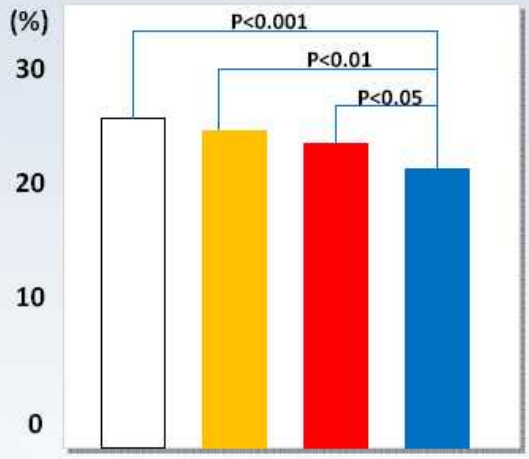
# Cell Type: Isolated CD34⁺ Cells Best Able to Maintain Cardiac Function

The Superior Improvement in Capillary Density and Decrease in Fibrosis seen with purified CD34⁺ Cells Infusion Correlates with Superior Improvement in Cardiac Muscle Function:

Fractional Shortening




Regional Wall Motion Score

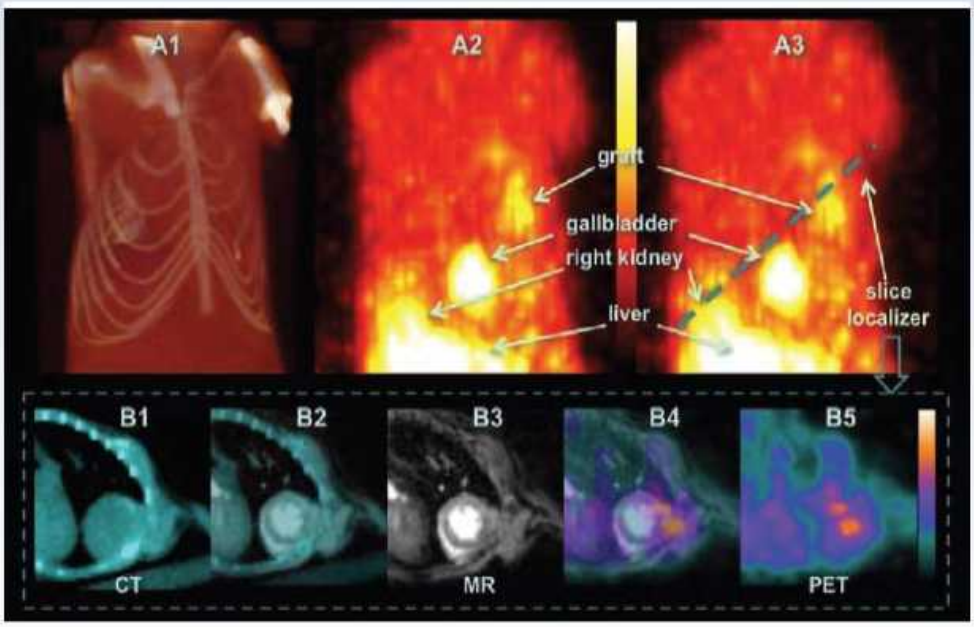



*PBS = Phosphate-buffered saline*
*loMNCs = 5x10^5 MNC*
*hiMNCs = contains 5x10^5 CD34⁺ cells within MNCs*
*CD34+ = 5x10^5 CD34⁺ cells*

Kawamoto et al., *Circulation 2006;114;2163-2169*

# CD34+ Cells Localize in the Peri-infarct Zone

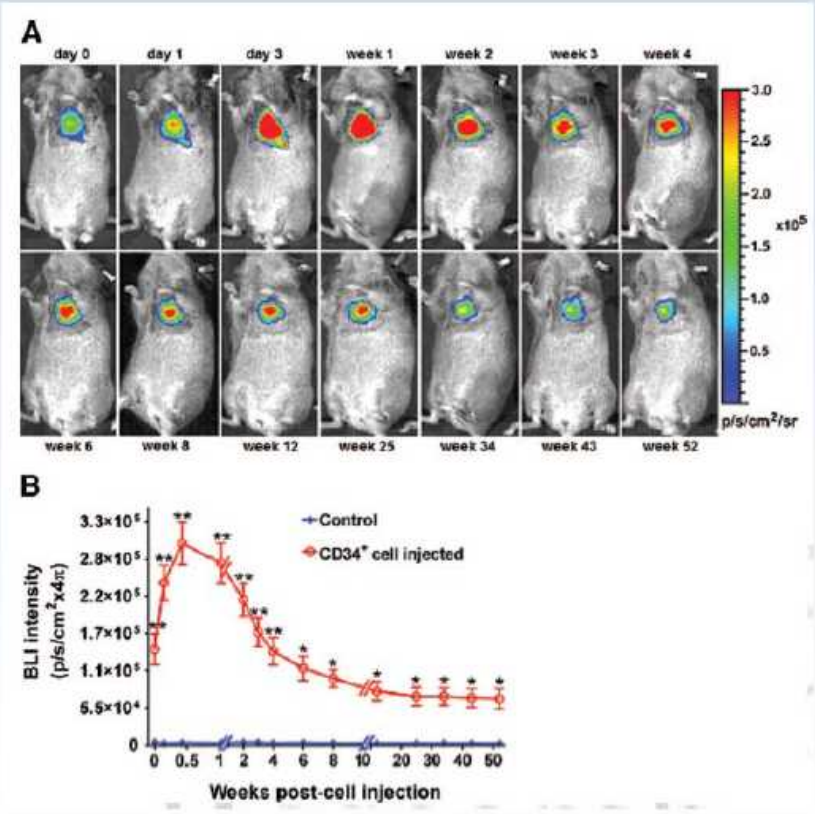
Localization of transplanted CD34 cells in the peri-infarct area of the heart is revealed by coregistration of MRI, micro-CT and micro-PET




A1. Three-dimension rendering of micro-CT to show anatomy and viewing angle for (A2 and A3) micro-PET maximum intensity projections after registration. PET maximum intensity projections demonstrate graft-related uptake and other nonspecific (ie, normal) uptake in various organs. A3. Localizer for the slice shown in B.

Quyyumi AA et al 2011, American Heart Journal; 161(1) 98-105

# CD34+ cells survive in the heart for over 12 months



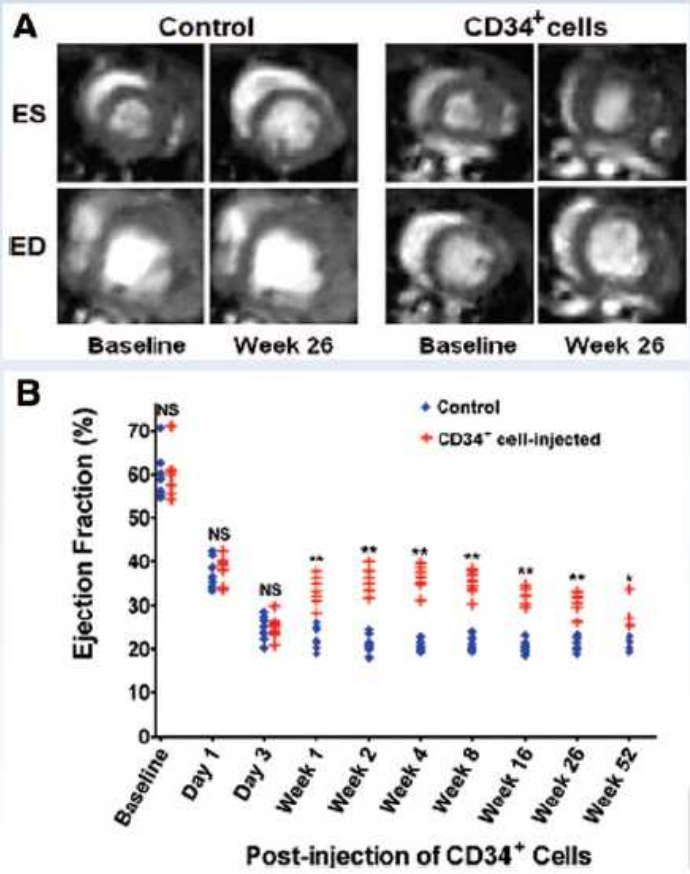

Wang et al., *Circ. Res. 2010: 106:1904-1911*

Long-term BLI of TGL-CD34 in SCID mice:

A. The bioluminescent signal in the heart was superimposed on a photograph of a SCID mouse for the indicated time points after CD34 cell injection (representative mouse)

B. BLI intensity in SCID mice injected with CD34 cells is significantly higher than the mice received PBS injection over a 52-week time period. BLI intensity was assessed by measuring the photon flux from region of interest drawn over the precordium. Data are expressed in mean ±SE (n7/group). ***P0.01; *P0.05.*

# LVEF significantly improved in treated mice compared to control mice for up to 52 weeks



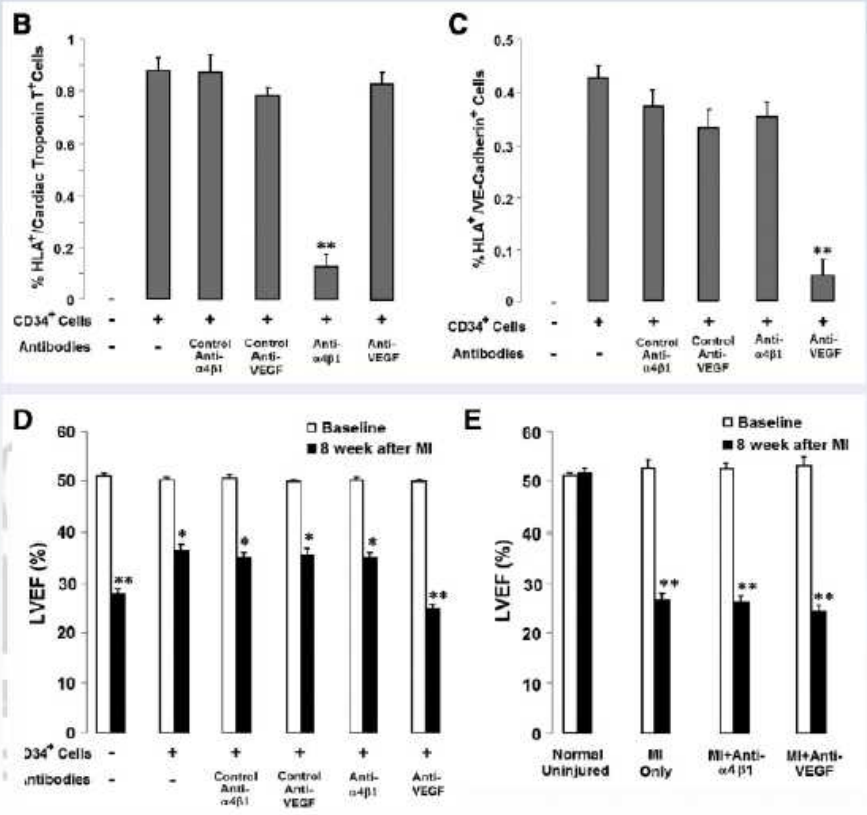

Evaluation of cardiac function using MRI:

A. Representative sequential images of the ES and ED volumes from a $CD34^+$ cell–transplanted mouse and a control mouse over 25 weeks.

B. Dot graph of the LVEF in control mice vs $CD34^+$ cell-transplanted mice over a 52-week time period. There is a significant difference between groups for LVEF at each time point. Data are expressed in mean ± SE (n7/group, except for week 52). NS: *PNS; **P0.01; *P0.05.*

Wang et al., *Circ. Res. 2010: 1904-1911*

# In vivo antibody treatments inhibit myogenesis/angiogenesis and affect cardiac function induced by injection of CD34⁺ cells into mice after MI.




B. Anti- *α4B1*, but not anti-VEGF, antibodies inhibited the formation of human-derived cardiomyocytes (HLA /troponin T), as determined by FACS analysis.

C. Only anti-VEGF inhibited the formation of human-derived endothelial cells (HLA/VE-cadherin).

D. Anti-VEGF, but not anti- *α4B1*, antibodies diminished the effect on the improvement in the LVEF caused by the injection of human CD34⁺ cells.

E. Treatment with anti- *α4B1* or anti-VEGF antibodies did not affect LVEF following MI without cell therapy (Data are expressed in mean ± SE (n4/group). ***P0.01; *P0.05.*

Wang et al., *Circ. Res. 2010: 1904-1911*