

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): October 30, 2014

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

Delaware
(State or Other Jurisdiction
of Incorporation)

001-33650
(Commission
File Number)

22-2343568
(IRS Employer
Identification No.)

420 Lexington Avenue, Suite 350, 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):

- 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))

Item 2.02. Results of Operations and Financial Condition.

On October 30, 2014, NeoStem issued a press release relating to, among other things, the results of the Company's third quarter ended September 30, 2014. A copy of this press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated into this Item 2.02 by reference.

In accordance with General Instruction B.2 of Form 8-K, the information in this Item 2.02 of this Current Report on Form 8-K, including Exhibit 99.1, shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference in any filing under the Exchange Act or the Securities Act of 1933, as amended, except as shall be expressly set forth by specific reference in such a filing.

Item 7.01 Regulation FD Disclosure.

NeoStem intends, from time to time, to present and/or distribute to the investment community and 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 attached hereto as Exhibit 99.2. NeoStem undertakes no obligation to update, supplement or amend the materials attached hereto as Exhibit 99.2.

In accordance with General Instruction B.2 of Form 8-K, the information in this Item 7.01 of this Current Report on Form 8-K, including Exhibit 99.2, shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Exchange Act or the Securities Act of 1933, as amended, except as shall be expressly set forth by reference in such a filing.

Forward Looking Statements

This Current Report on Form 8-K, including Exhibits 99.1 and 99.2, contain "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 statement 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	Press Release dated October 30, 2014*
99.2	Slide presentation of NeoStem, Inc. dated November 2014*

*Exhibits 99.1 and 99.2 are furnished as part of this Current Report on Form 8-K.

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
Name: Catherine M. Vaczy, Esq.
Title: General Counsel

Dated: November 5, 2014

NeoStem Announces Third Quarter 2014 Financial Results and Outlines Near Term Milestones

NEW YORK, Oct. 30, 2014 (GLOBE NEWSWIRE) -- NeoStem, Inc. (Nasdaq:NBS), a biopharmaceutical company developing novel cell based therapeutics designed to prevent, treat or cure disease, today announced financial results for the third quarter of 2014 and also described important expected milestones related to its clinical programs. Near term anticipated events include data release from the Phase 2 PreSERVE AMI clinical trial evaluating NBS10 in the treatment of damaged heart muscle following a heart attack and the commencement of patient enrollment in the Phase 3 Intus clinical trial, evaluating NBS20 in the treatment of malignant melanoma.

"We look forward to reaching these important clinical milestones in our ischemic repair and targeted cancer immunotherapy programs and are pleased that this achievement is being enabled by our unique ability to leverage the expertise of our subsidiary, PCT, recognized as a world leader in providing high quality manufacturing capabilities, support and innovative engineering solutions to developers of cell based therapies," said Dr. Robin Smith, Chairman and CEO of NeoStem.

Clinical Data Release: PreSERVE AMI Phase 2 Clinical Trial

NBS10, also known as AMR-001, the Company's lead candidate in its ischemic repair program, is being developed to treat damaged heart muscle following an acute myocardial infarction (heart attack or AMI). NeoStem anticipates release of data from the PreSERVE AMI Phase 2 clinical trial on November 17, 2014 at the American Heart Association's Scientific Sessions, or sooner if results are available. This 160 patient randomized, double-blind, placebo-controlled clinical trial is evaluating NBS10 in patients with post ST segment elevation myocardial infarction (STEMI). Ischemia occurs when the supply of oxygenated blood in the body is restricted. NeoStem seeks to improve oxygen delivery to tissues through the development and formation of new blood vessels. NBS10 is designed to address a significant medical need for which there is currently no effective treatment, potentially improving longevity and quality of life for those suffering a STEMI, and positioning NeoStem to capture a meaningful share of this worldwide market.

Trial Initiation: Intus Phase 3 Clinical Trial

NeoStem's most advanced product candidate, NBS20, based on DC/TC (dendritic cell/tumor cell) technology, is designed to target malignant melanoma initiating cells and is being evaluated in the treatment of Stage IV or recurrent Stage III metastatic melanoma. The primary endpoint will be based on overall survival. The immunotherapy has been granted fast track and orphan designation by the Food and Drug Administration ("FDA") and has a Phase 3 protocol that is the subject of a Special Protocol Assessment ("SPA"), indicating that the FDA is in agreement with the design, clinical endpoints, and planned clinical analyses of the Phase 3 clinical trial and, if successful, it would serve as the basis for a Biologics License Application ("BLA") that would be filed with the FDA requesting marketing approval of this therapeutic candidate. This protocol calls for enrolling 250 evaluable patients and, in the fourth quarter of 2014, NeoStem began activating clinical sites. NeoStem expects to begin patient enrollment in the first quarter of 2015. For more information, visit www.theintusstudy.com. NeoStem is also evaluating other clinical indications into which the Company may advance this program, including liver, ovarian and lung cancers.

The development of NeoStem's novel proprietary cell therapy products leverages the Company's revenue-generating contract development and manufacturing service business while it also provides service to other companies in the cell therapy industry. The revenue-generating service business provides the Company with unique capabilities for cost effective in-house product development and immediate revenue and future cash flow to help underwrite its internal development programs. This group also has underway a significant initiative to develop engineering solutions to automate processes for large scale commercial manufacturing with an emphasis on producing high quality products at lower costs.

Financial Results for the Third Quarter of 2014 (all comparisons are with the Third Quarter of 2013):

Total revenue for the three months ended September 30, 2014 was \$4.1 million, up 11% percent from \$3.7 million for the prior year period. Clinical Services and reimbursable revenue, representing approximately \$3.1 million of total revenues, increased 6% compared with the prior year period. Processing and storage services revenue, representing approximately \$1.0 million of total revenues, increased 30% compared with the prior year period.

Research and development expenses were \$8.5 million compared with \$4.5 million for the quarter ended September 30, 2013. The increase was primarily comprised of investment in the Company's Targeted Cancer Immunotherapy Program based on DC/TC technology and Immune Modulation Program based on T Regulatory Cell technology.

Selling, general and administrative expenses were \$7.9 million, up from \$5.6 million a year ago. The increase was related to increased corporate development activities, expenses associated with the additional California Stem Cell (CSC) operating activities since its acquisition in May 2014, and increased corporate infrastructure needed to support the Company's expanded clinical activities. In addition, the increase was related to higher equity-based compensation paid in exchange for services, and in particular, equity awards issued as a bonus for the successful completion of the CSC acquisition.

Net loss for the three months ended September 30, 2014 was \$17.2 million compared with a \$9.3 million loss for the three months ended September 30, 2013. Net loss for the nine months ended September 30, 2014 was \$43.8 million (or \$32.1 million when excluding non-cash charges - see appendix for reconciliation), compared with \$26.8 million for the nine months ended September 30, 2013 (or \$19.9 million when excluding non-cash charges - see appendix for reconciliation).

At September 30, 2014 NeoStem's cash and cash equivalents, and marketable securities totaled \$32.8 million, which includes \$15.0 million of gross loan proceeds from Oxford Finance LLC in September 2014, and the concurrent \$3.1 million repayment of NeoStem's existing mortgage payable.

Appendix

Use of Non-GAAP Financial Measures

The Company uses Net Loss Excluding Non-Cash Charges as a non-GAAP financial measure in evaluating its performance. This measure represents net loss, less equity-based compensation, depreciation and amortization, and other non-cash adjustments included in net loss. The Company believes that providing this measure to investors provides important supplemental information of its performance and permits investors and management to evaluate the core operating performance and cash utilization of the Company by excluding the use of these non-cash adjustments. Additionally, the Company believes this information is frequently used by securities analysts, investors and other interested parties in the evaluation of performance. Management uses, and believes that investors benefit from, this non-GAAP financial measure in assessing the Company's operating results, as well as in planning, forecasting and analyzing future periods.

Net Loss Excluding Non-Cash Charges has limitations as an analytical tool, and investors should not consider this measure in isolation, or as a substitute for analysis of the Company's results as reported under generally accepted accounting principles in the United States ("U.S. GAAP"). For example, this measure does not reflect the Company's cash expenditures, future requirements for capital expenditures, contractual commitments, or cash requirements for working capital needs. Although depreciation and amortization are non-cash charges, the assets being depreciated or amortized often will have to be replaced in the future, and Net Loss Excluding Non-Cash Charges does not reflect any cash requirements for such replacements. Given these limitations, the Company relies primarily on its U.S. GAAP results and uses the Net Loss Excluding Non-Cash Charges measure only as a supplemental measure of its financial performance and cash utilization.

GAAP to Non-GAAP Reconciliation

Net Loss Excluding Non-Cash Charges Reconciliation

(in millions)	Nine Months Ended	
	September 30, 2014	September 30, 2013
Net loss	\$ (43.8)	\$ (26.8)
Equity-based compensation	8.9	5.4
Depreciation and amortization	1.6	1.2
Changes in fair value of derivative liability	(0.0)	0.0
Changes in acquisition-related contingent consideration	1.1	-
Bad debt recovery	(0.0)	(0.2)
Deferred income taxes	0.1	0.5
Accretion on marketable securities	0.0	0
Net Loss Excluding Non-Cash Charges	\$ (32.1)	\$ (19.9)

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements reflect management's current expectations, as of the date of this press release, and involve certain risks and uncertainties. Forward-looking statements include statements herein with respect to the successful execution of the Company's business strategy, the Company's ability to develop and grow its business, the successful development of cellular therapies with respect to the Company's research and development and clinical evaluation efforts in connection with the Company's Targeted Immunotherapy Program, Ischemic Repair Program, Immune Modulation Program and other cell therapies, the future of the regenerative medicine industry and the role of stem cells and cellular therapy in that industry, the performance and planned expansion of the Company's contract development and manufacturing business. The Company's actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors. Factors that could cause future results to materially differ from the recent results or those projected in forward-looking statements include the "Risk Factors" described in the Company's Annual Report on Form 10-K filed with the Securities and

Exchange Commission ("SEC") on March 13, 2014, the Company's Current Report on Form 8-K filed with the SEC on May 8, 2014 and in the Company's other periodic filings with the SEC. The Company's further development is highly dependent on future medical and research developments and market acceptance, which is outside its control.

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**INVESTOR
PRESENTATION**

NASDAQ: NBS
NOVEMBER 2014



TRANSFORMING MEDICINE

FORWARD-LOOKING STATEMENTS



This presentation contains "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act of 1995, as well as historical information. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or industry results, to be materially different from anticipated results, performance or achievements expressed or implied by such forward-looking statements. When used in this 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. We remind readers that forward-looking statements are merely predictions and therefore inherently subject to uncertainties and other factors and involve known and unknown risks that could cause the actual results, performance, levels of activity or our achievements or industry results, to be materially different from any future results, performance levels of activity or our achievements or industry results expressed or implied by such forward-looking statements. Such forward looking statements appear in this presentation. Factors that could cause our actual results to differ materially from anticipated results expressed or implied by forward-looking statements include, among others:

- our ability to obtain sufficient capital or strategic business arrangements to fund our operations and expansion plans, including meeting our financial obligations under various licensing and other strategic arrangements, the funding of our clinical trials for product candidates in our development programs for our Targeted Cancer Immunotherapy Program, our Ischemic Repair Program and our Immune Modulation Program, and the commercialization of the relevant technology;
- our ability to build and maintain the management and human resources infrastructure necessary to support the growth of our business;
- our ability to integrate our acquired businesses successfully and grow such acquired businesses as anticipated, including expanding our PCT business internationally;
- whether a large global market is established for our cellular-based products and services and our ability to capture a meaningful share of this market;
- scientific and medical developments beyond our control;
- our ability to obtain and maintain, as applicable, appropriate governmental licenses, accreditations or certifications or comply with healthcare laws and regulations or any other adverse effect or limitations caused by government regulation of our business;
- whether any of our current or future patent applications result in issued patents, the scope of those patents and our ability to obtain and maintain other rights to technology required or desirable for the conduct of our business; our ability to commercialize products without infringing the claims of third party patents;
- whether any potential strategic or financial benefits of various licensing agreements will be realized;
- the results of our development activities, including the results of our planned Intus Phase 3 clinical trial of DC/TC being developed to treat metastatic melanoma, our PreSERVE Phase 2 clinical trial of NBS10 (AMR-001) being developed to treat acute myocardial infarction and planned clinical trials;
- our ability to complete our other planned clinical trials (or initiate other trials) in accordance with our estimated timelines due to delays associated with enrolling patients due to the novelty of the treatment, the size of the patient population and the need of patients to meet the inclusion criteria of the trial or otherwise;
- the other factors discussed in "Risk Factors" in our Form 10-K filed with the Securities and Exchange Commission ("the SEC") on March 13, 2014, and elsewhere in the Annual Report on Form 10-K; and
- the Company's acquisition of California Stem Cell, Inc. ("CSC Acquisition") and the ongoing operations associated with this new business will subject the Company to additional risks. Our Current Report on Form 8-K filed on May 8, 2014 reporting the closing of the CSC Acquisition contains a discussion of the risk factors related to the CSC Acquisition and our new Targeted Immunotherapy Program.

The factors discussed herein, including those risks described in Item 1A. "Risk Factors" in the Company's Annual Report on Form 10-K filed with the SEC on March 13, 2014, the "Risk Factors" described in the Current Report on Form 8-K filed by the Company on May 8, 2014 and in the Company's other periodic filings with the Securities and Exchange Commission (the "SEC") which are available for review at www.sec.gov under "Search for Company Filings" could cause actual results and developments to be materially different from those expressed or implied by such statements. All forward-looking statements attributable to us are expressly qualified in their entirety by these and other factors. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. Except as required by law, the Company undertakes no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.



NEOSTEM COMPANY OVERVIEW

- Integrated biotechnology company with a strong pipeline based on multiple platform technologies, that includes Phase 2 and 3 assets, and a revenue-generating contract development and manufacturing service business
- Headquarters in New York City
- GMP-compliant facilities in Allendale, NJ; Mountain View, CA; and Irvine, CA
- 168 employees as of September 30, 2014
- Nasdaq CM: NBS
- Market cap: \$186 MM*
- \$32.8 MM in cash and marketable securities of September 30, 2014

* As of October 15, 2014, based on a \$5.26 share price



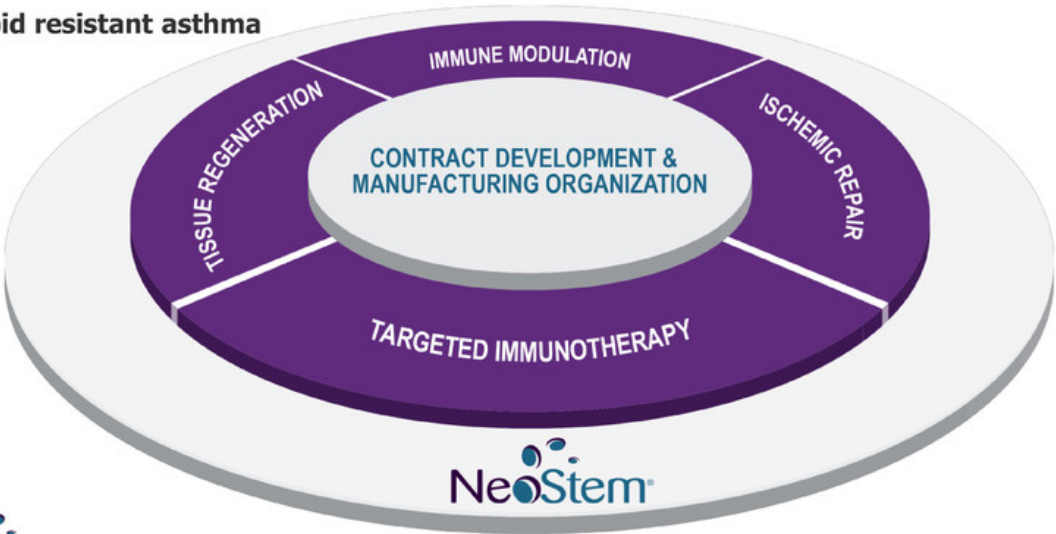
OUR VALUE PROPOSITION



A LATE STAGE CLINICAL PIPELINE AND A REVENUE-GENERATING SERVICE BUSINESS IN CELL THERAPY

TARGET INDICATIONS INCLUDE:

- Stage IV and recurrent Stage III melanoma
- Acute myocardial infarction
- Type 1 diabetes
- Steroid resistant asthma



MANAGEMENT HIGHLIGHTS



Robin Smith, MD
Chief Executive Officer

- Leading NeoStem since 2006, completed six acquisitions and one divestiture

Robert Dickey IV
Chief Financial Officer

- Former investment banker (Lehman Brothers)
- Former CFO at StemCyte, a stem cell company

Douglas W. Losordo, MD
Chief Medical Officer

- Leader in cell therapy research and renowned cardiologist (Baxter, Northwestern University)

Andrew L. Pecora, MD
Chief Visionary Officer

- Chief Innovations Officer at John Theurer Cancer Center
- Co-founder of PCT

Robert A. Preti, PhD
Chief Scientific Officer, President of PCT

- Leading authority on cell engineering (30+ papers published)
- Co-founder of PCT

Stephen W. Potter
Executive Vice President

- Former Senior VP Operations & Corporate Development, Osiris Therapeutics (approval of Prochymal®, first-ever stem cell drug therapy)
- Genzyme, DuPont Pharmaceuticals, Booz Allen & Hamilton



DEVELOPMENT HIGHLIGHTS: MULTIPLE PLATFORM TECHNOLOGIES



A PORTFOLIO OF CELL THERAPY PRODUCTS IN DEVELOPMENT THAT LEVERAGE THE BODY'S NATURAL ABILITY TO HEAL AND FIGHT DISEASE



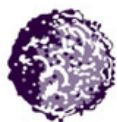
**TARGETED CANCER
IMMUNOTHERAPY
PROGRAM**

- Using DC/TC Technology



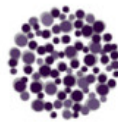
**IMMUNE
MODULATION
PROGRAM**

- Using T Regulatory Cell Technology



**ISCHEMIC
REPAIR
PROGRAM**

- Using CD34 Cell Technology



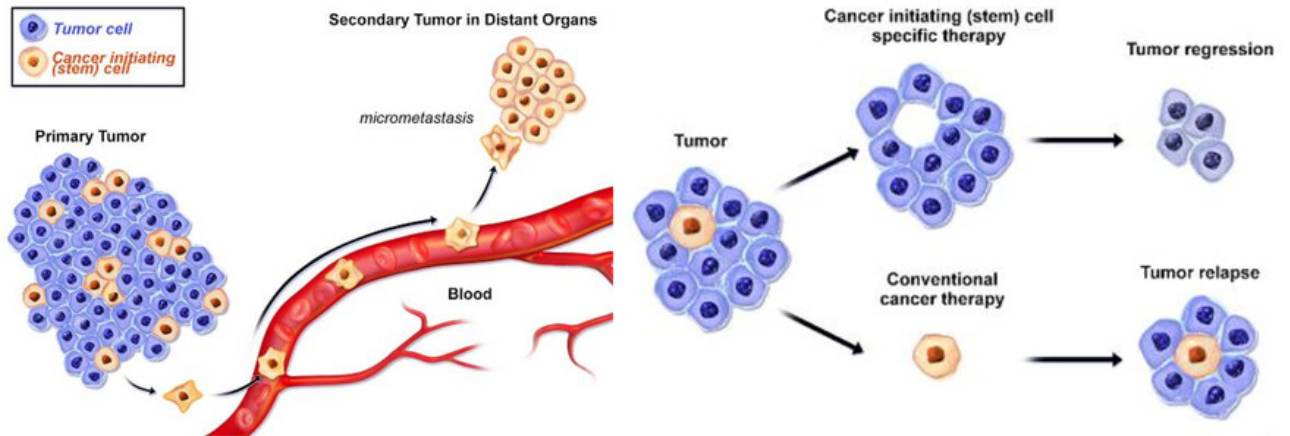
**TISSUE
REGENERATION
PROGRAM**

- Using VSEL™ Technology and Stem Cell Derived Growth Factors

TARGETED CANCER IMMUNOTHERAPY PROGRAM RATIONALE



Cancer initiating (stem) cells* can move through the blood stream to form new metastases and grow to form new tumors



- Once isolated from patient's tumor, cancer initiating cells provide potent signature antigens to educate and direct the immune system
- Our immunotherapy program uniquely targets the patient's cancer initiating cells which are otherwise capable of reconstituting the tumor



* These cells are defined as invasive migratory cancer initiating cells capable of reconstituting and developing new tumors

FIRST TARGET INDICATION: MELANOMA



BASICS OF MELANOMA

- Most lethal form of skin cancer
- Most often caused by unrepaired DNA damage to skin cells from UV radiation
- 76,100 estimated new cases per year in U.S.¹
- Kills an estimated 9,710 in U.S. annually¹

SURVIVAL RATE

- Stage IV metastatic melanoma – 15% five-year survival rate with current therapies²

CURRENT MAJOR-MARKET* LANDSCAPE FOR MELANOMA

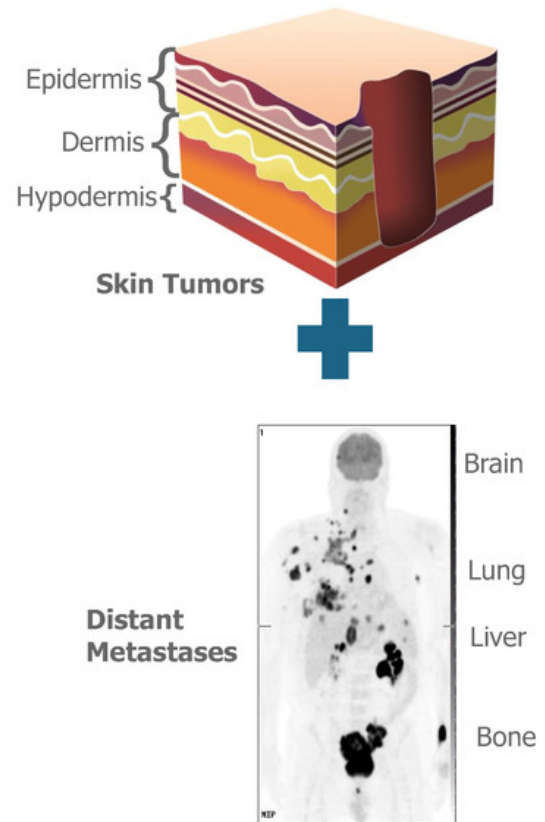
- \$950 million market size
- 76% of cost is spent on immunotherapies

1. National Cancer Institute – 2014 SEER

2. AJCC Cancer Staging 2010 (based on 17 academic centers) (Five year data for recently approved melanoma immunotherapies is not yet reflected)

All other data from *Decision Resources Malignant Melanoma – 2013 Report*

* U.S., Europe and Japan in 2012



MELANOMA: STANDARD OF CARE

SUBOPTIMAL EFFICACY, POOR TOLERABILITY, HIGH COST



THERAPY	2 YR OVERALL SURVIVAL	SIDE EFFECTS	ESTIMATED COST
Proleukin (Interleukin-2) <i>Prometheus Labs</i>	25% ¹	Capillary Leak Syndrome Impaired Neutrophil Function Disseminated Infection Sepsis	>\$100,000
Yervoy (Ipilimumab) (CTLA-4 inhibitor) <i>Bristol Myers – Squibb</i>	28% ²	Enterocolitis Hepatitis Dermatitis Neuropathy Endocrinopathy GI Disorders	>\$100,000
Oral BRAF inhibitors & MEK inhibitors	28% ³	Cutaneous Malignancies Hypersensitivity Reactions Tumor Promotion in BRAF wild-type QT Prolongation Hepatotoxicity	>\$100,000
Chemotherapy	15% ⁴	Anemia Fatigue Risk of Infection Nausea/Diarrhea/Constipation	~\$50,000

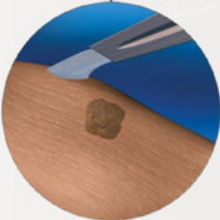
1. Eton *JCO* 2002, Atkins *JCO* 2008
 2. Hodi *NEJM* 2010, Robert *NEJM* 2010, Wolchok *Ann Oncol* 2013
 3. Estimated
 4. Chapman *JCO* 1999, Middleton *JCO* 2000, Ranson *JCO* 2007, Robert *NEJM* 2011, Chapman *NEJM* 2011
 (Derived from a range of 9 – 20%)



TARGETED CANCER IMMUNOTHERAPY TREATMENT PROCESS

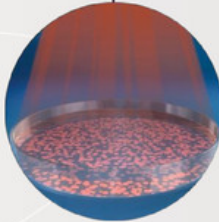


Step 1



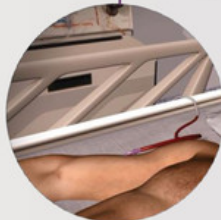
STEP 1:
Treatment begins with the surgical resection of the patient's tumor

Step 2



**STEP 2:
(DAY 0 - WEEK 6)**
The cancer initiating (stem) cells from the tumor are isolated, expanded, and irradiated to render them inactive

Step 3



**STEP 3:
(PRIOR TO WEEK 6)**
Patient undergoes leukapheresis, a procedure in which monocytes are extracted from circulating blood

Step 4



STEP 4: (WEEK 6)
Immature dendritic cells, derived from monocytes, are exposed to the irradiated cancer initiating cells and learn to identify cancer initiating cells based on their antigen signature

Step 5



**STEP 5:
(WEEK 6 - WEEK 8)**
Partially matured, antigen-loaded dendritic cells are cryopreserved, quality controlled, then shipped to the clinical site

Step 6

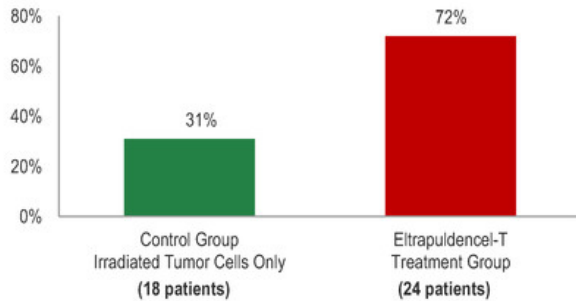


STEP 6:
Treatment begins (eight injections administered over six months)

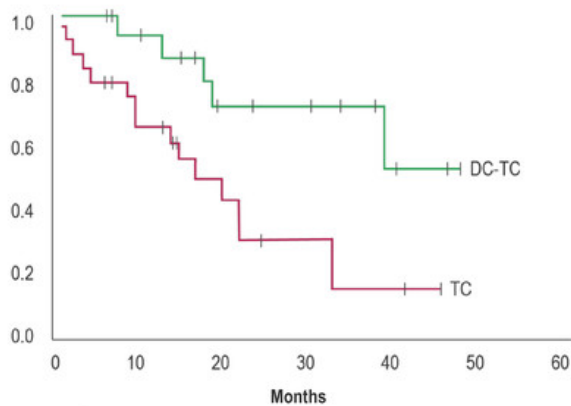
PHASE 2 RESULTS FOR ELTRAPULDENCEL-T FOR METASTATIC MELANOMA



2 YEAR OVERALL SURVIVAL



PROPORTION SURVIVING



Dillman, et al. *Journal Immunotherapy* 2012

TRIAL DESIGN:

- Treatment group: EltrapuldenceL-T (autologous dendritic cells pulsed with irradiated tumor cells in GM-CSF)
- Control group: Irradiated tumor cells only
- Stratified by whether regional or distant metastatic disease and whether measurable disease.
- 80% power to detect 40% difference in survival. 90% power to detect a 50% difference in survival.
- P = 0.007
- Hazard ratio = 0.27

TRIAL RESULTS:

- First accrual Oct. 2007
- Last randomized Feb. 2011
- 42 patients randomized
- **No serious adverse events** related to immunotherapy
 - Minor local injection site reactions

FEATURES AND INTENDED EFFECTS OF TARGETED CANCER IMMUNOTHERAPY PROGRAM



FEATURES:

INTENDED EFFECTS:

Designed to present the entire spectrum of patient-specific antigens that are expressed on cancer initiating (stem) cells for the immune system to target	Designed to address cancer heterogeneity by including tumor-associated antigens unique to that patient
Designed to target the cancer initiating cells that express antigens associated with mutated cell lineages	Focuses on the fraction of tumor cells that cause recurrence and metastasis of cancer rather than on more differentiated cells
Designed to induce or enhance persistent T-cell immunity with activated dendritic cells	Potential for improved anti-tumor immune response compared to using tumor cells alone or specific tumor antigens as the source of tumor-associated antigens
Designed to act through natural anti-tumor pathways of humoral and cellular immunity	Potential for less toxicity compared to other anti-melanoma therapies

Adverse events seen in development to date:

- Serious adverse events in Phase 2 trials included AMI (1 patient), seizures (1 patient), acute myelogenous leukemia (1 patient), anaphylactoid reaction (1 patient) – judged unrelated to study participation
- Minor local injection site reactions in most patients



MELANOMA SCIENTIFIC ADVISORY BOARD



Robert Dillman, MD

SAB Administrative Co-Chairman

Vice President, Oncology, NeoStem

Andrew L. Pecora, MD

SAB Administrative Co-Chairman

Chief Visionary Officer, NeoStem

Hackensack University Medical Center

Michael B. Atkins, MD

Georgetown-Lombardi Comprehensive
Cancer Center

Lisa H. Butterfield, PhD

University of Pittsburgh

Kim Margolin, MD

Stanford University

Stephen J. O'Day, MD

Beverly Hills Cancer Center

Merrick I. Ross, MD

University of Texas M.D. Anderson Cancer
Center

Jedd D. Wolchok, MD, PhD

Memorial Sloan Kettering Cancer Center



INTUS PHASE 3 SPECIAL PROTOCOL ASSESSMENT (SPA) STUDY DESIGN



STUDY NAME



TARGET

Patients with Stage IV or recurrent Stage III metastatic melanoma

LOCATION

United States and potentially Australia & New Zealand, approximately 50 sites

DESIGN

Double blind, placebo controlled, randomized (2:1), intent to treat analysis, planned enrollment 250 evaluable patients; 80% power to detect 37.5% reduction in risk of death; Hazard ratio=0.625

ENDPOINT

Overall survival

TREATMENT GROUP

DC/TC (autologous dendritic cells pulsed with irradiated tumor cells in GM-CSF)

CONTROL GROUP

Autologous mononuclear cells (MC) in GM-CSF

SPECIAL PROTOCOL ASSESSMENT (SPA)

Suggests FDA is in agreement with the design, clinical endpoints and planned clinical analysis of this Phase 3 trial. Potential to serve as the basis for a Biologics License Application

FDA DESIGNATIONS

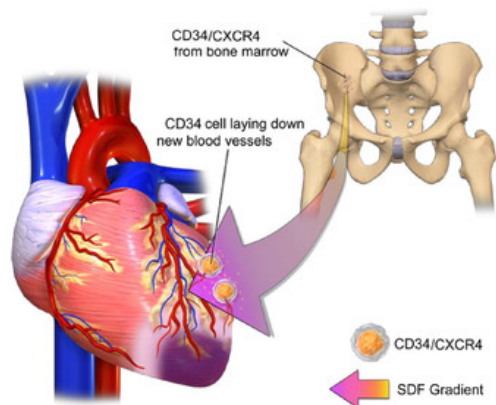
Fast Track Designation for metastatic melanoma and Orphan Drug Designation



ISCHEMIC REPAIR PROGRAM RATIONALE: TO ENHANCE THE BODY'S NATURAL REPAIR MECHANISM



- Ischemia occurs when the supply of oxygenated blood is restricted
- Program seeks to reverse this restriction through development and formation of new blood vessels
- CD34/CXCR4 expressing cells have been shown to be capable of inducing the development and formation of new blood vessels and preventing heart cell death
- The same natural repair mechanism applies to multiple areas of vascular insufficiency such as:
 - ▶ Acute myocardial infarction (AMI)
 - ▶ Traumatic brain injury
 - ▶ Chronic heart failure
 - ▶ Critical limb ischemia

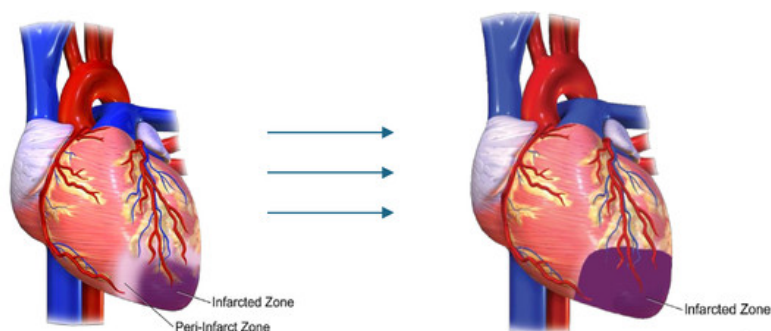


FIRST TARGET INDICATION: STEMI



- Following a heart attack, apoptosis and progressive cardiomyocyte loss leads to infarct expansion
- ST segment Elevation MI (STEMI) patients are at a high risk of a progressive deterioration in heart muscle function that leads to worsening of cardiac output, morbidity and mortality
- 240,000 STEMI patients/year in US
- Incidence and prevalence is ~1/3 of total AMI events
- Average age of AMI patient in US is 66
- > \$37 billion hospital cost/year in US for AMI

THE NATURAL PROGRESSION OF DISEASE POST-STEMI



STEMI: STANDARD OF CARE

INVASIVE, ASSOCIATED MORBIDITY & MORTALITY



■ Emergency care:

- ▶ Administration of antithrombotic therapy, aspirin, beta-blocker, nitroglycerin, and/or morphine
- ▶ Percutaneous coronary intervention - coronary angioplasty and stenting

■ Home care:

- ▶ Aspirin, anti-clotting medication, beta-blocker
- ▶ Cholesterol-lowering therapy and lifestyle changes

■ Prognosis:

- ▶ Despite improvements in care, prognosis for STEMI unchanged over past 10 years according to AHA¹
- ▶ One year mortality of 10%²
- ▶ 30-day hospital readmission after STEMI is common, even in optimally treated patients³

1. AHA 2013 Statistical Update, Circulation 2013

2. "Prognosis after myocardial infarction" - www.uptodate.com/contents/prognosis-after-myocardial-infarction

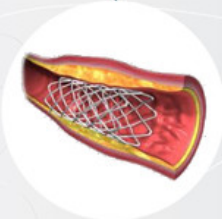
3. Duke Clinical Research Institute



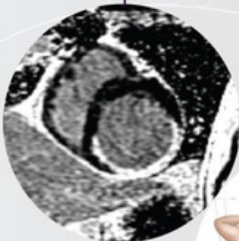
NBS10 TREATMENT PROCESS*



DAY 1 DAY 2 DAY 3 DAY 4 DAY 5 DAY 6 DAY 7 DAY 8 DAY 9 DAY 10 DAY 11



DAY 1:
Patient comes to emergency room with heart attack and receives stent

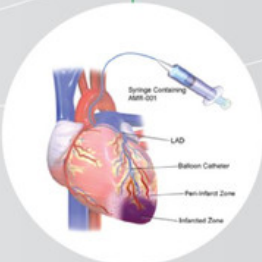


DAY 4:
Cardiac magnetic resonance to assess ventricular function



DAY 4-9:
Mini bone marrow procedure to harvest cells

DAY 5-9:
6-8 hour cell separation process to isolate CD34/CXCR4 cells



DAY 6-11:
Injection of cell therapy into the infarct-related artery

*Process as per protocol for PreSERVE Phase 2 study

PHASE 1 RESULTS POINT TO NBS10 POTENTIAL



DOSE RESPONSE CORRELATED WITH MOBILE CD34 CELLS

Patients dosed \geq the threshold dose of 10 million cells showed significant improvement in perfusion

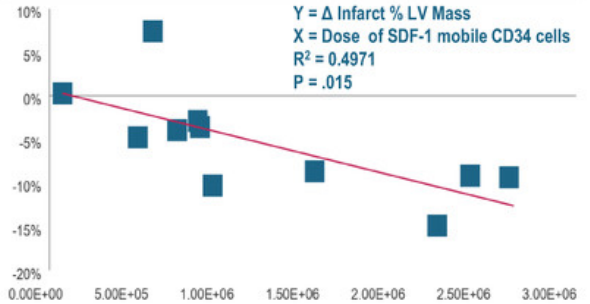
RTSS (HYPOPERFUSION)				
COHORT	BASE LINE	6 MONTHS	DELTA	% CHANGE
Control	259.0	273.5	+14.5	+5.6
5M Cells	714.2	722.0	+7.8	+1.1
10M Cells	998.6	635.8	-362.8	-36.4
15M Cells	584.0	462.0	-122.0	-20.9

- No action/changes from DSMB after interim reviews

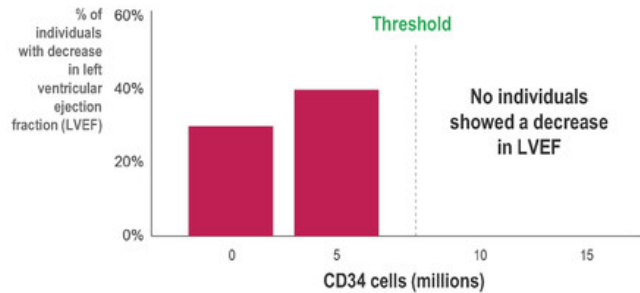
Quyyumi *AmHLJ* 2011 and data on file



Increasing doses of CD34/SDF-1 mobile cells reduced the size of the infarct region as measured by CMR



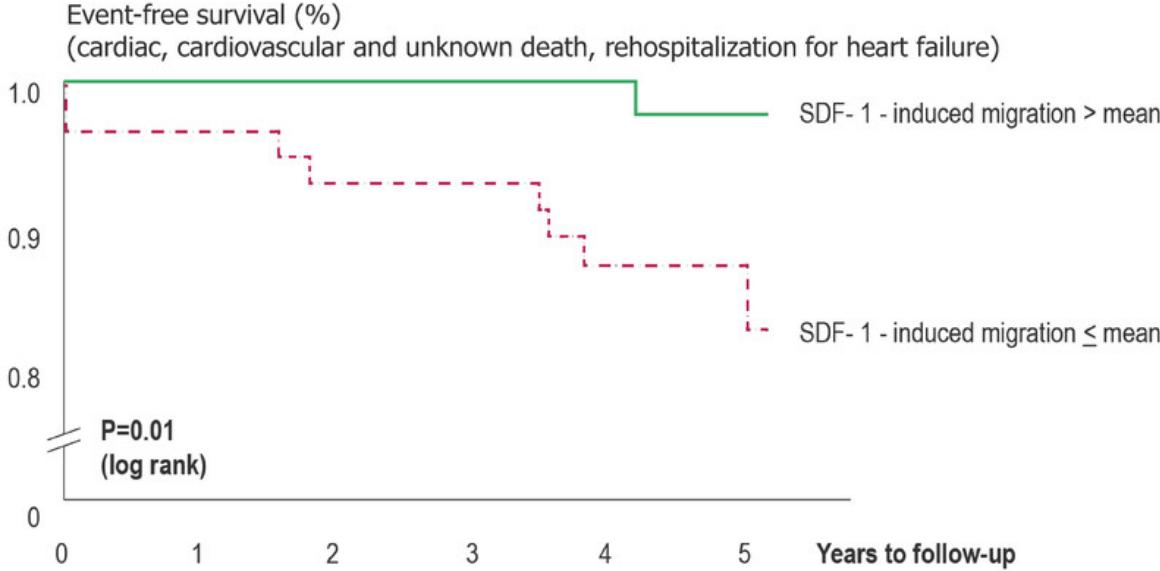
At threshold dose of 10 million cells or more, no individuals showed decrease in LVEF



MIGRATORY CAPACITY OF ADMINISTERED CD34 CELLS ASSOCIATED WITH EVENT-FREE SURVIVAL POST AMI



- Recently published study demonstrated administration of autologous SDF-1 migratory CD34 cells, significantly reduces cumulative incidence of major adverse clinical cardiac events following acute myocardial infarction (AMI)



Assmus, B., et al. (2014) Long-term clinical outcome after intracoronary application of bone marrow-derived mononuclear cells for acute myocardial infarction: migratory capacity of administered cells determines event-free survival. *European Heart Journal*



FEATURES AND INTENDED EFFECTS OF NBS10



FEATURES:

INTENDED EFFECTS:

CD34/CXCR4 cells are designed to target viable tissue surrounding the infarcted myocardium (peri-infarct zone) after administration and persist	Mobile cells migrate to targeted tissues
Autologous cells take up residence in the peri-infarct zone, with potential to promote angiogenesis	No immunogenicity risk; Potential for improved blood flow
Cell preparation has a 72 hour shelf life and is infused into patient 5 to 11 days following an acute myocardial infarction (AMI)	Cells are introduced after pro-inflammatory "hot phase" but prior to permanent scar formation; Enhanced likelihood of healthy tissue formation
Infusion into infarct related artery (IRA), not myocardium	Designed to be safer and permit greater distribution

Adverse events seen in treated Phase 1 patient population:

- One case of congestive heart failure 1 year after cell infusion
- One patient was diagnosed with chronic myelogenous leukemia (CML)
- Two cases of re-stenosis and thrombosis

PRESERVE PHASE 2 STUDY: ENROLLMENT COMPLETED WITH ANTICIPATED DATA RELEASE NOV. 17, 2014



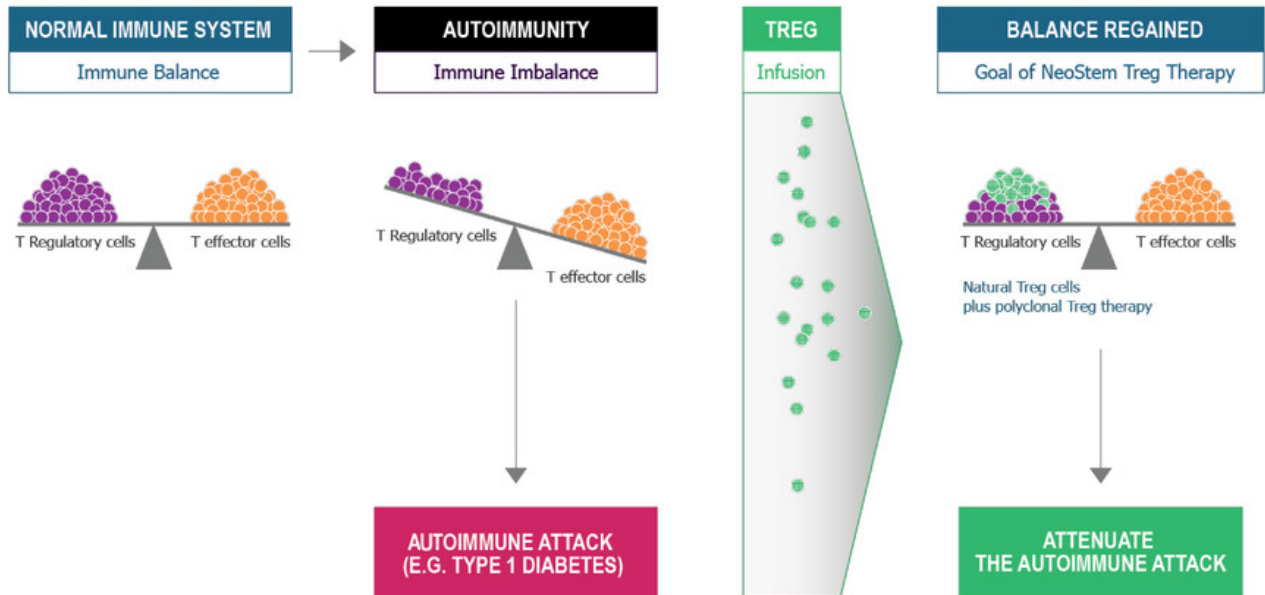
TARGET	Post-AMI patients
KEY INCLUSION CRITERIA	Confirmation of ST Elevation MI (STEMI); ejection fraction \leq 48% at day 4; state of the art care post stenting
LOCATION AND NUMBER OF SUBJECTS	United States, 60 centers, 160 patients (enrollment completed)
DESIGN	Double blind, placebo controlled, randomized (1:1)
PRIMARY ENDPOINT	Change in cardiac perfusion (RTSS by SPECT) from baseline to 6 months
OTHER ENDPOINTS	Secondary endpoints to determine preservation of cardiac function and clinical events: <ul style="list-style-type: none">■ CMR to measure LVEF, LVESV, LVEDV, regional myocardial strain, infarct/peri-infarct regional wall motion abnormalities, and infarct size (baseline and 6 months)■ Quality of Life measures: (KCCQ & SAQ)■ Reduction in cumulative MACE and other adverse clinical cardiac events at 6, 12, 18, 24, and 36 months
TREATMENT	Single dose via infarct related artery with minimum dose for release \geq 10MM CD34+ cells



IMMUNE MODULATION PROGRAM RATIONALE



TREG THERAPY REPRESENTS A NOVEL APPROACH FOR RESTORING IMMUNE BALANCE BY ENHANCING T REGULATORY CELL NUMBER AND FUNCTION¹

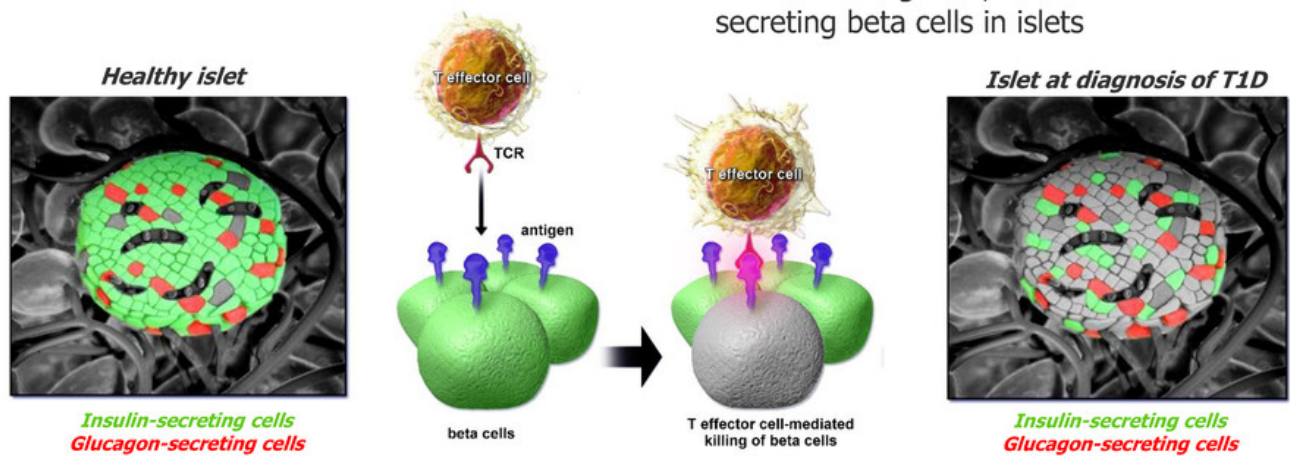


1. Chai, Jian-Guo et al, *Journal of Immunology* 2008; 180;858-869

FIRST TARGET INDICATION: DIABETES MELLITUS TYPE-1 (T1D)



- Also called insulin dependent diabetes or juvenile diabetes
- Affects >34 million worldwide, 1 in 300 children and more adults
- Economic burden of T1D in the U.S. is estimated at \$14.9 billion
- Autoimmune destruction of insulin-producing (beta cells) of the pancreas
- Diabetes is leading cause of kidney failure, new cases of adult blindness, and non-traumatic lower-limb amputations
- Results in total insulin deficiency
- At time of diagnosis, there are still insulin-secreting beta cells in islets



T1D: STANDARD OF CARE

LIFETIME INSULIN DEPENDENCY, COMORBIDITIES

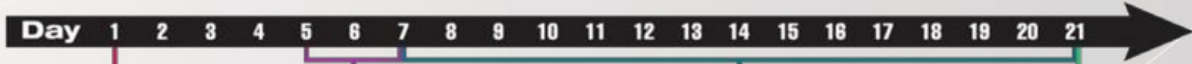


- There is no treatment for T1D – only lifelong insulin therapy to help avoid complications
 - 2 or more injections daily
 - \$2 billion estimated market size for insulin sales in 2017 for T1D alone¹
- Complications and comorbidities occur, even in patients with good diabetes control:
 - Chronic kidney disease and end-stage renal disease
 - Diabetic macular edema
 - Diabetic ulcers
 - Lipid abnormalities and hypertension
 - Increased risk heart attack and stroke
 - Diabetic neuropathy



1. Burn, Nat Rev Drug Discov, 2010

T1D TREG TREATMENT PROCESS



DAY 1:
Screening and enrollment



DAY 5-7:
Blood draw from patient

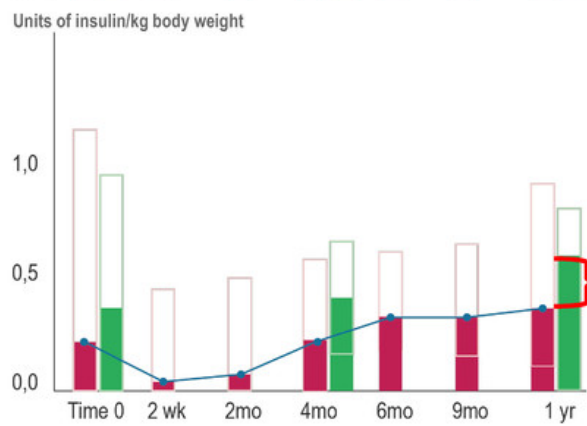
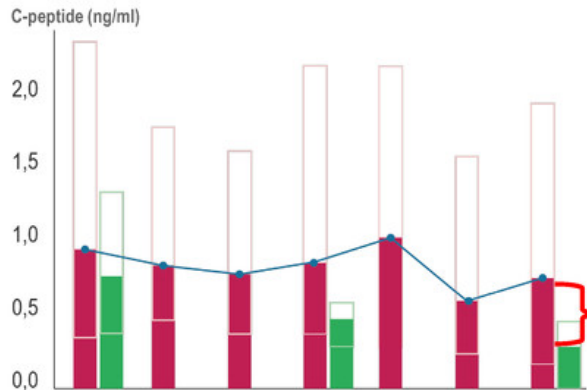


DAY 7-21:
Manufacturing including expansion



DAY 21:
Infusion of Treg therapy to patient

ADMINISTRATION OF REGULATORY T CELLS PRESERVES BETA CELL FUNCTION IN T1D IN CHILDREN*



- First human evidence of therapeutic effect of autologous Treg therapy protection of pancreatic function in new onset T1D in children

- One year follow-up: evidence that Treg therapy preserves function of pancreatic islets cells

▶ C-peptide levels stabilized

▶ Reduction of insulin requirements

- 20% of patients able to come off of exogenous insulin four months after treatment

■ Green bars represent control group

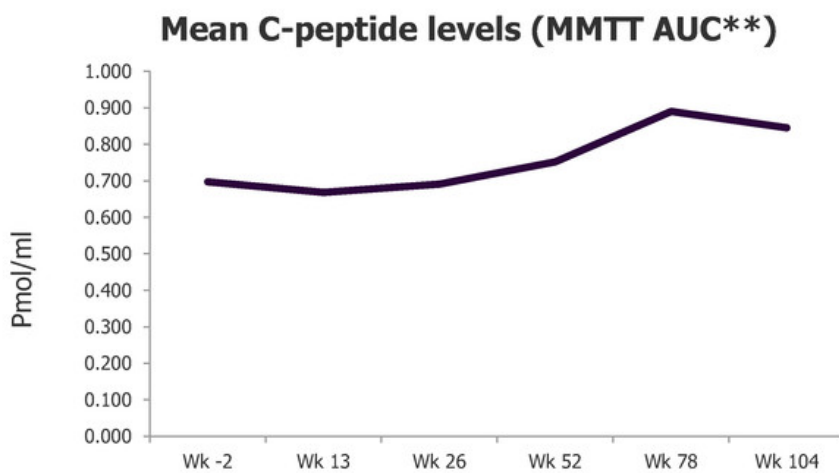
* Children aged 8-16 in study
 Regulatory T cells expressing CD4+CD25highCD127-
 Marek-Trzonkowska N et al. Diabetes Care 2012;35:1817-1820
 Marek-Trzonkowska N et al. Clinical Immunology 2014



ADMINISTRATION OF REGULATORY T CELLS* APPEARS TO BE SAFE IN ADULTS WITH ESTABLISHED T1D



- Preliminary data indicates safety and tolerability
- Infused Tregs detected in peripheral circulation for over 6 months
- Results complement safety and efficacy data from new onset trial in children and informs design of NeoStem's Phase 2 trial in new onset T1D



Summary data of 4 dose cohorts (14 patients) through completed follow up through 104 weeks

* Regulatory T cells expressing CD4⁺CD25^{high}CD127⁻
** MMTT = Mixed Meal Tolerance Test
AUC = Area under the curve

Gitelman et al, American Diabetes Association Abstract, 2014





FEATURES AND INTENDED EFFECTS OF IMMUNE MODULATION PROGRAM



FEATURES:

INTENDED EFFECTS

Tregs are natural part of immune system	Potential for positive safety profile
Tregs shown in pre-clinical studies to be important in modulating autoimmune disorders and allergic conditions	Platform may be applicable to steroid resistant asthma, rheumatoid arthritis, lupus, multiple sclerosis, organ transplant rejection, graft vs. host disease
Proprietary technology with minority interest by Becton Dickinson 	Intellectual property protection and CMC section that can be used for the investigation of multiple indications
Collaboration with University of California, San Francisco and laboratory of Dr. Jeffrey Bluestone 	Accelerated development by utilizing already-generated UCSF Phase 1 data

Adverse events seen in development to date:

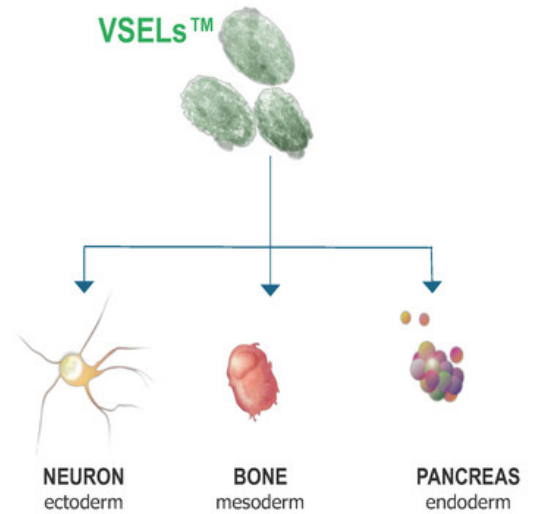
- Serious adverse events in Phase 1 T1D trial included hypoglycemia (2 events in 1 patient) and diabetic ketoacidosis (1 patient) – judged unrelated or unlikely to be related to study participation

TISSUE REGENERATION PROGRAMS



VSEL™ TECHNOLOGY: POTENTIAL TO REPAIR DAMAGED TISSUE

- Evaluating therapeutic potential of very small embryonic-like stem cells (VSELS™)
- Research suggests multipotency and multi-lineage differentiation into all basic cell types (mesoderm, ectoderm, endoderm)
- Exploring the development for retinal repair and the treatment of chronic wounds
- \$4.5 million of grants toward preclinical VSEL™ research



DERMATOLOGY PROGRAM: TOPICAL PRODUCT BASED ON STEM CELL DERIVED GROWTH FACTORS

- Exploring potential for fine lines and wrinkles, psoriasis, and wound care



INTELLECTUAL PROPERTY



TARGETED CANCER IMMUNOTHERAPY PROGRAM

- 5 issued patents and 35 pending patents in the U.S. and OUS with coverage including:
 - ▶ Stem cell growth medium and methods of making and using same; Antigen-presenting cancer vaccines; Individualized high purity carcinoma initiating (stem) cells for target indications, methods and use of same; and rapid methods to produce high purity cancer initiating (stem) cells

ISCHEMIC REPAIR PROGRAM

- Broad and growing patent portfolio supports cardiac conditions and a broad range of other conditions caused by underlying ischemia
- 17 granted composition of matter and methods patents
- 19 patents pending

IMMUNE MODULATION PROGRAM

- Exclusive rights to 23 issued patents and 9 pending patents covering isolation, activation, expansion and methods of treating or preventing certain conditions and/or diseases using Tregs in U.S. and major international markets
- Includes composition of matter patents and method patents

TISSUE REGENERATION (VSEL™ TECHNOLOGY)

- In-licensed from the University of Louisville the world-wide patent rights and know-how regarding the isolation, purification and therapeutic use of very small embryonic-like (VSEL™) stem cells



PCT PROVIDES OUTSOURCED MANUFACTURING CAPABILITIES TO CELL THERAPY INDUSTRY

ALSO ENABLES DEVELOPMENT OF INTERNAL PIPELINE

- High quality manufacturing capabilities with 15-year track record of success
- Proven efficiencies and reduced capital investment for customers through outsourcing
- Demonstrated regulatory expertise:
 - ▶ 50+ EU and U.S. regulatory filings;
 - ▶ All clinical trial phases including BLA submission and product approval by FDA
- Significant focus on innovation, engineering and automation
- EU product distribution requirement compliant
- Continuing to expand commercial capabilities in the U.S. and internationally



ALLENDALE, NEW JERSEY (30,000 ft²)
ISO Class 7 / Class 10,000 suites
ISO Class 6 / Class 1,000 suite
Recent expansion of clean room space

MOUNTAIN VIEW, CALIFORNIA (25,000 ft²)
ISO Class 7 / Class 10,000 suites
Recent expansion of clean room space

IRVINE, CALIFORNIA (12,500 ft²)
ISO Class 7 / Class 10,000 suites



FINANCIAL METRICS



MARKET METRICS

MARKET CAPITALIZATION¹	\$186M
STOCK PRICE²	\$5.26
52 WEEK RANGE²	\$4.56 - \$8.29
FLOAT¹	31.2M
INSIDER HOLDINGS¹	11.9%

FINANCIAL METRICS

REVENUE³	\$4.1M (Third Quarter)
CASH⁴	\$32.8M
COMMON SHARES OUTSTANDING¹	35.4M
WARRANTS¹	3.6M (avg. warrant exercise price of \$14.13)
OPTIONS¹	4.5M (avg. option exercise price of \$9.24)

1. As of October 15, 2014 (based on shares outstanding on September 30, 2014)

2. As of October 15, 2014

3. For the three months ended September 30, 2014

4. As of September 30, 2014 (includes marketable securities)



FUTURE GROWTH DRIVERS



DEVELOP NOVEL PROPRIETARY CELL THERAPY PRODUCTS

- Leverage unique capabilities for cost effective in-house product development
- Partner select programs at key inflection points
- Grow pipeline and capabilities through strategic acquisition

EXPAND REVENUE-GENERATING SERVICE BUSINESS

- Grow client base organically and through new service areas
- Expand manufacturing in U.S. and internationally
- Expand into cell therapy tools and technology market

CONTACT INFORMATION



NEOSTEM, INC.

NASDAQ: NBS

WWW.NEOSTEM.COM

ROBIN SMITH, MD, MBA

CHAIRMAN & CEO

PHONE: (212) 584-4174

EMAIL: RSMITH@NEOSTEM.COM



APPENDIX



BOARD OF DIRECTORS



Robin Smith, MD, MBA

Chairman of the Board

- MD – Yale; MBA – The Wharton School
- Formerly President & CEO IP2M, EVP & CMO HealthHelp
- Experience - Trustee of NYU Medical Center; Chairman of the Board of NYU Hospital for Joint Diseases (through November 2009) and Chairman of Stem for Life Foundation

Richard Berman

Independent Director

- BS and MBA – NYU; JD – Boston College
- Over 35 years of venture capital, management, M&A experience
- Experience – Current Board of Directors of Apricus Biosciences, Easylink Services International, Inc., Advaxis, Inc., Broadcaster, Inc., National Investment Managers

Drew Bernstein, CPA

Independent Director

- BS – University of Maryland Business School
- Licensed in State of New York; member AICPA, NYSSCPA and NSA
- Experience – Bernstein & Pinchuk LLP (member of BDO Seidman Alliance); PRC auditing; 200+ real estate transactions with \$3B+ aggregate value; accountant and business advisor

Martyn Greenacre, MBA

Independent Director

- BA – Harvard College; MBA – Harvard Business School
- Experience – Board and executive positions for multiple biopharmaceutical companies; Former CEO of Delsys Pharmaceutical Corporation and Zynaxis Inc; Chairman of the Board of BMP Sunstone Corporation

Steven M. Klosk

Independent Director

- BS Industrial & Labor Relations – Cornell; JD – New York Law School
- Experience – President, CEO & Director of Cambrex Corporation (leading provider of active pharmaceutical ingredients) since 2008 driving significant revenue growth during his tenure

Steven Myers

Independent Lead Director

- BS Mathematics – Stanford University
- Experience – Founder/Chairman/CEO SM&A (competition management services); career in aerospace and defense sectors supporting DoD & NASA programs

Andrew Pecora, MD, FACP

Director

- MD — University of Medicine and Dentistry of New Jersey
- Experience – Chief Innovations Officer, Professor and Vice President of Cancer Services at John Theurer Cancer Center at Hackensack University Medical Center, and Managing Partner of the Northern New Jersey Cancer Center

Eric Wei

Director

- BS – Mathematics & Economics – Amherst College; MBA – The Wharton School
- Experience – Founder/Managing Partner of RimAsia Capital partners (private equity); Formerly with Peregrine Capital, Prudential Securities, Lazard Freres, Citibank, Gilbert Global Equity Partners, and Crimson Asia Capital Partners



CONTRACT MANUFACTURING IS A SIGNIFICANT OPPORTUNITY



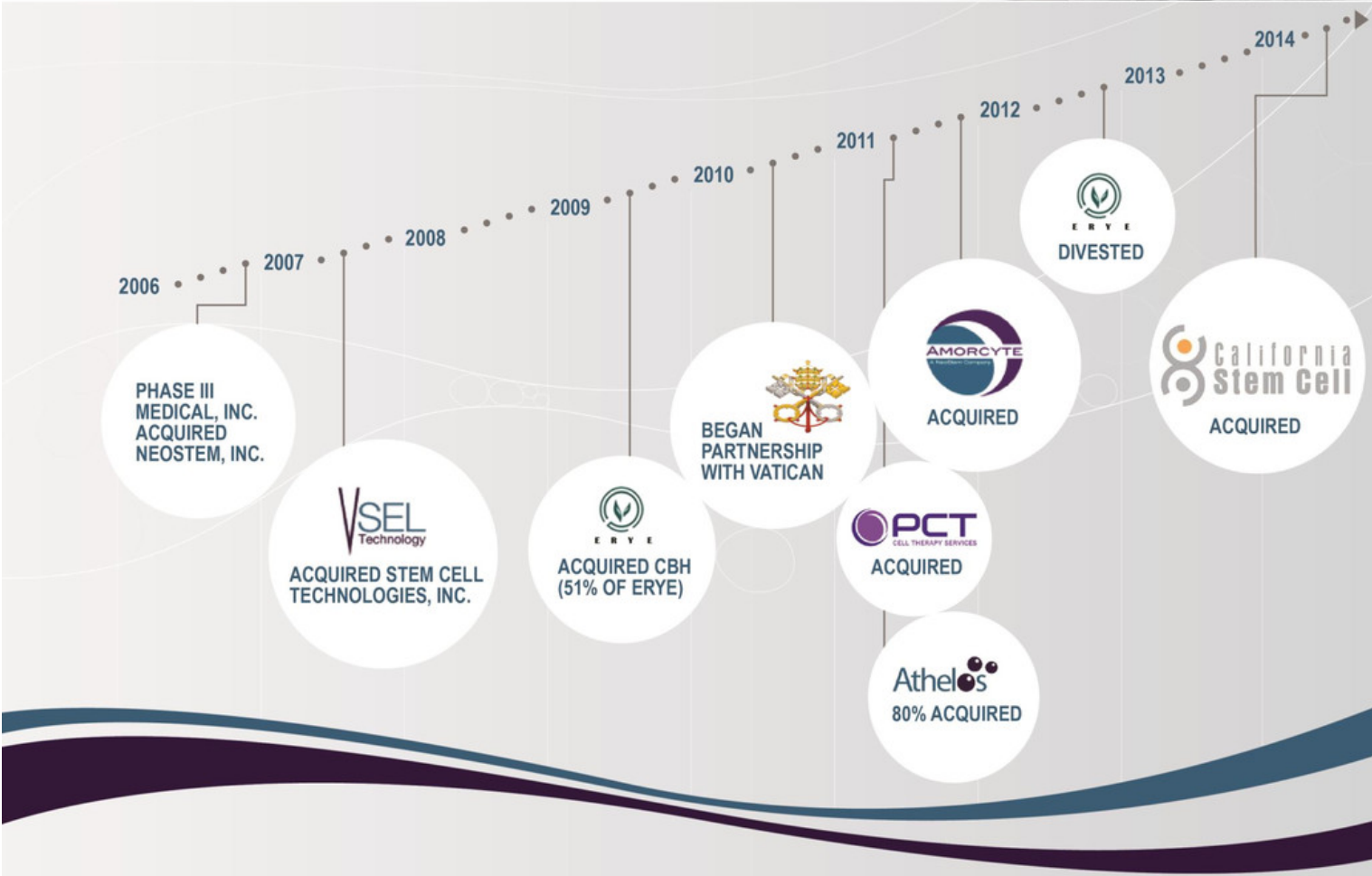
EXAMPLES OF CONTRACT SERVICES POTENTIAL FROM CONCEPTION TO COMMERCIALIZATION*

	LOW COMPLEXITY PRODUCT	MEDIUM COMPLEXITY PRODUCT	HIGH COMPLEXITY PRODUCT
PRECLINICAL DRUG DISCOVERY CONTRACT	12 to 18 Month Engagement \$50,000 to \$250,000	12 to 24 Month Engagement \$250,000 to \$500,000	24 to 36 Month Engagement \$500,000 to \$1,000,000
PHASE 1 CLINICAL TRIAL MANUFACTURING CONTRACT	6 to 12 Month Eng. 5 to 25 Units Produced \$250,000 to \$750,000	12 to 18 Month Eng. 25 to 50 Units Produced \$625,000 to \$1,250,000	12 to 24 Month Eng. 50 to 100 Units Produced \$1,000,000 to \$2,000,000
PHASE 2 CLINICAL TRIAL MANUFACTURING CONTRACT	12 to 18 Month Eng. 25 to 50 Units Produced \$625,000 to \$1,250,000	12 to 24 Month Eng. 100 to 200 Units Produced \$2,000,000 to \$4,000,000	18 to 36 Month Eng. 200 to 400 Units Produced \$3,000,000 to \$6,000,000
PHASE 3 CLINICAL TRIAL MANUFACTURING CONTRACT	12 to 18 Month Eng. 50 to 100 Units Produced \$1,000,000 to \$2,000,000	24 to 48 Month Eng. 200 to 400 Units Produced \$3,000,000 to \$6,000,000	24 to 48 Month Eng. 400 to 1,000 Units Produced \$4,000,000 to \$10,000,000
COMMERCIAL MANUFACTURING CONTRACT	Est. Peak Annual Sales 2,500 to 5,000 Units \$38M to \$75M / Yr.	Est. Peak Annual Sales 10,000 to 25,000 Units \$80M to \$200M / Yr.	Est. Peak Annual Sales 25,000 to 50,000 Units \$125 to \$250M / Yr.

*Based on industry experience and estimated potential future commercial manufacturing in the industry



**SINCE 2006, ACCESSED OVER \$193M
AND COMPLETED MULTIPLE M&A
TRANSACTIONS AND ONE DIVESTITURE**



CARDIOVASCULAR SCIENTIFIC ADVISORY BOARD



Douglas W. Losordo, MD, FACC, FAHA
SAB Administrative Chairman

Chief Medical Officer, NeoStem

Eugene Braunwald, MD, FRCP

Brigham & Women's Hospital

Bernard J. Gersh, MD, ChB, DPhil, FRCP

The Mayo Clinic

Dean J. Kereiakes, MD, FACC

The Christ Hospital Heart of Greater Cincinnati

Douglas L. Mann, MD, FACC

Washington University School of Medicine

Emerson C. Perin, MD, PhD, FACC

Texas Heart Institute

Bertram Pitt, MD

University of Michigan School of Medicine

Arshed Quyyumi, MD, FRCP, FACC,

Emory University School of Medicine

Edmund K. Waller, MD, PhD, FACP

Emory University School of Medicine

James T. Willerson, MD

Texas Heart Institute

Joseph Wu, MD, PhD

Stanford University School of Medicine



IMMUNE MODULATION PROGRAM ADVISORS



The Company accesses these experts to advise in the areas of diabetes, asthma, and other autoimmune conditions for its Immune Modulation Program.

Jeffrey Bluestone, PhD	University of California, San Francisco, Diabetes Center
William Busse, MD	University of Wisconsin
Mario Castro, MD, MPH	Washington University in St. Louis
David A. Horwitz, MD	University of Southern California
Robert Korngold, PhD	Hackensack University Medical Center
Robert J. Meyer, MD	Virginia Center for Translational and Regulatory Sciences
Robert S. Negrin, MD	Stanford University
Paul O'Byrne, MB	McMaster University
David Peritt, PhD	Hospira
Noel L. Warner, PhD	BD Biosciences
Prescott Woodruff, MD, MPH	University of California, San Francisco



VSEL™ TECHNOLOGY ACADEMIC COLLABORATORS



Mariusz Ratajczak, MD, PhD, Dsci

University of Louisville

Russell Taichman, DMD, DMSc

University of Michigan

Vincent Falanga, MD

Boston University

Michael Young, PhD

Schepens Eye Research Institute, Harvard Medical School

Kameran Lashkari, MD

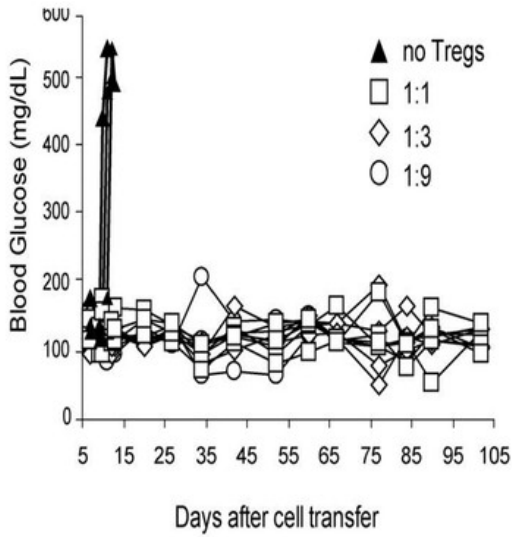
Schepens Eye Research Institute, Harvard Medical School

Song Li, PhD

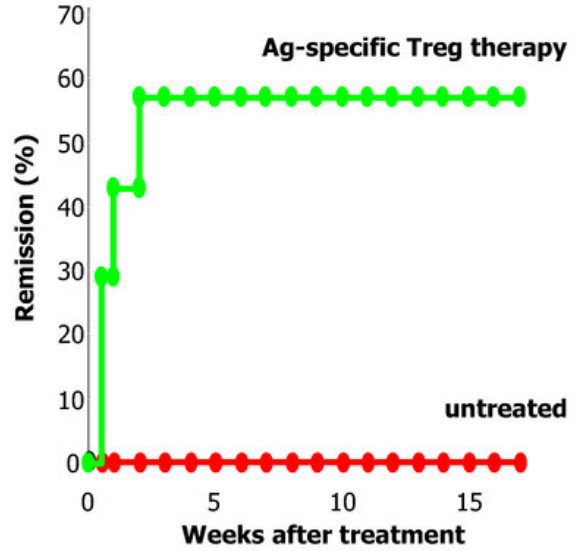
University of California, Berkeley



TREG IMMUNOTHERAPY WORKS IN MODEL OF T1D



Tregs effectively suppress diabetes



Ag-specific Tregs reverse diabetes

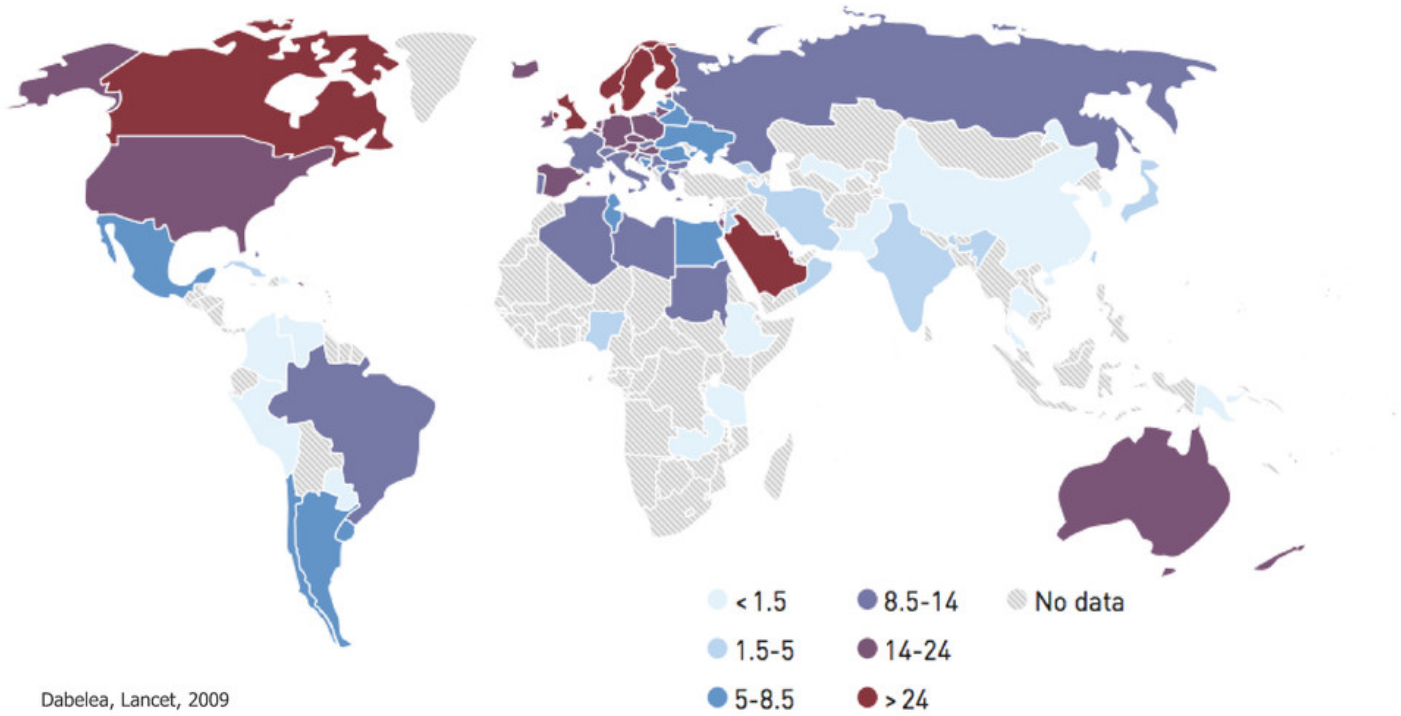
Tang, Bluestone, et al.



T1D IS ON THE RISE



NEW CASES OF T1D (0-14 YEARS) PER 100,000 CHILDREN, 2013:
CONCENTRATION IN DEVELOPED MARKETS



Dabelea, Lancet, 2009



ECONOMIC IMPACT OF T1D



THE ECONOMIC BURDEN OF T1D IN THE U.S. IS ESTIMATED AT \$14.9 BILLION¹

- Average economic burden per person with diabetes is larger for T1D vs T2D

PREVENTION IS KEY - MEDICAL COSTS ASSOCIATED WITH T1D INCREASE SUBSTANTIALLY WITH AGE AND DURATION OF DISEASE

- Annual medical costs per person increase with age at a much faster rate for those with T1D vs T2D
- For T1D the average medical cost per case increases from ~\$4,000 for people younger than age 44 to ~\$35,000 for the population age 65 and older
- Increased utilization of institutional care in elderly T1D patients

\$2 BILLION ESTIMATED MARKET SIZE FOR INSULIN SALES IN 2017

- For the T1D indication alone

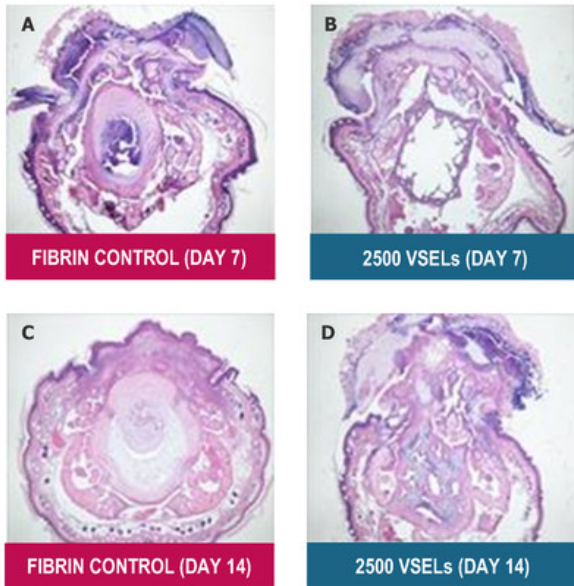
UNMET NEED FOR β -CELL PRESERVING/PREVENTATIVE TREATMENTS FOR T1D

1. Dall TM et al. *Population Health Management* 2009;12:103–110

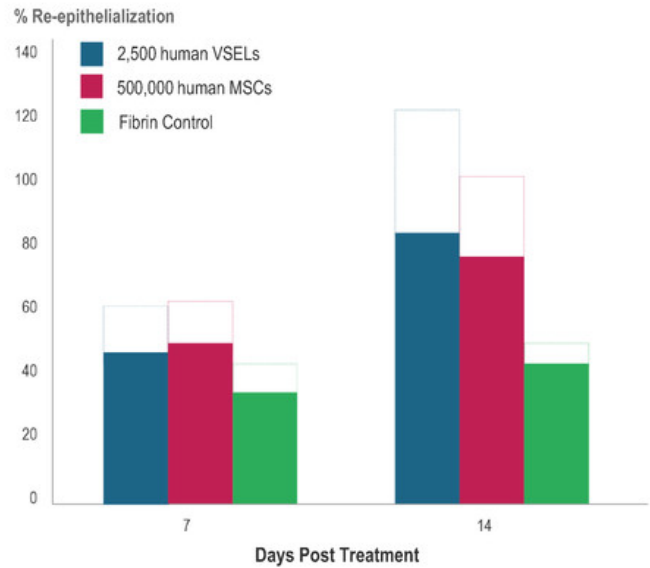
HUMAN VSELS™ ACCELERATE HEALING IN A SCID MOUSE COMPLEX TAIL WOUND MODEL



PRELIMINARY DATA IN A PRECLINICAL MODEL OF SEVERE COMPLEX WOUNDS SUGGEST THAT VSELS™ MAY BE MORE EFFECTIVE IN ACCELERATING HEALING THAN MESENCHYMAL STROMAL CELLS (MSCs)



VSELS vs. MSCs
P<0.05



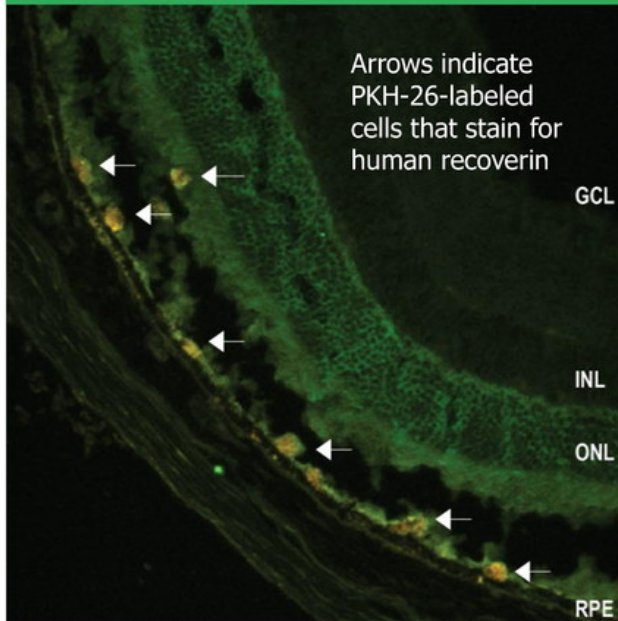
VSELS™ COULD BE USED TO TREAT MACULAR DEGENERATION



PRELIMINARY DATA SUGGEST HUMAN VSELS™ INJECTED INTO A MOUSE SUB-RETINAL SPACE INTEGRATE AND SHOW DIFFERENTIATION POTENTIAL IN SITU

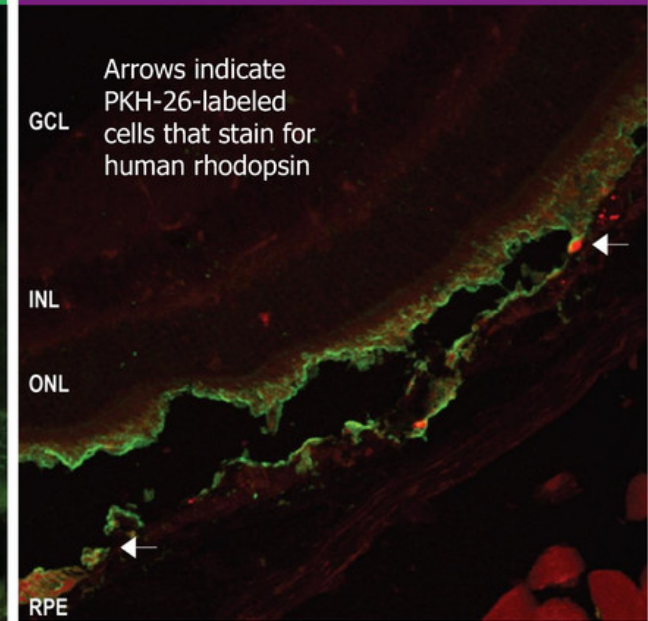
PKH-26 / RECOVERIN

PKH-26 positive cells co-labeled with Recoverin (400x).



PKH-26 / RHODOPSIN

PKH-26 positive cells co-labeled with Rhodopsin (400x).



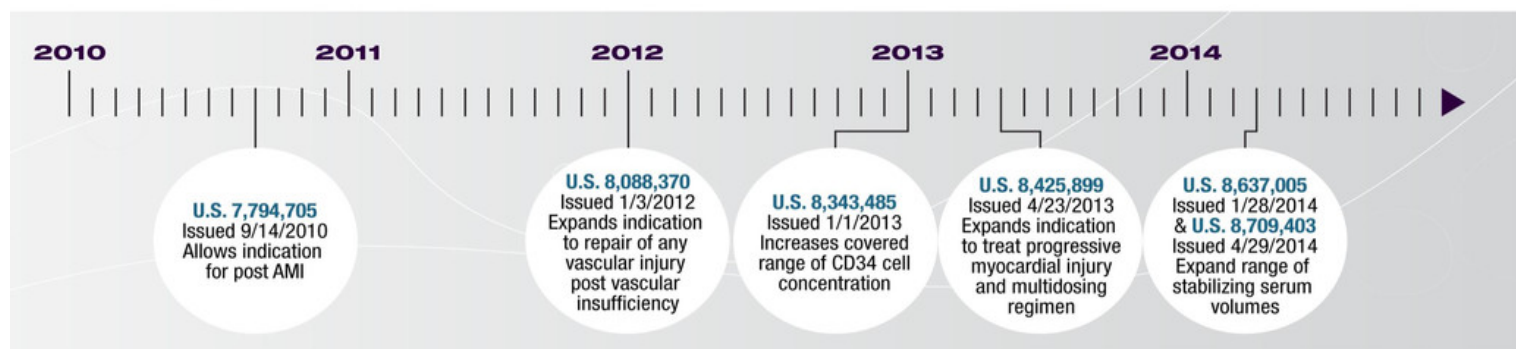
Eminli, S. et al. Exploring the use of human very small embryonic-like stem cells (VSELS) isolated from adult peripheral blood for therapy of dry age-related macular degeneration (AMD). ISSCR 2012 Annual Meeting, Yokohama, Japan. Poster presentation.



ISCHEMIC REPAIR PROGRAM INTELLECTUAL PROPERTY



- Broad and growing patent portfolio supports cardiac and other ischemic conditions
- NeoStem's patent claims cover a pharmaceutical composition that contains a therapeutic concentration of non-expanded CD34/CXCR4 stem cells that move in response to SDF-1 or VEGF, together with a stabilizing amount of serum, and that can be delivered parenterally through a catheter to repair an injury caused by vascular insufficiency
- Six granted U.S. composition of matter and methods patents



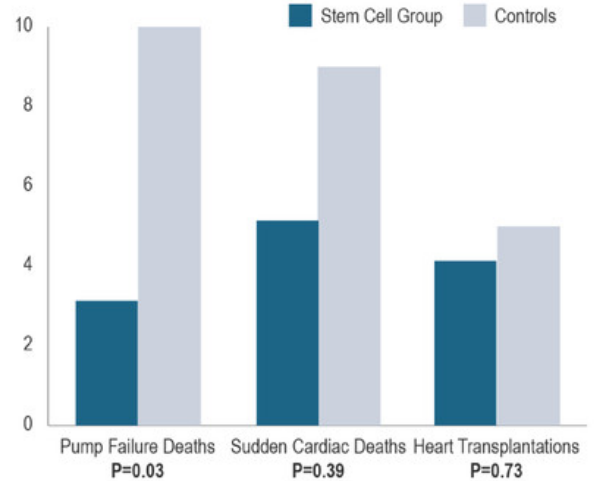
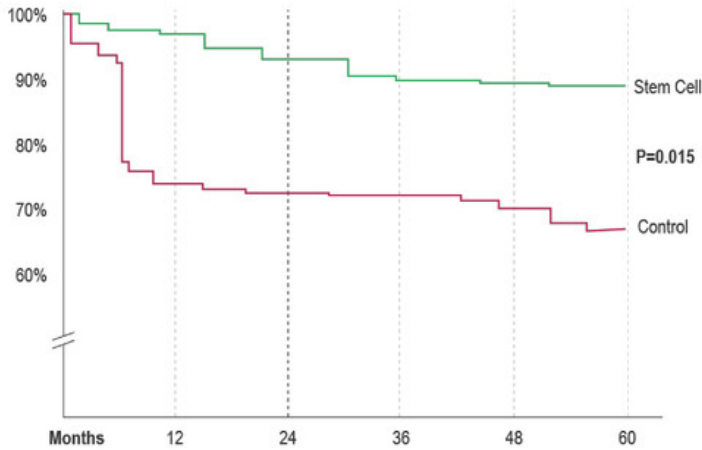
- 10 granted or allowed OUS composition of matter and method patents:
 - ▶ European Union, Japan, South Africa, Malaysia, Philippines, Canada, Russia
- Patent Applications: 20 U.S. and OUS patents pending
- Issued and pending claims can be applied to broad range of other conditions caused by underlying ischemia, including: chronic myocardial ischemia post-AMI; chronic heart failure; critical limb ischemia; and ischemic brain injury



RECENT DATA SUPPORTS CD34 STEM CELL THERAPY IN CHRONIC HEART FAILURE



CD34 STEM CELL THERAPY SIGNIFICANTLY IMPROVES EVENT-FREE SURVIVAL AT 5 YEARS IN PATIENTS WITH DILATED CARDIOMYOPATHY



- Significant need - prevalence of over 23 million worldwide, 5.7 million U.S.
- Therapy would enable larger distribution (not limited to mapping systems)

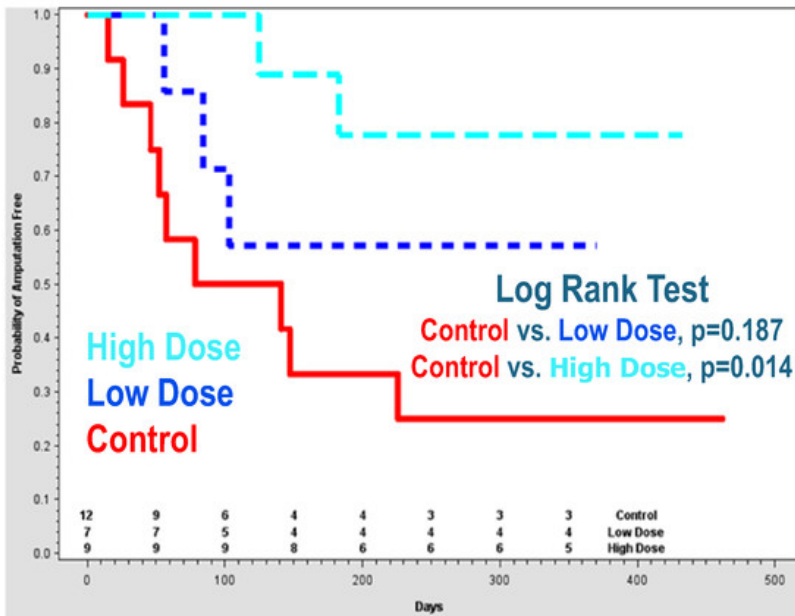
Adapted from Vrtovc et al, *Circ Res* published online 10/12/2012
Note: 110 patients (open label, 55 treated with cells and 55 standard of care)



RECENT DATA SUPPORTS CD34 STEM CELL THERAPY IN CRITICAL LIMB ISCHEMIA



PROBABILITY OF AMPUTATION-FREE SURVIVAL 12 MONTHS



- Double blind, randomized, controlled trial of autologous CD34 cells
- Two dose levels (N=28); Diabetics distributed equally
- CLI Patients (Rutherford Score IV or V); Non-optimal candidate for surgical or percutaneous revascularization or have refused revascularization
- 8 intramuscular injections or placebo Rx

Losordo et al. (2012) A Randomized, Controlled Pilot Study of Autologous CD34+ Cell Therapy for Critical Limb Ischemia, *Circulation Cardiovascular Interventions*.



MARKET OPPORTUNITY IN ASTHMA



ASTHMA

- Affects 25 million in U.S. and 300 million worldwide
- Asthma accounts for \$56 billion in annual direct and indirect health care costs in U.S.
- Steroid resistant asthma afflicts less than 5% of the total asthma population, but accounts for up to 50% of healthcare spending on asthma
- Plan to initiate proof-of-concept study subject to review and approval of the protocol by the appropriate regulatory authorities

