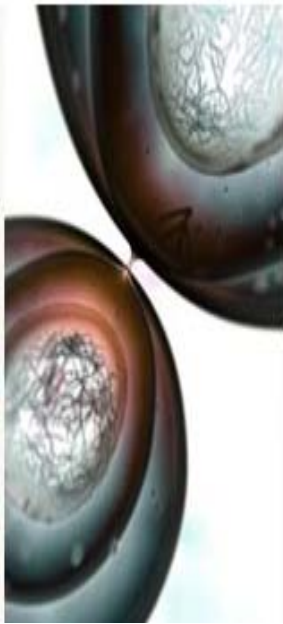




Advanced Cell Technology



*At The Forefront of
Stem Cell Therapy*

March 2011 Corporate Presentation

Cautionary Statement Concerning Forward-Looking Statements

This presentation is intended to present a summary of ACT's ("ACT", or "Advanced Cell Technology Inc", or "the Company") salient business characteristics.

The information herein contains "forward-looking statements" as defined under the federal securities laws. Actual results could vary materially. Factors that could cause actual results to vary materially are described in our filings with the Securities and Exchange Commission.

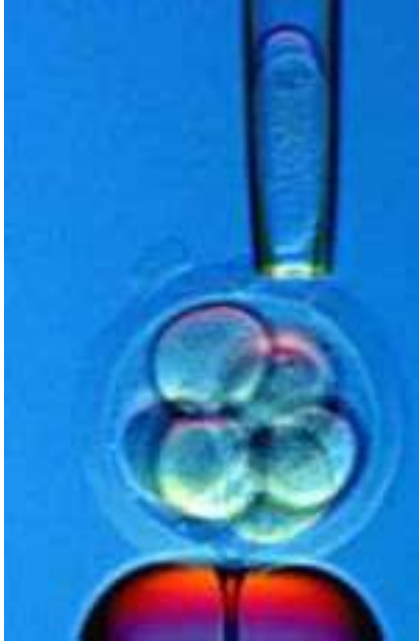
You should pay particular attention to the "risk factors" contained in documents we file from time to time with the Securities and Exchange Commission. The risks identified therein, as well as others not identified by the Company, could cause the Company's actual results to differ materially from those expressed in any forward-looking statements.

At The Forefront of Regenerative Medicine

- Patented method of producing human embryonic stem cells (hESCs) *without harm to embryo*
- Commencing 2 of 3 human trials using hESCs ever approved by FDA in coming months
 - Stargardt's Macular Dystrophy (SMD)
 - Dry AMD – (Dry Age-Related Macular Degeneration)
- Myoblast program for heart failure approved for Phase II
- Seeking to file IND for hemangioblast program

Blastomere Program

Patented Method of Generating hESCs without Destroying Embryo



Single Blastomere Technology

- Company scientists successfully generate stem cell lines without destruction of embryo
- Utilizes single cell biopsy similar to pre-implantation genetic diagnostics (PGD).
- PGD is routine - used in thousands of pregnancies every year in United States and Europe.
- Cell lines hold potential to form all cells in the human body.
- Resulting human ES cell lines are more robust and reproducible than traditional ICM-derived lines.
- Technology has been reproduced and peer-reviewed on several occasions.
- National Institute of Health (NIH) proposing expanded funding regulations to accommodate ACT's lines.
- ***Feb. 23, 2011: Issued broad patent on technique***

nature



Therapeutic Programs	Indication	Clinical Stage
Retinal Pigment Epithelium (RPE) Program	Stargardt's Macular Dystrophy Dry AMD	IND approved Nov. 2010 Phase I to begin 1 st Half 2011 IND approved Jan. 3, 2011 Phase I to begin 1 st Half 2011
Myoblast Program	Heart Disease, Heart Attack and Heart Failure	Phase I successfully completed FDA-approved for Phase II
Hemangioblast Program	Diseases and Disorders of Circulatory and Vascular System	Preclinical Anticipate IND filing late 2011/early 2012



RPE Program: Why the Eye? Why RPE Cells?



- The eye is generally immune-privileged site, thus minimal immunosuppression required
- RPE cells are pigmented so easy to identify (no need for staining)
- Small dosage vs. other therapies

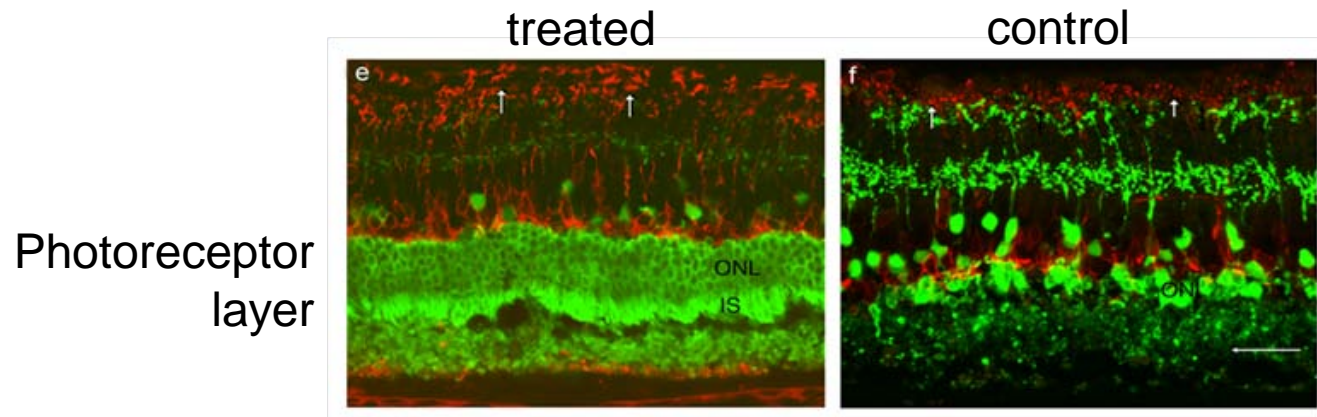
- Ease of administration

- Doesn't require separate approval by the FDA
- Procedure already used by eye surgeons; no new skill set required for doctors

RPE cell therapy could positively impact over 200 retinal diseases

Animal Studies

RPE treatment in animal model of retinal dystrophy has slowed the natural progression of the disease by promoting photoreceptor survival.



RPE cells improve visual acuity and revive dormant photoreceptors

Dry AMD and Stargardt's Disease Programs

Dry AMD

- Most common form of age-related macular degeneration (~ 90%)
- Affects 10-15 million Americans
- No approved therapies available
- \$25-30 Billion market in US and Europe alone
- FDA-approved for Phase I/II clinical trial; ***will start first half 2011***

Stargardt's Disease

- Affects at least 30,000 Americans
- FDA Orphan Status; 7 years of market exclusivity
- FDA-approved for Phase I/II clinical trial; ***will start first half 2011***
- Secured positive opinion on similar Orphan Status designation in Europe



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Myoblast Program

Adult Stem Cells for Treatment of Heart Failure

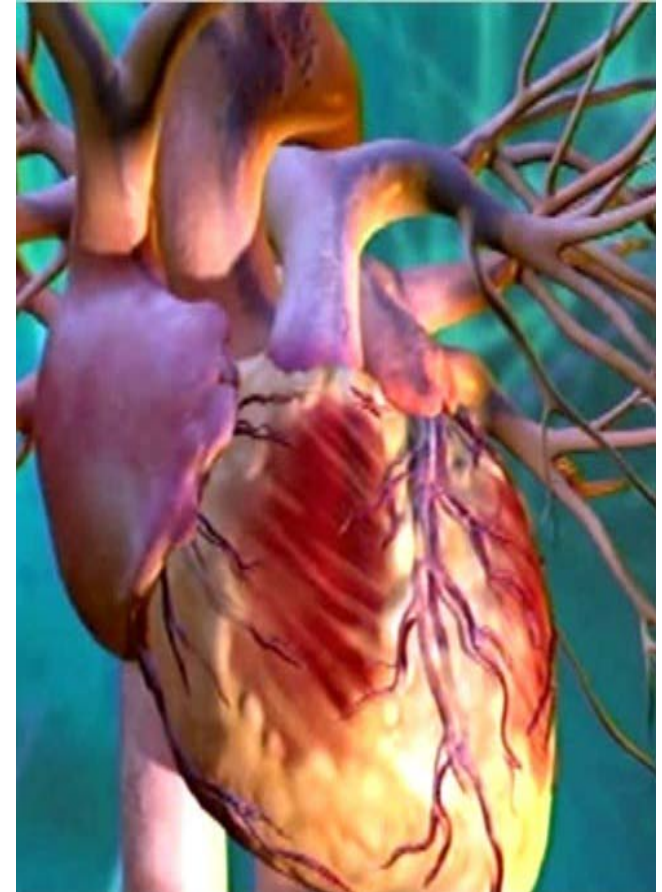
Target Market

- *Sufferers of heart failure, chronic heart failure and patients with scarred or ischemic (dead) heart tissue caused by or related to heart attack*
- *Despite significant advances in treatment of ischemic cardiomyopathy and congestive heart failure, the morbidity and mortality remain high.*

This remains a large (and growing) unmet medical need.

Program Status

- *Clearance from FDA to Proceed with Phase II Clinical Trial*



Catheter Trial – Responder Analysis

Angiogenesis: Grafts induce new blood supply

Histology: Confirmed myoblast survival, myofiber formation, and engraftment.

Treated patients showed improvement in QOL (NYHA and MLHFQ), ventricular viability, and there was evidence of reverse ventricular remodeling.

❖ End diastolic ventricular volume

- Treated Patients remain stable, perhaps some improvement (reduced LVEDD).
- Control Patients continued to decline, with enlarging LVEDD over time.

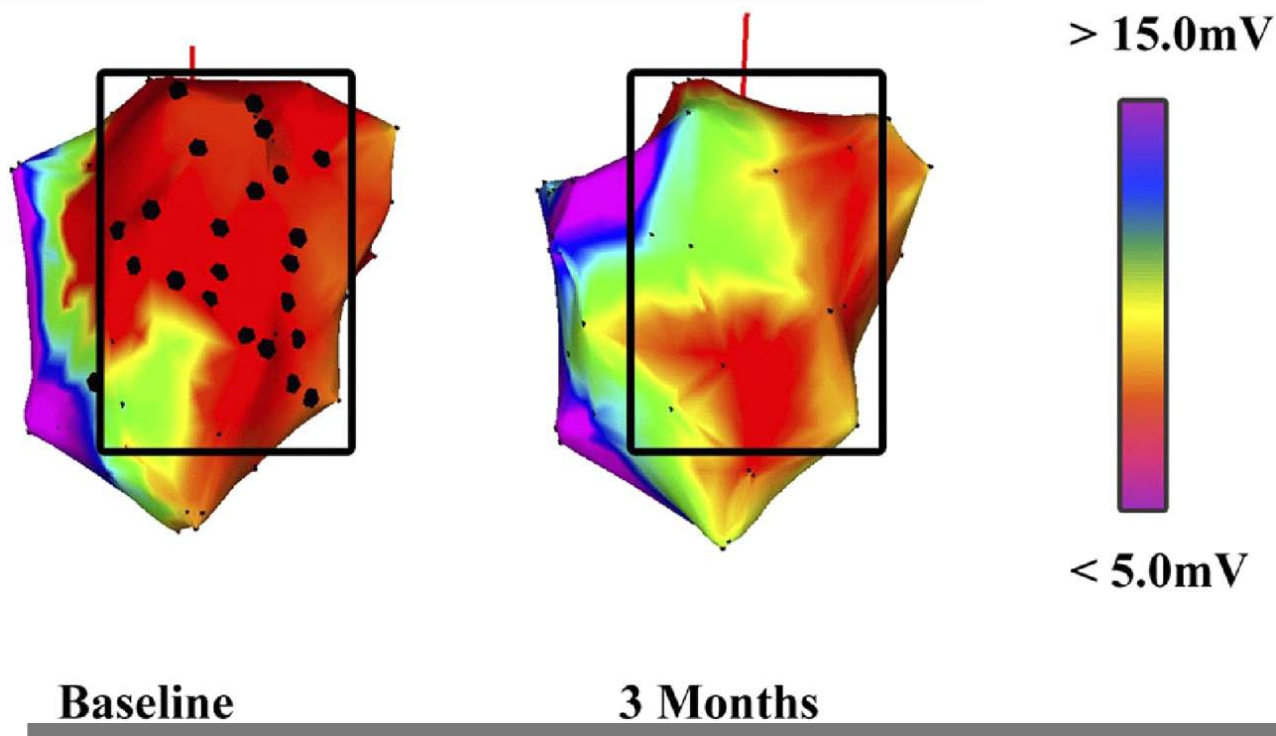
More significant improvement with respect to Q-O-L measurements when compared to current best-course-of-treatment.

	Improved	No Change	Worsened
Myoblast	83%	17%	0%
Control	0%	64%	36%

NYHA Classification at 6 month vs Baseline for all Patients

Recovery in the Area Injected With Myoblasts

Pronounced Reduction in Infarcted Area



Phase 1 demonstrates positive safety outcomes and warrant initiation of larger phase 2, double-blind, placebo-controlled clinical trials.

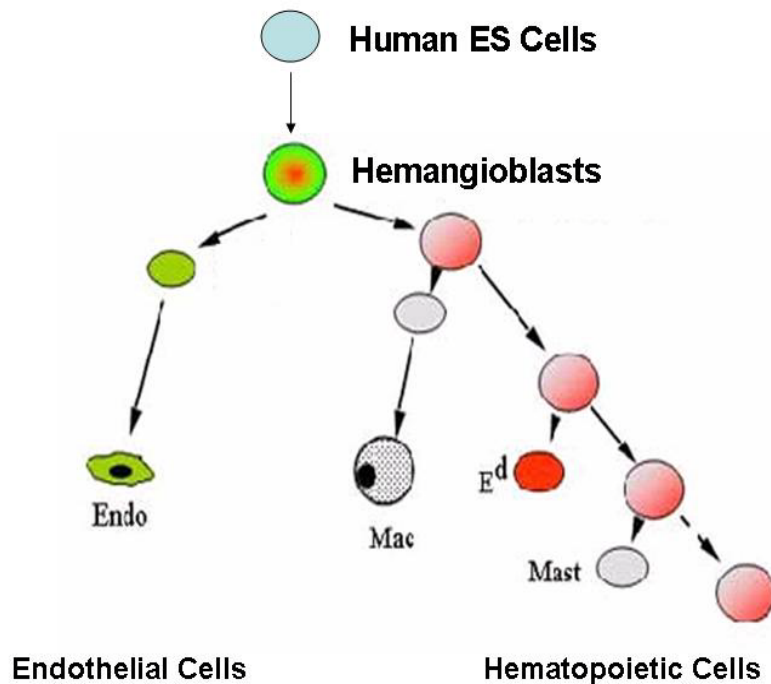


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Hemangioblast Program: Overview

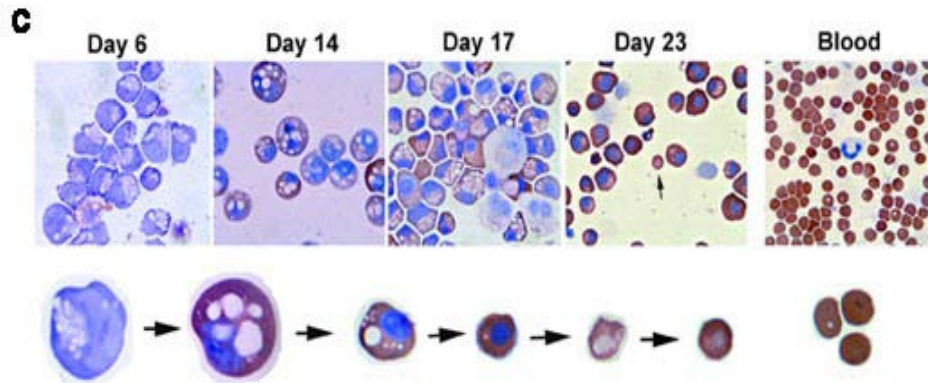
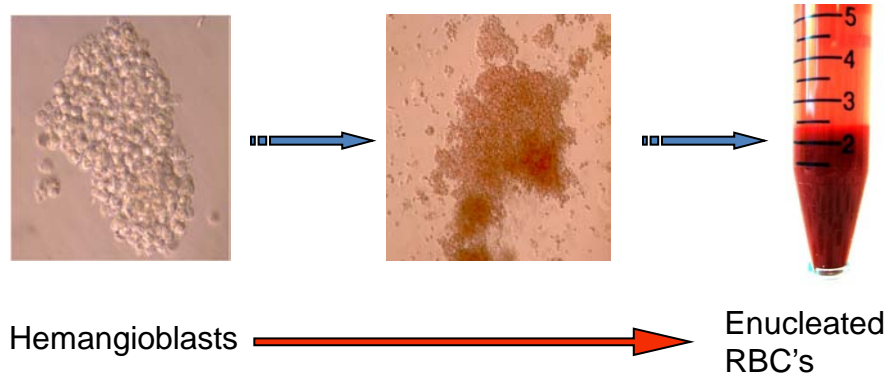
The Hemangioblast cell is a multipotent cell, and a common precursor to hematopoietic and endothelial cells.



- Hemangioblast cells can self-renew.
- Hemangioblast cells can be used to achieve vascular repair.
- Hemangioblast activity could potentially be harnessed to treat diseases such as myocardial infarction, stroke, cancer, vascular injury and blindness.

Hemangioblast cells can be used to produce all cell types in the circulatory and vascular systems

Generation of Blood Products



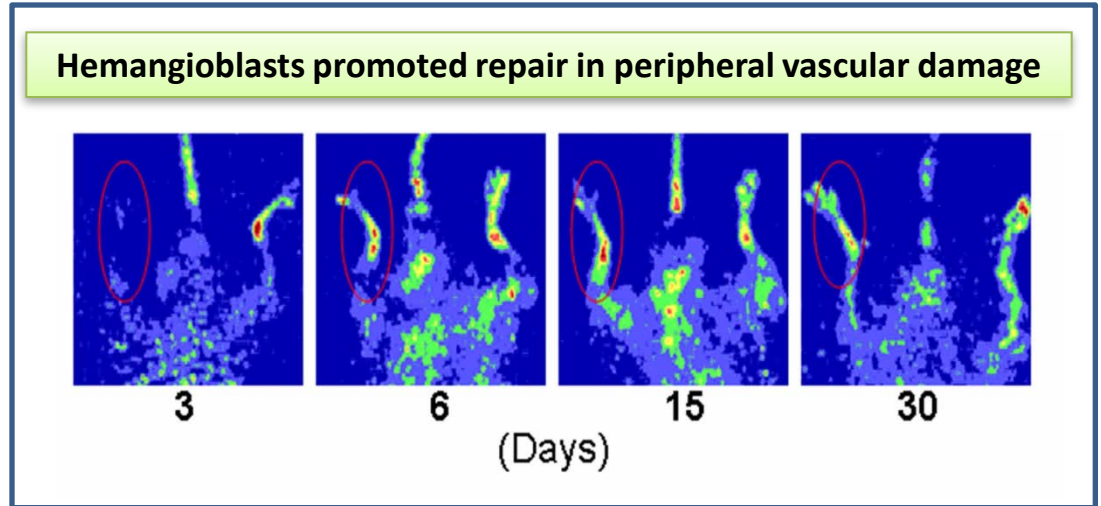
- Capable of generating large quantities of enucleated red blood cells.
- Efficiently generate functional megakaryocytes & platelets.
 - ES-derived platelets participate in clot formation.
 - ES-derived platelets incorporate into mouse thrombus at site of laser-induced arteriolar injury

Repair of Vascular Damage

Hemangioblasts were tested in animal models of diabetic retinopathy, heart disease and peripheral vascular damage

Results from treatment with hemangioblast cells

- Restoration of blood flow to ischemic limbs.
- Survival after myocardial infarction.
- Revascularizes ischemic retinas



Potential Impact on a Large Number of Vascular Diseases
myocardial infarction, vascular ischemic damage, ischemia-reperfusion injury, diabetic vascular disease and peripheral artery disease (PAD) that are leading causes of death and/or disability worldwide.

Hemangioblast Program



- Investigating using HG cells to treat cardiovascular disease, stroke and cancer
- Production of blood cell products documented in *Nature Methods*
- Potentially unlimited source of platelets for transfusion, as reported in *Cell Research*
- Joint Venture with leading Korean stem cell developer CHA Biotech

nature | **methods**

Intellectual Property

RPE Cells

- Worldwide patent filings
- Dominant patent position for treating retinal degeneration
 - One issued patent broadly covers treating retinal degeneration using RPE cells differentiated from hESCs.
- Broad IP Coverage for Manufacturing RPE Cells from hESCs
 - Two other patents

Blastomere Technology

- 2/23/11 - Issued broad patent on technique
- Other pending patent applications

2011 Milestones

1Q

- Designation for hESC-derived RPE Cells for Stargardt's Disease

2Q

- Sign clinical trial agreements for SMD and Dry AMD sites
- Commence patient selection
- Treat first patients for SMD and Dry AMD Phase I/II clinical trials
- Secure European EMA "Orphan" approval for SMD program
- File with European Medicines Agency (EMA) for RPE program

2nd Half of 2011

- Treat additional cohorts of patients in RPE Phase I/II trials
- Early look at data from first cohort of patients in RPE Phase I/II trials
- Secure approval from EMA for RPE Program
- Continue partnering and licensing discussions
- Advance toward IND filing for hemangioblast program

Solid Financial Footing

Most Stable Financial Situation In Company History

- 12/31 announced \$25 million funding commitment
- Over \$15 million on balance sheet
- \$21 million more equity available
- Virtually debt-free
- Able to pay for both clinical trials, *but that will likely not be necessary:*
- Anticipate additional non-dilutive funding
 - Federal and state grants
 - Other grant and loan sources

The Advanced Cell Technology Team

World Class Scientific Team

Dr. Robert Lanza, M.D. – Chief Scientific Officer

Dr. Irina Klimanskaya, Ph.D. – Director of Stem Cell Biology

Dr. Matthew Vincent, Ph.D. – Director of Business Development

Seasoned Management Team

Gary Rabin – Interim Chairman and CEO

Stephen Price – Interim SVP – Corporate Development

Edmund Mickunas – Vice President of Regulatory Affairs

Dr. Roger Gay, PhD – Senior Director of Manufacturing

Rita Parker – Director of Operations

Bill Douglass – Director of Corporate Communications & Social Media

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For more information, visit www.advancedcell.com