



NYSE American: AGE

Rodman & Renshaw
Global Investment Conference

September 9, 2019

Forward Looking Statements

The matters discussed in this presentation include forward looking statements which are subject to various risks, uncertainties, and other factors that could cause actual results to differ materially from the results anticipated. Such risks and uncertainties include but are not limited to the success of AgeX Therapeutics and its affiliates in developing new stem cell-based products and technologies; results of clinical trials of such products; the ability of AgeX and its licensees to obtain additional FDA and foreign regulatory approval to market products; competition from products manufactured and sold or being developed by other companies; the price of and demand for such products; the ability of AgeX and its subsidiaries to maintain patent and other intellectual property rights; and the ability of AgeX to raise the capital needed to finance its current and planned operations. Any statements that are not historical fact (including, but not limited to statements that contain words such as "will," "believes," "plans," "anticipates," "expects," "estimates") should also be considered to be forward-looking statements. As actual results may differ materially from the results anticipated in these forward-looking statements they should be evaluated together with the many uncertainties that affect the business of AgeX and its other subsidiaries, particularly those mentioned in the cautionary statements found in AgeX's Securities and Exchange Commission filings. AgeX disclaims any intent or obligation to update these forward-looking statements.

Mission

- To target the largest and most rapidly-growing markets in medicine:
Age-Related Degenerative Disease
- An advanced technology that reverses aging and induces regeneration in human cells and tissues

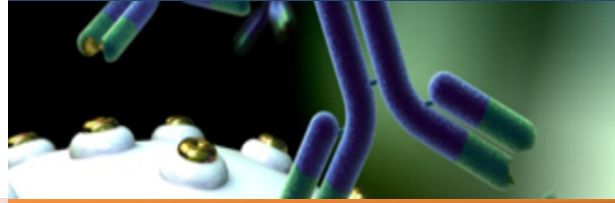
Significant Biotechnology Revolutions

Recombinant DNA Technology



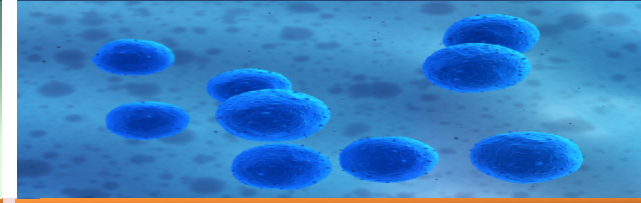
- 1974 – Gene cloning technology developed
- 1976 - Moratorium on rDNA research initiated led to established guidelines on rDNA research
- 1989 – First \$B product EPO
- Today, products from the use of rDNA technology are ubiquitous
- >140 clinical trials
- Current Global Market \$75 B

Monoclonal Antibodies



- 1975 - Hybridoma technology developed
- 1997- First \$B Product Rituximab
- Advances in Mab Engineering
- Today, eight of the 20 best-selling biotechnology drugs in therapeutic monoclonal antibodies
- > 200 clinical trials
- Current Global Market \$44 B

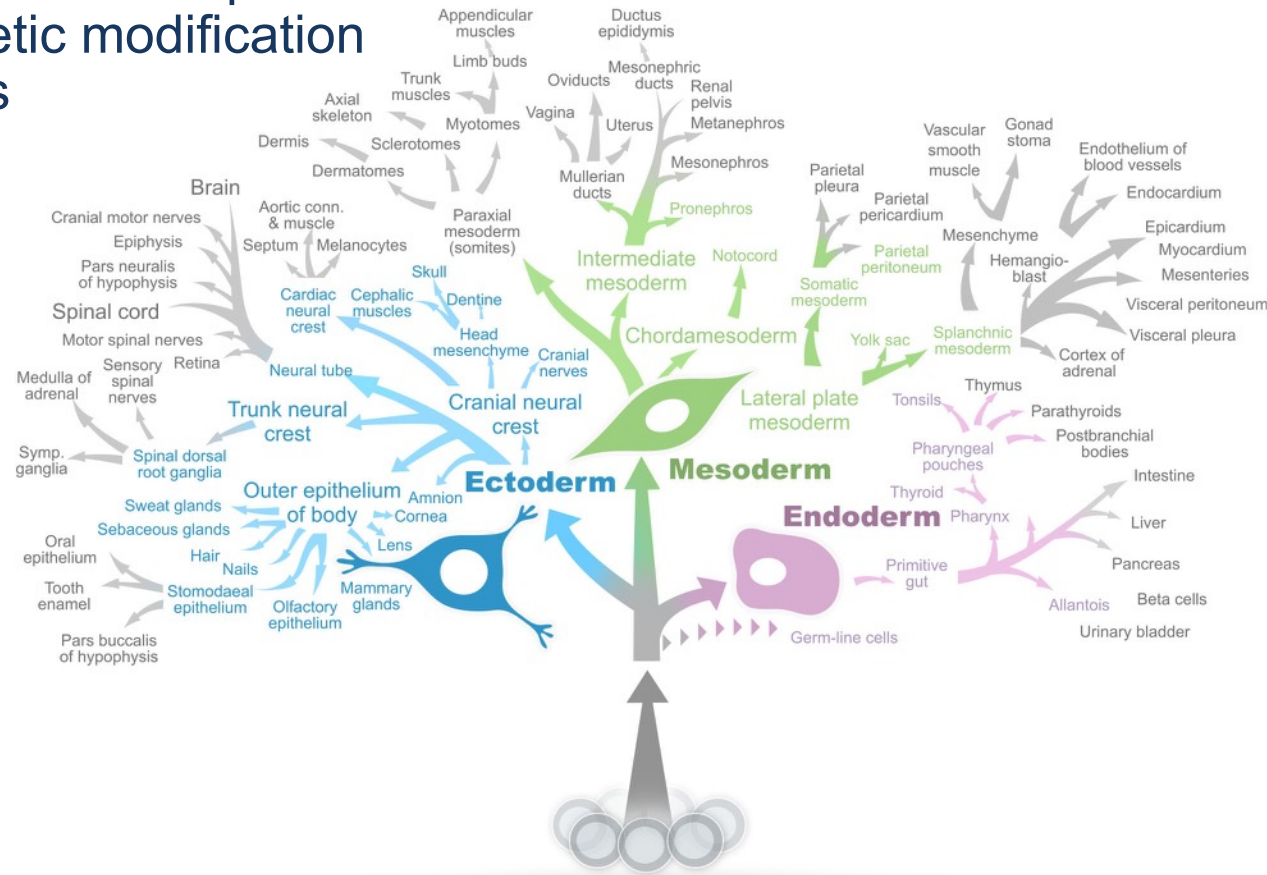
Regenerative Medicine



- 1998 – First Pluripotent Stem Cells isolated
- 2001 – U.S. Federal funding restriction (reversed in 2009)
- 2010 – 1st hES Clinical trial
- 2015 – Fuji acquires Cell. Dyn.
- 2015 – Astellas acquires Ocata
- 2019 – Bayer acquires BlueRock
- 2019 – Vertex acquires Semma
- Future – 1st \$B product

The Power of Pluripotency

- Key applications in age-related degenerative disease
- Uniform and infinitely-scalable product
- Enables precise genetic modification
- Off-the-shelf products

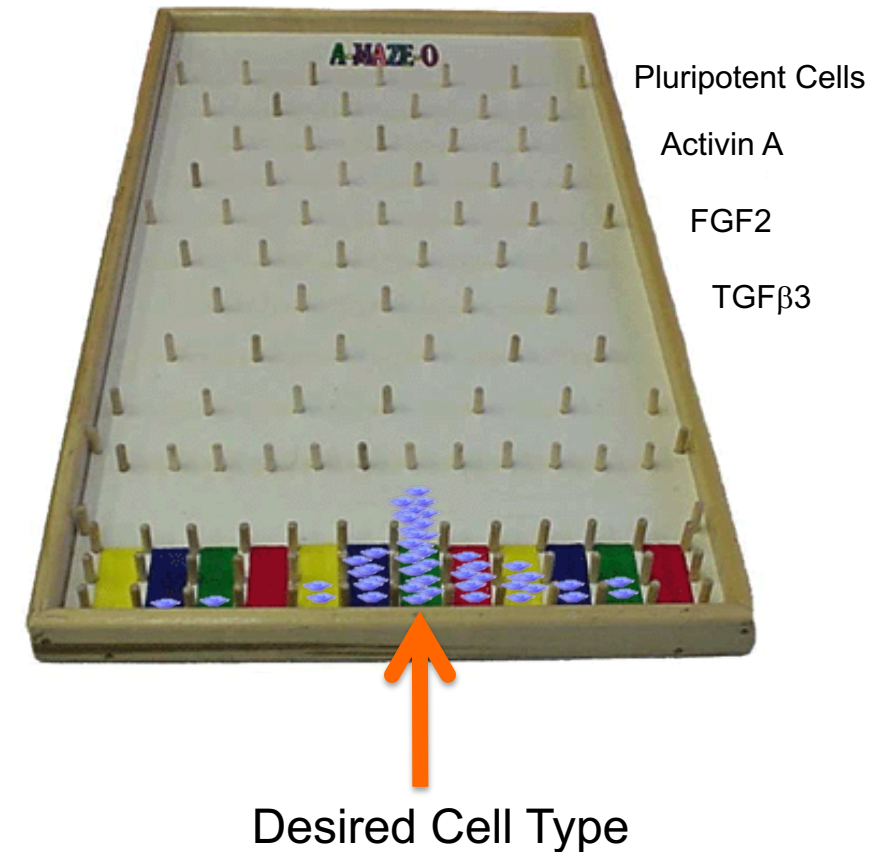


Pluripotent Stem Cells

Pluripotency – The Competitive Edge

The >1000-fold complexity of cell types derived from hPS cells leads to unique challenges:

- How manufacture with cGMP?
- How produce allogeneic product?
- Identity - Lot-to-lot variability in composition
- Purity – Contamination with unknown cell types

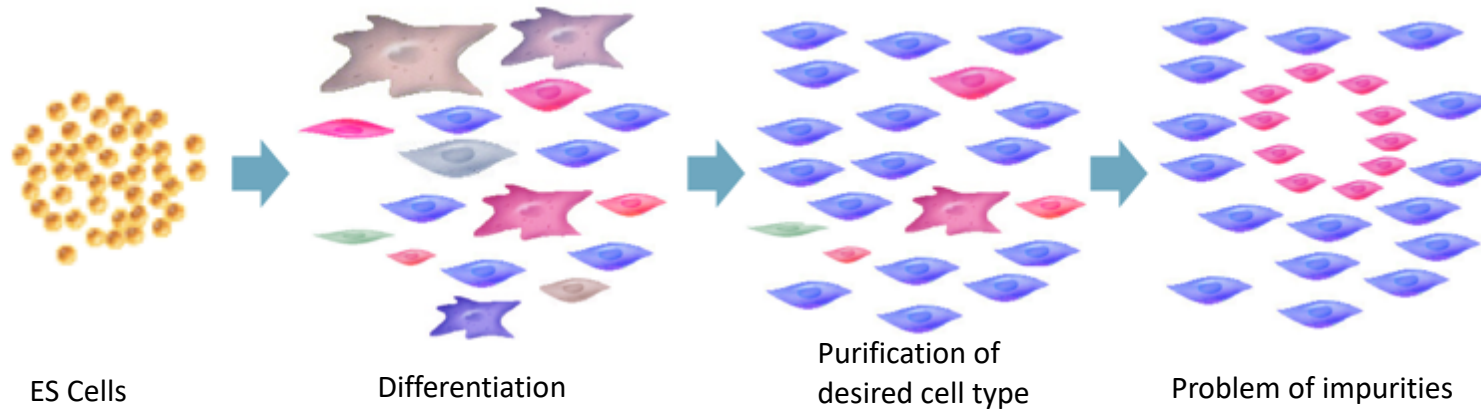


Proprietary Technologies

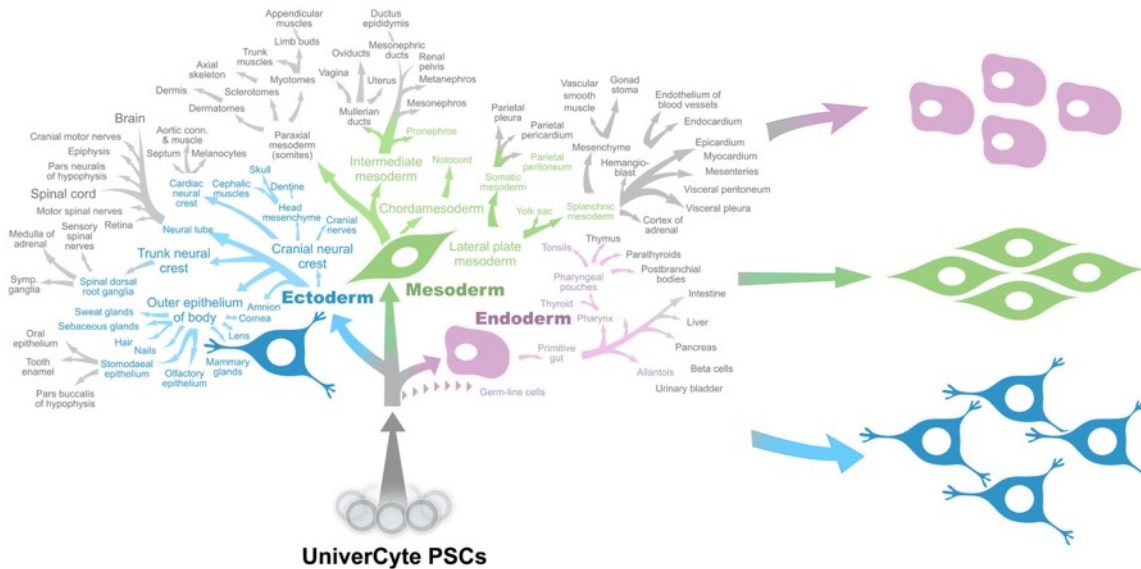
- >400 patents & patent apps worldwide in pluripotency-based therapeutics:
 - *PureStem*® manufacturing technology

Universal *PureStem*TM Technology

Traditional Manufacture



PureStem Technology



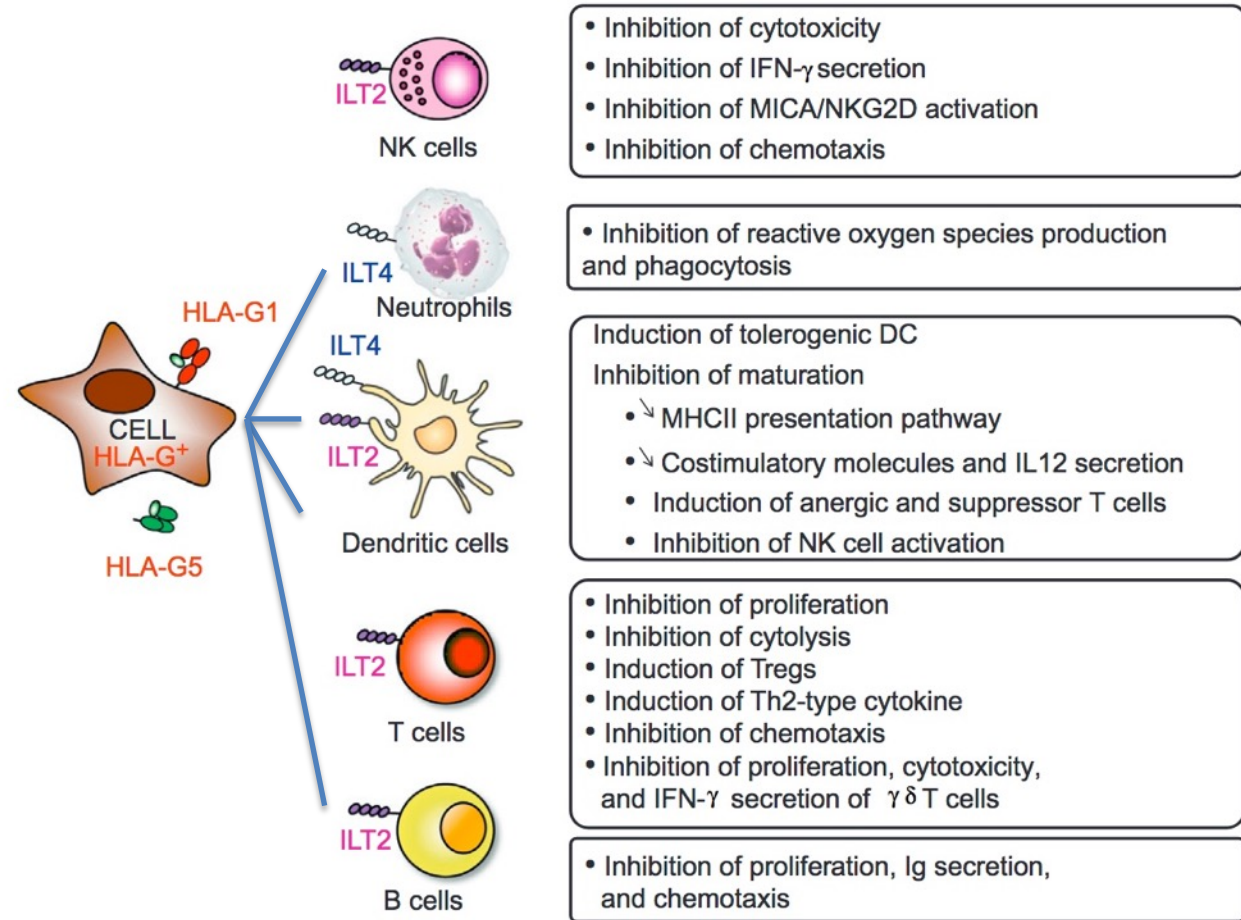
- >200-fold diversity
- Scalable, monoclonally-purified regenerative progenitor cell lines
- Off-the-shelf use

Proprietary Technologies

- >400 patents & patent apps worldwide in pluripotency-based therapeutics:
 - *PureStem*® manufacturing technology
 - *UniverCyte*™ (HLA-G to mask rejection) technology of choice for cell-based therapies

UniverCyte™: HLA-G for Allogeneic Immunotolerance

- The primary role of HLA-G is to suppress maternal immune response to pregnancies
- Disarms multiple pathways of immune response leading to rejection



Adv. Immunol. (2015) 127:33-144

Value of the *UniverCyte* Allogeneic Products

Classical biologics off-the-shelf business model

Traditional
Biologics



*Centralized
Production
Facility*



*Distributed
Frozen
Inventory*



Point Of Care

UniverCyte-
Derived
Cell Therapy
Products



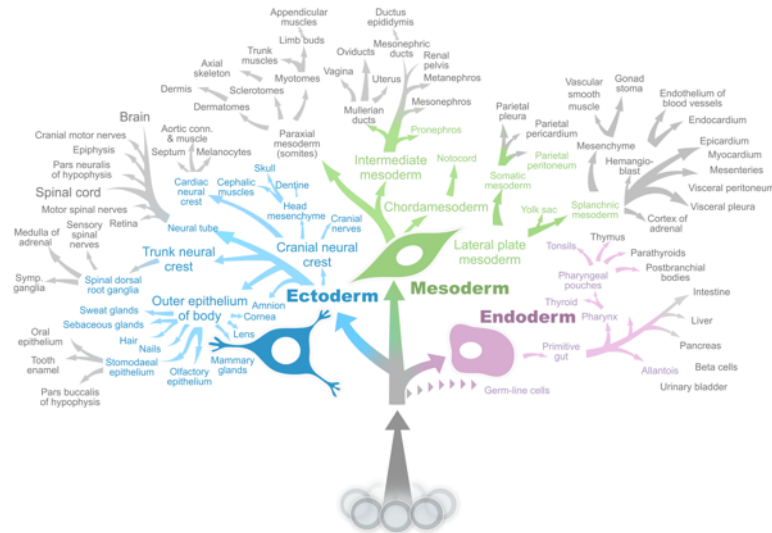
Proprietary Technologies

- >400 patents & patent apps worldwide in pluripotency-based therapeutics
 - PureStem manufacturing technology
 - UniverCyte (HLA-G to mask rejection) technology of choice for cell-based therapies
 - HyStem matrix for stable engraftment

The Ideal Regenerative Platform

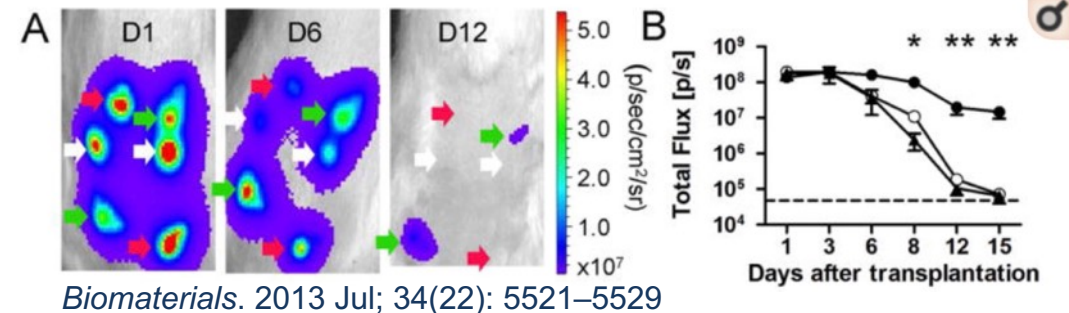
Twin Technologies: Cells & Matrix

Pluripotent Cell- Based Therapeutics



- Pluripotent Stem Cells (PSCs) allow the manufacture of all young human cell types on an industrial scale
- PureStem-based purity

HyStem® Matrix Delivery



Biomaterials. 2013 Jul; 34(22): 5521–5529

Proprietary Technologies

- >400 patents & patent apps worldwide in pluripotency-based therapeutics:
 - *PureStem*® manufacturing technology
 - *UniverCyte*™ (HLA-G to mask rejection) technology of choice for cell-based therapies
 - *HyStem*® matrix for stable engraftment
- Induced Tissue Regeneration (iTR™)

iTR or “Partial Reprogramming”



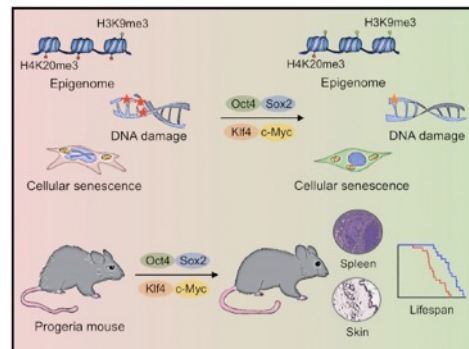
WEEKLY

The Race for Age Reversal Heats Up

Cell

In Vivo Amelioration of Age-Associated Hallmarks by Partial Reprogramming

Graphical Abstract



Authors

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Correspondence

belmonte@salk.edu

In Brief

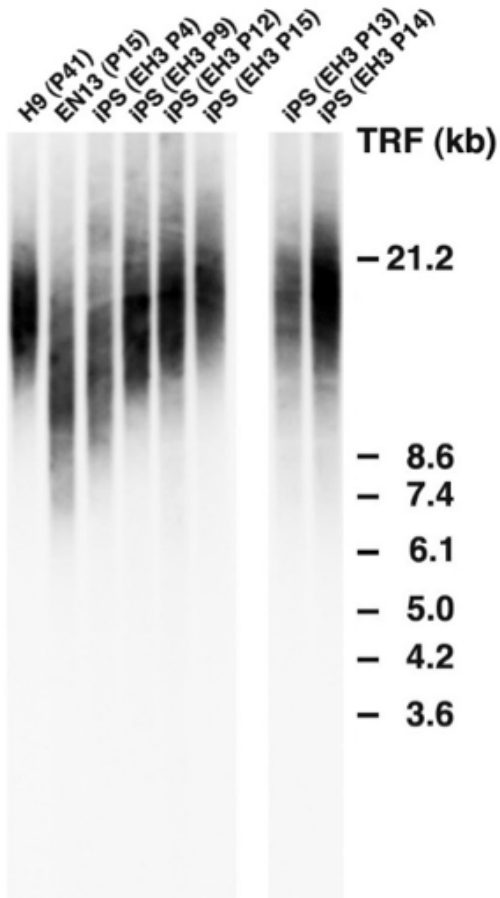
Cellular reprogramming by transient expression of Yamanaka factors ameliorates age-associated symptoms, prolongs lifespan in progeroid mice, and improves tissue homeostasis in older mice.

Reversal of ageing- and injury-induced vision loss by Tet-dependent epigenetic reprogramming

Yuancheng Lu^{1,2}, Anitha Krishnan^{3,9}, Benedikt Brommer^{4,9}, Xiao Tian^{1,2,9}, Margarita Meer⁵, Daniel L. Vera^{1,2}, Chen Wang⁴, Qiurui Zeng^{1,2}, Doudou Yu^{1,2}, Michael S. Bonkowski^{1,2}, Jae-Hyun Yang^{1,2}, Emma M. Hoffmann³, Songlin Zhou⁴, Ekaterina Korobkina³, Noah Davidsohn^{2,6}, Michael B. Schultz^{1,2}, Karolina Chwalek^{1,2}, Luis A. Rajman^{1,2}, George M. Church^{2,6}, Konrad Hochedlinger⁷, Vadim N. Gladyshev⁵, Steve Horvath⁸, Meredith S. Gregory-Ksander^{3*}, Bruce R. Ksander^{3*}, Zhigang He^{4*} and David A. Sinclair^{1,2*#}

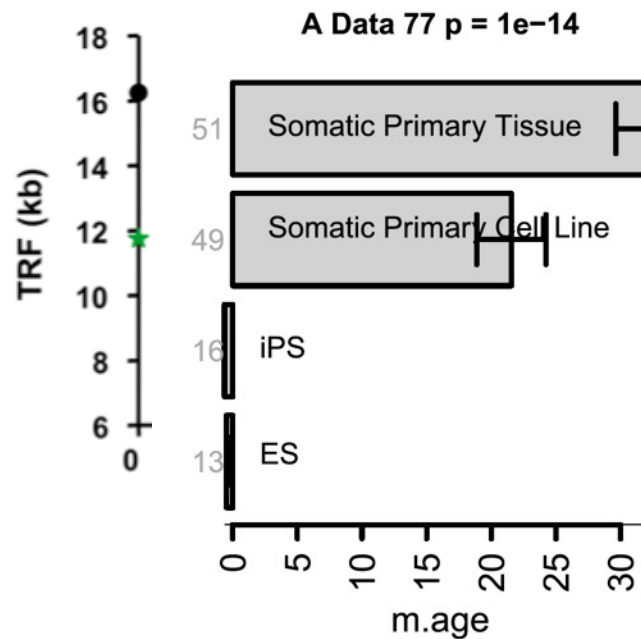
1. Paul F. Glenn Center for Biology of Aging Research at Harvard Medical School;
2. Blavatnik Institute, Department of Genetics, Harvard Medical School;

Reversing the Aging of Human Cells

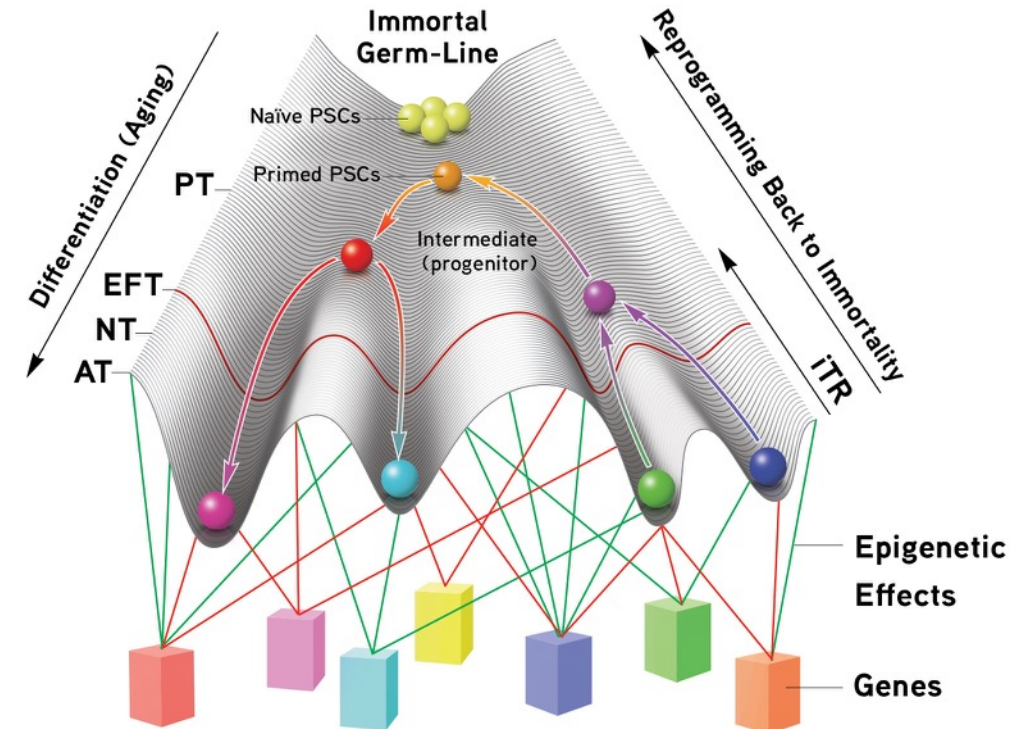


Regen Med 2010 May;5(3):345-63

Reprogramming Methylation Age



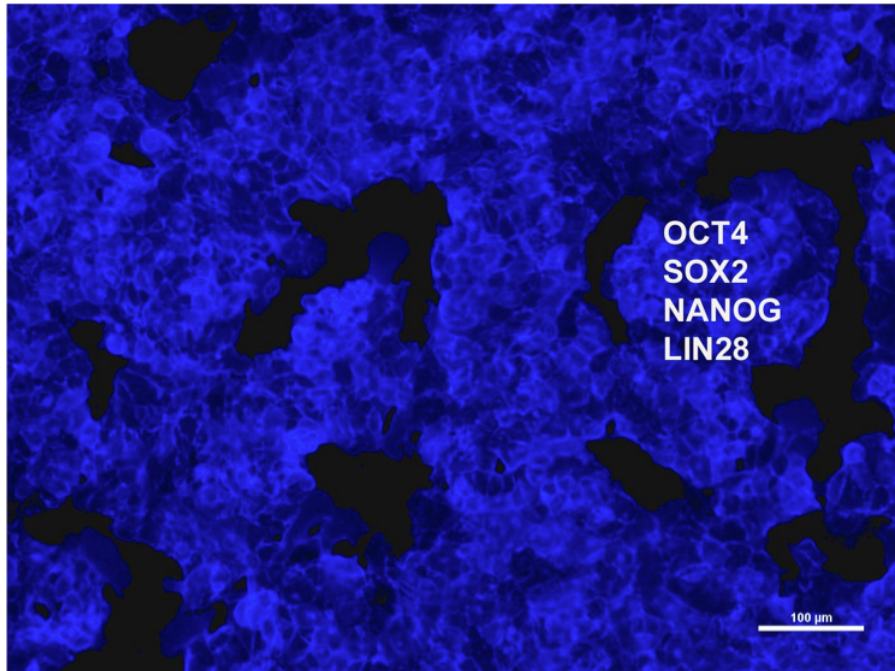
Genome Biol. 2013;14(10):R115



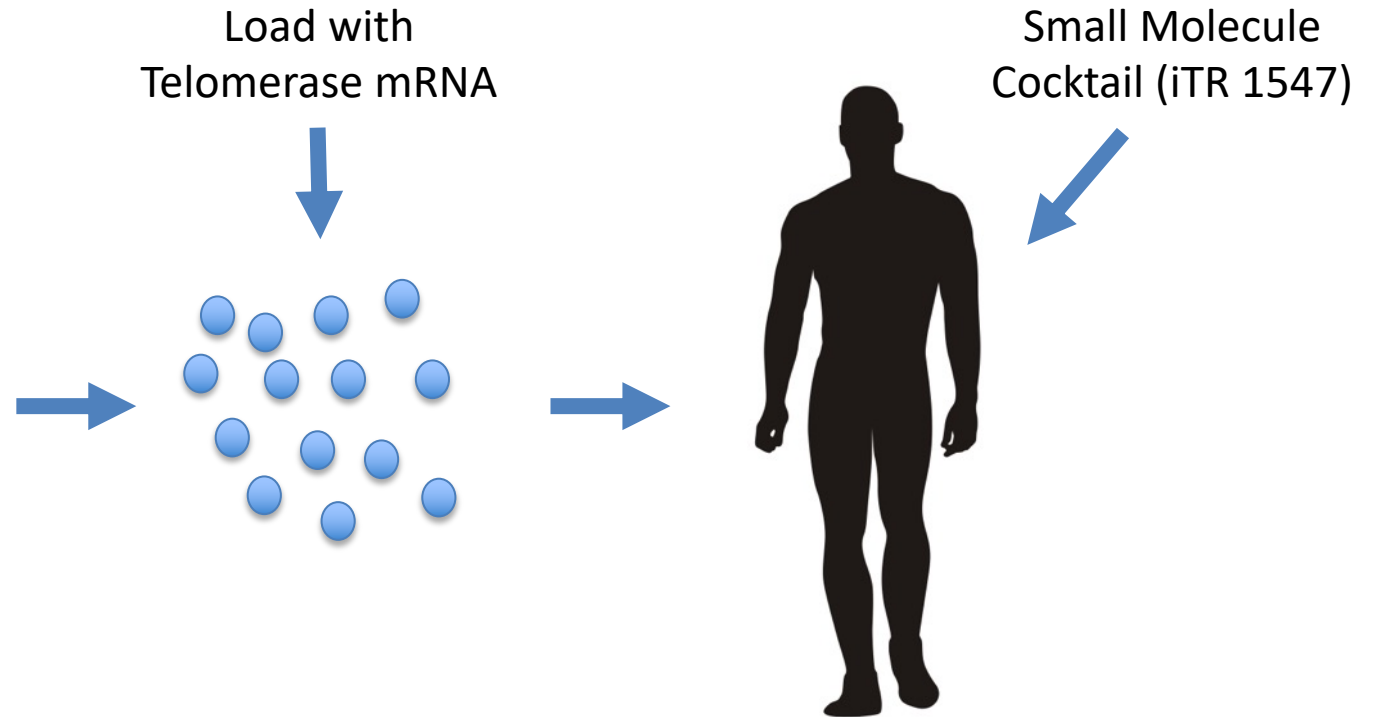
Regen Med 2019 Aug 28. doi: 10.2217/rme-2019-0062.

iTR Strategy

Twin Strategies in Development



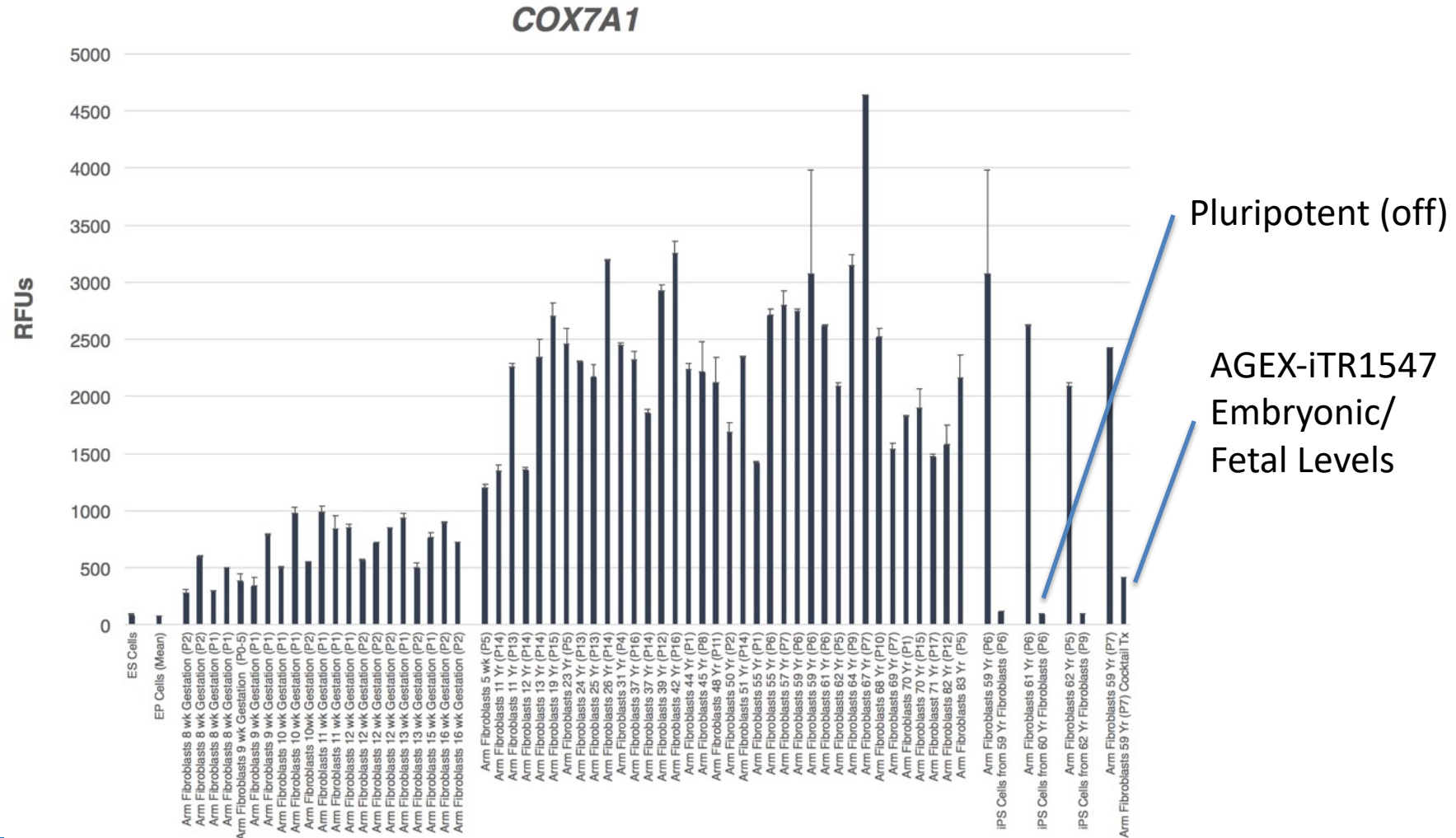
ReCyte1 EC Cell Line



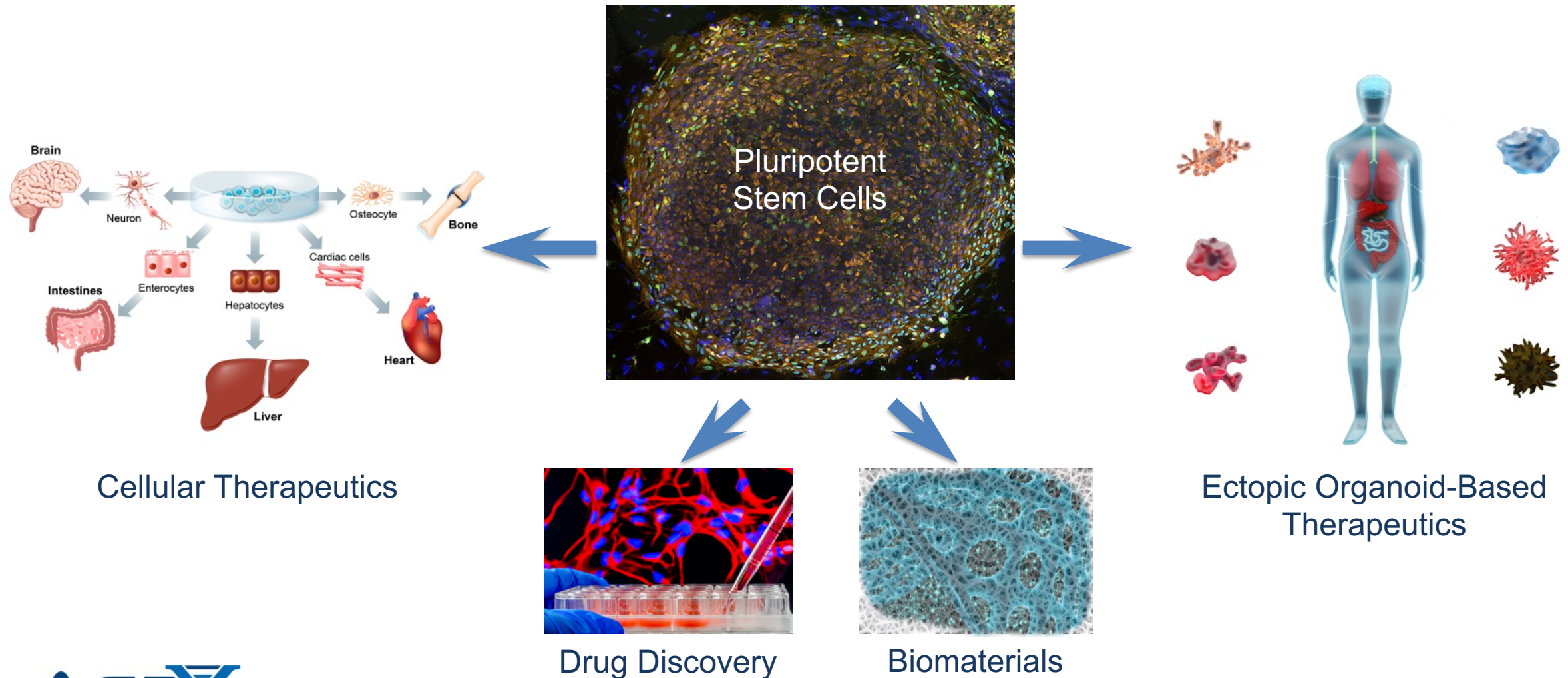
Exosomes

In Vivo Applications

Drug-Based iTR

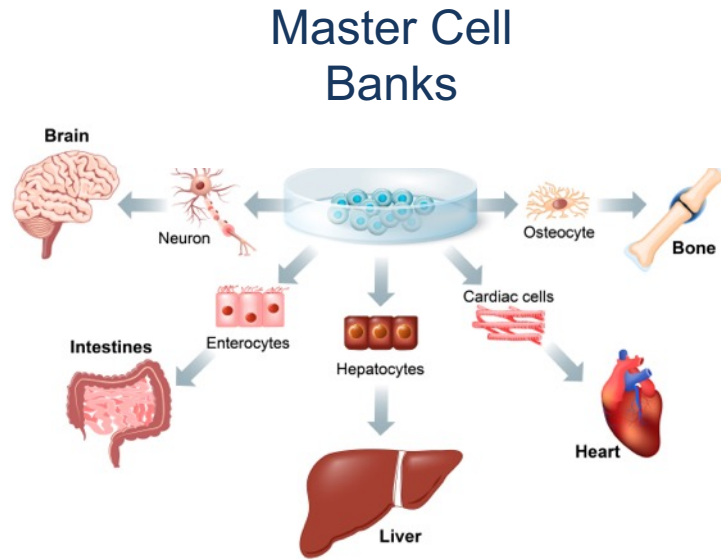


Maximizing Commercialization of the Platform



- Bailment of Master Cell Banks (MCBs)

Bailment of Master Cell Banks



Cellular Therapeutics

- AgeX retains ownership of MCB
- Licensee owns derivative products in defined fields of use
- Royalty is not patent-based and therefore runs into indefinite future
- Results in potentially high NPV

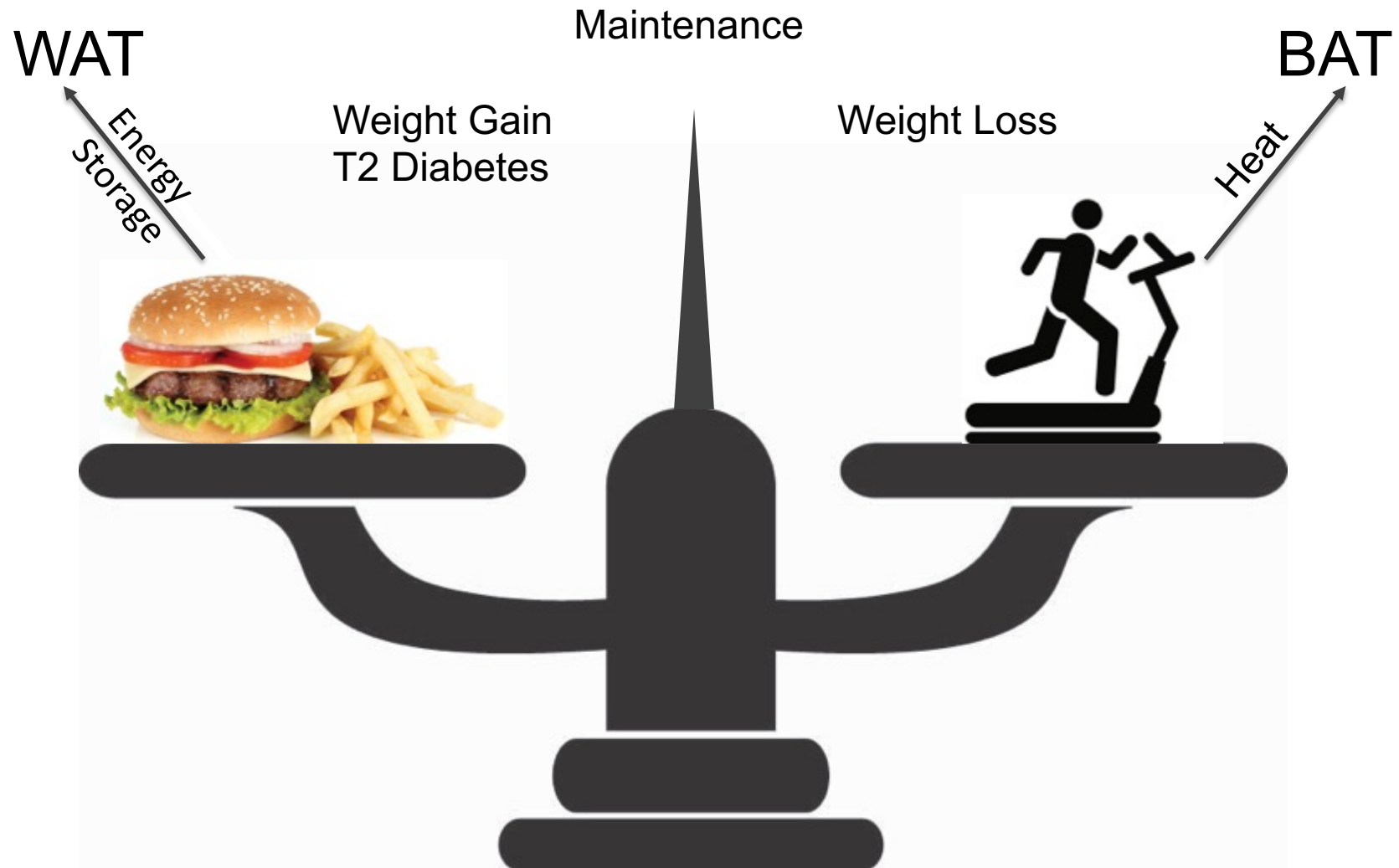
Business Strategy

- Bailment of Master Cell Banks (MCBs)
- Partnerships for non-core applications
 - Therapeutic use of ectopic organoids
 - Diverse biomaterials including exosomes
 - *Cytiva II* - Adult cardiac cells for drug testing

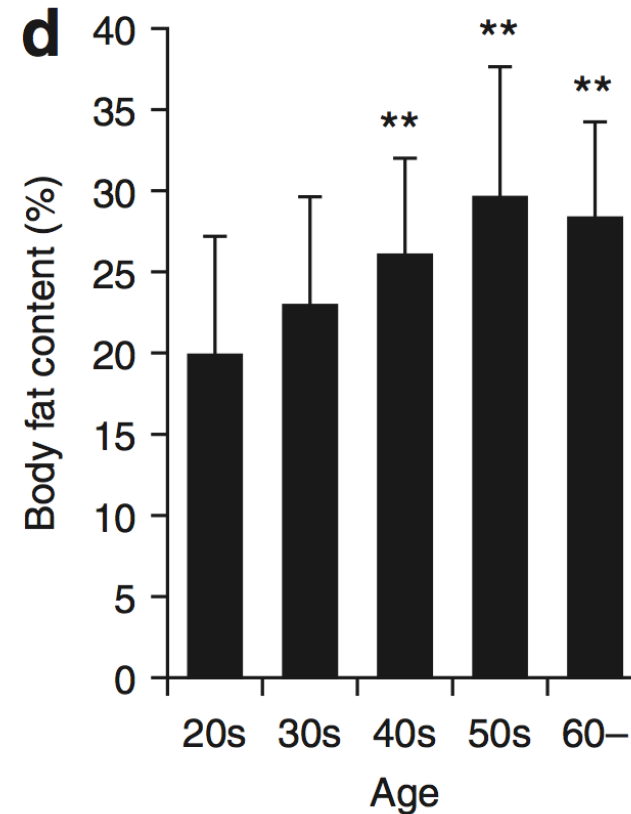
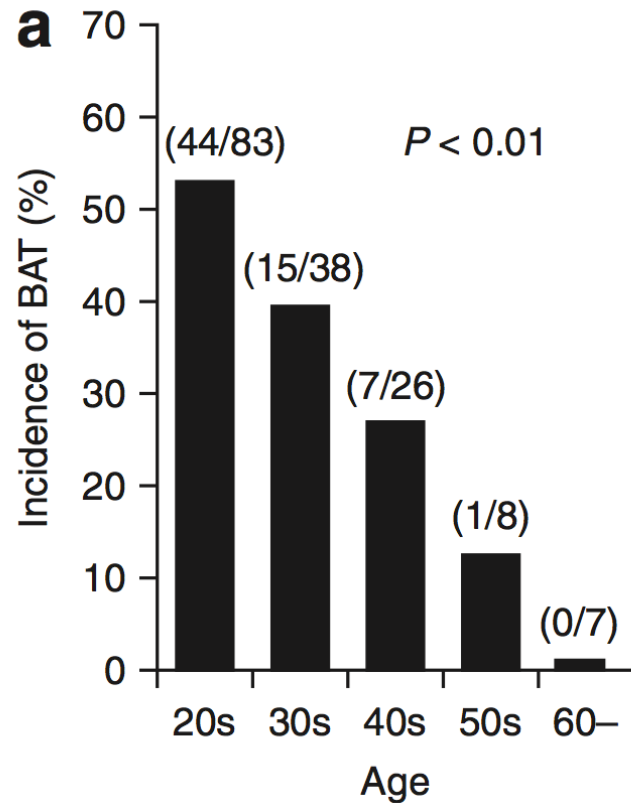
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- Internal development of *AGEX-BAT1*, *AGEX-VASC1*, and *Renelon*

Brown Adipose Cells Regulate Metabolism



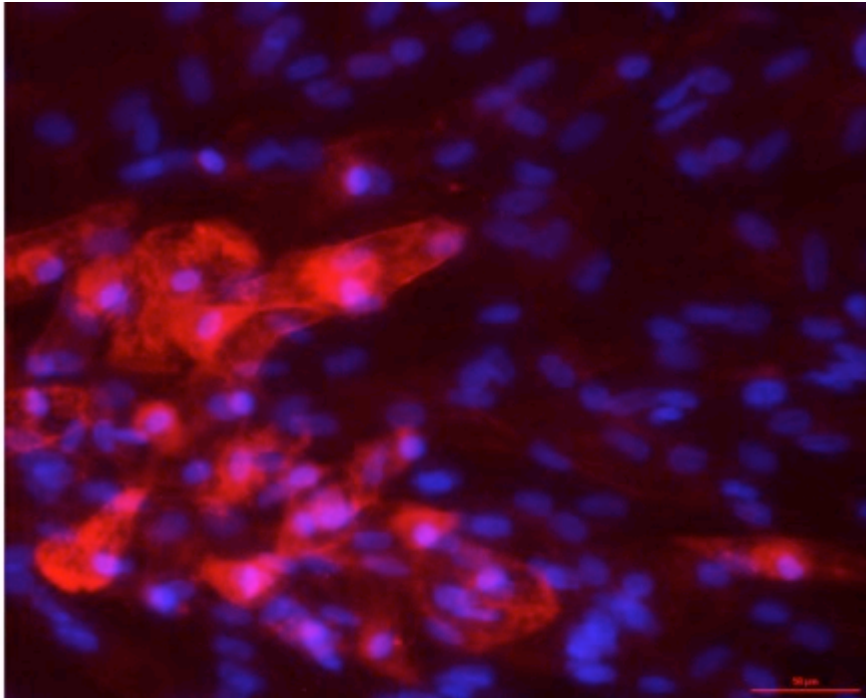
Brown Adipose Cells Regulate Metabolism



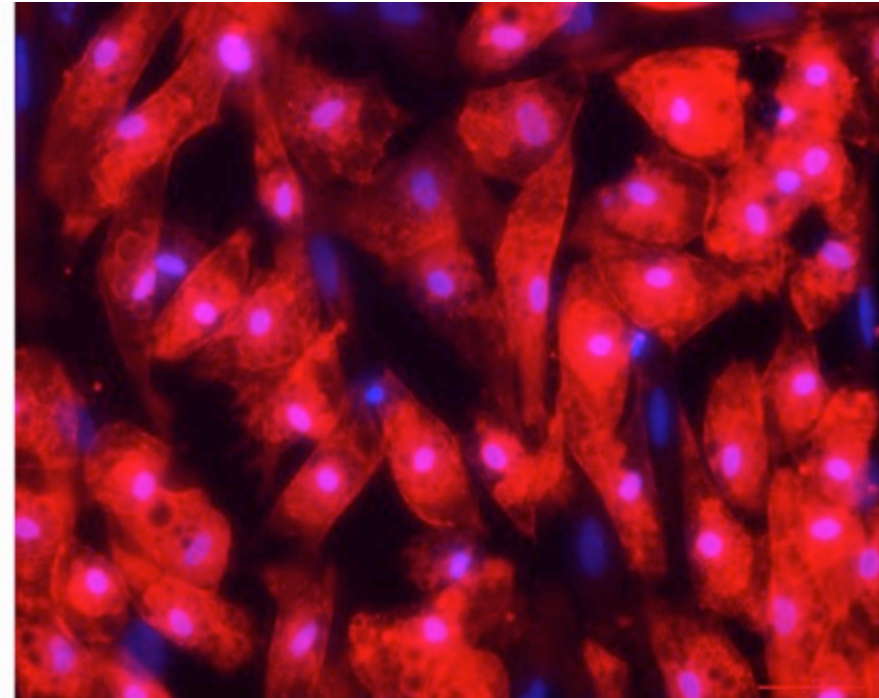
Obesity (2011) **19**, 1755–1760. doi:10.1038/oby.2011.125

AgeX-BAT1 Properties

Stained for Brown Adipocyte Marker UCP1



Tissue-Sourced Brown Adipocytes



PureStem Brown Adipocytes

Stem Cell Research & Therapy (2019) 10:7

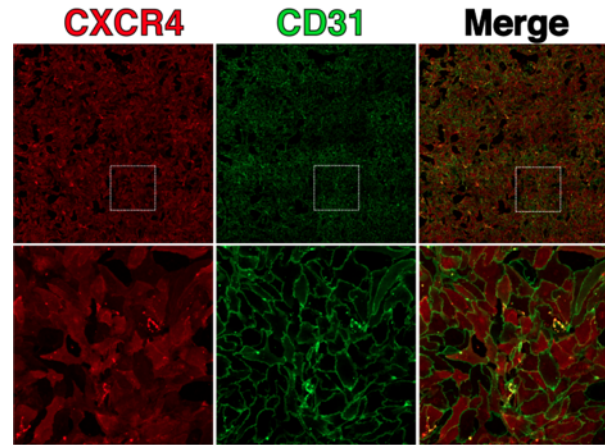
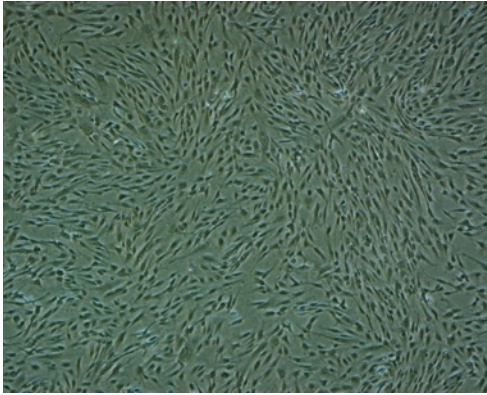
Obesity/T2D Market/Competition

- 30M Americans have diabetes¹ 1:3 Americans will have diabetes by 2050
- The global market for diabetes mellitus and obesity is set to rise from \$70.8 billion in 2015 to \$163.2 billion by 2022, at a strong compound annual growth rate of 12.7%, according to business intelligence firm GBI Research.
- Competing products commonly target insulin secretion, glucose excretion, incretins such as GLP-1, or attempt to activate existing BAT or cause browning of white fat.

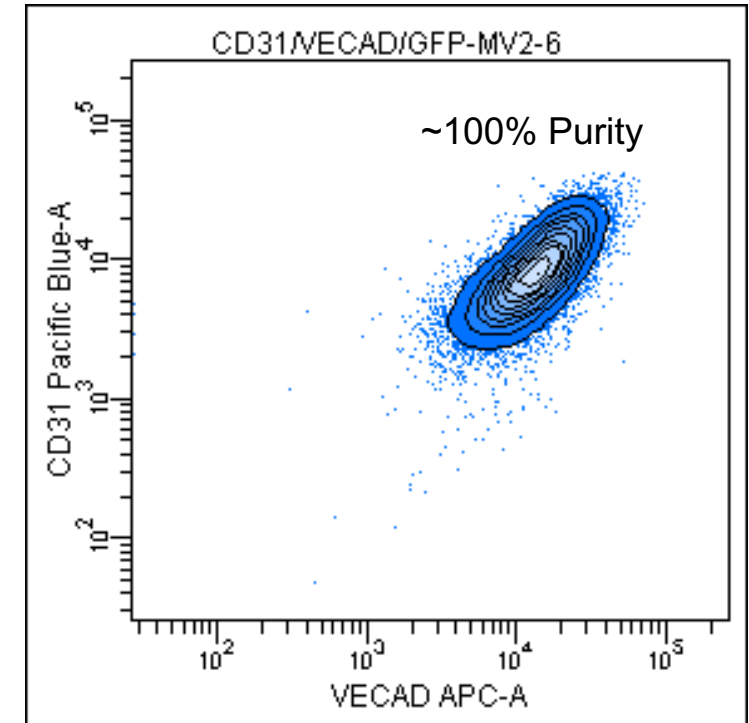
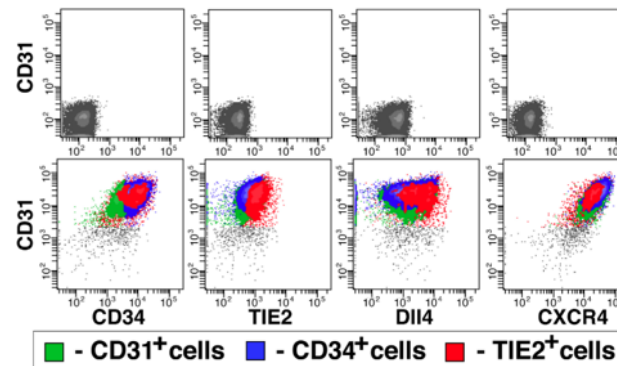
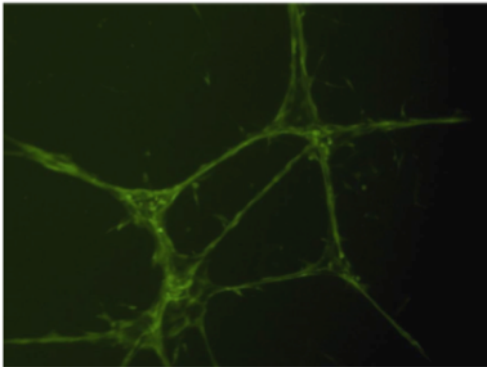
1) Centers for Disease Control and Prevention. National Diabetes Statistics Report: Estimates of Diabetes and Its Burden in the United States. US Department of Health and Human Services; Atlanta, GA: 2014.

AgeX-VASC1 Purity

Monoclonal Endothelium



GFP Endothelium (168 hrs)



Cardiovascular Market

> *\$Trillion Market Worldwide*



	Current	2035
Medical costs up 135 percent	\$318 billion	\$749 billion
Indirect costs up 55 percent (Lost productivity)	\$237 billion	\$368 billion
TOTAL COSTS	\$555 billion	\$1.1 trillion

The Cost Generators: Aging Baby Boomers

As Baby Boomers age, costs for CVD will shift from middle-aged Americans to individuals ages 65 and over. By 2035, Boomers who are 80 and older will be the source of the largest cost increases for CVD.

http://www.heart.org/idc/groups/heart-public/@wcm/@adv/documents/downloadable/ucm_491543.pdf

Business Strategy

- Bailment of Master Cell Banks (MCBs)
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 - Therapeutic use of ectopic organoids
 - Diverse biomaterials including exosomes
 - *Cytiva II* - Adult cardiac cells for drug testing
- Internal development of *AGEX-BAT1*, *AGEX-VASC1*, and *Renelon*
- Induced Tissue Regeneration (iTR™) through the subsidiary Reverse Bioengineering, Inc.

Anticipated Six Month Milestones

- Partnerships:
 - Therapeutic use of ectopic organoids
 - First commercial bailment of master cell bank
 - PureStem-derived biomaterials
- Finance Reverse Bioengineering, Inc. to advance iTR
- Complete development of *Cytiva II*
- Announce development plans for *Renelon™*, a relatively near-term application of iTR technology

Company Information

COMPANY QUICK FACTS

Founded 2017

Contact Details:

965 Atlantic Avenue

Alameda, CA 94501

Tel: +1 (510) 671-8370

Stock Listing NYSE American: **AGE**

Market Cap (9/6/19) ~\$100M

EXECUTIVE MANAGEMENT

Michael D. West, Ph.D. Chief Executive Officer

Founder and first CEO Geron Corporation

Gregory Bailey, M.D., Chairman of the Board

Co-founder Ascent Health Care, Board of Medivation

Nafees Malik, M.D., Chief Operating Officer

Head of Cell and Gene Therapies at Juvenescence

Russell Skibsted, M.B.A. Chief Financial Officer Lineage

Cell Therapeutics, Spectrum Pharmaceuticals, Hana

Biosciences, Asset Management Company

Aubrey de Grey, Ph.D., VP, New Technology Discovery.

Chief Science Officer, SENS Research Foundation.

INVESTOR CONTACT

Russell Skibsted, CFO

Email: rskibsted@agexinc.com



Summary

- Targeting the largest unmet medical needs in the US: chronic degenerative diseases of aging
- Partnering the non-core commercial applications of pluripotency
- Early/widespread commercialization through bailment of UniverCyte master cell banks
- Internal development of *AGEX-BAT1*, *AGEX-VASC1*, *Renelon*, and *Cytiva*
- Induced Tissue Regeneration (iTR) technology for the transcriptional reprogramming of aging *in vivo* to be developed by the subsidiary Reverse Bioengineering, Inc.