



NYSE American: AGE

Master Investor Conference

November 13, 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
- To employ advanced technology that reverses aging and induces regeneration in diverse tissues of the body

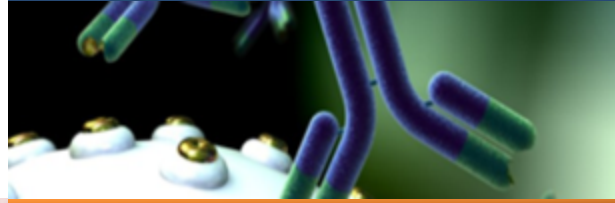
Significant Biotechnology Revolutions

Recombinant DNA Technology



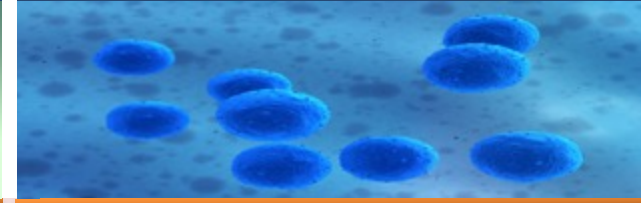
- 1974 – Gene cloning technology developed
- 1976 - Moratorium on rDNA research initiated led to established guidelines on rDNA research
- 1989 – First \$B product EPO
- Today, products from the use of rDNA technology are ubiquitous
- >140 clinical trials
- Current Global Market \$75 B

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

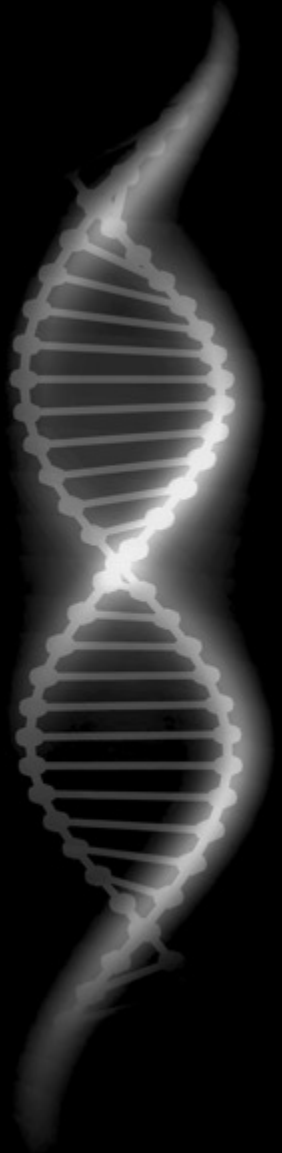


- 1998 – First Pluripotent Stem Cells isolated
- 2010 – 1st hES Clinical trial
- 2015 – Fuji acquires Cell. Dyn.
- 2015 – Astellas acquires Ocata
- 2019 – Bayer acquires BlueRock
- 2019 – Vertex acquires Semma
- Future – 1st \$B product

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
- Subsidiary Reverse Bio & Induced Tissue Regeneration (iTR™)

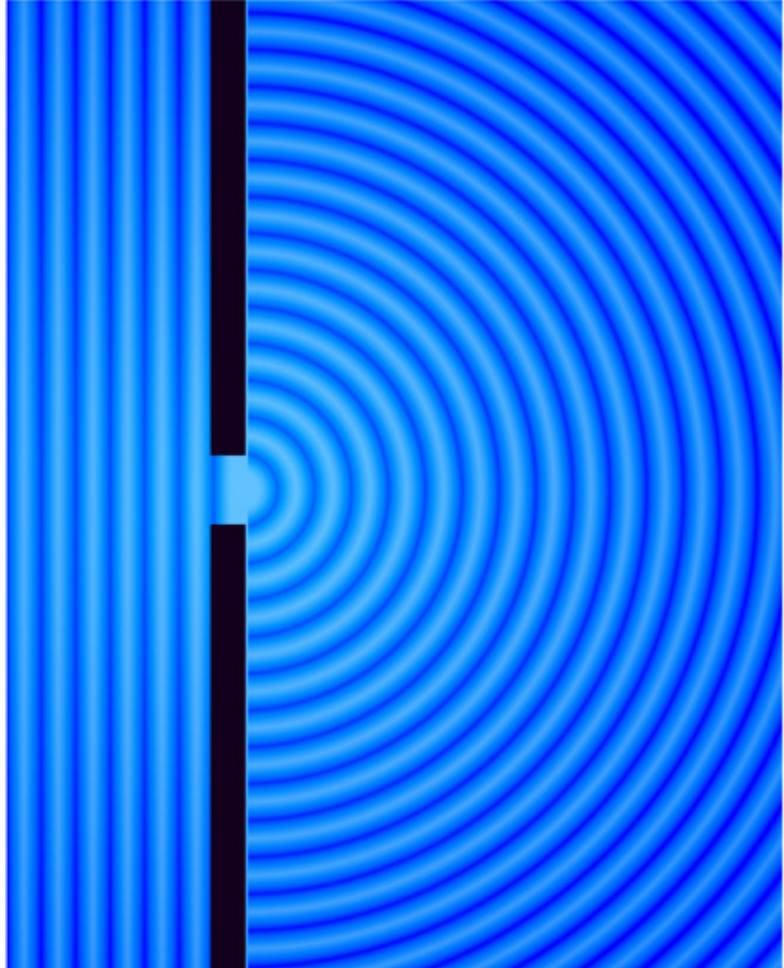
Mission



To lead the commercial development of technology capable of reversing the developmental age of human cells

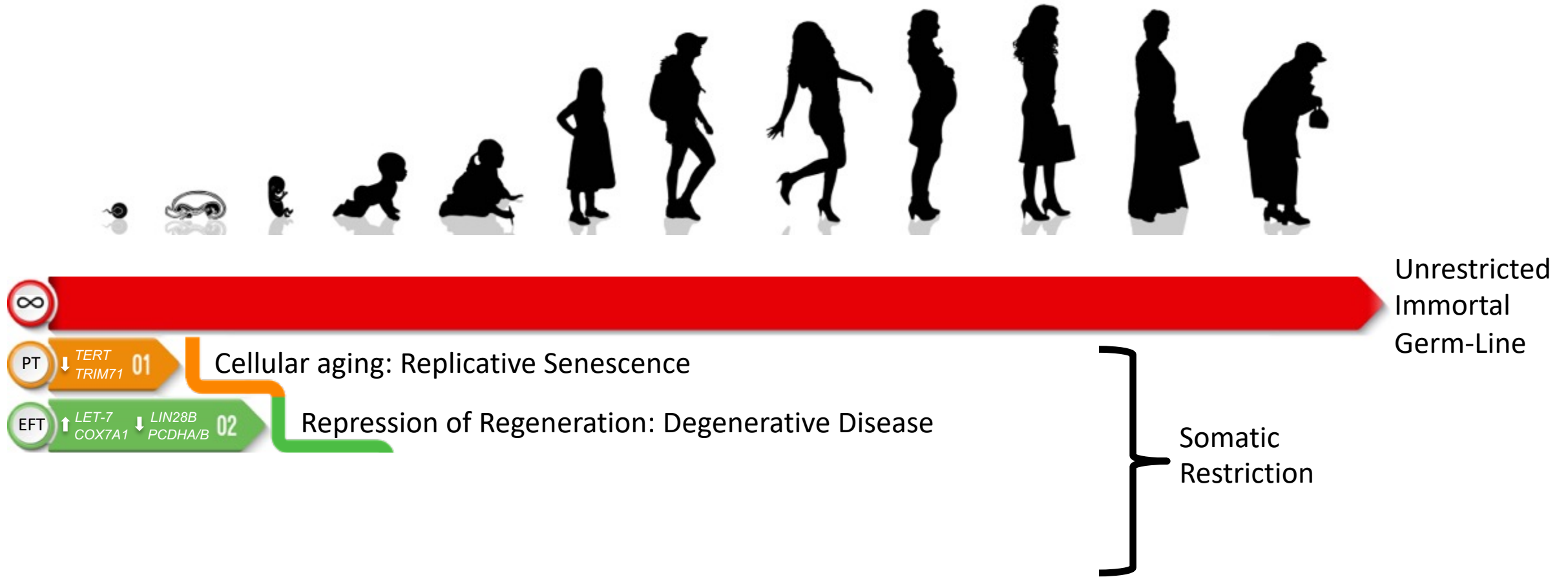
Recent Disruptive Events in Aging Research

Aging as
Inevitable,
Entropy



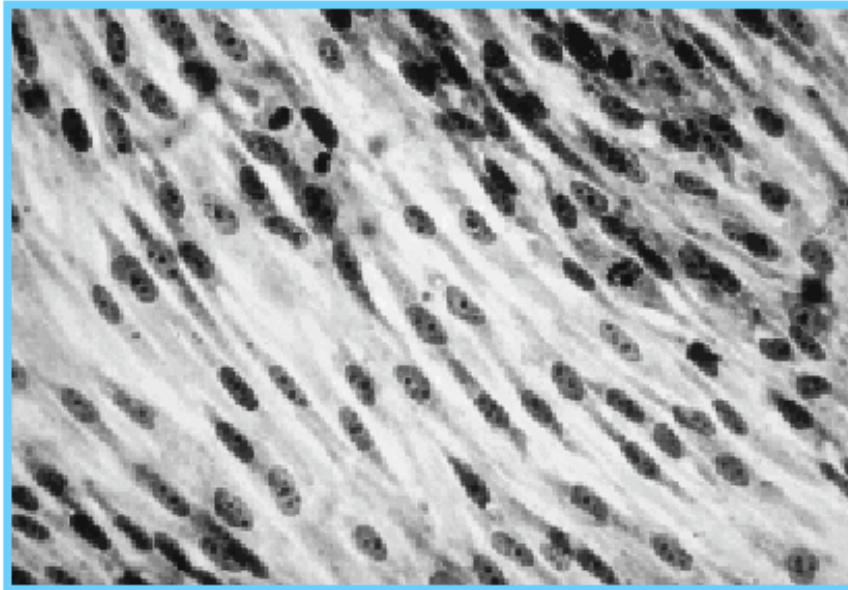
Aging
as
Reprogrammable

Developmental Restriction



Cellular Aging & Replicative Immortality

Somatic Cells Have a Finite Lifespan

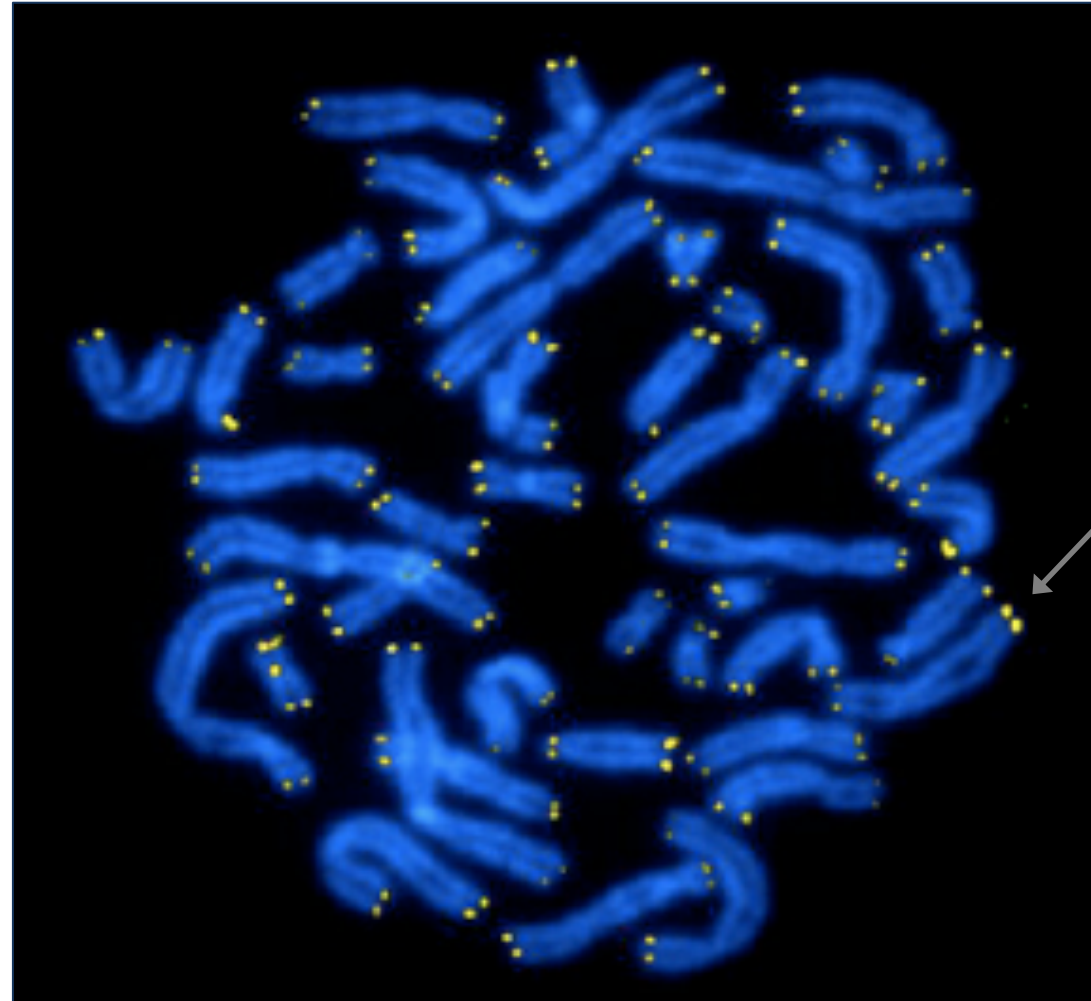


**Young
Fibroblasts**



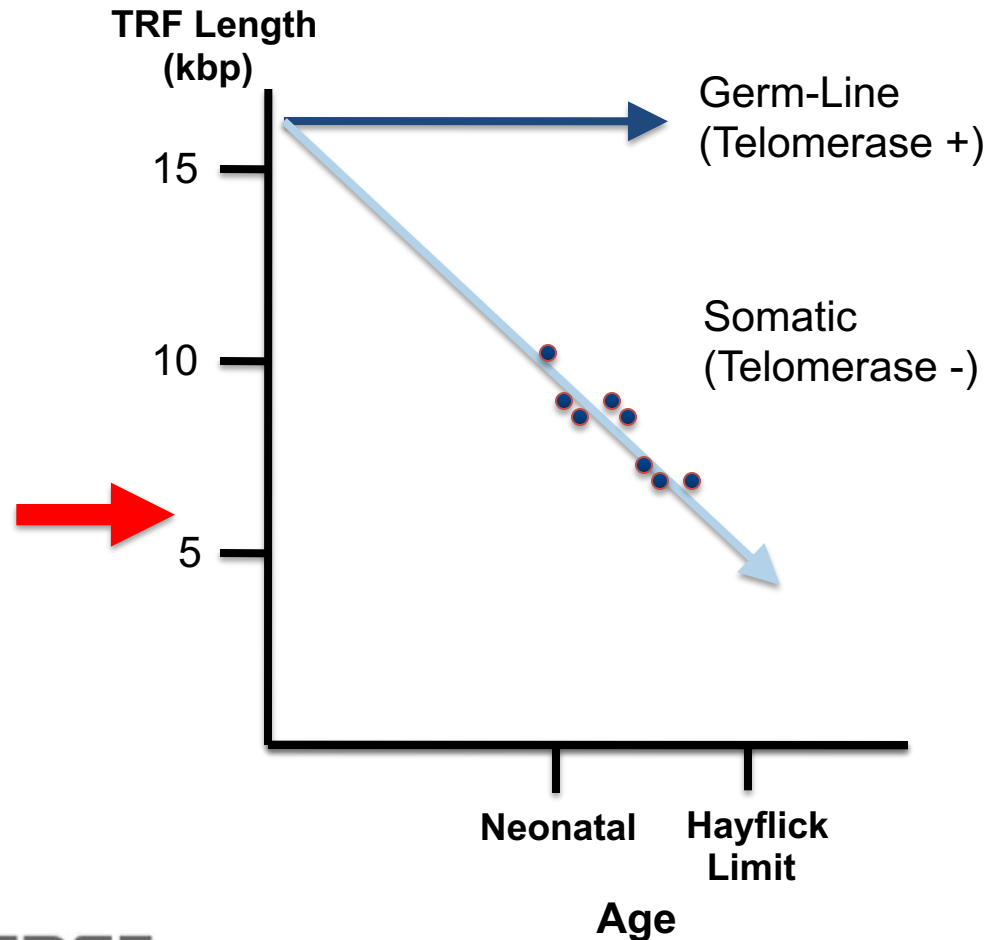
**Senescent
Fibroblasts**

Cellular Aging & Replicative Immortality



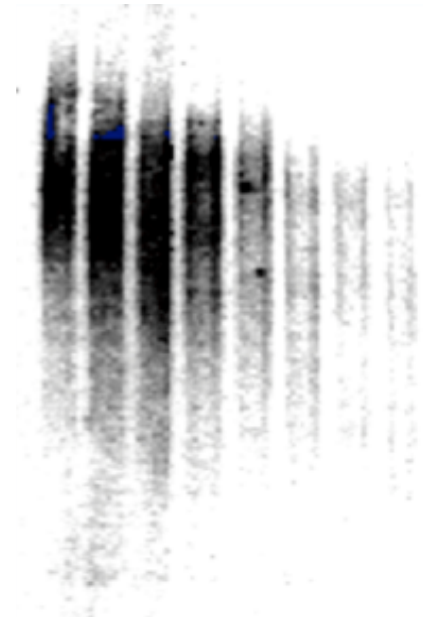
Telomere

Cellular Aging & Replicative Immortality



Population Doublings

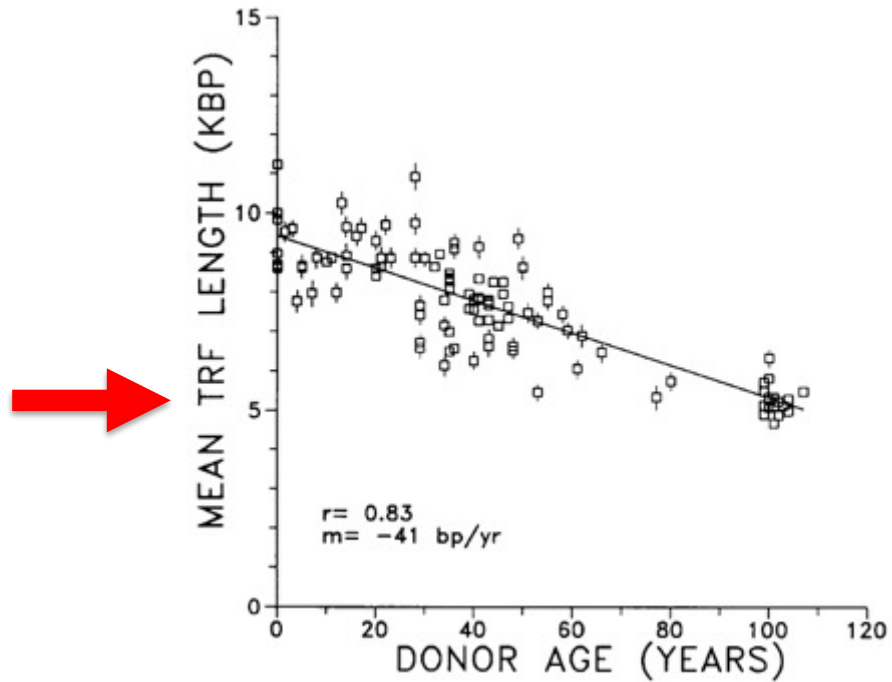
22 34 43 55 65 72 82 90



Decreasing Telomere Length With Age

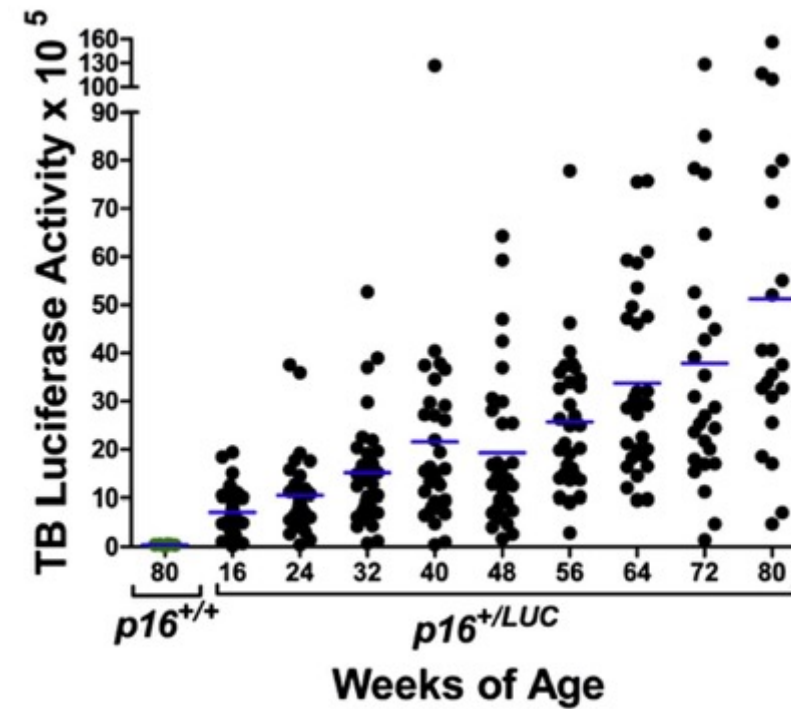
Cellular Aging in Human and Mouse

Human



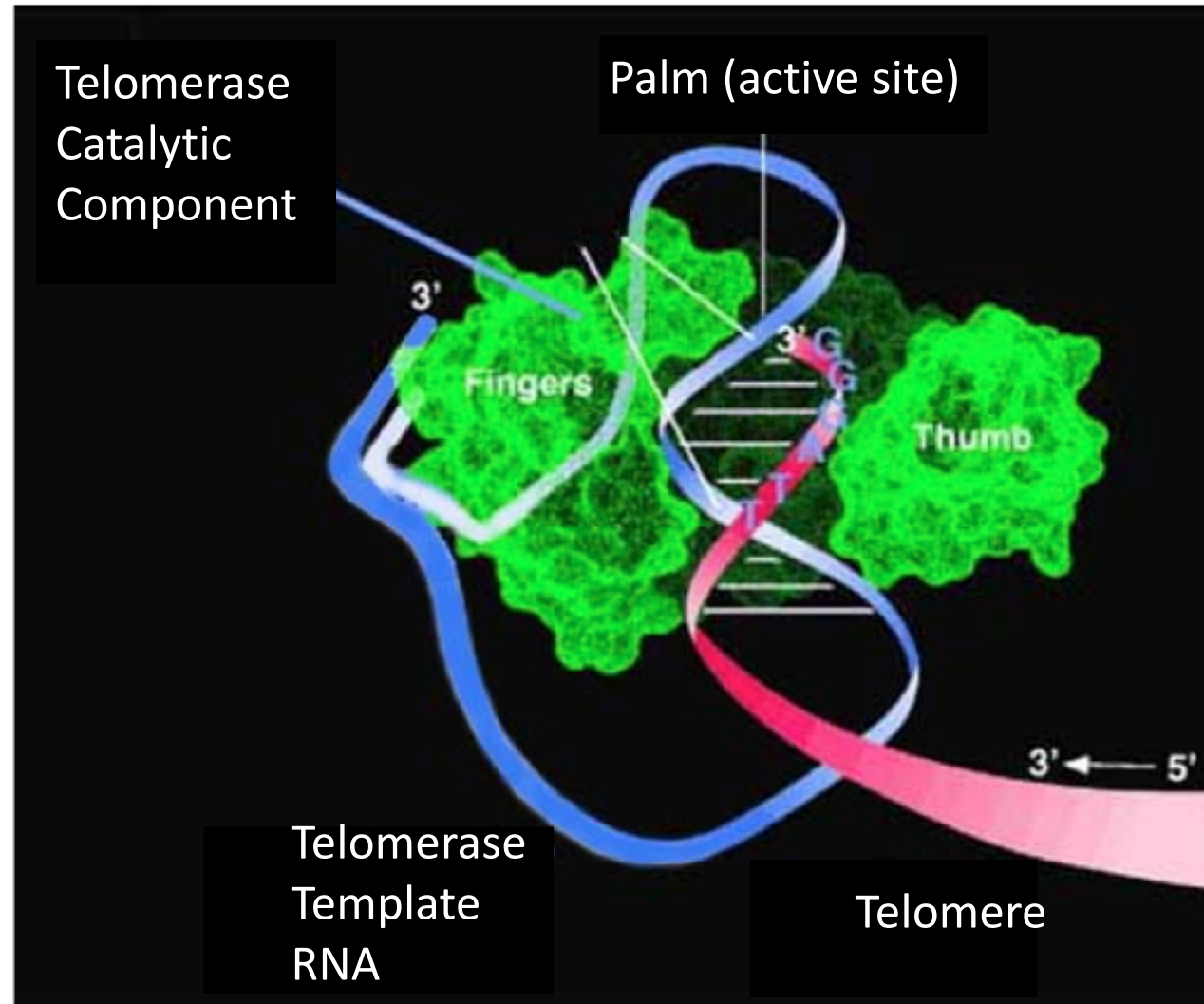
Am J Hum Genet. 1993 Apr;52(4):661-7

Mouse



Cell 152, 340–351, January 17, 2013

Telomerase in an Immortalizing Gene



Telomerase in an Immortalizing Gene



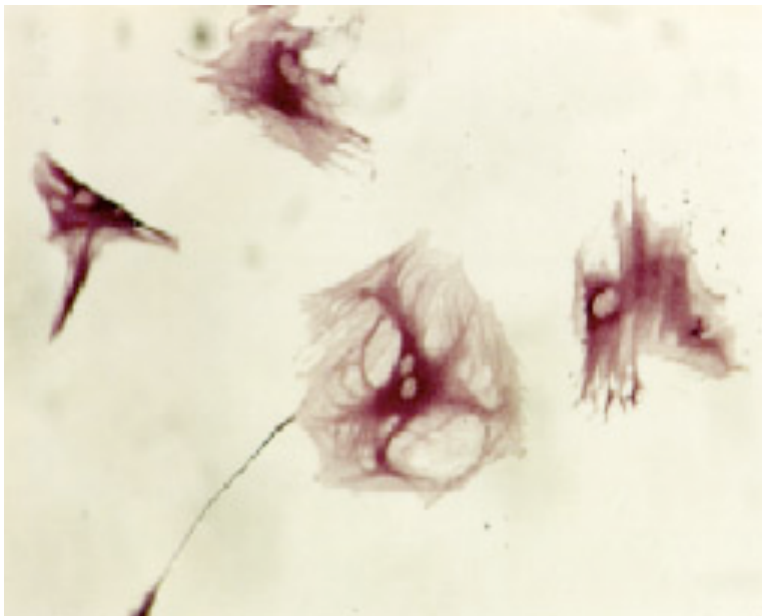
Extension of Life-Span by Introduction of
Telomerase into Normal Human Cells

Andrea G. Bodnar, *et al.*

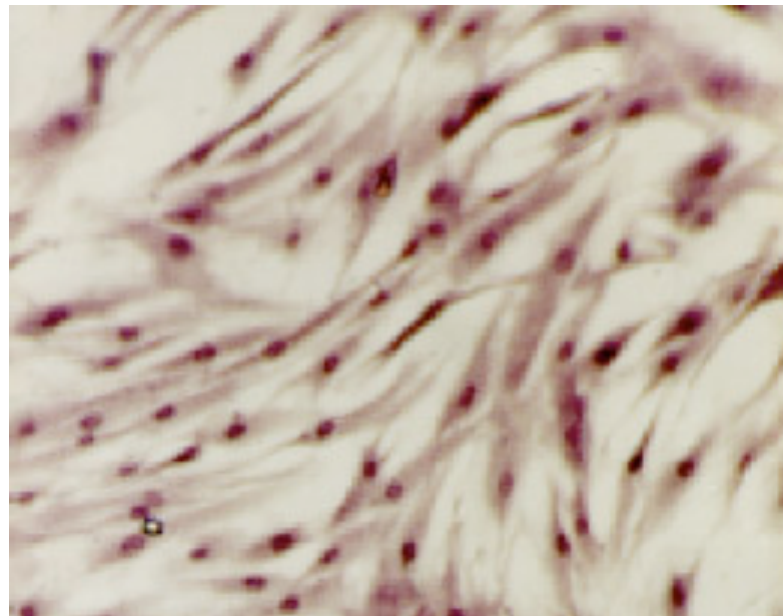
Science **279**, 349 (1998);

DOI: 10.1126/science.279.5349.349

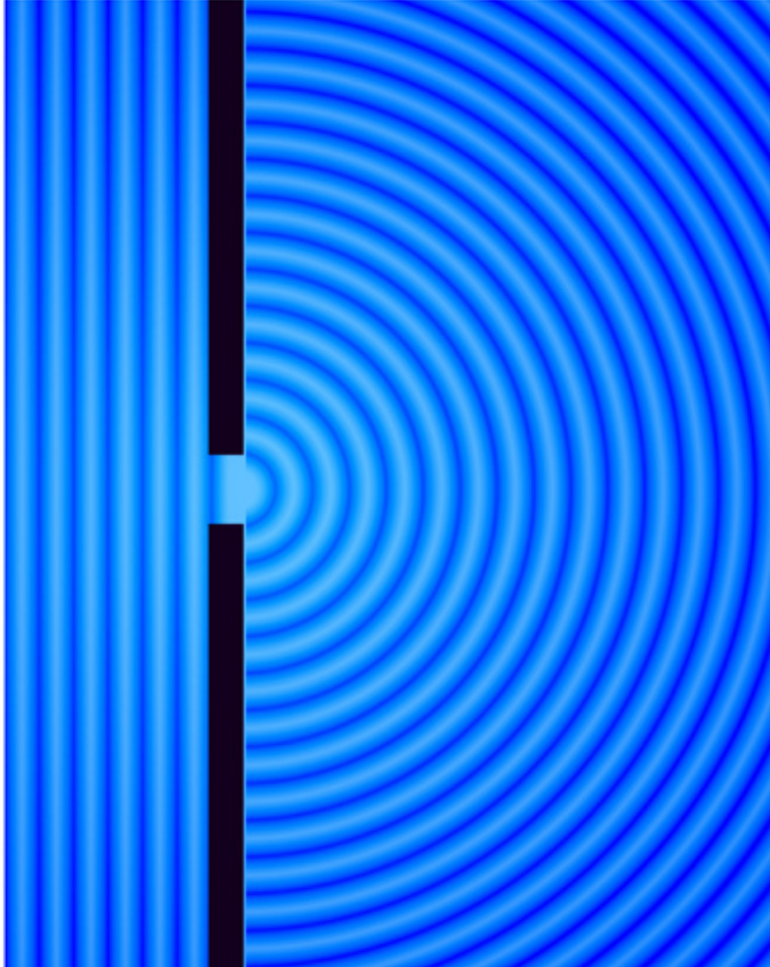
T'ase (-) (Senescent)



T'ase (+) (Immortal)



Cell Aging and Development is Reprogrammable

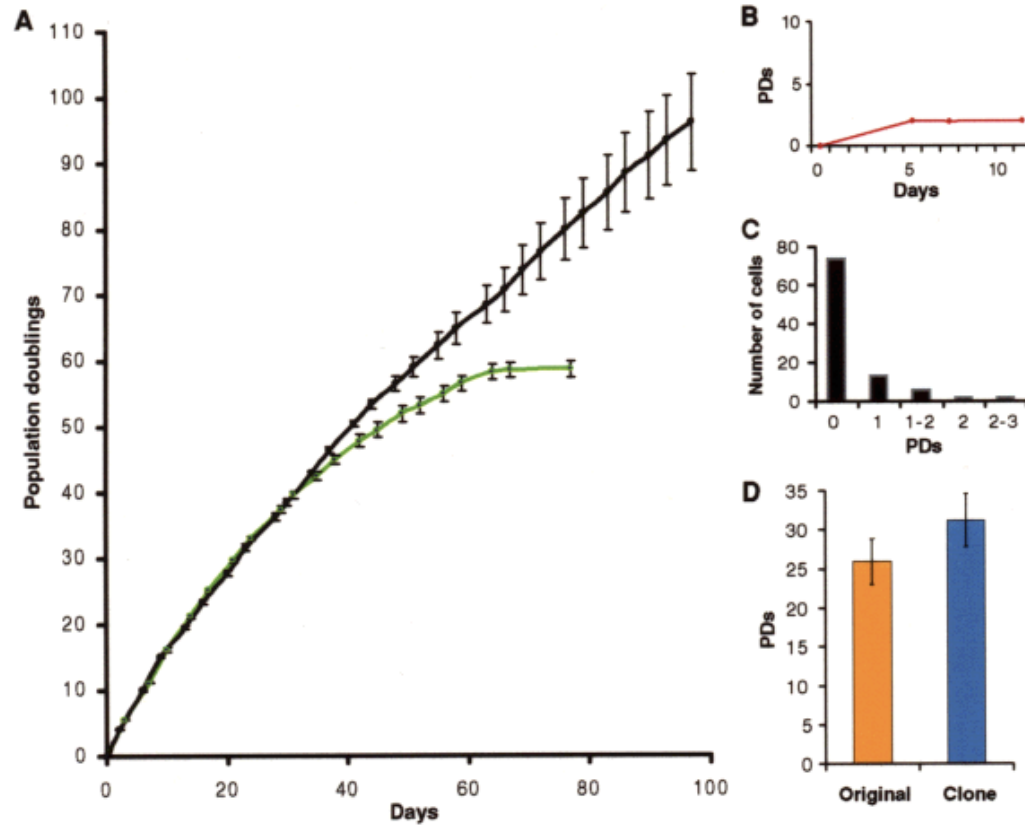


Extension of Cell Life-Span and Telomere Length in Animals Cloned from Senescent Somatic Cells

Robert P. Lanza,^{1*} Jose B. Cibelli,¹ Catherine Blackwell,¹
Vincent J. Cristofalo,² Mary Kay Francis,²
Gabriela M. Baerlocher,³ Jennifer Mak,³ Michael Schertzer,³
Elizabeth A. Chavez,³ Nancy Sawyer,¹ Peter M. Lansdorp,^{3,4}
Michael D. West¹

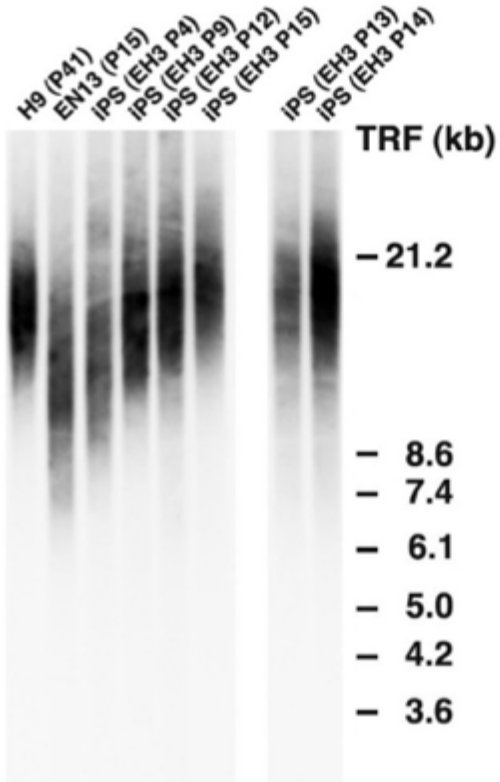
SCIENCE VOL 288 28 APRIL 2000

Reprogramming the Aging of Somatic Cells

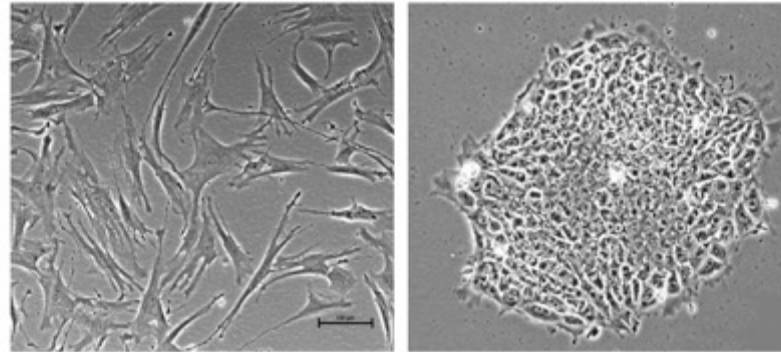


Science 288: 665 (2000)

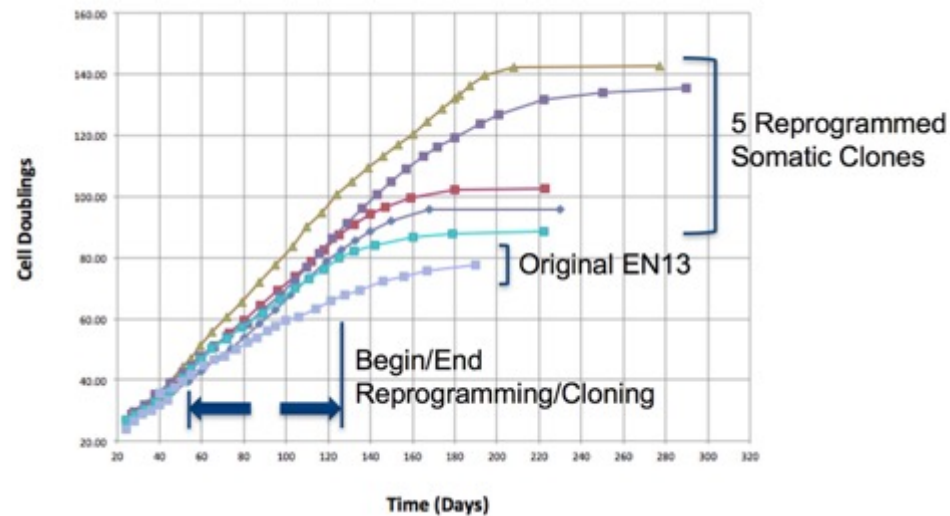
Reprogramming the Aging of Human Cells *In Vitro*



Regen Med 2010 5:345-63

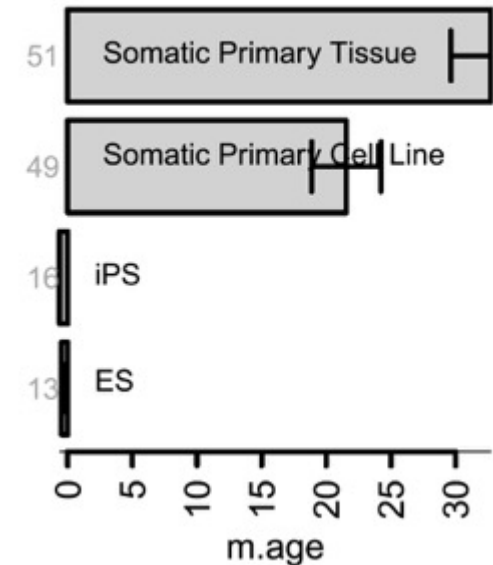


Skin Fibroblasts iPS Cells



Reprogramming Methylation Age

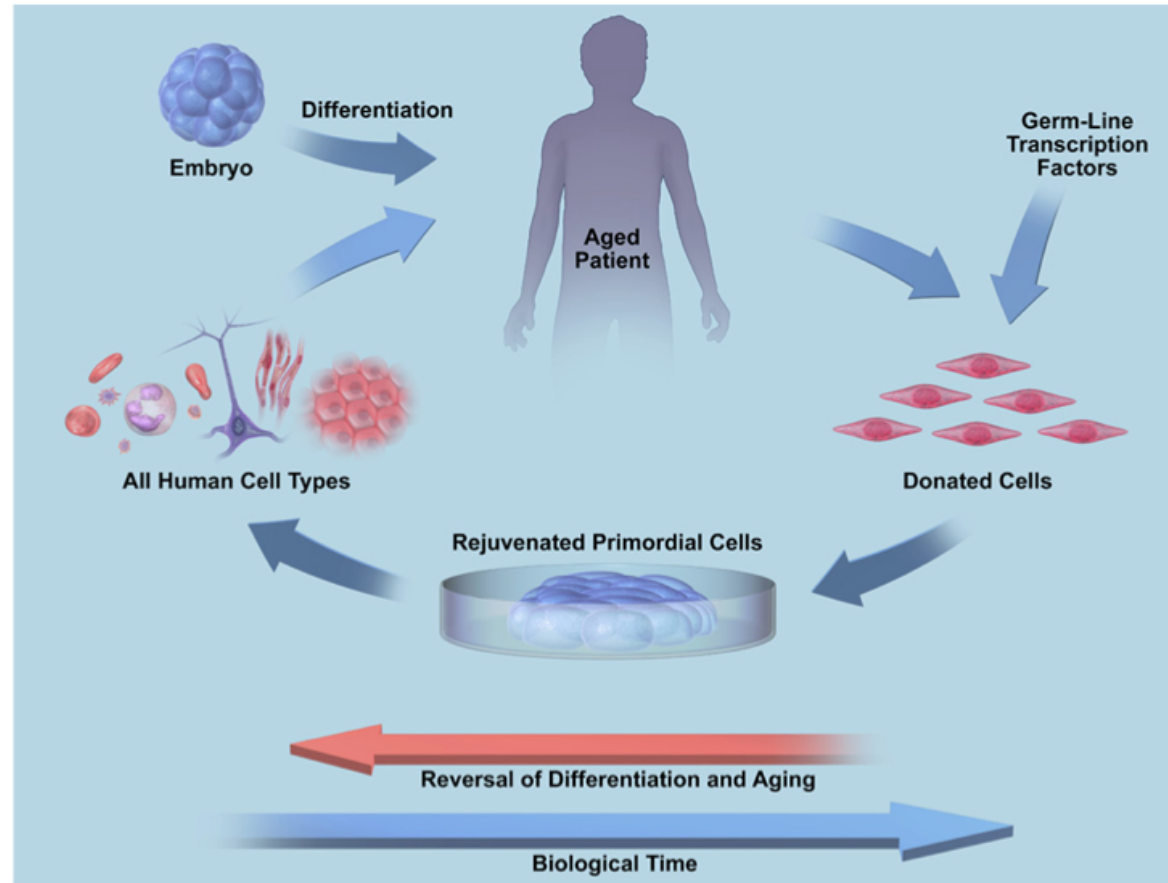
A Data 77 $p = 1e-14$



Horvath
Genome Biol. 2013;14(10):R115

Reprogramming the Aging of Human Cells *In Vitro*

Cell Age Reversal *In Vitro*



Provocative Science/Provocative Reporting



TransTech Alert
Transformational Technology

WEEKLY August 08, 2019

WEEKLY

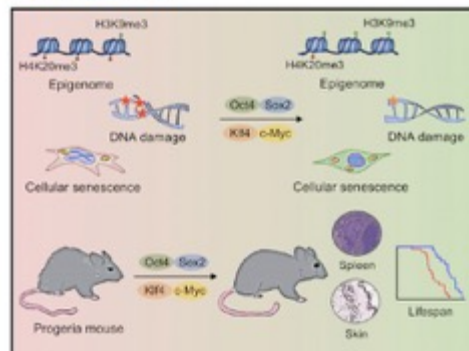
The Race for Age Reversal Heats Up

Cell

Article

In Vivo Amelioration of Age-Associated Hallmarks by Partial Reprogramming

Graphical Abstract



Authors

Alejandro Ocampo, Pradeep Reddy, Paloma Martinez-Redondo, ..., Isabel Guillen, Pedro Guillen, Juan Carlos Izpisua Belmonte

Correspondence

belmonte@saik.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.

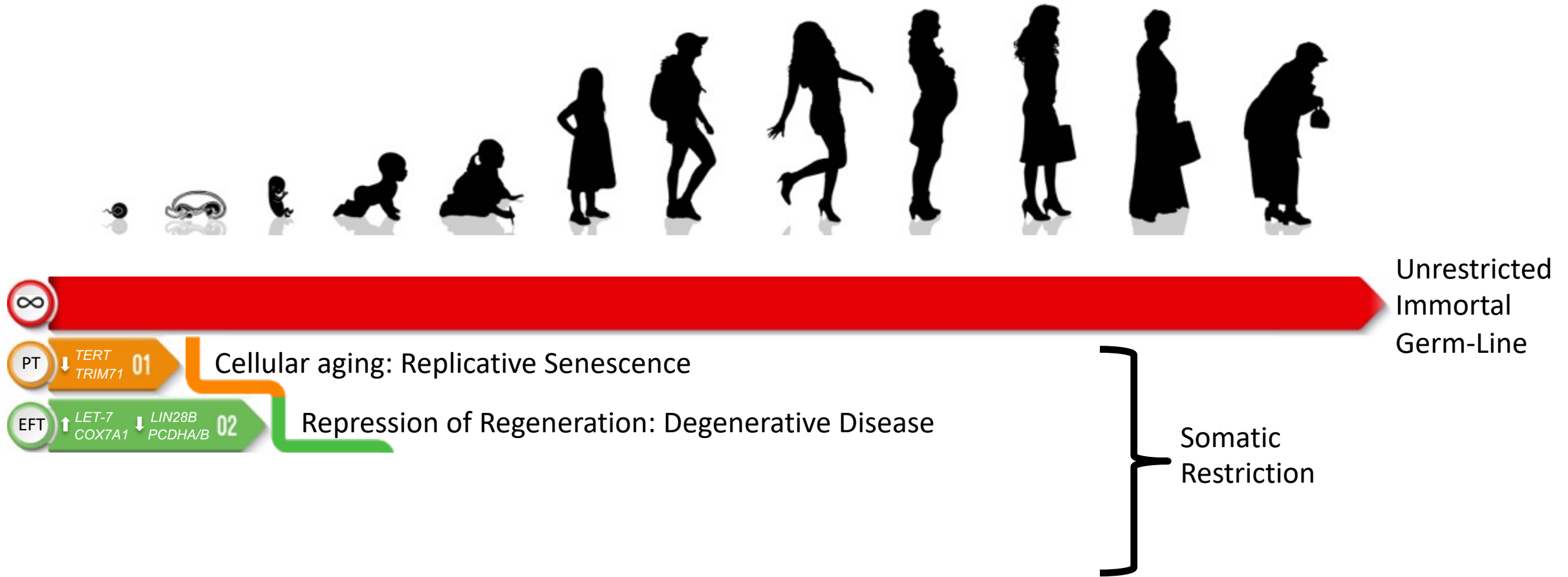
Reversal of ageing- and injury-induced vision loss by Tet-dependent epigenetic reprogramming

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;



Significance of the 2nd Developmental Restriction

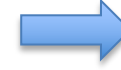


Immortal Tissue Regeneration (ITR™)

Embryonic



Fetal - Adult



Aging Adult



Highly Regenerative
Construction



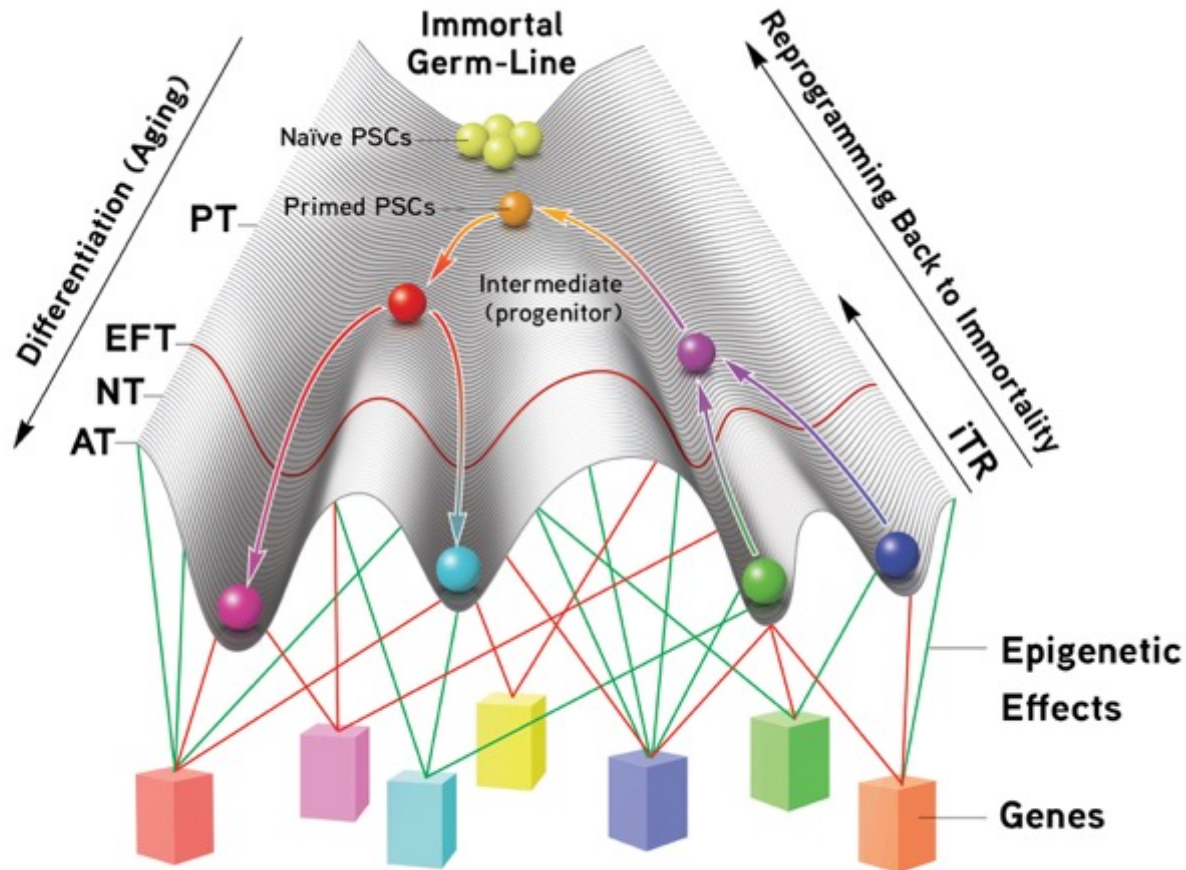
Declining Regeneration
Maintenance



Non-Regenerative
Destruction

↑ Cell Age Reversal through Telomerase
Induced Regeneration

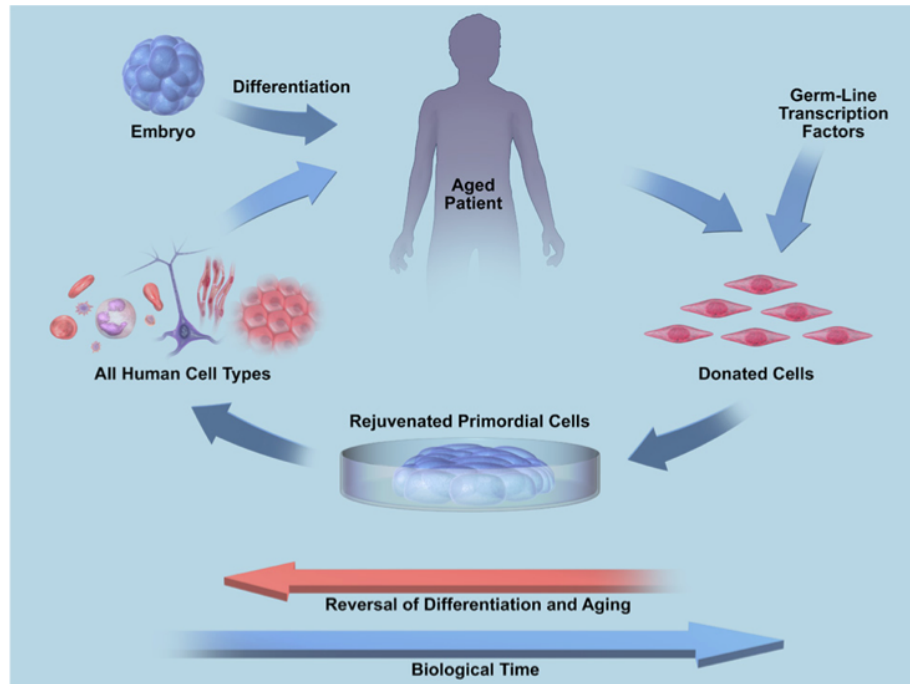
Immortal Tissue Regeneration (ITR™)



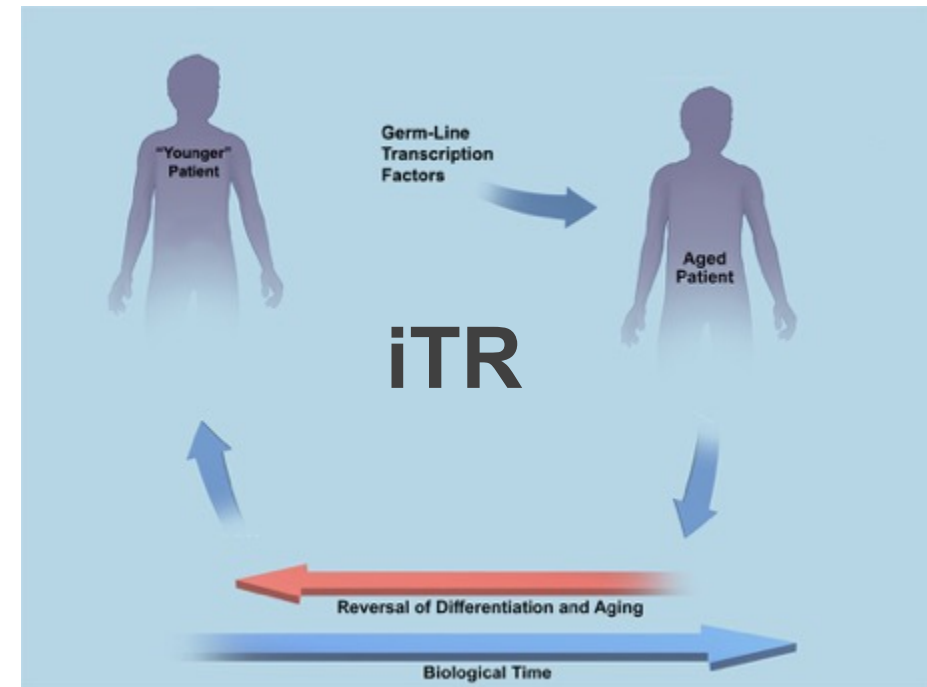
- Reverse developmental aging back to a regenerative state
- Reverse cell aging to restore cell lifespan
- Animals that can do both commonly don't age
- Profound applications in scarless tissue regeneration, aging, and cancer
- Discrete initial applications such as induced regeneration of the heart

Immortal Tissue Regeneration (ITR™)

Cell Age Reversal *In Vitro*

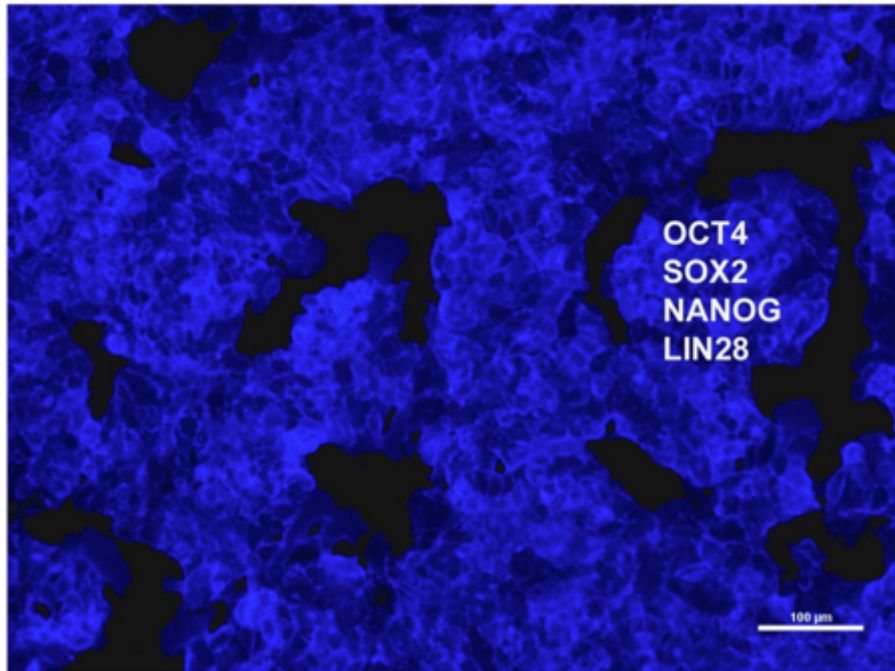


Cell Age Reversal *In Vivo*

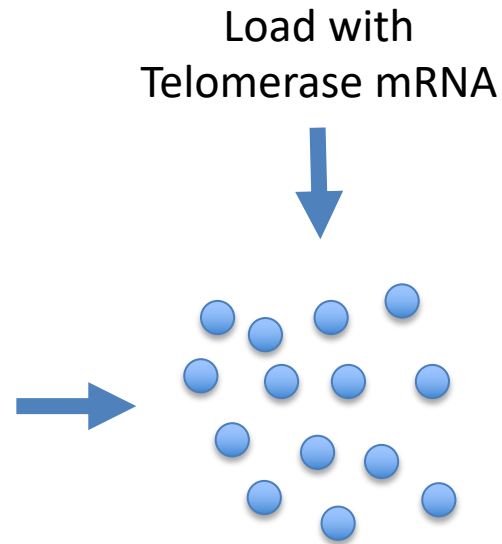


Immortal Tissue Regeneration (ITR™)

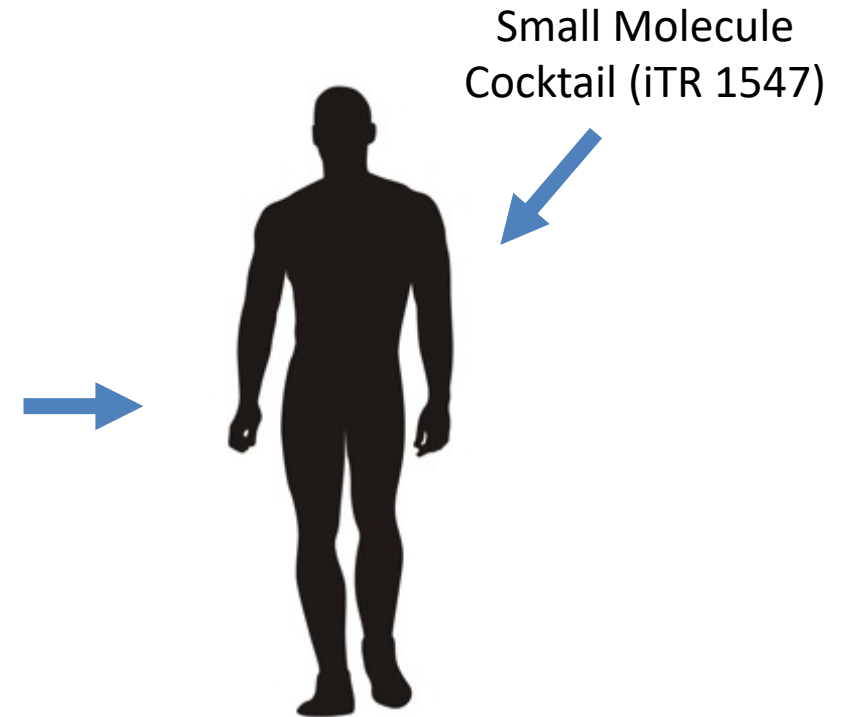
Twin Strategies in Development



ReCyte1 EC Cell Line

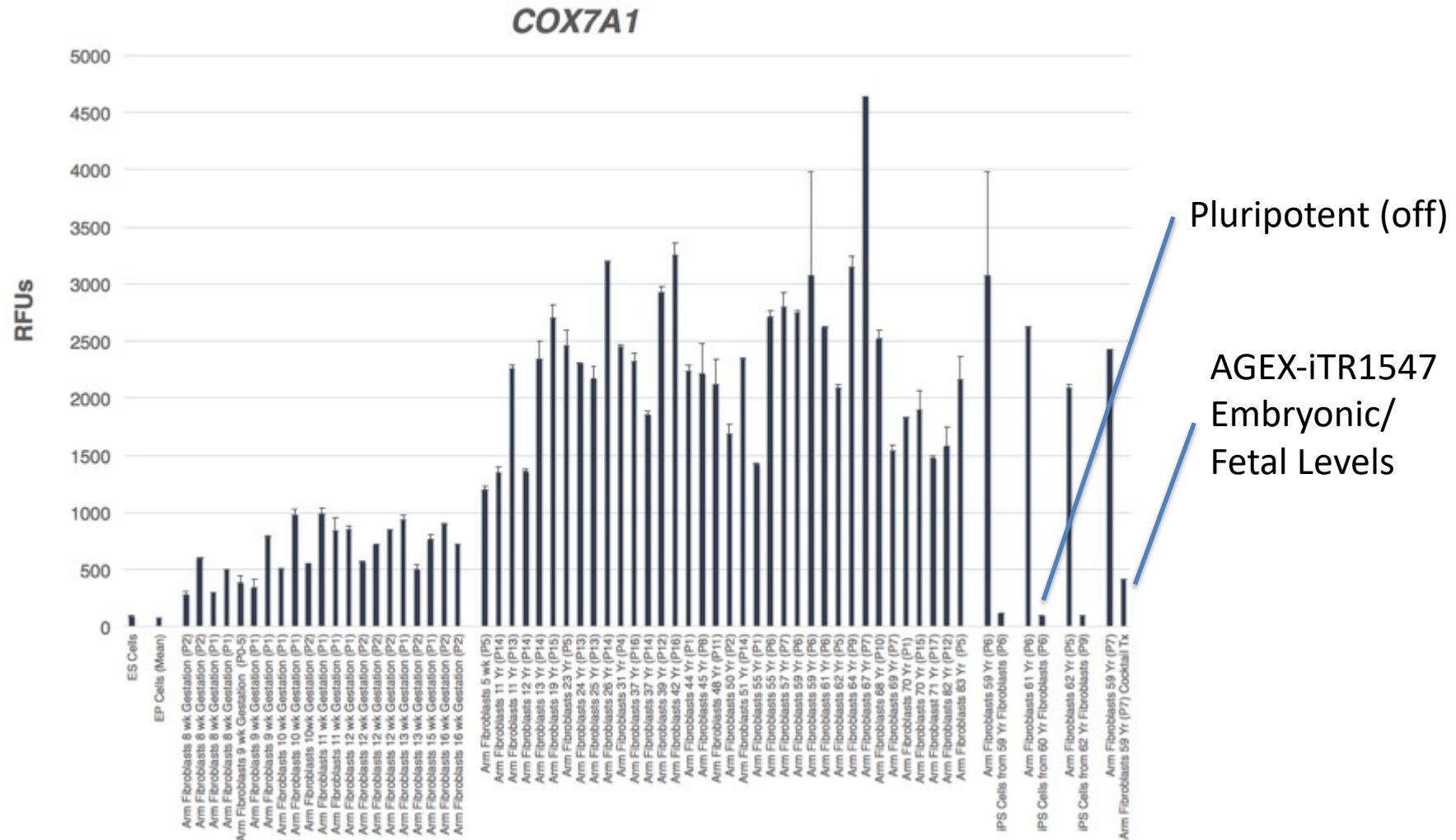


Exosomes



In Vivo Applications

Drug-Based iTR



Reverse Bio Strategy

- Privately-held subsidiary currently 100% owned by AgeX
- Fund via Reverse Bio equity financing
- Partner cancer applications in near-term
- Since the technology applies to virtually all tissue types, partner specific fields of use, retain key applications

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 (11/12/19) ~\$55M

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 U.S.: 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*, and *Cytiva*
- Induced Tissue Regeneration (iTR) technology for the transcriptional reprogramming of aging *in vivo* to be developed by the subsidiary Reverse Bioengineering, Inc.