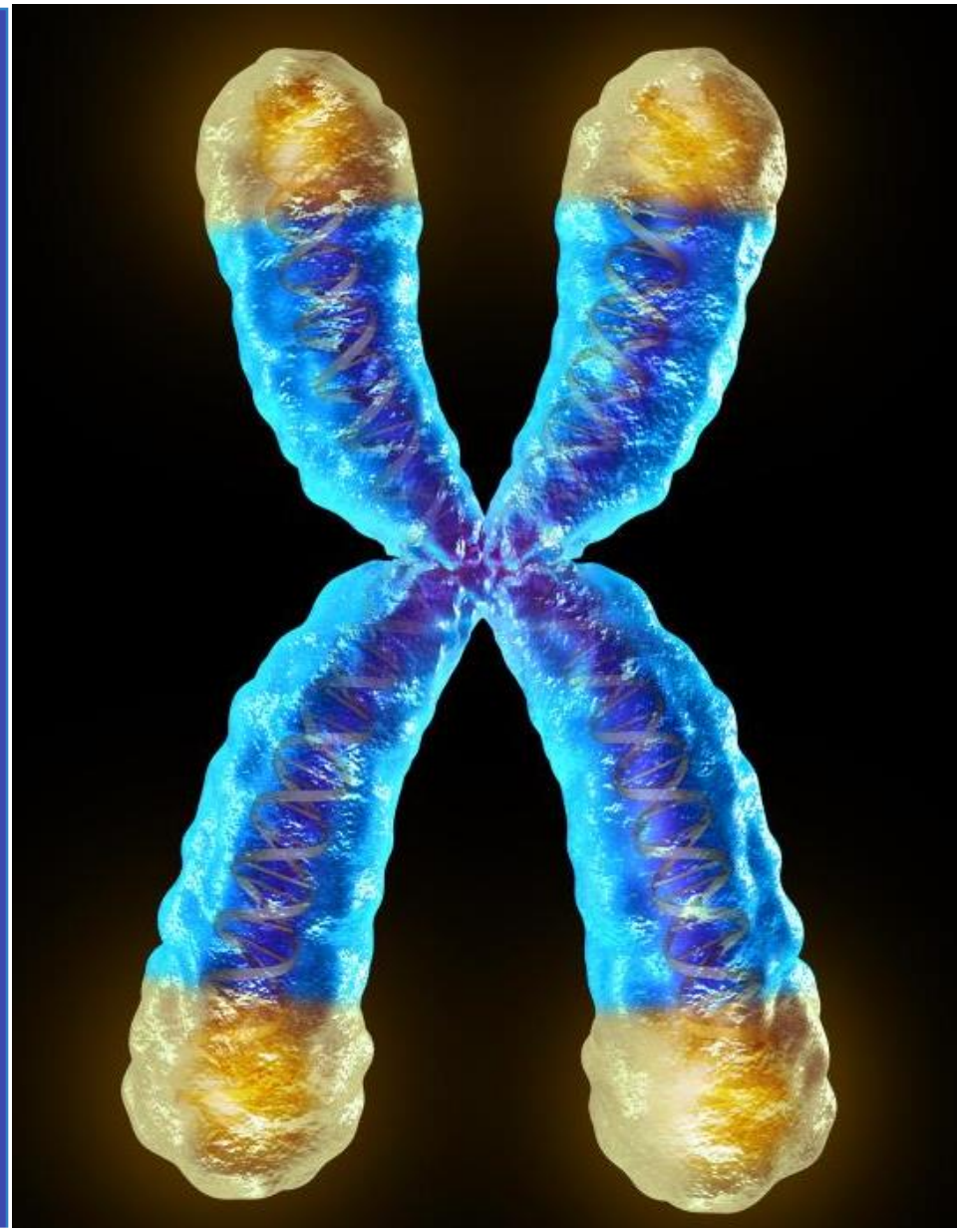
TELOMIR™

ORAL STEM CELL THERAPY

Erez Aminov
Chairman and CEO

August 2024



Nasdaq: TELO

2024 | INVESTOR PRESENTATION

FORWARD LOOKING STATEMENT

This presentation and the statements of the Company's management related thereto contains "forward-looking statements," which are statements other than historical facts made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements may be identified by words such as "aims," "anticipates," "believes," "could," "estimates," "expects," "forecasts," "goal," "intends," "may," "plans," "possible," "potential," "seeks," "will," and variations of these words or similar expressions that are intended to identify forward-looking statements. Any such statements in this presentation that are not statements of historical fact may be deemed to be forward-looking statements. These forward-looking statements include, without limitation, statements regarding Telomir's technologies potential in reversing age-related decline and TELOMIR-1's ability to result in an individual's ability to repair oneself by using TELOMIR-1. Any forward-looking statements in this presentation are based on Telomir's current expectations, estimates and projections only as of the date of this release and are subject to a number of risks and uncertainties (many of which are beyond the Company's control) that could cause actual results (including the anticipated benefits of the pre-clinical data discussed herein) to differ materially and adversely from those set forth in or implied by such forward-looking statements. These and other risks concerning Telomir's programs and operations are described in additional detail in its registration statement on Form S-1 and other SEC filings, which are on file with the SEC at www.sec.gov and the Company's website at https://ir.telomirpharma.com. Telomir explicitly disclaims any obligation to update any forward-looking statements except to the extent required by law.

TELOMIR PHARMACEUTICALS AT-A-GLANCE

Founded
August 2021

Headquarters
Tampa

IPO Date
February 9, 2024

Shares Outstanding
29,609,814

Telomir Pharmaceuticals is a preclinical stage pharmaceutical company focused on the development and commercialization of ***Telomir-1.*** Telomir-1 is the first innovative and novel small molecule targeted at lengthening the DNA's protective telomere caps in order to affect age reversal and also treat age-related inflammatory diseases.

Partners

IQVIA
FRONTAGE
Anthem BioSciences
DavosPharma
Johns Hopkins School of Medicine
eurofins
charles river
premier consulting
InSilicoTrials

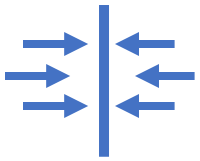
Telomir-1 is under investigation to potentially provide a therapeutic intervention against age-related inflammatory conditions

Novel small molecule

Oral therapeutic treatment to protect human stem cells

Targeting the treatment of age-related inflammatory conditions such as osteoarthritis

Elongate and stimulate telomeres by inhibiting metals that play a role in age-related inflammatory conditions

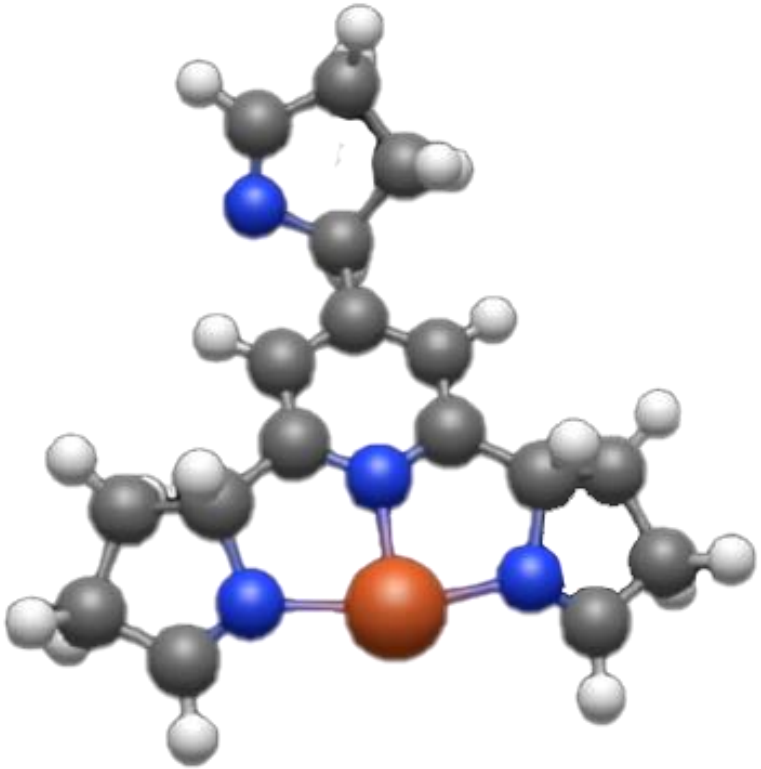


Interrupt and prevent IL-17 induced inflammatory pathways

No FDA approved oral IL-17 inhibitor

ARTIFICIAL INTELLIGENCE (AI) MODELING OF TELOMIR-1

TELOMIR collaborated with InSilicoTrials, an innovator in leveraging AI and simulations to enhance drug development, to perform advanced AI modeling on Telomir-1. Early research has confirmed the mechanism of action of Telomir-1 and suggests that it may be a potent metal inhibitor, potentially leading to a reversal of aging through telomere regeneration.



White=Hydrogen
Black=Carbon
Blue=Nitrogen
Orange=Iron

ELIZABETH BLACKBURN: NOBEL PRIZE ON TELOMERES

The Nobel Assembly at Karolinska Institute (Sweden) awarded the Nobel Prize in Physiology or Medicine 2009 jointly to Elizabeth Blackburn, Carol Greider and Jack Szostak for the discovery of how chromosomes are protected by telomeres and the enzyme telomerase.

Elizabeth Blackburn

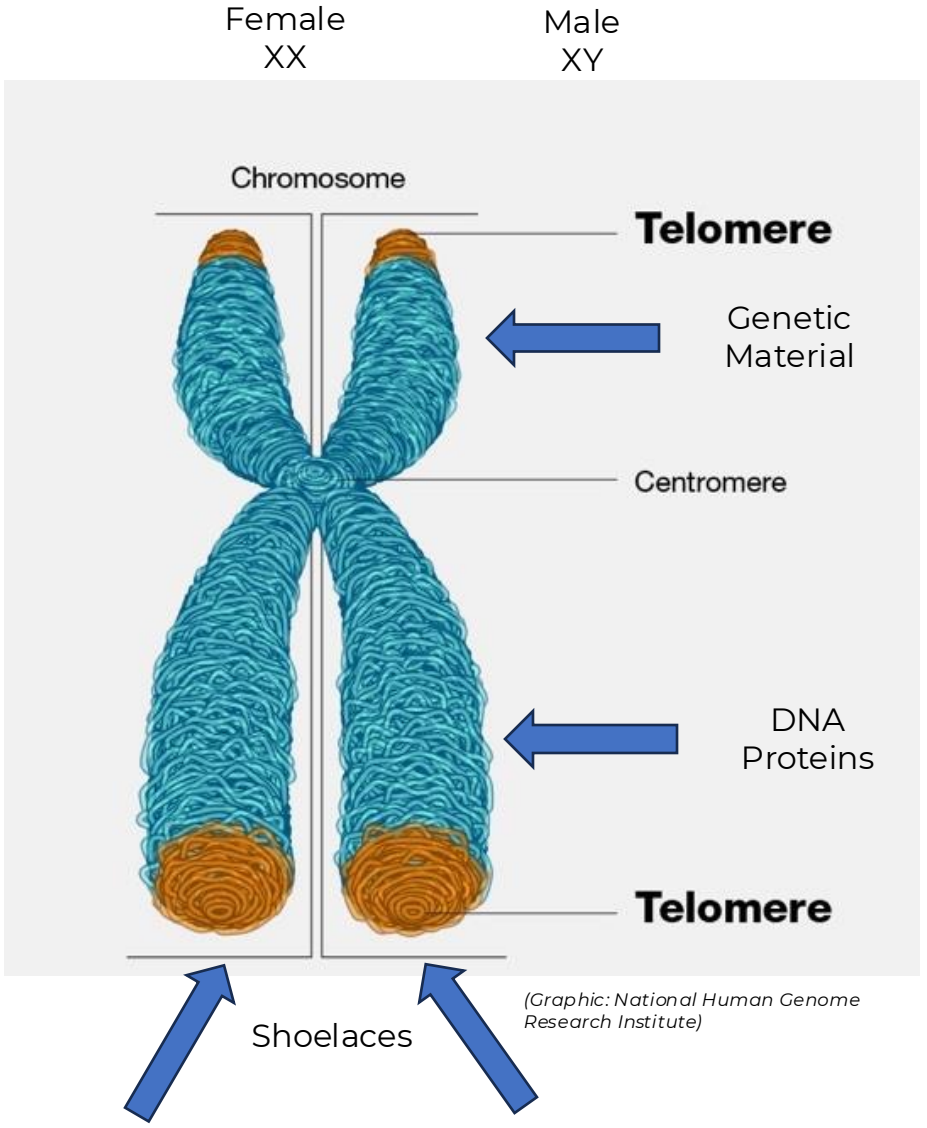
WHAT ARE TELOMERES

Telomeres are the protective end caps of a chromosome made up of DNA sequences and proteins (TTAGGG).

During cell division, telomeres allow cells to divide without losing genes by protecting the chromosome ends from becoming damaged similar to a plastic cap on the end of a shoelace.

This process would alter the genetic sequence of the chromosomes which could lead to cell death as well as certain types of cancers and diseases.

As humans age, telomeres shorten, with metal reactivity accelerating the process, which increases the likelihood of contracting a number of degenerative and age-related diseases.

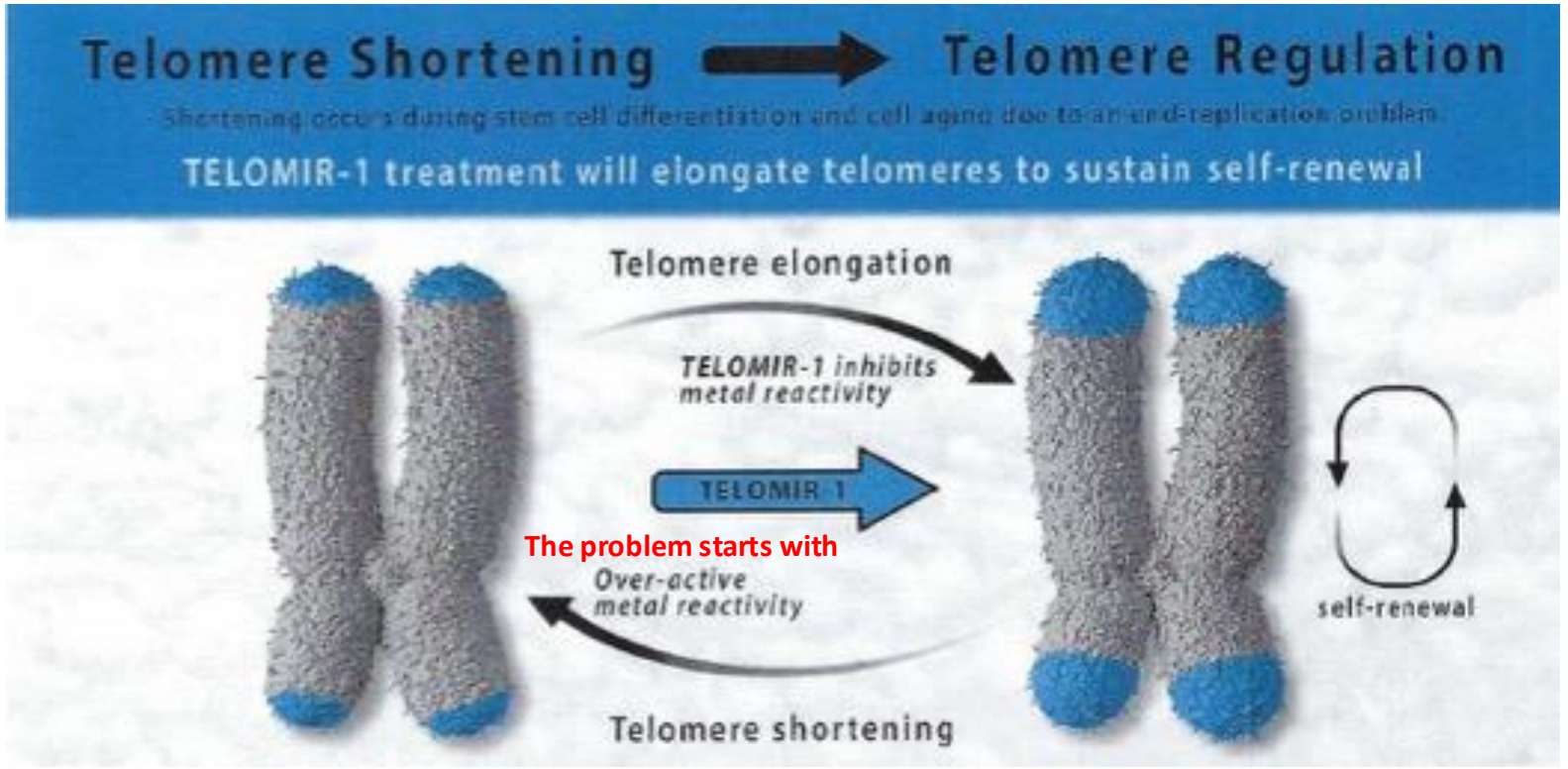


(Graphic: National Human Genome Research Institute)

TELOMERE REGULATION

The overarching goal of the study is to provide evidence that TELOMIR-1 can promote telomere elongation and stability, leading to a slower progression of diseases and self-renewal.

We have limited stem cells to repair ourselves due to limits on telomeres and their shortening with each replication. Longer telomeres can give us more, meaning more ability to repair and renew ourselves.

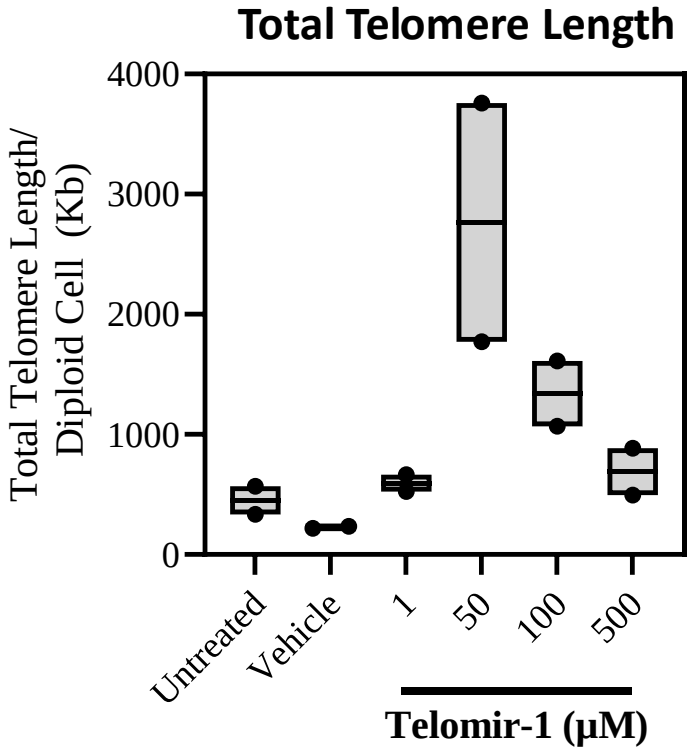


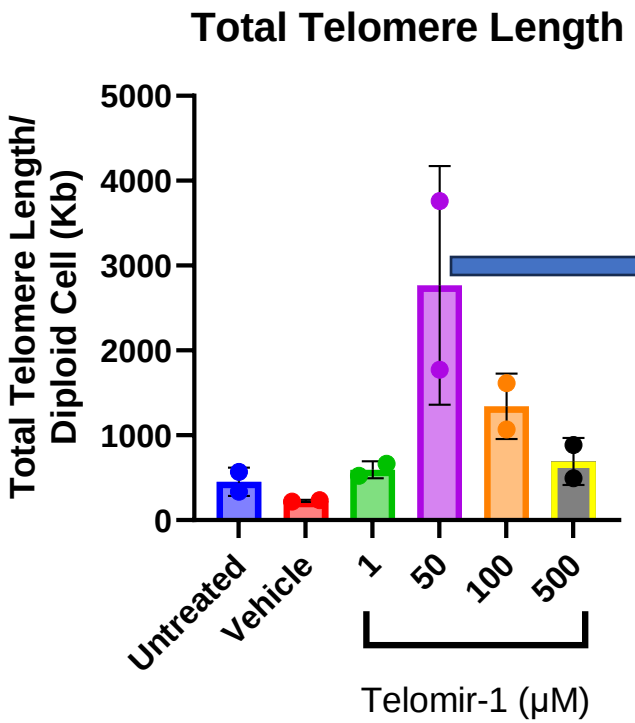
Self-Renewal of Stem Cells

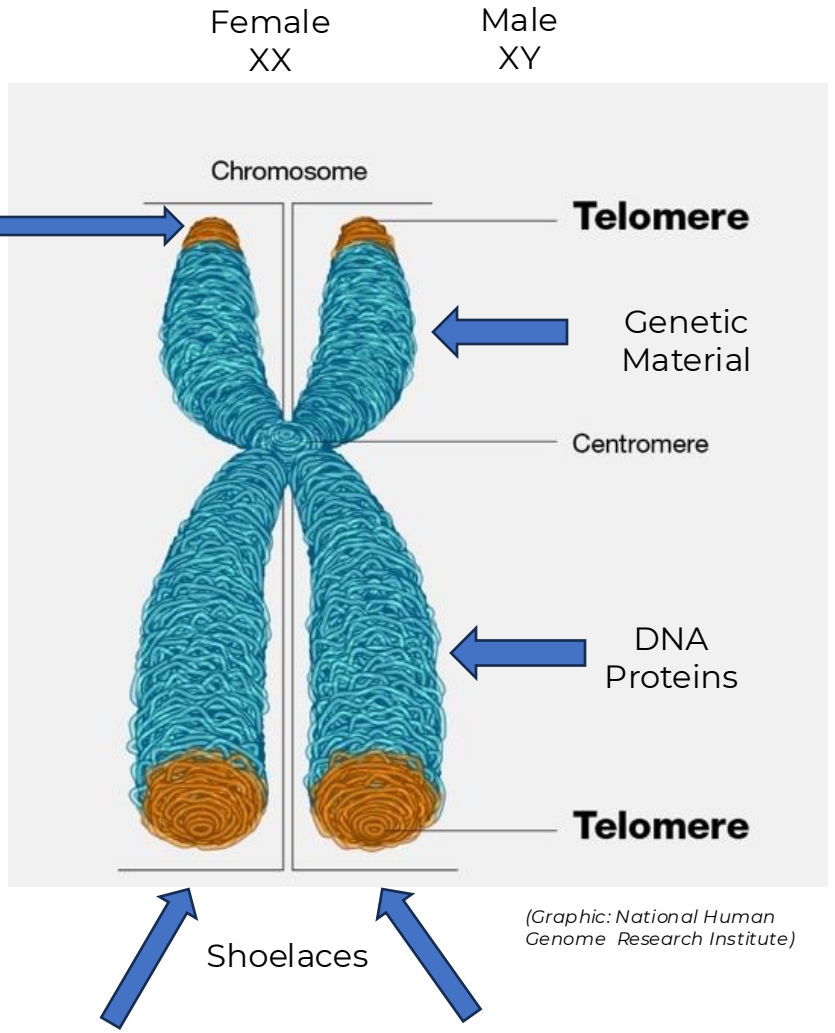
Rini, D. Johns Hopkins School of Medical Arts

IN VITRO HUMAN STEM CELL THERAPY WITH FRONTAGE LABORATORIES

TELOMERE LENGTH DETERMINATION (TTAGGG)







Summary: TELOMIR-1 promoted telomere length extension in Medical Research Council Cell Line

The compound's most potent effect was consistently observed at a concentration of 50 µM.

Frontage Laboratories. Telomere Length Determination

ADVANTAGES OF ELONGATING TELOMERES

- Stress **shortens** telomeres
- People who regularly eat sugar laden and processed food have **shorter** telomeres
- People who regularly do extreme physical activity have **shorter** telomeres
- Astronauts have **shorter** telomeres
- People who have sun burns or who smoke or vape have **shorter** telomeres
- People who regularly have short sleep times have **shorter** telomeres
- **VS**
- People who regularly eat healthily have **longer** telomeres
- People who regularly meditate have **longer** telomeres
- People who regularly have friends have **longer** telomeres
- People who regularly do moderate physical activity have **longer** telomeres
- People who regularly sleep 6.5 to 8.5 hours a night have **longer** telomeres
- People who regularly have sex have **longer** telomeres

Roizen, M. Linneman, P., & Ratner, A. (2022). The Great Age Reboot: Cracking the Longevity Code for a Younger Tomorrow. National Geographic.

STEM CELLS AND TELOMERE ELONGATION

Imagine if you could repair each organ or tissue with age-related damage and make that tissue young again

- Young heart
- Young blood vessels
- Young brain
- Young joints
- Young back discs
- Young lung
- Young kidney
- Young gut
- Young skin (additional applications in wound healing and burn victims)
- Young eyes

That is the promise of telomere regeneration. The ability to produce more stem cells and repair yourself.

Roizen, M. Linneman, P., & Ratner, A. (2022). The Great Age Reboot: Cracking the Longevity Code for a Younger Tomorrow. National Geographic.

THE STUDY: HARVESTING AND CULTURING STEM CELLS - STROKE

- Stem cells are the matriarchs of the human body—the cells from which all other cells are derived. Another way stem cells are maternal: they come in and repair things
- But let's say you can grow stem cells--- they did that at Stanford for 18 patients with existing motor strokes with damage unrecovered after at least 6 years.

- They harvested their stem cells and grew them in culture by adding factors including telomerase that grew their telomeres and allowed the stem cell population to increase. They then injected the stem cells into the area of brain missing due to the stroke.

- 7 of the 18 patients had a major restoration of motor function after 6 weeks. They didn't have enough stem cells (due to shortened telomers) to make the repairs.

Roizen, M. Linneman, P., & Ratner, A. (2022). The Great Age Reboot: Cracking the Longevity Code for a Younger Tomorrow. National Geographic.

JoyQ et al. Frontiers in Aging Neuroscicnce. 2020; doi10.3389/fnagi.2020.575990)

THE STUDY: STEM CELL REPAIR – HEART TRANSPLANTATION

- We learned this after transplantation of a male heart into a female person…that male heart initially had an ejection fraction of 55%.

- The male heart subsequently had a heart attack. The woman got to the hospital and had blood flow to her male heart restored quickly. The heart after the restoration of blood flow had an ejection of about 30% but over 6 weeks the male heart regained an ejection fraction of 55%. On microscopic examination (Biopsy), it was the female stem cells that repaired that male heart. (Quaini F et al: Chimerism of the Transplanted Heart NEJM 2002; 346:5-15)

- The Problem: each of us has a limited number of stem cells due to the fact they have limited telomeres and cannot reproduce more than the Hayflick limit of 70-110 times.

Dr. Mike Roizen

Roizen, M. Linneman, P., & Ratner, A. (2022). The Great Age Reboot: Cracking the Longevity Code for a Younger Tomorrow. National Geographic.

Quaini F et al: Chimerism of the Transplanted Heart NEJM 2002; 346:5-15

NEW YORK TIMES: WHY DO WE AGE?

According to some estimates, consumers spend $62 billion a year on “anti-aging” treatments.

Scientists are working to understand the biological causes of aging to slow or stop its visible signs and, more importantly, age-related diseases.

Why Do We Age?

- Problems with DNA
  - DNA does accumulate changes over the years
  - Our cells have ways to repair these genetic mutations, but they become less efficient with age
- Problems with chromosomes
  - Every time a cell replicates and its DNA is copied, the ends of its **chromosomes get a little shorter**.
  - Once **the cell’s telomeres get too short, it stops dividing**.
- Problems with epigenome
  - Many of the epigenetic mechanisms that help control the activity and even the identity of our cells start to degrade with age. If this happens in too many cells, it can affect organ health and function.
- Problems with mitochondria
  - As we age, mitochondria (power plant of the cell) also stop working as well as before, becoming less efficient and creating less energy
- Problems disposing of bad cells
  - As we age, two things happen: 1. There are more cells that need to be discarded and 2. The disposal system starts to break down. As a result, senescent cells build up, causing ever **more inflammation**.
- Problems disposing of bad proteins
  - The process of Autophagy (self-eating of bad/misfolded proteins) declines with age which causes stress and leads to aging

https://www.nytimes.com/2024/03/20/well/live/aging-biologydna.html

KEY INVESTMENT HIGHTLIGHTS

TELOMIR AGE REVERSAL

Treatment Indications – Elongating telomeres, age-related inflammatory diseases (osteoarthritis), and hemochromatosis.

Large Market Opportunity

Osteoarthritis – Market Opportunity $7.4 billion worldwide in 2021, expected CAGR of 8.5% through 2030*

Global longevity- According to Allied Market Research, the global longevity and anti-senescence therapy market was valued at $25.1 billion in 2020, and is projected to reach $44.2 billion by 2030, growing at a CAGR of 6.1% from 2021 to 2030.**

Exclusive Licensing – An affiliated IP development company to support license agreement

World-class Partners

IQVIA, Frontage, Eurofins, Charles River, DavosPharma, Argenta, Premier Consulting, Anthem Biosciences, and InSilicoTrials

Experienced Management Team

Combined 25 years of publicly-traded pharmaceutical company experience

*Polaris Market Research
**Allied Market Research

COMMERCIAL OPPORTUNITY

Telomir is developing the novel asset Telomir-1 as a treatment for age-related inflammatory diseases

OSTEOARTHRITIS:

Most common cause of disability

Approximately 528 million people worldwide with ~344 million classified as moderate or severe*

$7.4 billion worldwide in 2021, expected CAGR of 8.5% through 2030**

No treatment for osteoarthritis – pain is mitigated through medications, therapy, and surgical procedures***

*World Health Organization
** Polaris Market Research
***Mayo Clinic

INTELLECTUAL PROPERTY

Patent rights are licensed from an affiliated IP development company under a perpetual, worldwide exclusive license agreement that bears an 8% running royalty.

Worldwide Patent Pending for Telomir-1

WORLD CLASS VENDORS

IQVIA

GLOBAL

- IND Services
- Phase 1
- Phase 2
- Phase 3
- Phase 4 (post-market)
- NDA
- BLA

FRONTAGE

NEW JERSEY

- IND Services
- Phase I Human Clinical Trial Site
- 160 beds across 3 units

PENNSYLVANIA

- Animal Toxicology Program (Dog and Rat Toxicology, DMPK), Genotoxicology, and Stem Cell Studies
- Chemistry, Manufacturing and Controls (CMC) to develop a capsule/tablet

eurofins

GLOBAL

- BioMap Platform Superior Human Disease Models

InSilicoTrials

- AI Modeling

DavosPharma

US

Anthem BioSciences

INDIA

- API Manufacturing

charles river

GLOBAL

- Toxicology

premier consulting

- Chemistry, Manufacturing, and Controls

ANTICIPATED TIMELINE FOR PRODUCT DEVELOPMENT

TELOMIR AGE REVERSAL

Pre-clinical work is underway and initial IND is expected to be filed in Q1 2025

Q1 –Q2 2023

- Computational Mutagenicity Analysis
- Analytical Development (CMC)

Q4 2023

- Plasma Protein Binding
- Reaction Phenotyping in Human Liver Microsomes
- Metabolite Identification
- Recombinant Enzymes (CYP450)
- Direct and Time-Dependent Inhibition of CYP450
- ^MTD/7D DRF Rat
- ^MTD/7D DRF Dog
- SafetyScreen44™
- Stem Cell Therapy (Frontage)

Q1 2024

- Rat Osteoarthritis with IL-17 measurement with Charles River Laboratories
- Canine Study (Osteoarthritis) ARGENTA Midwest Veterinary Services

Q2 2024

- ^^GMP
- Cardiovascular Study Dog
- Respiratory Study Rat
- *hERG
- Neurobehavioral Evaluation Rat
- AMES Test
- Micronucleus Assay

Q3 - Q4 2024

- Dog 28-day Toxicology
- Rat 28-day Toxicology

* In vitro Testing for Effects of Telomir-1 on human Ether Related Gene (hERG) Channel Currents
^ Maximum Tolerated Dose (MTD); Dose Range Finding (DRF)
^^ Good Manufacturing Practice (GMP)

EXECUTIVE MANAGEMENT

Erez Aminov
Chairman & CEO

- In August 2024, he was appointed Chairman and CEO of Telomir Pharmaceuticals, further expanding his leadership role in the biotech industry.
- Has led MIRA Pharmaceuticals, Inc. (Nasdaq: MIRA) as Director and CEO since April 2023, driving the development of Ketamir-2, a synthetic cannabinoid analog being studied for its potential to rapidly treat treatment-resistant depression (TRD) and major depressive disorder with suicidal ideation (MDSI).
- With over 20 years of experience, including founding Locate Venture Corp. and serving as President of Finds4less Inc., Mr. Aminov is known for his strategic oversight and expertise in guiding early-stage biotech startups to success.

Michelle Yanez, MBA
Chief Financial Officer

- Became Chief Financial Officer in June 2024, bringing over 25 years of experience in biotech, pharma, and life sciences, with a strong background in financial management and corporate governance.
- She has been CFO of MIRA Pharmaceuticals (NASDAQ: MIRA) since April 2023 and was appointed President of Telomir International in May 2024. Previously, she held key leadership roles at BioDelivery Sciences (NASDAQ: BDSI).
- Ms. Yanez also serves as a director at Inhibitor Therapeutics (OTCQB: INTI) and is Co-Founder and CFO of Santander Pharma Consulting. She holds a B.A. in Business Management and an MBA in Strategic Leadership, graduating Cum Laude.

Itzchak Angel, PhD
Chief Scientific Advisor

- Over 40 years of executive leadership in the pharmaceutical industry, driving drug development from research to market across diverse therapeutic areas.
- Founded and led Angel Pharmaceutical Consulting & Technologies, providing strategic and operational guidance to Life Sciences companies and research teams globally.
- Authored over 100 scientific publications and patents; passionate painter, music lover, and multilingual world traveler.

ADVISORY BOARD

Michael Roizen, M.D.
Special Advisor on Age Reversal

Michael F. Roizen, MD, has had a distinguished career in age-related medicine, including as the Chief Wellness Officer of the Cleveland Clinic,
A board-certified internist and anesthesiologist, Dr. Roizen has been instrumental in the development of many successful ventures.

He co-founded RealAge Inc., a consumer-health media company and provider of personalized health information and management tools where he maintains the role on its Advisory Board. He also served 16 years on Food and Drug Administration (FDA) advisory committee and chaired one for two years.

MARK OKEN
Senior Advisor

Mr. Oken is the chairman of Falfurrias Capital and has been responsible for managing the FCP portfolio since inception and building the FCP team. Along with his co-founders, Hugh McColl, Jr. and Ed McMahan, he is a member of the FCP Investment Committee. Mr. Oken served as managing partner of the Firm from 2006 until 2018, when Mr. McMahan assumed that role.

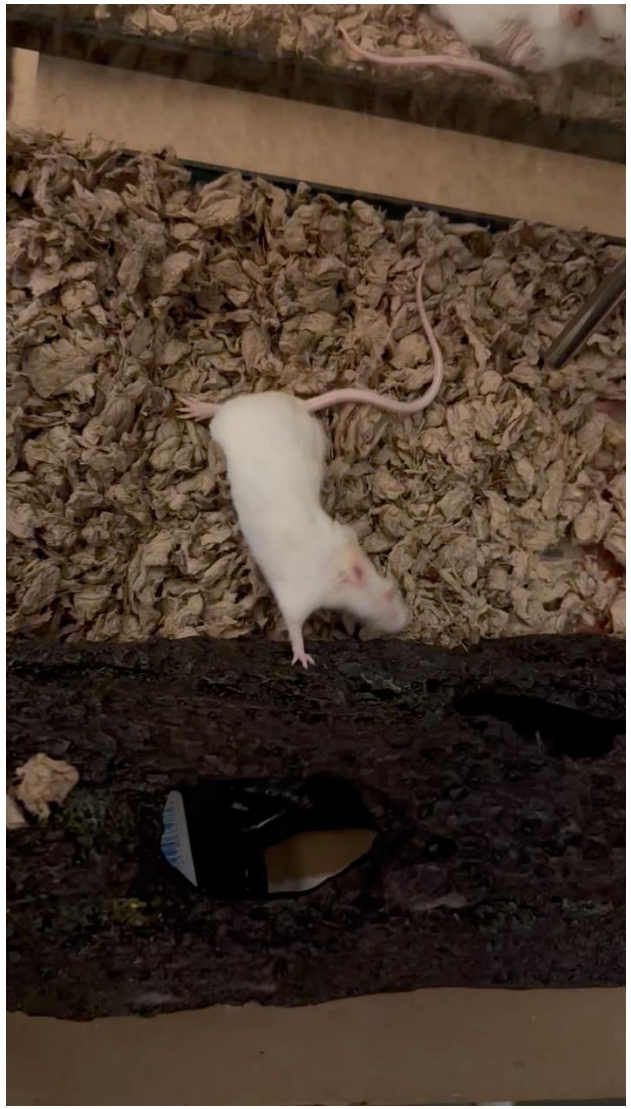
Mr. Oken is the former chief financial officer of Bank of America. Prior to his career with Bank of America, Mr. Oken was a partner with Price Waterhouse and served as a Professional Accounting Fellow at the Securities and Exchange Commission.

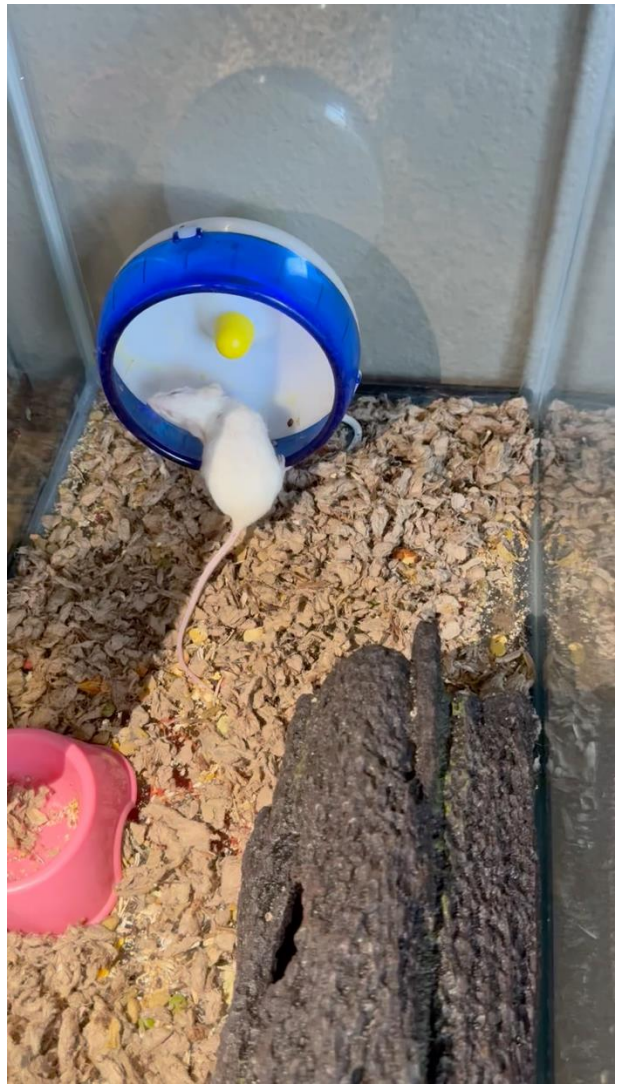
ALEX WEISMAN, PH.D.
Scientific Advisor

Dr. Alex Weisman, Ph.D. in biochemistry, is the founder and owner of Calathea Pharma Ltd., a consulting company providing scientific and business development services in Chemistry, Manufacturing, and Controls for companies and government institutions. Dr. Weisman has held executive positions as VP R&D and Chief Scientist at a number of Israeli and international pharmaceutical companies and currently serves as an advisor and management team member of companies developing new products for the chemicals, pharmaceuticals, and food industries. With more than 30 years of experience in the development, characterization, scale-up, technology transfer, troubleshooting, production, and registration of novel and generic drugs, as well as other pharmaceutical and chemical products, Dr. Weisman brings extensive expertise to his consulting role.

MOUSE PICTURES

MOUSE VIDEOS





DOG PICTURES

DOG VIDEO

SUMMARY

- Developing and commercializing Telomir-1, a potential treatment for age-related diseases
- Telomir-1 is being developed to protect stem cells by elongating and stimulating the telomeres to sustain self-renewal of stem cells.
- Large market opportunity for the treatment of multiple indications, including osteoarthritis and other diseases of aging
- An affiliated IP development company license agreement for the US rights for Telomir-1 patent
- Positioning Telomir-1 for an initial IND filing in Q1 2025 for osteoarthritis
- February 2024 IPO provided funds to advance the development and commercialize of Telomir-1

TELOMIR™

ORAL STEM CELL THERAPY

CONTACT:

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erez@telomirpharma.com

Nasdaq: TELO

THANK YOU FOR YOUR CONSIDERATION