



# THE HEALTHSPAN REVOLUTION

*“Making 100 yrs old the new 60”*

June 2023

Live Tweeting?

I'm @PeterDiamandis



Peter H. Diamandis, MD

# PROOF OF LONGEVITY

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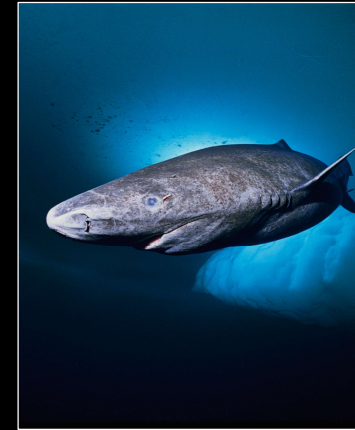
# HOW LONG MIGHT WE LIVE?



Human Beings  
100 Yrs



Bowhead Whales  
200 Yrs



Greenland Sharks  
500 Yrs

**WHY THE DIFFERENCE?:** Hardware or Software problem?

# SAME GENES: WHY DO YOU LOOK DIFFERENT?



NEWBORN



20 YRS OLD

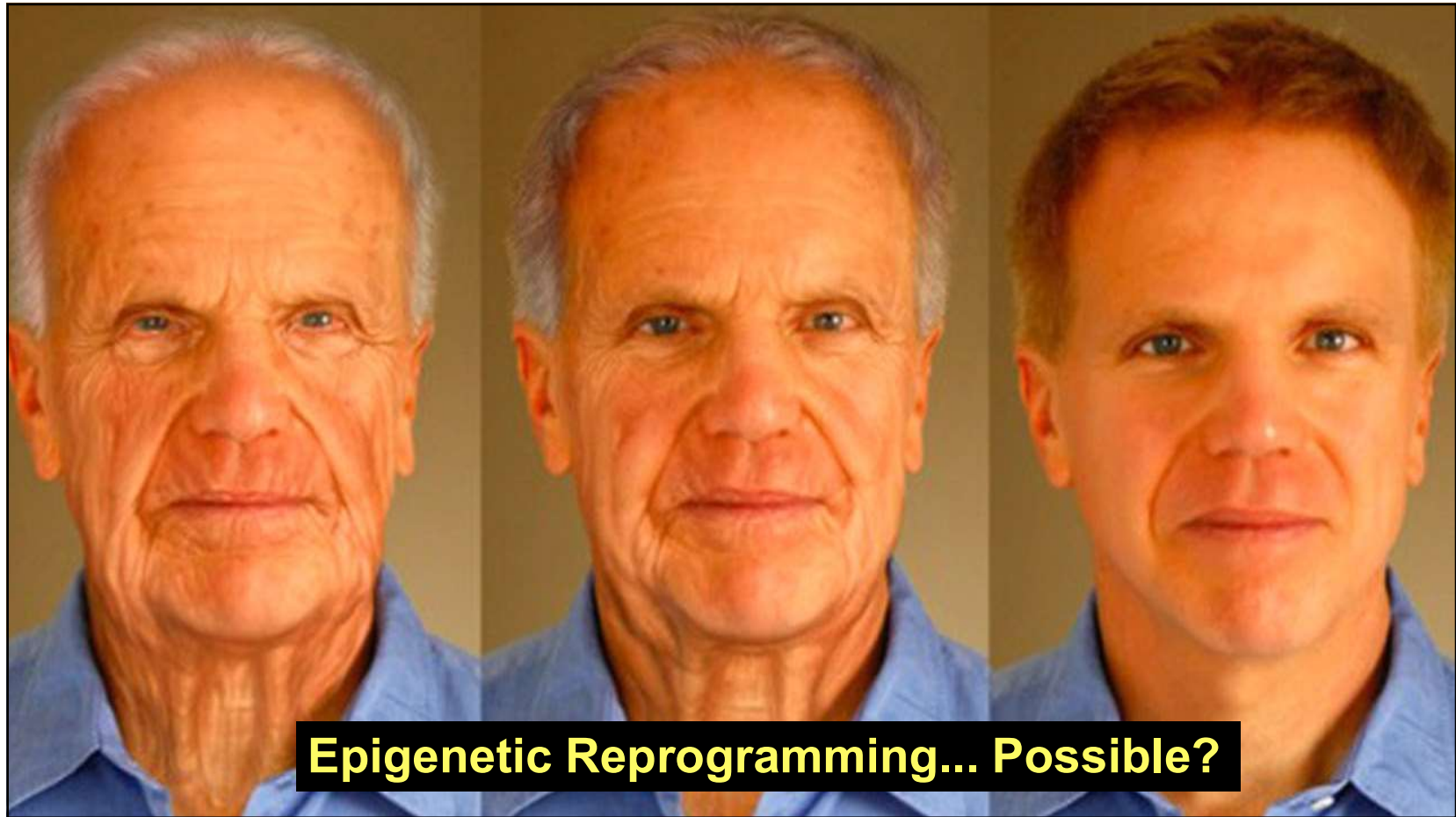


50 YRS OLD



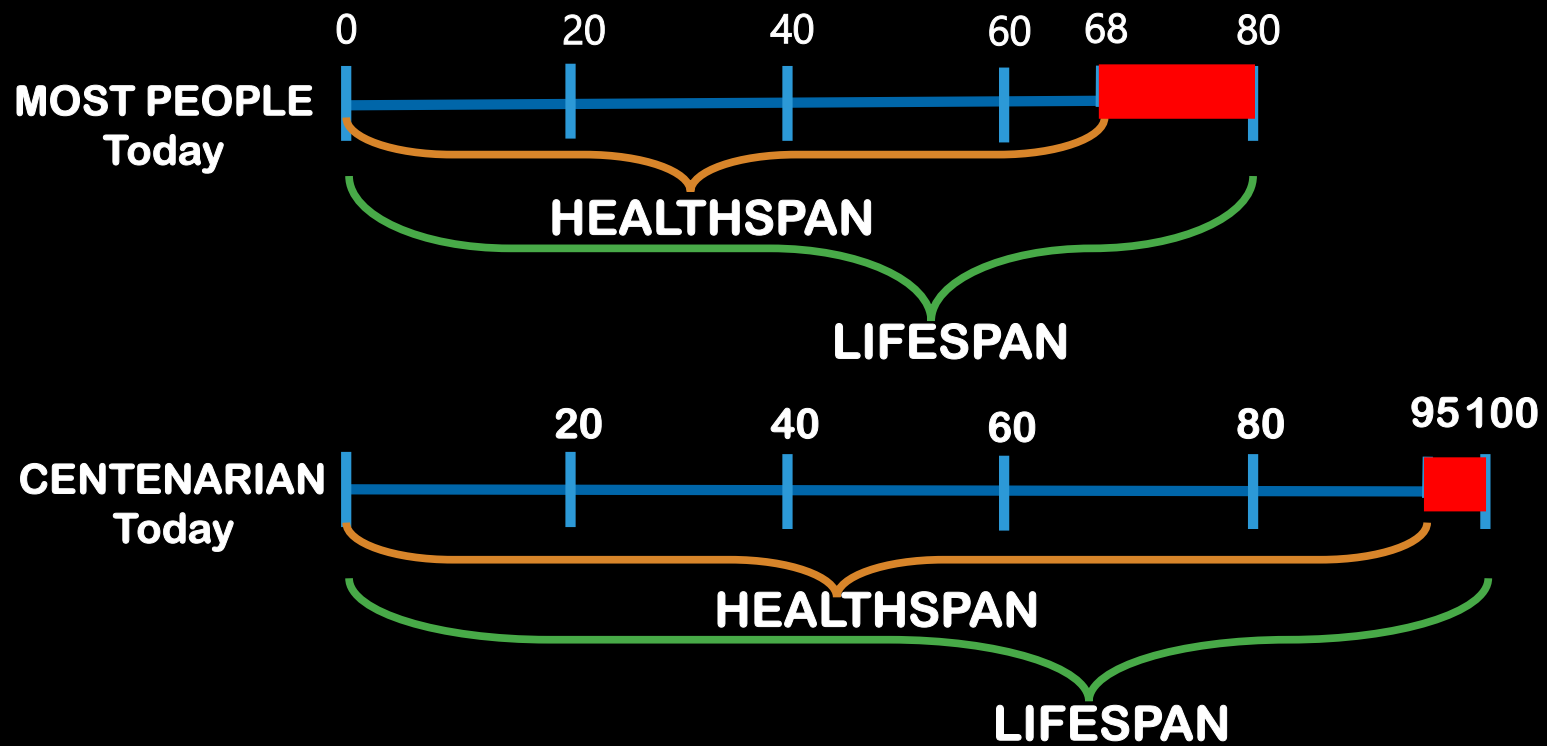
100 YRS OLD

**Epigenetics:** Which genes are on / off, and when!



**Epigenetic Reprogramming... Possible?**

# LIFESPAN vs HEALTHSPAN



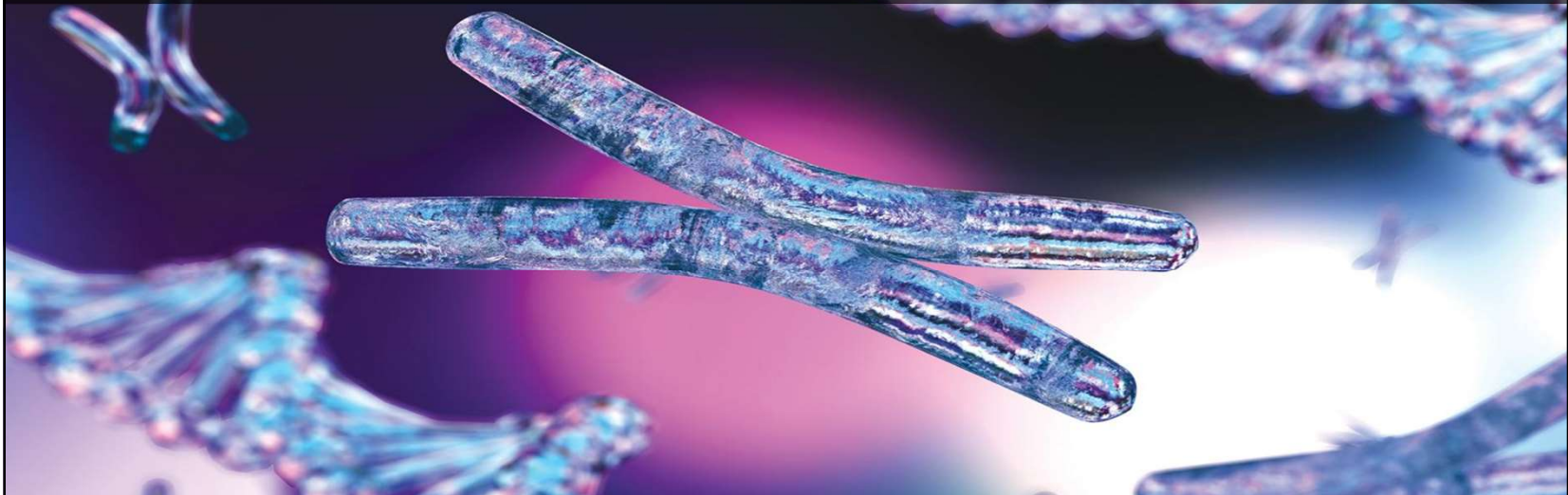
**We are on the verge of a  
healthspan revolution...**

**WHY NOW?  
(4 Reasons)**

# 1. CAPITAL



# GLOBAL LONGEVITY INVESTMENT HIT **\$5.2 BILLION** IN 2022



A total of **\$5.2 billion** was invested into **130 longevity deals** in **2022**, an increase of **77%** from 2020 and **10X** growth from 2013.

# **HEVOLUTION** IN SAUDI & UAE CREATED TO DRIVE LONGEVITY BREAKTHROUGHS

**Foundation to deploy >\$1B per year in age R&D investments**

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\$101M  
HEALTHSPAN



- **\$101 Million** Purse
- Reverse age-related degradation by >20 years in:
  - >Muscle
  - >Skin
  - >Immune
  - >Cognition
- Single treatment (1-year Tx)
- 7-year timeframe

## **2. EXPONENTIAL TECH:**

- ✓ **Artificial Intelligence**
- ✓ **Quantum Technologies**

# 3. BIOTECH REVOLUTION



**NEW RECORD FOR WHOLE-GENOME  
SEQUENCING: NOW 7 HOURS and \$200**

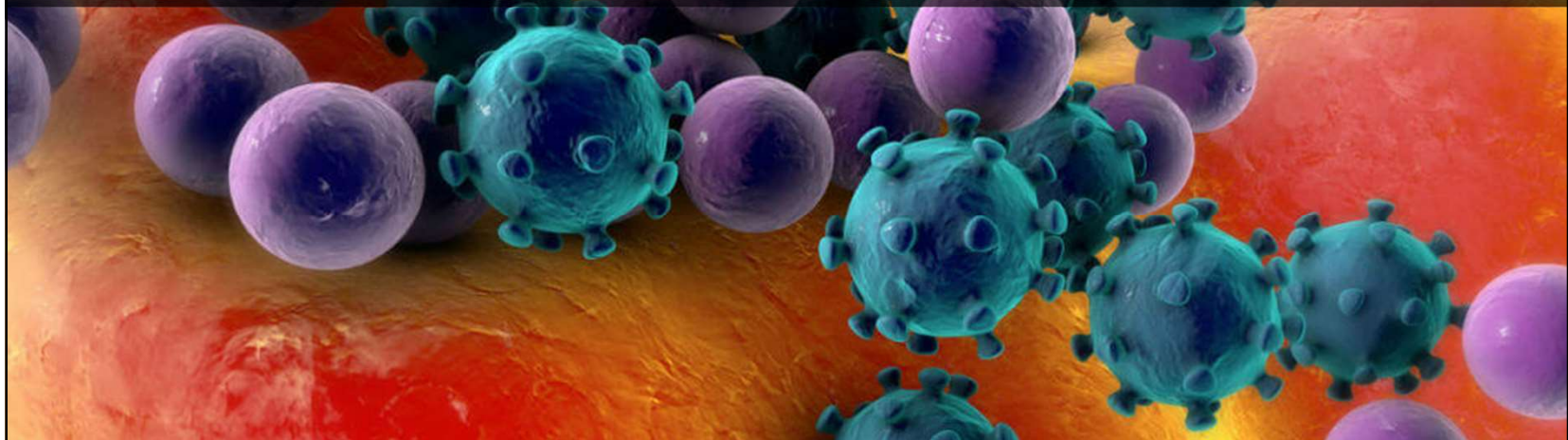
In just 7 hours, 18 minutes, researchers at Stanford  
went from collecting blood to a disease diagnosis.

# CRISPR-BASED CURES IN 7 AREAS, IN OVER 130+ ONGOING TRIALS

1. BLOOD DISORDERS
2. CANCERS
3. INHERITED EYE DISEASE
4. DIABETES

5. INFECTION DISEASE
6. INFLAMMATORY DISEASE
7. PROTEIN-FOLDING DISORDERS

**DR. GEORGE CHURCH & COLLEAGUES  
ENGINEER **VIRUS-RESISTANT BACTERIUM**  
**WITH SYNTHETIC GENOME****



***NATURE* (March'23). Bacterium developed is **1st**  
**organism that can't be infected by any known virus.****

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# NEW VACCINE COULD PREVENT FENTANYL FROM ENTERING BRAIN & ELIMINATE ITS “HIGH”



Over **150 people die/day** from synthetic opioids, including fentanyl, which is **50X stronger than heroin.**

# MODERNA'S mRNA VACCINE FOR HIV STARTS HUMAN TRIALS



Moderna's mRNA-based HIV vaccine mRNA-1644 has begun a Phase 1 trial with 56 people.

**FIRST EVER CANCER VACCINE (MELANOMA)  
GRANTED FDA BREAKTHROUGH STATUS (2/22/23)**



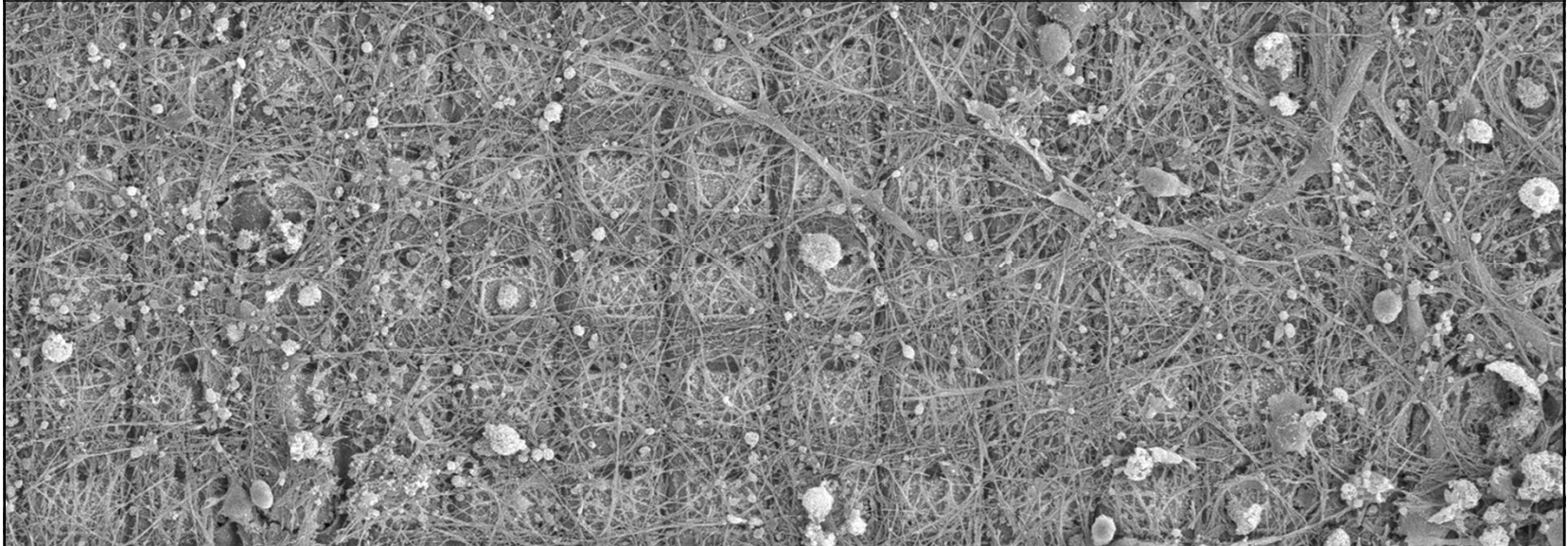
**Moderna and Merck's new vaccine will be used to treat patients with high-risk melanoma, the deadliest skin cancer.**

**VACCINE TO PREVENT (HYPERCHOLESTEROLEMIA)  
HEART DISEASE & STROKE ENTERS HUMAN TRIALS**



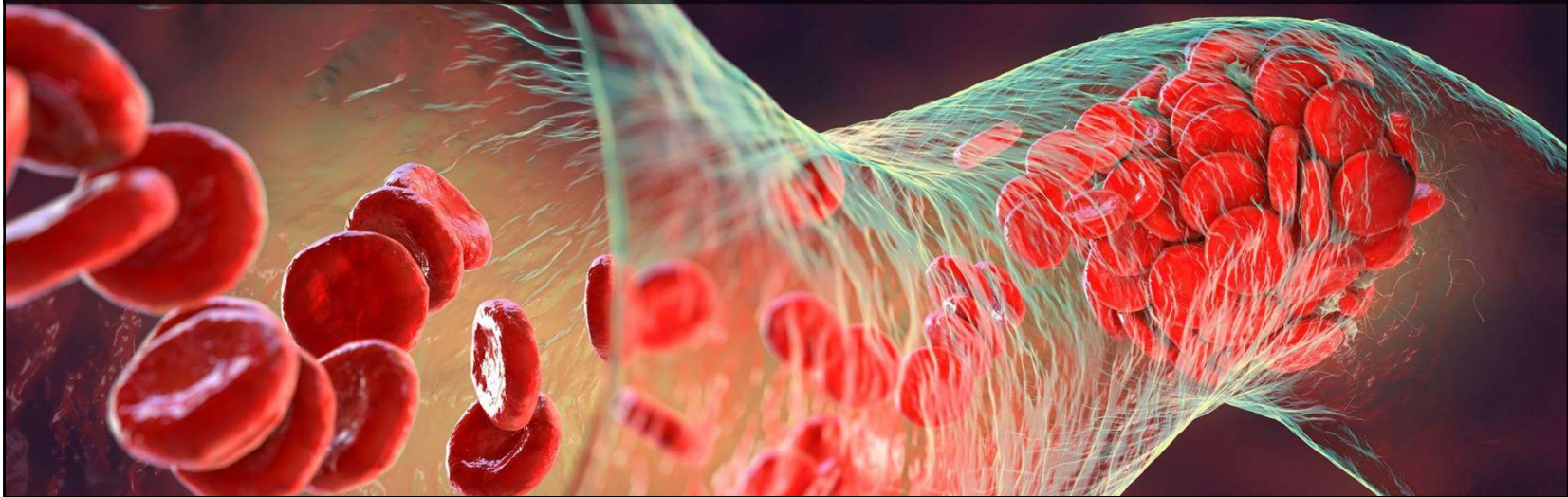
**VAXXINITY (VAXX)**

# **LAB-GROWN BRAIN CELLS LEARN TO PLAY PONG (1970s TENNIS-LIKE VIDEO GAME)**



**“Brain cells living in a dish can perform goal-directed tasks.”**

# WORLD'S FIRST TRIAL TRANSFUSING LAB GROWN RED BLOOD CELLS BEGINS IN THE UK



Lab grown RBC made from donated stem cells may **last longer & require fewer transfusions.**



# **ANTI-AGING GENE** 'REWINDS' HEART BIOLOGICAL AGE BY **10 YEARS**

Inserting the **BPIFB4** gene found in  
**centenarians** may result in **10+ years** of heart

age-reversal

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# GENE THERAPY RESTORES PRIMATE VISION LOSS BY MAKING EYE CELLS YOUNG AGAIN



2030 U.S. estimates: **2.2M** blind and **5M** with low vision; vision loss has an annual economic burden of **\$139B** in the U.S. alone.



# GRAY HAIR MAY BE REVERSIBLE, SAYS NEW STUDY



NYU researchers find that restoring motility of **melanocyte stem cells (MCSCs)** may reverse gray hair. (*Nature* '23)

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**SCIENTISTS REJUVENATE A 53-YEAR-OLD'S SKIN TO THAT OF A 23-YEAR OLD / COLLAGEN PRODUCTION**



**Yamanaka Factors Reactivate 28 Collagens / 43 genes.  
Silenced Genes were turned on again for youthful skin.**

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# SCIENTISTS CREATE MICE WITH 2 FATHERS AFTER MAKING EGGS FROM MALE CELLS



Creation of mammal with **2 biological fathers** could pave way for **new fertility treatments** in humans.

Dr. SINCLAIR ABLE TO AGE MICE ON AN ACCELERATED TIMELINE, **AND REVERSE THE EFFECTS OF AGING, RESTORING YOUTH**



**13 years of work** published in *CELL* (Jan'23). Study shows **epigenetic change as a primary driver of aging.**

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DAVID SINCLAIR

**ANNUAL “LONGEVITY PLATINUM TRIP”  
50 TOP SCIENTISTS, LABS & STARTUPS.**

**2023 TRIPS:** AUG & SEPT  
LIMIT 40. EAST COAST:  
CAMBRIDGE-BOSTON-NY

**George Church, PhD  
Harvard Medical School**





**REMINDER: SLOWING AGING & INCREASING LIFE EXPECTANCY BY 1 YEAR IS WORTH \$38T**

Harvard, Oxford and London Business School show **economic value of +1 Year of increased healthspan** is worth \$38 trillion!



## FOUNTAIN LIFE'S DIAGNOSTICS

### UPLOAD RESULTS:

**2.0%** Have Cancer

**2.5%** Have an Aneurysm

**14.4%** *of seemingly healthy members* have an actionable, life-threatening find.

← **Annual 150 Gbit "UPLOAD"** →

**MIT Media Lab**



# ABUNDANCE PLATINUM

LONGEVITY EXPERIENCE

- **Cambridge/Boston**
- **New Hampshire**
- **New York**

**Trip #1:** Aug 16 – 20, 2023 *or*  
**Trip #2:** Sept 27 – Oct 1, 2023



# High-Level 5-Day Itinerary



**Day 1 & 2**  
**Boston/Cambridge**

MIT / Harvard  
30+ startups



**Day 3**  
**New Hampshire**

Kamen's ARMI &  
DEKA Research



**Day 4**  
**Transport**

Verijet / Private  
flights to New York



**Day 4 & 5**  
**New York**

Fountain Life &  
NYC Startups

## 2023 Platinum Longevity Overview

- **5-Day/5-Star** luxury education/health trip
- **50+ Top Scientists**, Biotech Startups, & Research institutes at the cutting-edge.
- **40 Members** per Trip x 2 Trips
- **Trips are fully customized** to meet your needs: *Medical Advice? Investment Focus?*

**TRIP #1: August 16 – 20, 2023 (12 seats)**

**TRIP #2: Sept 27 – Oct 1, 2023 (2 seats)**



# 2023 TOPICS/THEMES

## Therapeutics & Technologies:

- CRISPR & gene editing
- Gene Therapy & epigenetic reprogramming
- Senolytic medicines
- Stem cells & cellular therapies
- Organ & tissue regeneration
- AI-driven drug development
- Imaging & advanced diagnostics
- The Basics: diet, sleep & exercise
- Nutraceuticals: NMN, NAD, etc.

## Disease Focus:

- Cardiovascular disease
- Pulmonary conditions
- Cancer: detection & treatments
- Neurodegen diseases & Stroke
- Autoimmunity & Inflammation
- Infectious Disease
- Reproductive & Women's Health
- GI & microbiome health

## Additional Content:

- Biotech 101: Basics Crash Course
- Investing in Biotech

# FEATURED 2023 PLATINUM FACULTY



**DAVID SINCLAIR, PHD**  
Harvard Center for Biology  
of Aging Research



**GEORGE CHURCH, PHD**  
Harvard Wyss Institute



**DEAN KAMEN, PHD**  
DEKA Research &  
Development



**DORIS TAYLOR, PHD**  
Organamet Bio



**DAVA NEWMAN, PHD**  
MIT Media Lab



**MICHAEL LEVIN, PHD**  
Tufts Dept. of Biology



**EDWARD SCHULAK**  
EdenRoc



**DINA RADENKOVIC, MD**  
Gameto

## Includes:

1. **5-star accommodations**
2. **All internal transit** (including private flights from Boston to New York)
3. **Haute cuisine** meals (all food & beverage)
4. **Fountain Life**, diagnostics & therapeutics
5. **Personalized introductions** to the world's leading longevity researchers and entrepreneurs





**SPACE IS  
EXTREMELY  
LIMITED**

– CAPACITY: 40 /trip  
(80 Total) (14 remain)

Contact Neil Sogard  
to reserve your seat(s)

[neil@a360.com](mailto:neil@a360.com)

(m) +1 (617) 686-6431

**Peter & Nate...**

**On Longevity Investing**

**&**

**Accounting for Extended Healthspan in  
Wealth Planning**

# Q & A