BIOAGE

INVESTING IN THE AGE OF LONGEVITY
NOVEMBER 2022

BioAge is a **platform-driven, clinical-stage biotechnology company** advancing a growing portfolio of therapies that treat severe diseases by targeting the molecular causes of aging

Powerful human-first discovery platform with key competitive moats

Clinical-stage portfolio

Proven track record of results, with $127M raised to date

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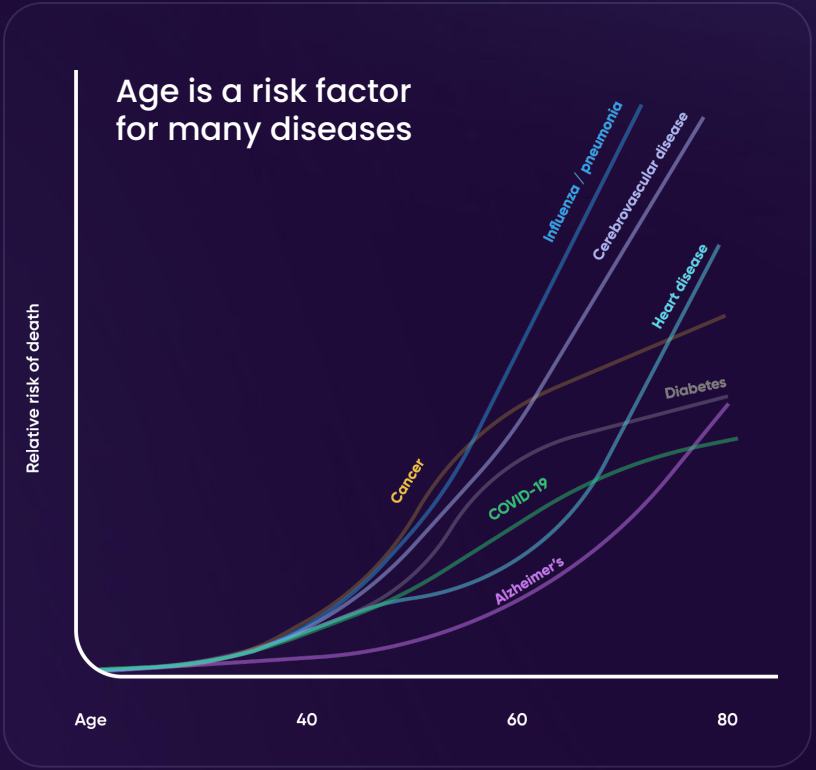
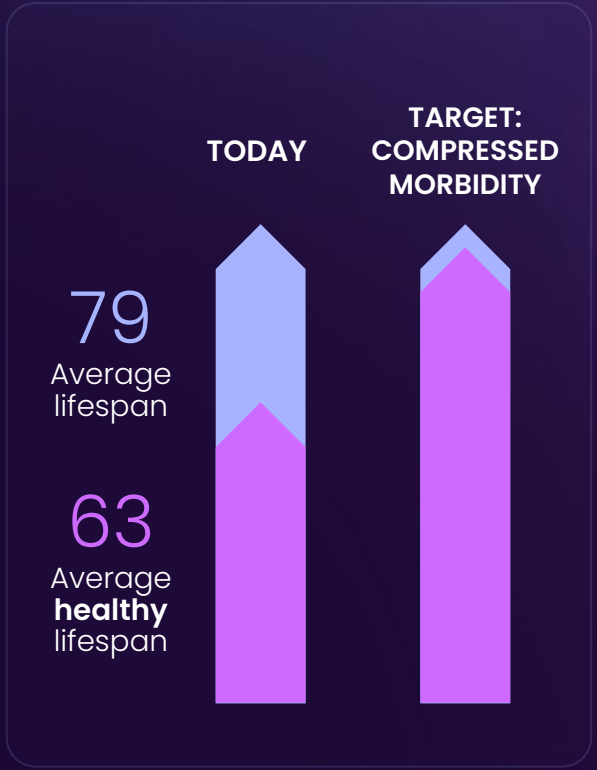
BioAge is changing the nature of aging.

What could you do with more healthy time?

Aging is one of the greatest challenges for human health





80%
of adults 65+ have at least one chronic condition[1]

>$500B
Annual health care costs for chronic disease among 65+ in US[2]

Sources:
1. "The Top 10 Most Common Chronic Conditions in Older Adults." The National Council on Aging. April 2021. https://www.ncoa.org/article/the-top-10-most-common-chronic-conditions-in-older-adults
2. Centers for Disease Control and Prevention, https://www.cdc.gov/chronicdisease/about/costs/index.htm#:~:text=More%20than%20877%2C500%20Americans%20die,lost%20productivity%20on%20the%20job. 4. Van Houtven G, Honeycutt AA, Gilman B, et al. Costs of Illness Among Older Adults: An Analysis of Six Major Health Conditions with Significant Environmental Risk Factors [Internet]. Research Triangle Park (NC): RTI Press; 2008 Sep. Available from: https://www.ncbi.nlm.nih.gov/books/NBK532461/doi: 10.3768/rtipress.2008.rr.0002.0809.

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However, there are many natural examples of exceptional longevity

400 years

5000 years

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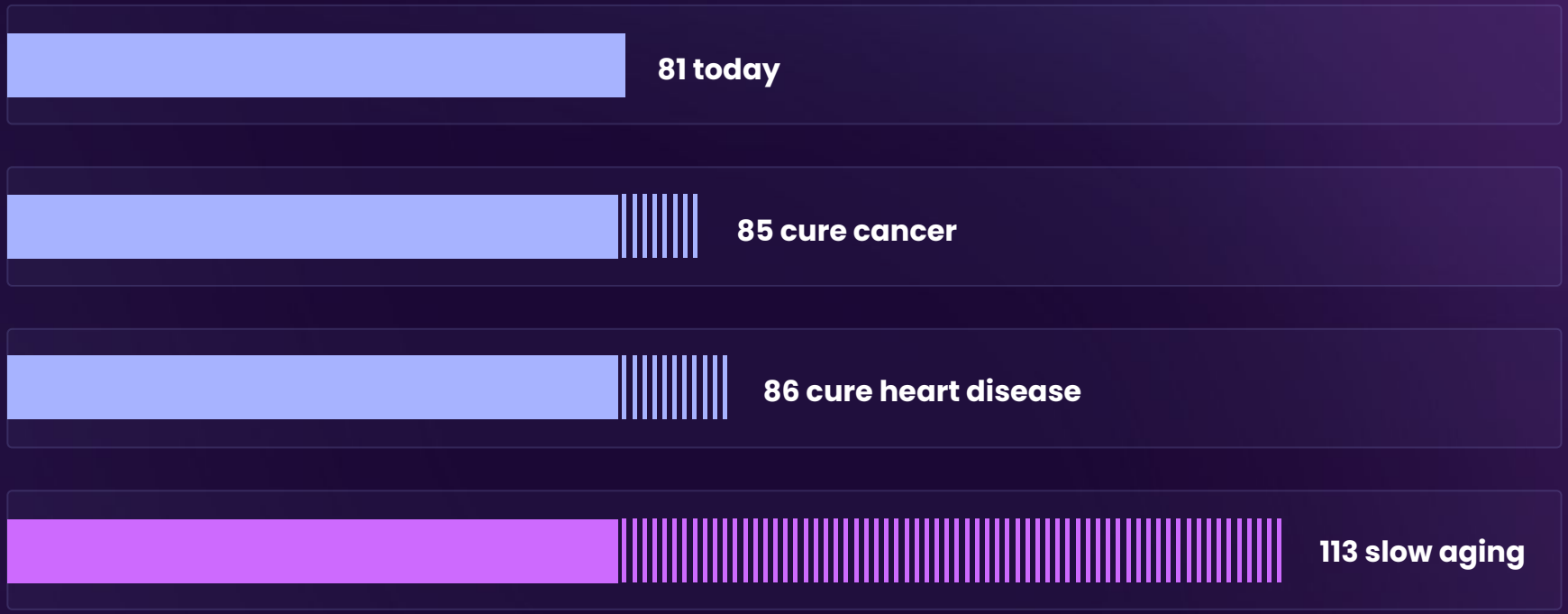
Curing major diseases would have a modest impact on human lifespan; slowing aging holds greater promise



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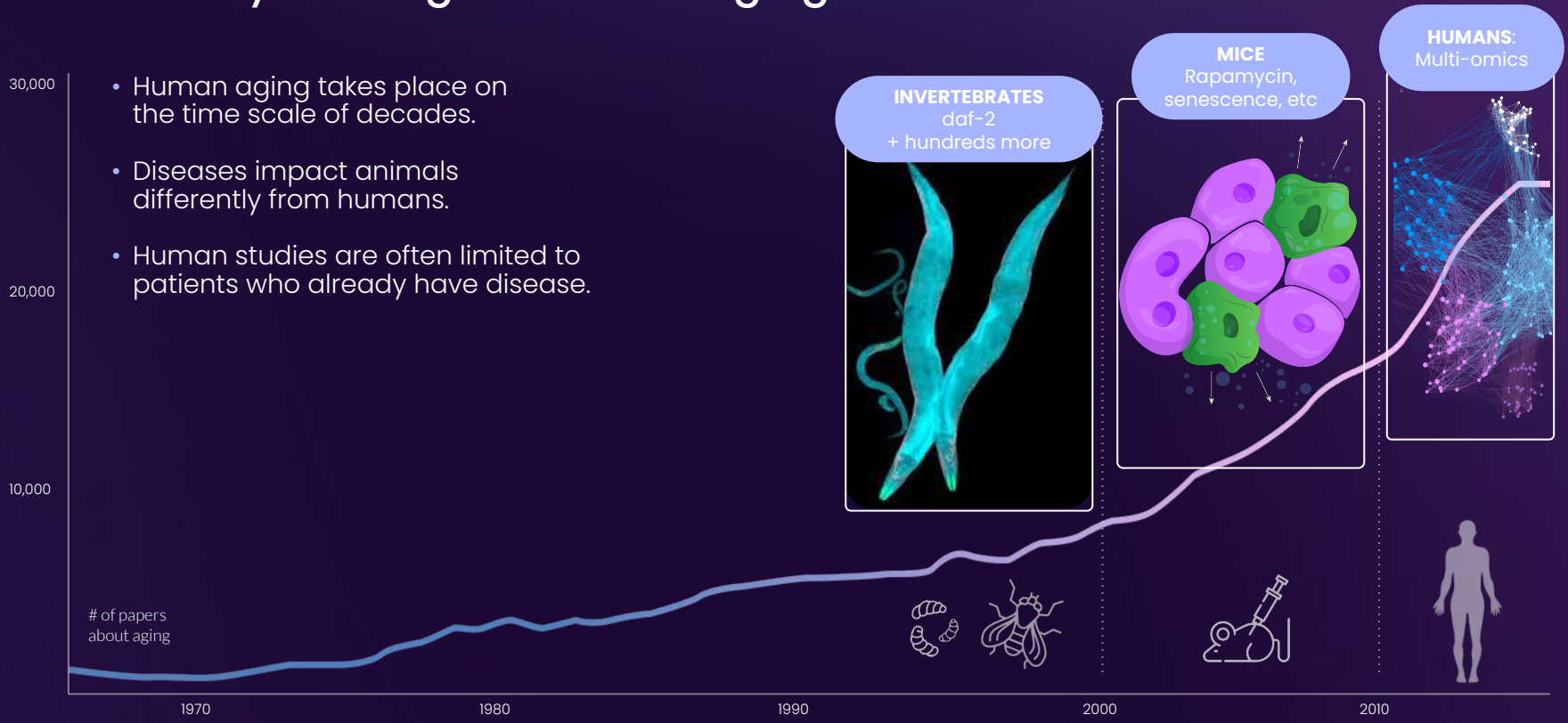
The study of human aging is accelerating: AI & ML are enabling us to directly interrogate human aging

- Human aging takes place on the time scale of decades.
- Diseases impact animals differently from humans.
- Human studies are often limited to patients who already have disease.



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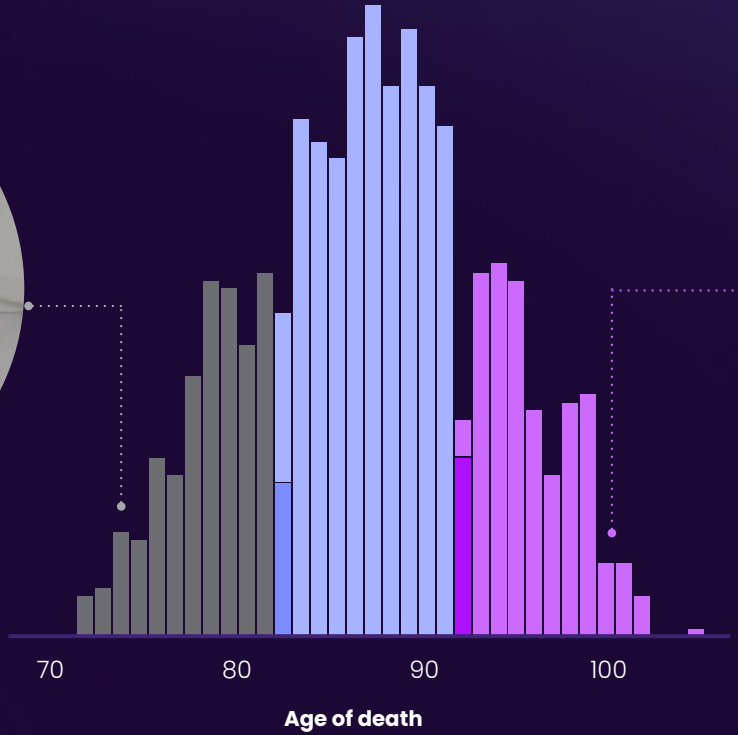
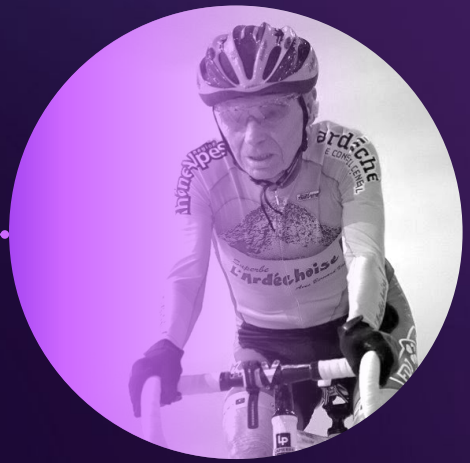
We know there are many pathways that impact human lifespan; It is our mission to find them





Robert Marchand set a record as the oldest competitive cyclist at age 105.

He lived to be 109.

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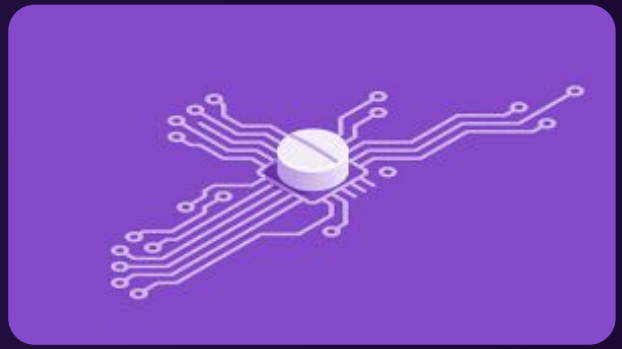
We are driven by data: AI, biobanks, and multi-omics are enabling us to directly decode the biology of human aging



We collect data over a lifetime

65M+
Molecular data points

10k+
Patients

45+
Years of collection

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Our proprietary platform gives unprecedented visibility into human aging, including detailed clinical outcomes

Lifespan outcomes

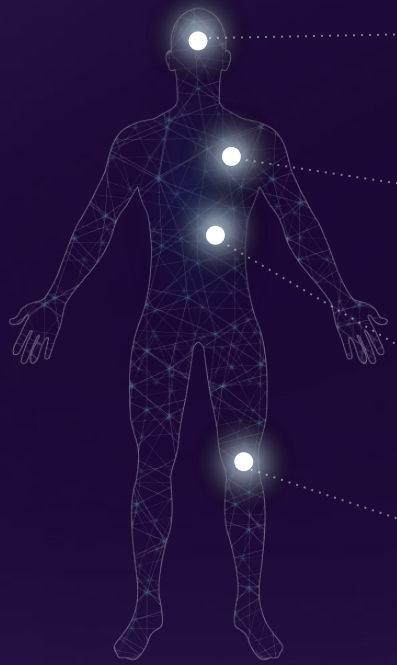
All-cause & cause-specific mortality

Demographics and lifestyle

- Education
- Smoking history
- Alcohol, diet, exercise

Other deep phenotypes

- Body composition
  (e.g., skinfold thickness, ABI)
- Lung capacity
  (e.g., FEV, COPD status)



Cognition

- Serial cognitive assessments (CASI/MMSE)
- Dementia diagnosis and subtyping
- ApoE status

Cardiometabolic

- CVD events
- Medication use
- Clinical risk factors (e.g., routine blood work)

Renal

- Renal function (Serum Cystatin C)
- Incident kidney disease

Muscle / Functional

- Grip strength
- Loss of independence (ADLs / IADLs)
- Walking speed
- Mobility score*
- Physical activity index**

Note:
*difficulty with walking 1/2 mile, walking around the house, getting out of beds or chairs, walking up a flight of stairs, or getting to and using the toilet;
** as defined in Abbott et al. 1994

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INPUTS

Proteins measured in our longitudinal patient samples reveal strong signals for longevity and healthspan outcomes

MAP | Molecule-Aging Phenotype Associations | Molecule-Molecule Associations | Curated Aging Biology

Molecule-Aging Phenotype Associations

Muscle aging

Grip strength

Brain aging

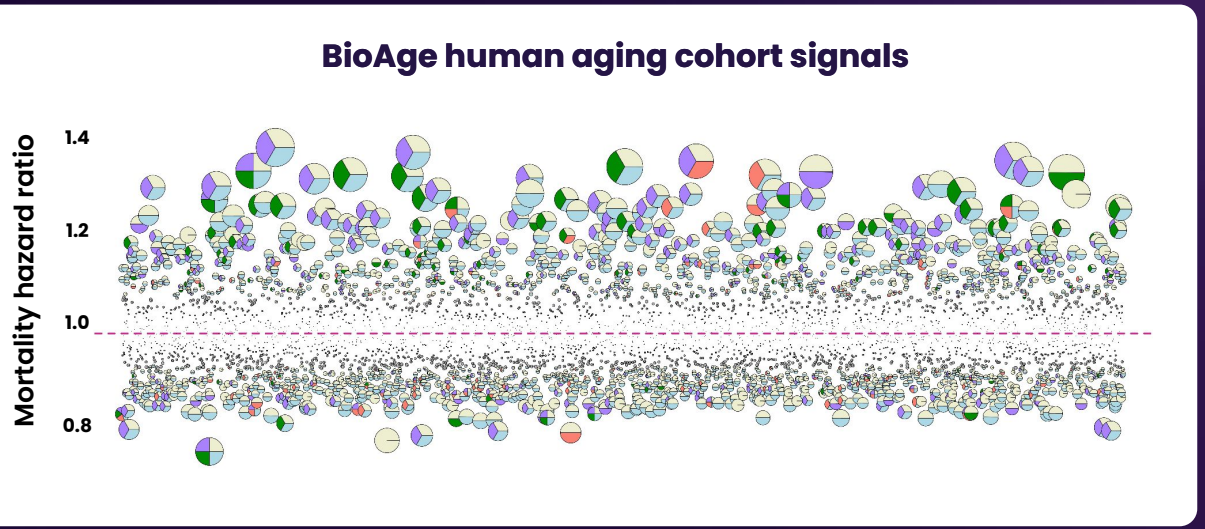
Cognitive decline (CASI score)

Renal function

Cystatin C

Cardiovascular

CV risk factors*



Note: Target considered signal if significantly associated with 2+ CV risk factors: total cholesterol, HDL, LDL, Systolic BP, Diastolic BP, Fasting glucose, CRP, MCP-1 and ICAM-1

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OUR PLATFORM

Our human-first, data-driven approach enables us to make multiple orthogonal bets across known and novel aging biology

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We aim to benefit the patients of today

Rapid,
clinic-ready drugs

Near-term multi-mechanistic bets
These drugs can benefit patients today

Reprogramming
Gene and cell therapies

Xenotransplanted organs
Artificial chromosomes

Timeline to patient benefit

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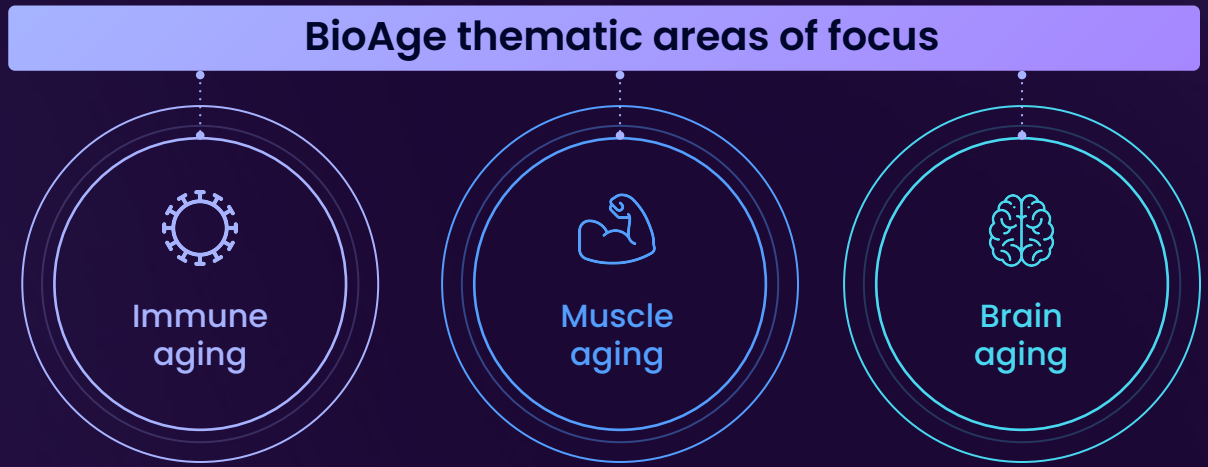
We focus on 3 thematic areas of aging given high levels of unmet need and a strong strategic position



Rationale

INSIGHT
Clear and actionable signals in our human aging cohorts

OPPORTUNITY
High unmet need

FEASIBILITY
Predictive preclinical models & tractable human POC

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A pragmatic approach to an existential challenge:

We start with acute, high unmet need indications given rapid time to value creation

Program de-risking:
Model indications that have a rapid path to commercialization and clear regulatory endpoints

Initial model indication

- Efficient Ph2 trial (+ beyond)
- POC for aging

Aging indications

- High prevalence
- Huge market potential
- High unmet need

Diverse professional experience across the biopharma ecosystem and a proven track record of success

LEADERSHIP TEAM

Kristen Fortney, PhD
Co-Founder, CEO

Eric Morgen, MD
Co-Founder, COO

Paul Rubin, MD
CMO & EVP Research

Ann Neale
CDO

Dov Goldstein, MD, MBA
CFO

Peng Leong, PhD, MBA
CBO & TA Head,
Brain Aging

~750
Clinical trials

130
INDs

~100
US regulatory approvals

BOARD MEMBERS

Vijay Pande, PhD
Partner
a16z

Jason Coloma, PhD
CEO
Maze Therapeutics

Rekha Hemrajani, MBA
CEO
Jiya Acquisition Corp.

**Denotes members of the leadership team that are also board members*

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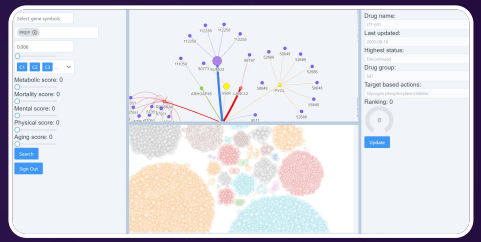
We have developed differentiated R&D capabilities that enable scalability and deepen our competitive moats

R&D process

Target ID

Bespoke data science ecosystem with AI and ML-enabled insights from our human aging cohorts

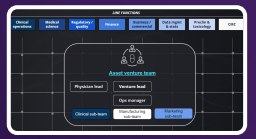


Target validation

In-house translational aging core with expanding roster of assays in naturally aged mice

Clinical development

Dedicated asset teams enabling decentralized program strategy & ops



Incorporation of wearables in trials for continuous biometric data

Multi-omic profiling of trial samples to understand the molecular drivers of treatment response

Proven expertise in data science, aging biology, discovery, and development

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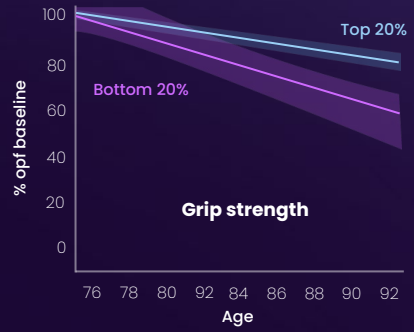
Our platform enables accelerated progression from analysis to asset: apelin case study

SOURCE

Biobank cohorts track key outcomes:

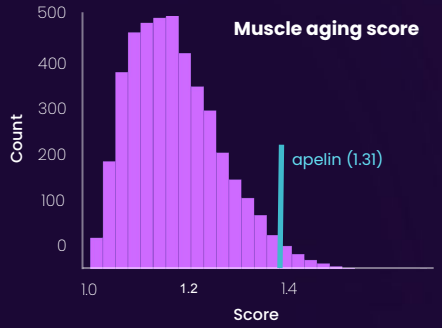
- Lifespan
- Healthspan (e.g., muscle preservation)
- Disease

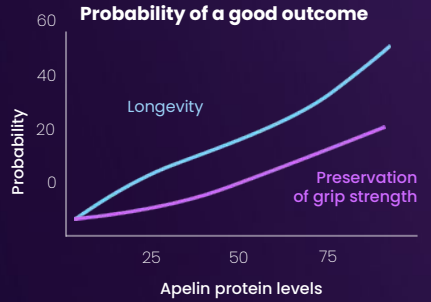
✓ **target ID**



CHARACTERIZE

Apelin protein levels strongly associated with longevity and muscle strength





BIOAGE

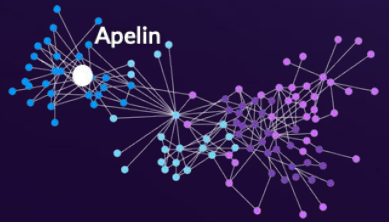
Our platform enables accelerated progression from analysis to asset: apelin case study

MAP

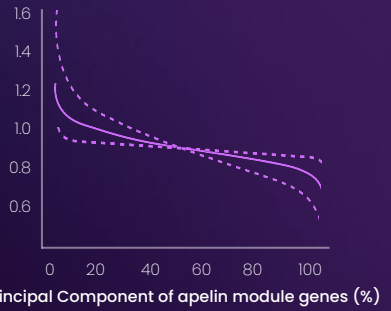
Apelin module activation predicts human longevity

✓ **target ID**

Apelin signaling



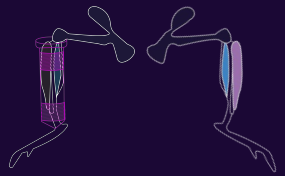
Relative mortality risk (HR)



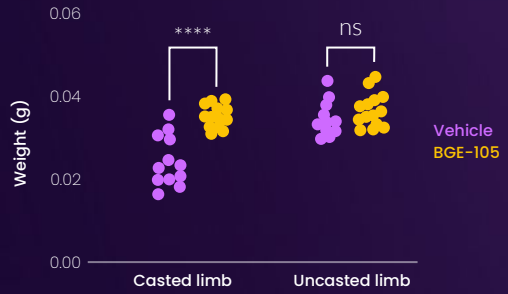
VALIDATE

BGE-105 protects elderly mouse muscle from atrophy

✓ **target & asset validation**



Tibialis anterior



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Our platform enables accelerated progression from analysis to asset: apelin case study

BUILD

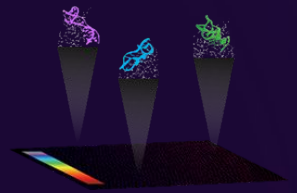
We licensed BGE-105 from Amgen for development in muscle aging indications

AMGEN

TRIAL

We initiated a Ph1b trial in healthy elderly volunteers at bedrest, which will include muscle evaluation and biomarker profiling

SomaScan proteomics



Mapping to frailty signature

ORIGINAL PAPER Aging Cell

Plasma proteomic profile of frailty

- Muscle dimensions
- Muscle quality
- Protein synthesis

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BGE-105: PH1B DESIGN

Our muscle aging Ph1b includes endpoints for muscle size and dimensions, quality, and protein turnover

Healthy volunteers 65+

Multiple dose cohort in patients at bedrest

Control cohort → **Active treatment**

Patients treated with placebo to optimize length of bedrest

Fixed IV dose of BGE-105

Endpoints

Pharmacodynamics

- Muscle size and dimensions
- Muscle quality (fatty degeneration)
- Muscle mass and protein turnover

Pharmacokinetics

Biomarkers, including proteomics

Safety

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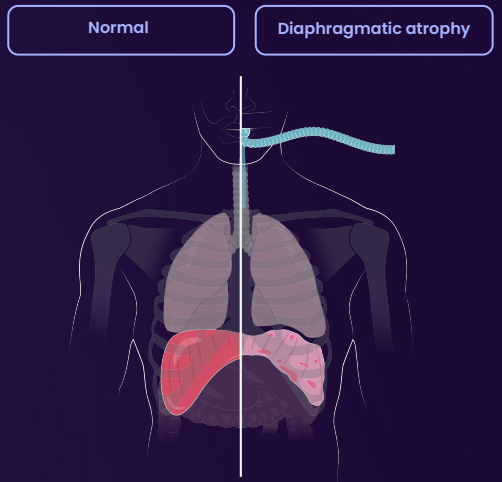
BGE-105: ICU DIAPHRAGM ATROPHY

ICU diaphragm atrophy results in poor clinical outcomes & significant resource utilization



Summary of ICU diaphragmatic atrophy

Patients undergoing mechanical ventilation (MV) undergo rapid diaphragmatic atrophy (DA) given muscle disuse

40-75% of patients undergoing MV develop clinically significant DA

It typically begins to develop within 24 hours of MV, with most profound changes occurring within 3 days

DA is the leading cause of difficulty weaning from MV, and is associated with poor clinical outcomes and increased resource utilization, including:

- **2x** longer **time on MV** (7 vs. 4 days)
- **2x** longer **time in the ICU** (12 vs. 6 days)
- **4x** higher **in-hospital mortality** (27% vs. 7%)

High unmet need: there is no approved therapeutic for prevention or treatment of DA

*Note: * 1 outlier was removed*

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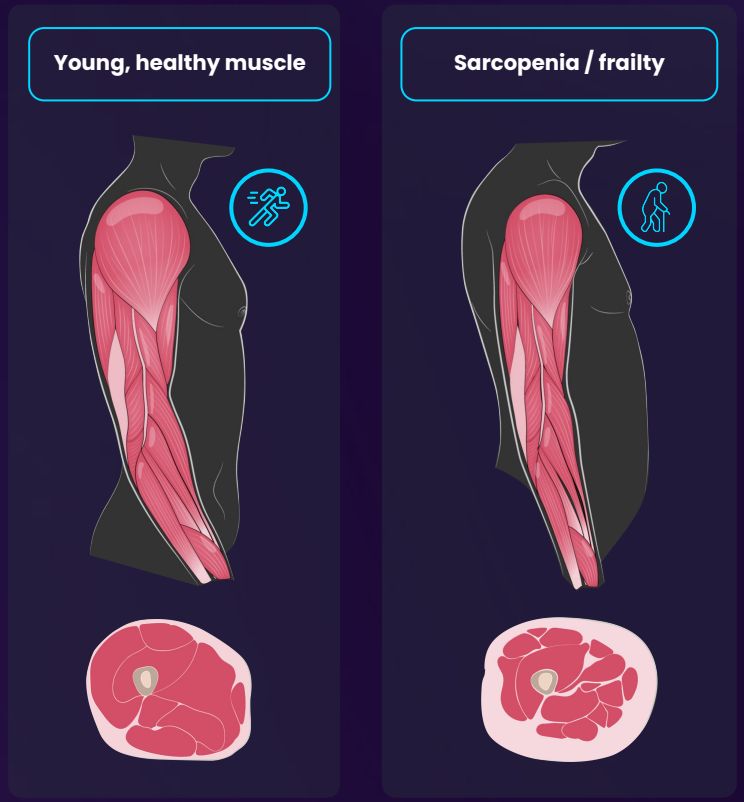
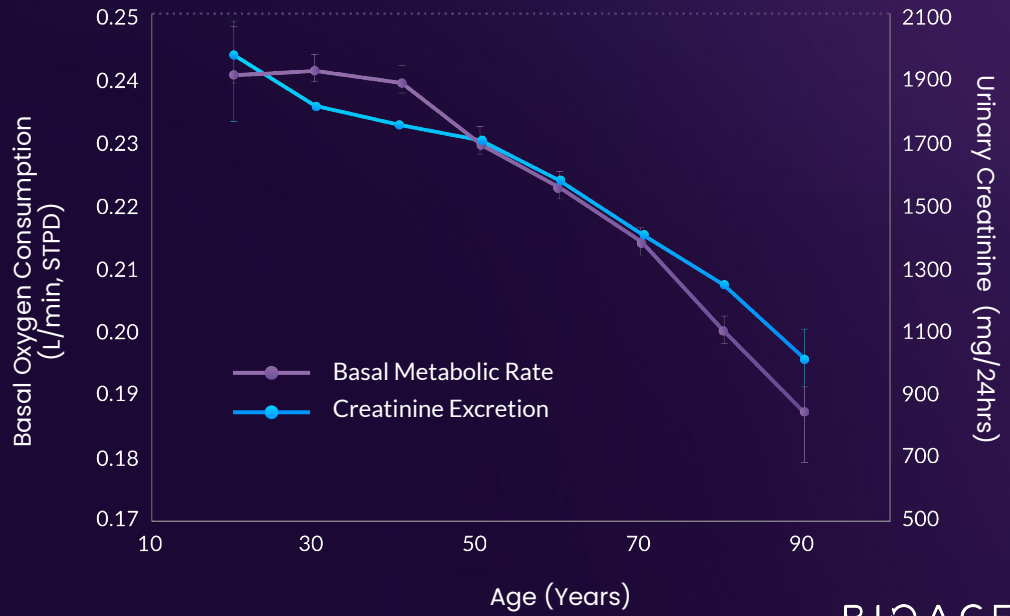
Sarcopenia: a key component of age-related frailty
Age-related loss of skeletal muscle mass



Age-related changes in muscle mass and BMR



Source: Tzankoff 1977

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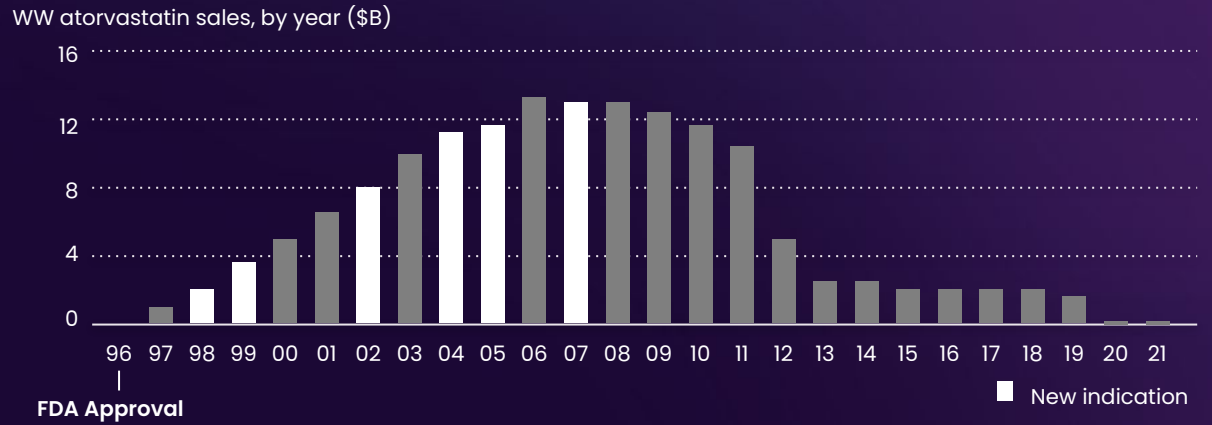
Potential for broad indication expansion and value creation, from acute to chronic diseases of aging

Treatment based on surrogate markers (e.g., cholesterol, lipids)

Prevention of cardiovascular events among adults with risk factors



BGE-105 Example

Example muscle aging development path & market potential

ICU diaphragm atrophy $10B+ > **Bedrest atrophy** $10B+ > **Sarcopenia / Frailty** $20B+

Across US, EU5, and JP

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"Our aim should be to help our patients die young as late as possible."

Tenley Albright, Surgeon

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