



AGELABS

Biomarker for aging

Patient selection for clinical trials

Partnership for Life 2019

Team

We are **competent founders** with a **documented track record** from several **profitable companies** with an aggregate valuation of **€13 million**.

We have deep knowledge in **aging, genetics and predictive analytics**.



Espen Riskedal

Co-founder and CEO
MSc Computer Science
Co-founder of Cutehacks
*customers: Telenor,
reMarkable, NRK, DNT*
Tech lead at Nokia
Tech lead at Trolltech



Arne Søråas

Co-founder and CSO
Medical Doctor
PhD Microbiology
Specialist Int. Medicine
Specialist Inf. Diseases
Postdoc in geroscience
Founder of Boklisten
Physician at Oslo
University Hospital



Karl Trygve Kalleberg

Co-founder and CTO
Medical Doctor
MSc, PhD Computer Science
Co-founder of KolibriFX
Co-founder of Just Technologies
Quantitative analyst at JPMorgan
Physician at Oslo University
Hospital

Top notch partners

abbvie

STARTUP
LAB

 The Research Council
of Norway

 NIPH
Norwegian Institute of Public Health

 NTNU
HUNT Research Centre

 Oslo
University Hospital

 Innovation
Norway

FÜRST
MEDISINSK
LABORATORIUM

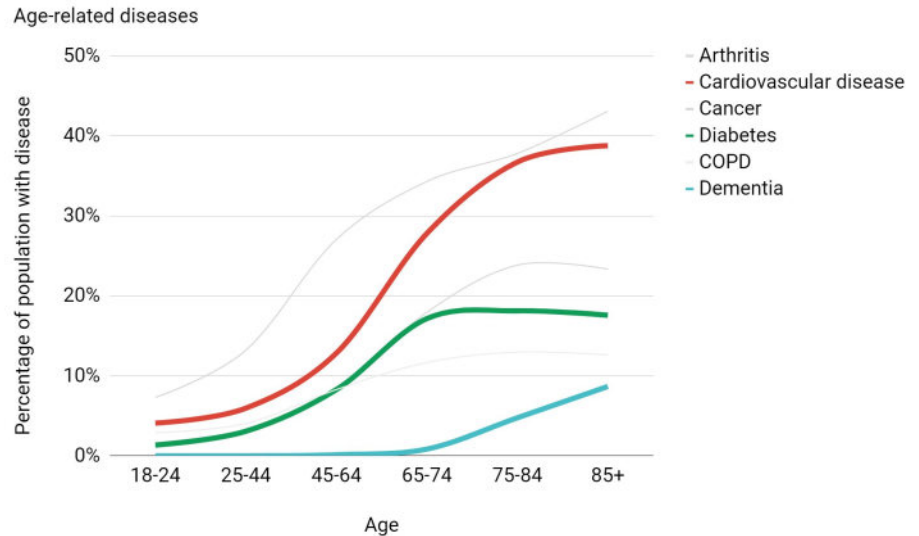
 IIGM
Italian Institute for Genomic Medicine

Scientific expertise – Biobanks – Funding – Labs – Secure computing facilities - Clinical trial expertise

PROBLEM BACKGROUND

The world population is aging

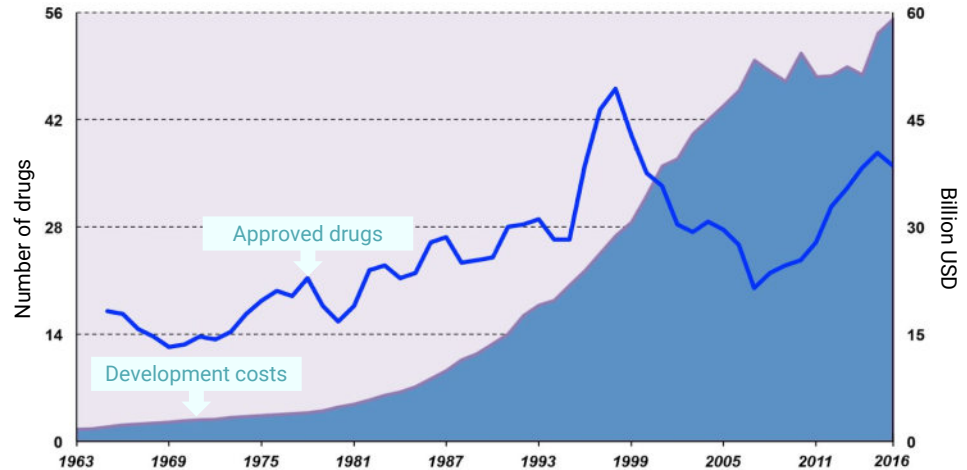
- The population over 65 grows from **0.8 to 1.6 billion** by 2050
- **Half of healthcare costs** is accrued after age 65
- Healthcare costs **increase exponentially** with age
- The US spends **\$3.4 trillion USD** on healthcare (17.2% of GDP)
- Developing **new drugs and therapies** is essential



PROBLEM

Drug development grows increasingly longer and riskier

- Extremely low success rates
 - 8.4% likelihood of approval
 - Most clinical trials fail in phase 2
- Trials using biomarkers for patient selection have a
 - 2x chance of success and
 - 3x chance of approval
- There is a lack of relevant biomarkers
 - Only used in 5% of all trials



“€2.3 billion is the average cost of developing a new approved drug”

SOLUTION

Age Labs biomarker for aging

Our unique blood test enables us to predict

- **Risk of death from**
 - **Cardiovascular disease**
 - **Cancer**
 - **Dementia**
- **Overall risk of death from all causes**
- **A comparison of risk relative to age group**

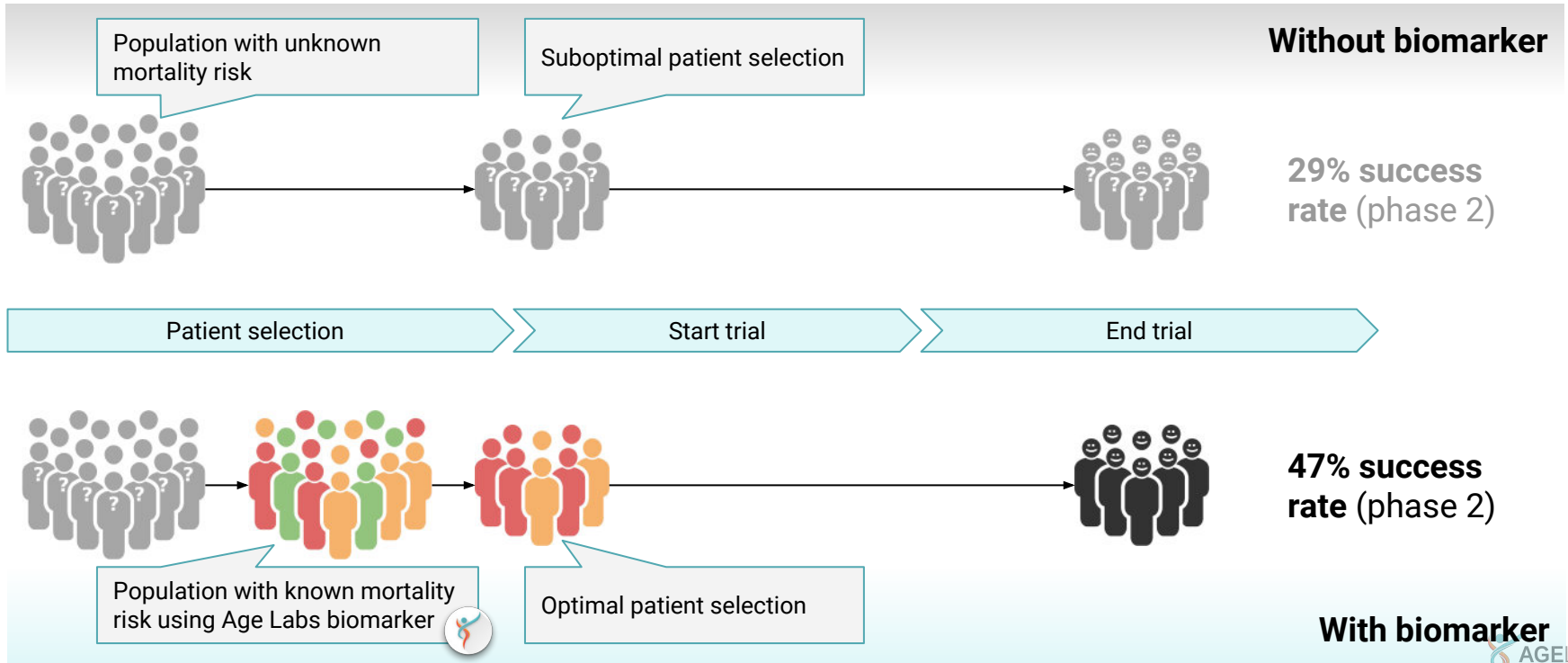


10-year chance of death

<i>Cause of death</i>	<i>%</i>	<i>Risk relative to age group</i>
Cardiovascular disease	3%	Medium
Cancer	1%	Low
Dementia	1%	Low
Other disease	2%	Medium
All causes	7%	High

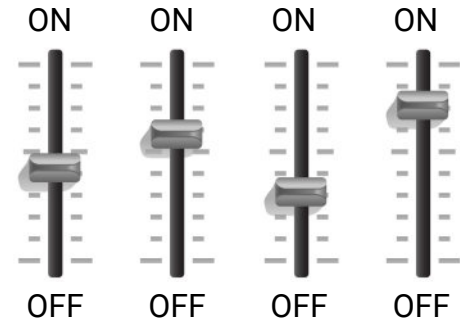
INCREASING PROBABILITY OF SUCCESS IN CLINICAL TRIALS

Improved patient selection



Epigenetic modifications

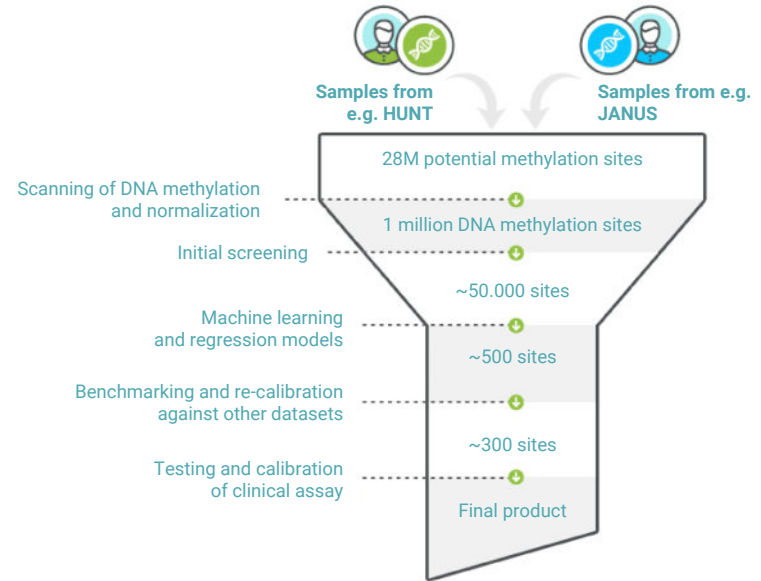
- **Chemical modifications** on top of our DNA
- Determines which genes are **turned on or off** at any given time
- Is affected by factors like **age, environment, lifestyle, diet, drugs** and **disease**
- Is **reversible and modifiable**
- Certain epigenetic modifications are **strongly associated with increased mortality risk**



“Epigenetic modifications are the control panel of our genes”

How we make our biomarker

- **Aggregate thousands of samples**
 - Epigenetic and clinical data
 - Datasets from **Norway**, Europe, America, Asia and Australia
- **Use statistics and machine learning**
 - Starting from **28 million** epigenetic modifications, we narrow it down to a **ranked subset of just 512** for mortality
- **Validate biomarker**
 - **Using separate datasets** we validate the biomarker
- **Patent biomarker and publish paper**



Traction

- **Commercial and governmental funding**
 - 2017 - €100k investment from StartupLab
 - 2017 - €20k gov't cash subsidy FORREGION
 - 2018 - €70k gov't cash subsidy IN Kommersialiseringstilskudd
 - 2018 - 20% tax rebate on all R&D through SkatteFunn
 - 2018 - €150k investment from existing owners
 - **2019 - €1M gov't cash subsidy for R&D through BIA**
- **Product and customers**
 - 2018 - First version of proprietary biomarker created
 - 2018 - First sale to customer
 - 2018 - Patent filed for method to lower biological age
 - **2019 - Partnerships with AbbVie and Fürst through BIA**

