

NAGI SNAPSHOT GUIDES

Fast-tracking healthy aging products: A multi-endpoint strategy

Combine lifespan, healthspan, and biological age measurements in a single experiment.



The Challenge

Aging research has traditionally relied on single endpoints, such as mean lifespan. While valuable, these metrics often fall short for:

- Limited **translational value** for predicting human outcomes.
- Reduced **exploratory power** when only one variable is measured.

Researchers need **multi-dimensional, actionable data** to:

- Detect subtle effects **earlier in the pipeline**.
- Capture both **lifespan and healthspan**.
- Shorten timelines **from hypothesis to clinical relevance**.

The ideal scenario? Being able to get multiple, insightful datapoints in one-shot assay as early as possible in your pipeline.

A Multi-Endpoint, One-Shot Approach

Nagi™ C-Age and Nagi™ B-Age AI-driven assays bring complementary capabilities that bridge the gap between speed, depth, and predictive value.

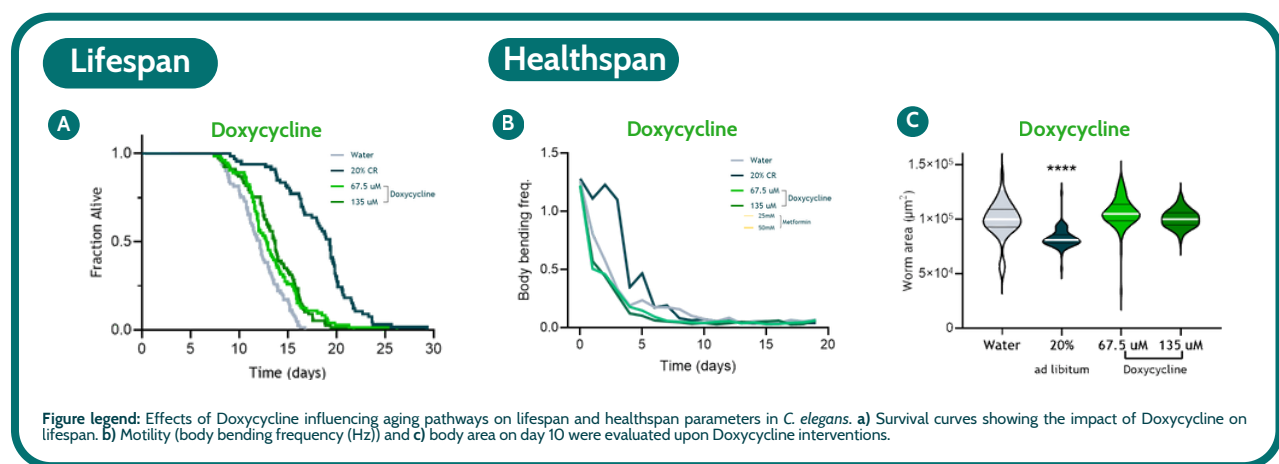
Capability	Nagi™ C-Age	Nagi™ B-Age
Primary Focus	Lifespan and healthspan in parallel.	Biological age across 5 Vital Traits
Readouts	Lifespan, motility, growth, reproduction.	Motility, posture, appearance, reproduction, growth (5 Vital Traits).
Strength	Integrated lifespan + healthspan readouts in a single automated assay.	High-resolution biological age tracking for mechanism-of-action insights.
Ideal Use Case	Broad screening, translational relevance, compound de-risking.	Mechanistic understanding, early detection, explore additional health claims.

Combine Nagi™ C-Age and Nagi™ B-Age: A sneak peek

We applied Nagi™ B-Age and Nagi™ C-Age to screen and evaluate the effects of known anti-aging interventions in *C. elegans*. This enabled us to monitor the chronological age, healthspan, and biological age to identify specific longevity improvements across the Five Vital Traits.

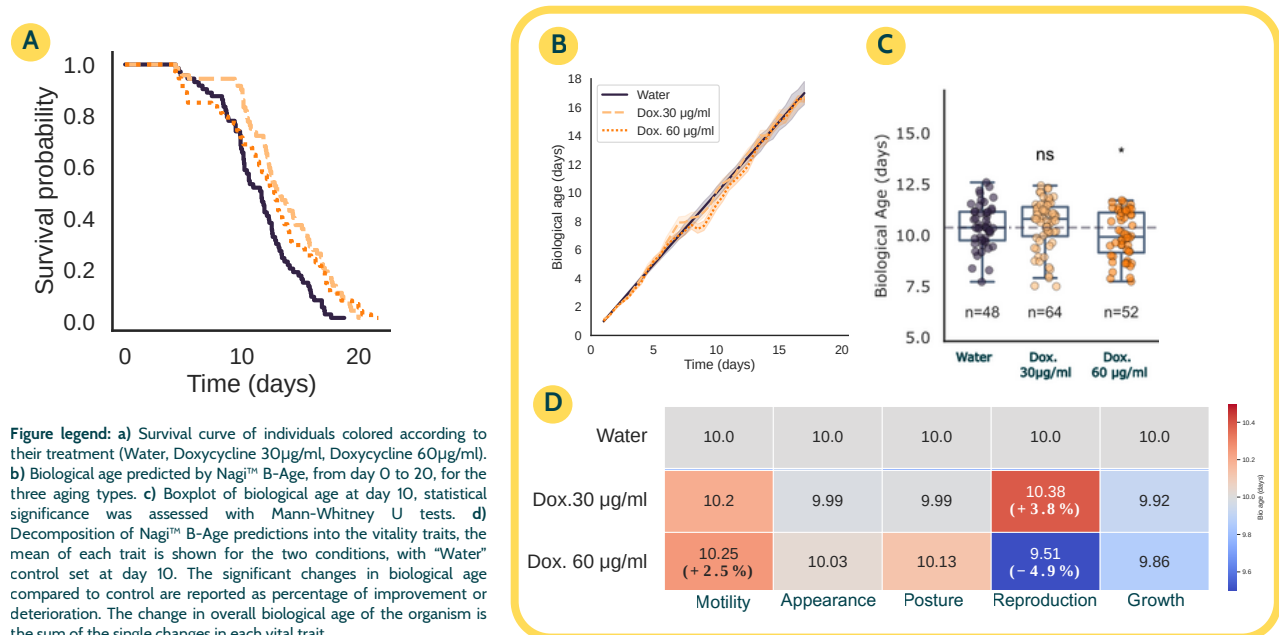
Nagi™ C-Age: Doxycycline interventions

Doxycycline showed a trend of lifespan extension, potentially through the induction of a mild stress response, an effect reported in mice.



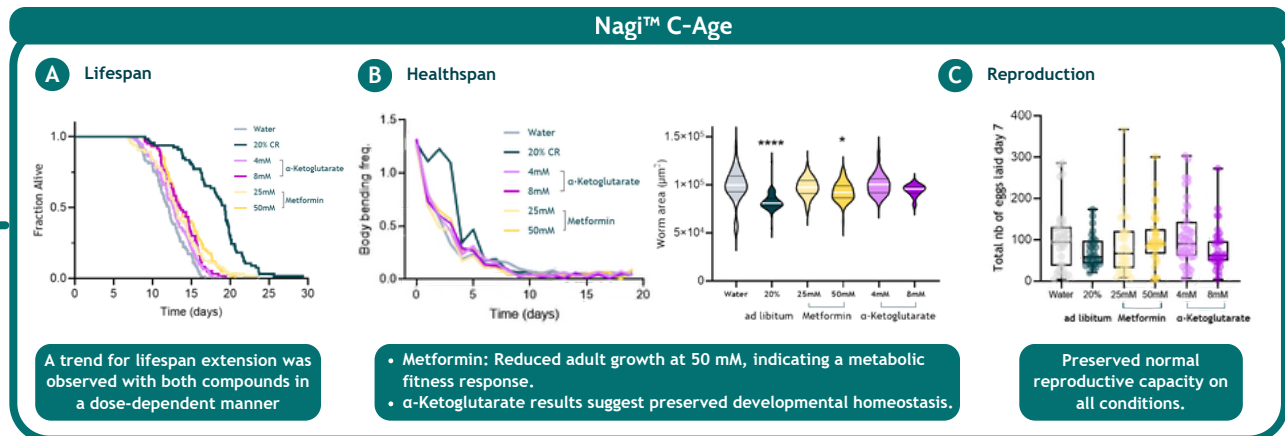
Nagi™ B-Age: Doxycycline interventions

Proposed to exert anti-aging effects via activation of protective mitochondrial stress responses, Doxycycline showed a specific impact at high concentrations by lowering the biological age of the **Reproduction** trait, potentially indicating an extended reproductive span.

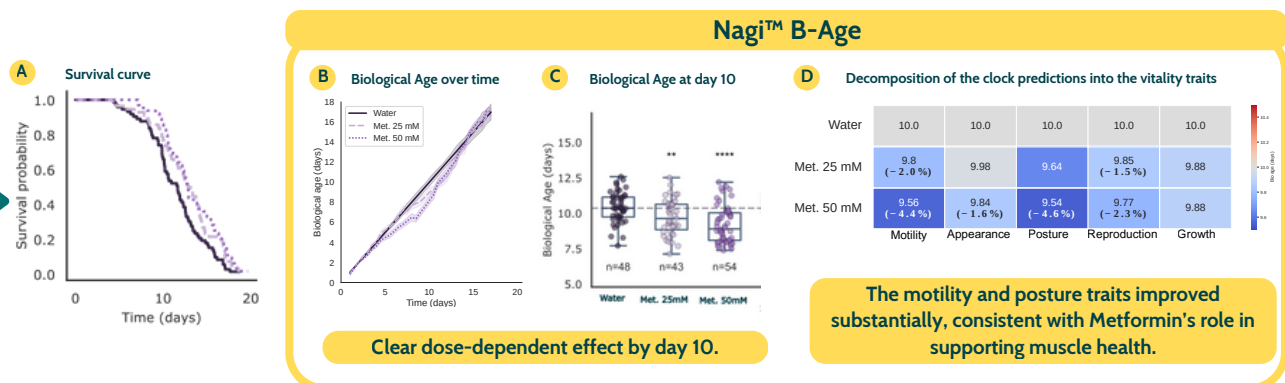


Combine Nagi™ C-Age and Nagi™ B-Age: A Strategic Edge

Effects of Metformin and α -Ketoglutarate on lifespan and healthspan

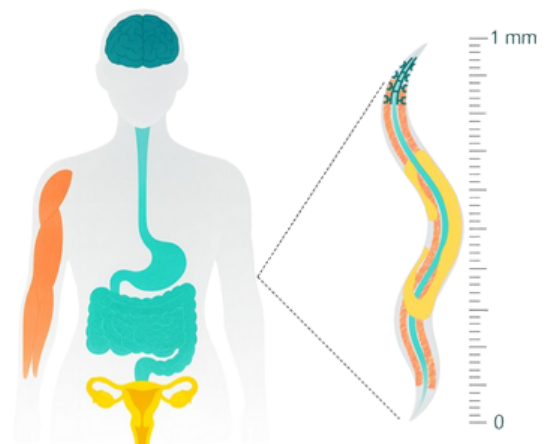


Impact of Metformin on Survival and Biological Age



Translational Impact

- **Lifespan and Healthspan Together:** See both survival and functional aging metrics in one experiment, improving translational predictivity for drug pipelines.
- **Biological Age Resolution:** Identify early intervention effects, beyond lifespan curves, enabling faster decision-making.
- **Trait-Level Mechanistic Insights:** Understand how a compound works. Is it preserving motility? Extending reproductive span? Improving posture or growth stability?



**Explore the Swiss knife
longevity discovery platform**



**Accelerate your research
with Nagi Bioscience**

Let's connect

info@nagibio.ch