

Ora Biomedical

Newsletter – Summer 2023

Introduction

Greetings and Happy Summer!

Ora Biomedical, Inc. is the source for longevity therapeutics. We identify lifespan and healthspan extending interventions by performing massively high-throughput phenotypic screening using our proprietary robotics + AI platform, the WormBot-AI. Interventions we identify are patent-protected, further developed for aging and disease indications, then out-licensed to biotechnology, pharmaceutical, direct-to-consumer nutraceutical, and other companies.

Operations at Ora Biomedical are better than ever! Our IP licensing with the University of Washington of the WormBot, neural net data analysis software, and initial drug database is complete. We are fully launched in our new headquarters in South Seattle. Our wet lab is running and the V1 WormBot army is assaying hundreds of drug treatments every day!

We have identified new lifespan extending interventions! We are planning our strategies to develop these interventions for out-licensing partnerships while continuing screens to identify blockbuster longevity therapeutics.

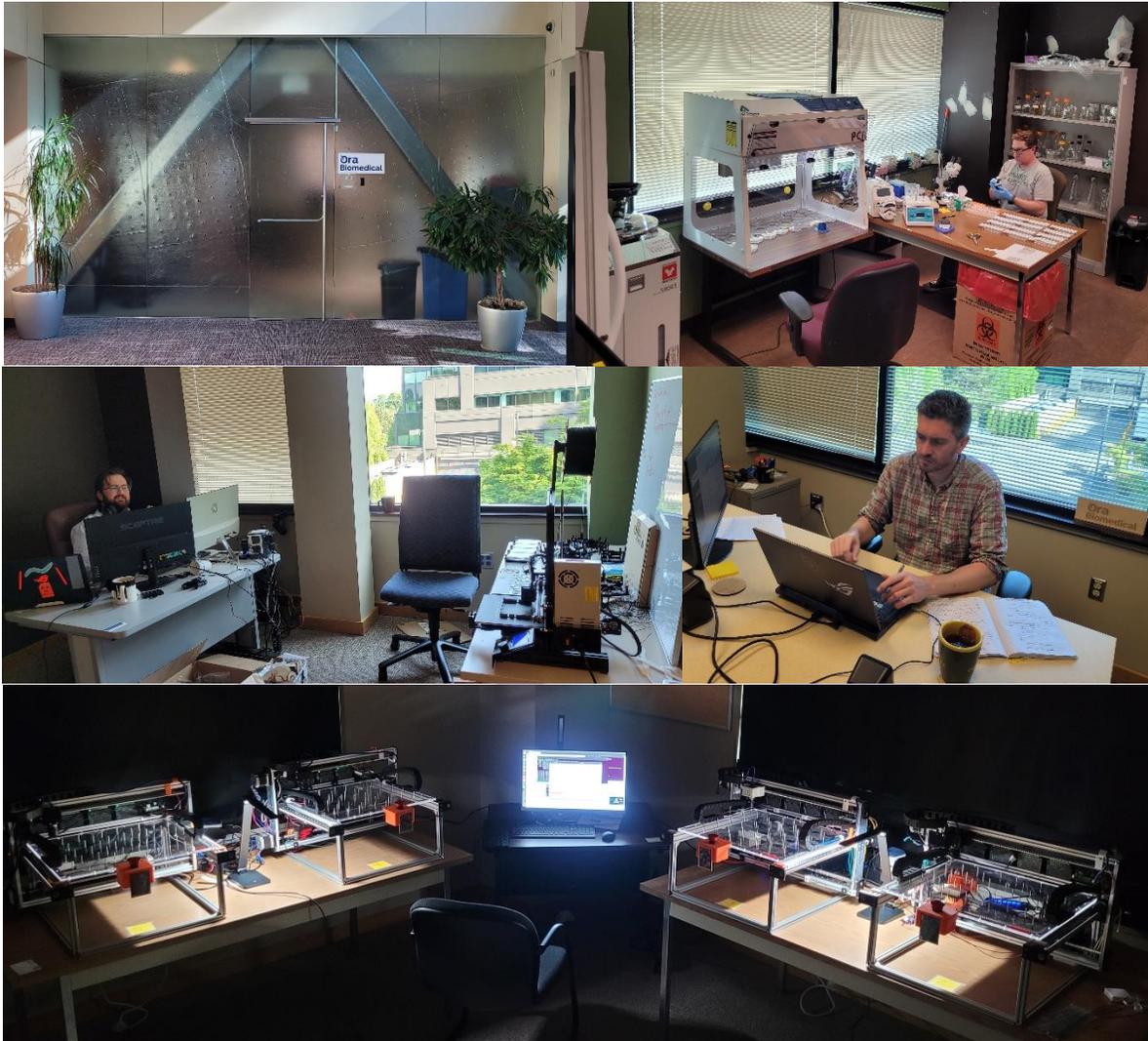
We are excited for the future as we move towards raising Seed financing to continue development of our new longevity interventions and build our screening capacity so we can screen 1,000,000 interventions within three years!

Dr. Mitchell Lee - CEO

General updates

At the end of December, we finalized our licensing agreement with the University of Washington to secure the exclusive commercial use rights for the WormBot robotics platform, neural net animal tracking, phenotyping, and data analysis software, and data from initial drug screens performed in the Kaeberlein lab. This is the first step in our IP generation strategy. We are now developing provisional patent filings for our drug discovery pipeline and first lifespan-extending interventions.

In April, we moved from the UW CoMotion incubator space and into our new research facility! We built our wet lab, brought our V1 WormBot army online, and launched our drug discovery program in our first month of operations. Excitingly, our headquarters is adjacent to >6000 SQFT of growth space available to us once we secure our Seed Series financing. Ora Biomedical HQ is located in South Seattle, just next door to Optispan clinics and Sabey Corp HQ.



Ora Biomedical HQ! (From left to right, top to bottom) Our main entrance, Director of Invertebrate Research, Michael Muir, getting our next drug screen assay going in our wet lab, Ben and Mitch in their offices, and the V1 WormBot army.

Ora Biomedical publicity/exposure

To better understand how the Ora Biomedical approach to drug discovery differs from other discovery pipelines, Mitch and Matt drafted [Of Worms and Cells](#) for the Ora Biomedical website. Briefly, we separate ourselves from common drug discovery approaches by performing phenotypic, as opposed to target-based initial screening. We start where it matters, by finding interventions that extend lifespan, healthspan, and fight against disease pathology. Target-based approaches, on the other hand, start by identifying interventions that modify a predetermined molecular target. It is

years and typically millions of dollars later before target-based approaches assess whether their drug for a molecular target actually improves health/lifespan outcomes.

Our approach to phenotypic screening increases the likelihood that an intervention will extend healthy lifespan and allows us to identify brand new targets that could not be identified using target-based approaches.

In February, Mitch and Ben presented a WormBot demonstration at the Future Health Technology showcase in Seattle.



Ben demonstrating the WormBot-AI platform at the Future Health Tech Showcase

In March, Matt, Mitch, and Ben attended the Puget Sound Business Journal Health Care of the Future event in downtown Seattle. As an invited panelist, Matt provided an excellent perspective on the value and importance of targeting aging as health care costs rise and populations age.



Matt discussing the importance of healthy aging at the Puget Sound Business Journal's Health Care of the Future event. Photos courtesy of Jason Redmond.

Mitch and Ben attended Life Science Innovation Northwest in Seattle at the end of April. They presented a poster and Mitch gave a short presentation on Ora Biomedical.



Mitch introducing the Seattle Biotech community to Ora Biomedical at LSiNW.

In mid-May, we submitted a new manuscript detailing the importance of nematodes as a drug discovery model system and promoting Ora Biomedical's ambitious Seed Series goal of screening one million interventions for increased lifespan and healthspan. *The million-molecule challenge: A moonshot project to rapidly advance longevity intervention discovery* is the next step in building enthusiasm and support for Ora Biomedical as we move to rapidly identify the next generation of longevity therapeutics.

Board Chair & Co-Founder Matt Kaerberlein continues to be a thought leader and voice of integrity in longevity science. Here are a few of his latest interviews and discussions:

[Aging is a Science with Tom Bilyeu](#)

[Decoding Aging in Dogs – Oxford Society of Ageing and Longevity](#)

[Lessons Learned from Two Decades of Rapamycin Research](#)

[Aging: Separating the Science from the Snake Oil](#)

[Aging Dogs Provide Insights for Human Longevity](#)

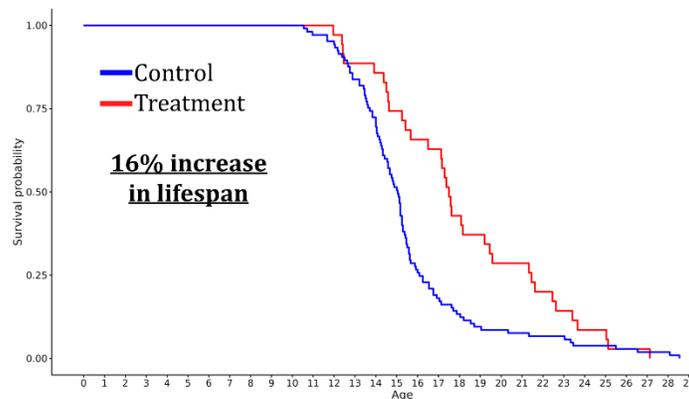
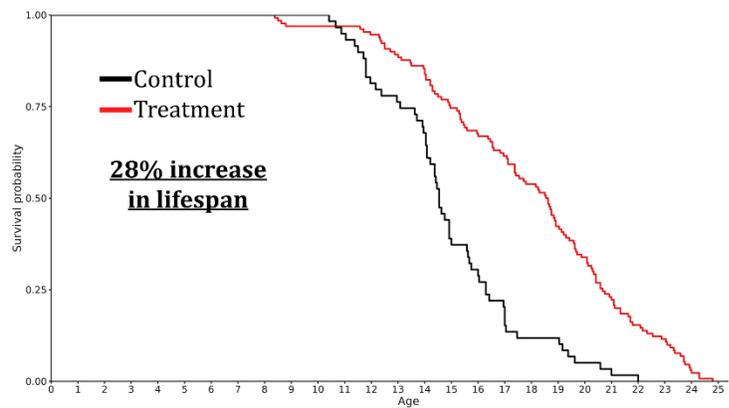
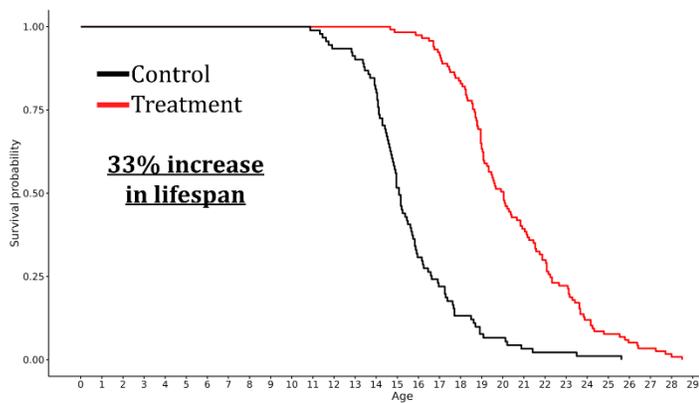
Follow us on [Twitter](#), [LinkedIn](#), and orabiomedical.com for the latest updates!

Science news

To date, the Ora Biomedical drug database contains 1,825 drug treatments, 928 unique compounds, and we have screened over 148,900 animals!

For comparison, the largest publicly available database, [DrugAge](#), contains data for 1,097 unique compounds. In just a few short months, we have nearly surpassed this database that catalogues decades of drug discovery research.

We have started identifying and validating several lifespan-extending interventions!
Here are a few of the most recent:



Some of these new interventions are novel lifespan-extending compounds and others are known interventions we have validated. None of these compounds have been tested for combination effects with other longevity interventions.

Moving forward, we plan to further develop these interventions and seek out-licensing partnerships, perform combination drug studies to identify lifespan extending drug synergies, and continue screening to identify even more powerful longevity therapeutics.

Snapshots in Longevity Biotech

[Ada Nguyen's Longevity Biotech Landscape – April 2023](#)

[Longevity.Technology 1st Quarter \(2023\) Longevity Investment Report](#)

Financing

To date, we have raised \$395K in cash financing and in-kind support during our Pre-Seed Series raise through SAFE financing. This includes our lease for our South Seattle headquarters.

As a platform, IP-generating company, our business model allows us to rapidly generate revenue by out-licensing drug IP (with upfront, milestone, and royalty payments) instead of waiting until therapeutics make it through the long process of clinical development. This revenue will quickly make us self-sufficient as we pursue

advanced development of blockbuster longevity therapeutics. To get to this point, however, we require additional financing.

In April, we resubmitted our Small Business Innovation Research (SBIR) grant for [NIH SBIR PAS-19-316](#). We will learn the status of this latest submission by early July. We have also identified two other NIH grant mechanisms that we are pursuing for a September submission.

We are raising \$5 million for our Seed Series now. This will provide financing to continue development of our first drug hits, grow our screening capacity, and screen 1,000,000 interventions for lifespan and healthspan within three years. This large-scale screening will identify 100s of new longevity interventions and targets that can be IP-protected, internally developed, and out-licensed to biotech, pharmaceutical, direct-to-consumer nutraceutical, and other companies.

Get in Touch

We want to hear from you! Please reach out to us at our [website!](#)

