



# 14 Years of Technology Innovation: Our 2023 Impact Report



Angelika Fretzen

Technology Translation Director & COO

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We at the [Wyss Institute at Harvard University](#) just released our [2023 Impact Report, 14 Years of Technology Innovation](#). This publication provides a welcome opportunity to reflect on the Institute's accomplishments over the last year, looking where we've come from and where we're headed.

We remain committed to our focus on solving "impossible" problems that hold the greatest potential for positive impact. To do this, we continue to break down silos and bridge the gap between academia and industry, innovating for the health of humanity and our planet.

I truly believe there is something in this report for every member of our community – staff, faculty, industry partners, collaborators, and supporters – to be proud of, and I'd like to invite you to spend some time reading it. Here, I'd like to highlight some of the achievements most significant to me.

## Celebrating Visionary Philanthropy

Last October, Hansjörg Wyss generously gifted \$350 million to Harvard to support our Institute's continued mission, which builds upon his previous three gifts. On April 26, members of our community, along with Mr. Wyss and his family and friends, gathered to celebrate the incredible accomplishments of the Institute thus far with a symposium, followed by a dinner honoring the vision of our namesake founder.

This event, which featured innovations from across the areas of therapeutics, diagnostics, MedTech, and sustainability, truly highlighted that Mr. Wyss' **philanthropy has empowered our community's ingenuity, and enabled us to take a variety of approaches, and sometimes big risks, to confront huge challenges.** We are excited to continue to enable our philanthropic partners to use their capital to address existing gaps in funding through investments spanning fundamental science, translational research, product development, and clinical medicine.



**I have been tremendously proud to watch the Wyss Institute grow into the remarkable engine for innovation and entrepreneurship that it has become today and I want to recognize and congratulate the Institute's leadership, entire faculty, and staff for working so tirelessly to realize my initial vision of working together across disciplines to solve some of the greatest challenges that we face as a society. It has been very gratifying to see the numerous advances in science and technology that have been achieved since the Institute was founded.**



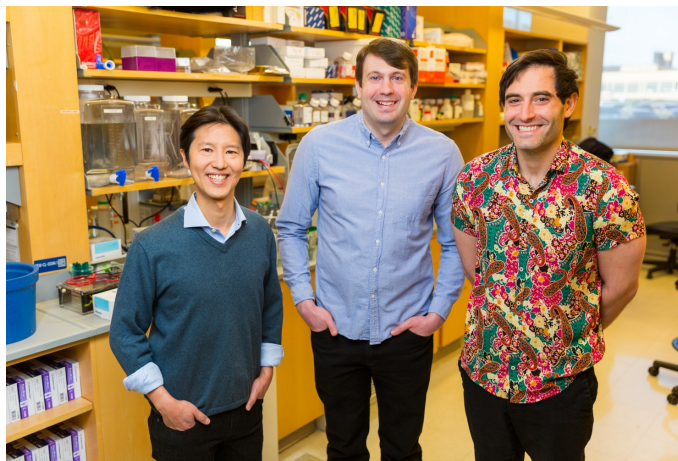
**I hope others will see what this team has accomplished in such a short time and join me in helping to build this incredible enterprise and expand its impact even further in the years to come.**



Hansjörg Wyss  
Entrepreneur and Philanthropist

## Partnerships New and Established: Collaborative Fund and Northpond Ventures

In May, we signed a **\$15 million agreement with Collaborative Fund** to create a Laboratory for Sustainable Materials Research and Innovation. Our new partners have over a decade of experience investing in successful climate technology startups. Their expertise and support will enable us to better address the daunting problems facing our planet. It has been a pleasure working with **Sophie Bakalar** and her team towards helping us to engineer a healthier world.



Lab-on-a-Molecule team members Wesley Wong, Clinton Hansen, and Mark Lipstein. Credit: Wyss Institute at Harvard University

On the medical side, **Northpond Labs** chose its **third project to fund – the Lab-on-a-Molecule Drug Discovery technology**. This team is finding effective therapies against difficult-to-drug targets in a high-throughput platform able to screen thousands of compounds. Our collaboration with **Northpond Ventures** has already enabled an RNA solutions startup, **EnPlusOne Biosciences**, and is currently funding two other critical projects.

## Improving Women's Health



A Celebration of Women at the Intersection of Science and Art event, held on March 8, International Women's Day. Credit: Wyss Institute at Harvard

Though women make up 50% of the world's population, their unique health needs receive only a fraction of the research investment and funding that men's issues are awarded. I'm incredibly proud of the fact that **25% of our research projects in 2022 were focused on improving women's health, and we're working to increase that percentage through our Women's Health Catalyst.**

Projects include an innovative solution for breast

reconstruction surgery, a human Vagina Chip to study bacterial vaginosis, and ovarian organoids that have been commercialized by Wyss startup [Gameto](#) to reduce the cost and physical burden of fertility treatments.

## Milestones from the Brain Targeting Program

Our Brain Targeting Program continued their effort to find brain transport shuttles that dramatically improve delivery of drugs across the blood-brain barrier. They are preparing to test three lead shuttles in models of neurodegenerative diseases. **The lead shuttle increases the uptake of test drugs into the brain by 10- to 60-fold.**

Anyone who has worked on therapeutics for brain diseases and mental health disorders knows what a huge feat this is, and I am truly excited about this program and its potential impact for patients and their families.

## Technology Translation

As the Wyss' Technology Translation Director, I'd be remiss if I did not mention our successes in this area. Eight technologies were licensed to companies this year, despite the problems facing our global economy. Existing Wyss startups continue to have tremendous clinical impact, gain regulatory approval, launch new products, and receive outside funding and industry recognition. For example, [Prapela](#) received FDA Breakthrough Device Designation to investigate the use of its vibrating mattress pad to treat apnea in premature infants, and [Emulate, Inc.](#) showed that their Liver Chip correctly identified 87% of drugs that caused liver damage in humans, even though they passed safety tests in animals.

**Through these companies, our innovations continue to have impact long after they leave the Wyss, supporting our core belief that breakthrough discoveries can only change the world once they're out of the lab.**




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







**Angelika Fretzen**  
Technology Translation Director & COO  
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**Sophie Bakalar** • 3rd+  
Partner @ Collab Fund

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I've always loved reading these reports - but it's especially fun now that we're included. It's been great working with you and the whole Wyss team, Angelika!

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**Angelika Fretzen** • Following

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Technology Translation Director & COO

[Sophie Bakalar](#) we are excited to have you on board!

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**Mohan Karkada** (He/Him) • 3rd+  
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Inspiration to others trying to achieve what Wyss has been so successful in achieving, Bravo 🙏👍

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