

BIOMIMICRY
INSTITUTE

2023
ANNUAL REPORT



A MESSAGE FROM OUR CEO, AMANDA STURGEON

Dear Friends and Supporters of The Biomimicry Institute,

As I reflect on the significant progress of The Biomimicry Institute over the past year, especially since assuming my role as CEO in November, I am filled with gratitude and pride. Taking the helm from Beth Rattner, whose leadership magnificently expanded our reach and impact, was both an honor and a profound responsibility. In the few months since I started, we have continued to build on this solid foundation, pushing the boundaries of innovation by drawing inspiration from the most efficient and sustainable designer we know—nature itself.

Our initiatives this year have not only showcased the power of biomimicry but have also brought to light the essential connections between our natural world and the well-being of our communities. This year, we increased our AskNature audience significantly, expanding the number of biomimicry strategies available. Personal favorites of mine included additions like [“Spider Build an Underwater Bubble House”](#) and [“How the Clownfish and the Sea Anemone Help Each Other”](#). We also celebrated the selection of ten incredible nature-inspired startups through the [Ray of Hope Prize](#), offering vital support to these bio-inspired breakthroughs. Additionally, our [Youth Design Challenge](#) received close to 200 submissions from young innovators across the globe!

As we enter the next phase of our organization, the importance of our community becomes even more pronounced. Tackling the twin crises of climate change and biodiversity loss demands collective action and innovative thinking. Our commitment to harnessing the principles of biomimicry to develop technologies, processes, and products that are not only inspired by nature but also sustainable for future generations is unwavering. Thank you for being a part of this journey, for your unwavering support, and for believing in a future where humanity and nature thrive together.

With warm regards,



Amanda Sturgeon
CEO, The Biomimicry Institute



BRINGING BIOMIMICRY TO THE WORLD

Humans are a relatively young species who have been here about 200,000 years. But the rest of nature has been here 3.8 billion years, and in that time has learned to do everything without harm to the planet. We're at a point now where we are seeing the unintended consequences of the way we've been living here as a young species.

It's time for us to figure out to how live on Earth in a way that enhances all life. And the best place to look is to the organisms that have already figured out how to live here gracefully over the course of time.



MAKING BIOMIMICRY SOCIAL

INSTAGRAM GROWTH:

January: 57,174 » December: 60,646

LINKEDIN GROWTH:

January: 21,786 » December: 26,028

AMPLIFYING BIOMIMICRY THROUGH VIDEO

We want the world to see biomimicry in action. To feel its promise. To hear the voices of those leading the way. In early 2023, we were proud to solidify a relationship with RE:TV, the Sustainable Market Initiative's content platform and production studio.

Since the summer of 2020, they have produced over 100 films with crews based all over the world, interviewing visionary entrepreneurs, technologists, scientists, academics and campaigners. Now, they are turning the message of nature-inspired innovation into a beautiful series of videos that have garnered tens of thousands of views across YouTube and our combined social media.

[JANINE BENYUS](#) | [NEW IRIDIUM](#) | [BIOME RENEWABLES](#)

[GREENPOD LABS](#) | [MYCOCYCLE](#)



BIOMIMICRY HITS US-MUSEUMS



After years of planning, our partnership with the world-renowned Oregon Museum of Science and Innovation (OMSI) can now be experienced in-person through their *Creatividad Silvestre | Wild Creativity Exhibit*. This immersive exhibit with Spanish-forward displays engages visitors with biomimicry through interactive design and engineering challenges inspired by our nature world. Powering the exhibit is content created by our dedicated AskNature team.

Not only will thousands come face to face with biomimicry in the exhibit's initial Portland, Oregon location, it will travel to museums and science centers in California, Arkansas, Delaware, Florida, Massachusetts, and more over the following three years.

View the full exhibit collection on [AskNature](#).



ASKNATURE: INSPIRING WITH NATURE'S GENIUS

The most used, most trusted destination for biological inspiration for human design solutions.

For anyone attempting to practice biomimicry—whether entrepreneurs, professional consultants, university researchers, or younger students—there is nowhere else they can turn to quickly discover and understand the relevant biological solutions to the questions they pose at any point in their career.

AskNature was created to bring the genius of nature to the design table of human innovators. Since 2007, it has produced more than 2,000 pages of information about how living things function, translating complex biological research into language that designers and others can understand and learn from. Those innovators are using these insights to produce radically sustainable solutions to the world's most pressing issues.

LEVERAGING THE POWER OF A.I.

We are on a mission to enable makers, designers, engineers, architects and more around the world to find relevant biological strategies for their projects. In doing so, they will have the ability to find, mimic, and implement localized nature-based solutions. This means adding not dozens, but thousands of new strategies to AskNature each year.

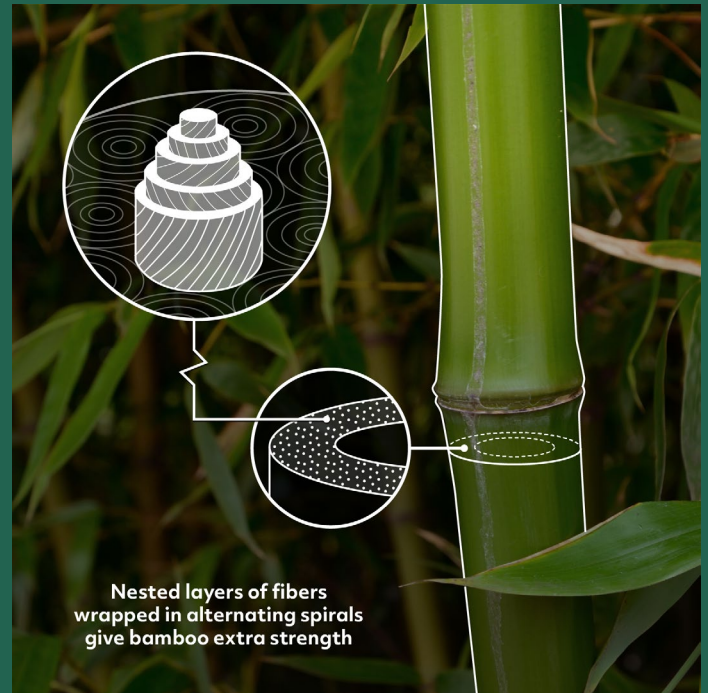
To do so, we are actively exploring AI's potential for various aspects of the production process. After months of development and testing, we began publishing select pages composed with assistance from AI. The first set of 20 AI-assisted Biological Strategy pages we produced in 80% less time.

To ensure accuracy, appropriateness, and tone, these and all AI-assisted pages are reviewed by human editors prior publishing, and the use of AI is communicated on each page, along with a link to suggest changes or provide feedback.



A NEW WAY OF SEEING

- Launched weekly series posting new science illustrations across our social media channels



- Had highest performing newsletter yet (10x the amount of clicks)
- New Instagram illustrations poster for free distribution to educators and others. Download it [here!](#)

NEW COLLECTIONS:

[How Does Nature Build a Home?](#)

[How Life Built Earth As We Know It](#)

[How Does Nature Teach and Learn?](#)

ANNUAL PERFORMANCE

VISITORS: 608,631 | PAGE VIEWS: 2,747,383



TRANSFORMING EDUCATIONAL EXPERIENCES WITH BIOMIMICRY



YOUTH DESIGN CHALLENGE

The Youth Design Challenge curriculum was revised to enhance inclusivity, incorporating language that broadens accessibility for educators in various settings beyond traditional schools.

- The 2022-2023 Youth Design Challenge concluded with a record-breaking 177 global submissions, an increase from the previous year, accompanied by 560 coaches participating, and the announcement of 16 national and international winners across various categories.
- The Youth Design Challenge curriculum was revised to enhance inclusivity, incorporating language that broadens accessibility for educators in various settings beyond traditional schools.

[MEET THE WINNERS HERE](#)

BIOMIMICRY CURRICULUM FOR 100,000 EDUCATORS

In our effort to bring biomimicry to as many educators as possible, we partnered with the science educator platform, [PocketLab](#).

Created by educators, for educators, PocketLab provides a straightforward, flexible, and comprehensive approach to teaching science, empowering educators to create dynamic and interactive learning environments that fully engage students at every stage.

Now, over 100,000 educators now have access to our biomimicry with biomimicry resources, lessons, and curriculum. Given classroom size and multi-year engagement, the potential reach in student influence is massive. TBI now has a dedicated biomimicry channel in their Lesson Library; this is the first time that biomimicry curricula have been featured in the PocketLab network.

[View the biomimicry curriculum on PocketLab.](#)

INNOVATION: ADVANCING NATURE-INSPIRED SOLUTIONS



RAY OF HOPE

Accelerating the growth of nature-inspired startups to scale systemic solutions to the world's most pressing environmental challenges.

The 2023 Ray of Hope Prize received 212 applications from a record 52 countries. 27 selection committee members representing experts in industry and academia across a diversity of disciplines were on the panel to select a cohort of 10.

- Provided \$150,000 in non-dilutive, catalytic capital.
 - The \$100,000, 2023 Ray of Hope Prize recipient was Sparxell, a UK-based cellulose pigments startup.
 - Anodyne Chemistries, a Canadian startup replacing petrochemistry via a sustainable bioelectric process was awarded the \$25,000 runner up prize.
 - The 2023 program included a peer-selected prize awardee in which the startups of the 2023 cohort voted for the venture they would invest in. BloomX an Israeli based ag-tech startup received the \$7,500 prize award.
- Secured the first two corporate innovation partners for Ray of Hope Program, L'Oréal and the Bentley Environmental Foundation.
- Delivered a successful program, including an immersive nature retreat in Yosemite National Park.
- Expanded our team - welcome Maëlys Renaud!



A close-up photograph of an elephant's trunk and tusk. The trunk is on the left, showing its characteristic segmented, wrinkled texture. The tusk is on the right, appearing as a smooth, light-colored, slightly curved structure. The background is a soft, out-of-focus gradient of warm colors, from light yellow to a darker greenish-brown.

BIOMIMICRY LAUNCHPAD

“We equip scientists, engineers, and designers with the skills and tools they need to turn their work into real-world solutions.”

- Selected 16 participants, out of 131 applicants, to join the 2023 Biomimicry Launchpad program, creating a uniquely multicultural and multidisciplinary cohort.
- Delivered a successful program, including an immersive nature retreat in the Montana wilderness.
- Advised on a number of bio-inspired research projects, including serving as an Industry Advisor for the Bio-derived and Bio-inspired Advanced Materials for Sustainable Industries (VALUED) research program, led by Imperial College London.

ALUMNI UPDATES

AWARDS:

- [Fusion Bionic](#) was selected to participate in a EU funded project about functional, bio-inspired surfaces created with lasers, with the net EU contribution of €772,000.
- [New Iridium](#) Secured \$1M NSF SBIR Phase II grant to revolutionize chemical manufacturing and combat climate change.
- [Pheronym](#) landed \$1 million NSF SBIR Phase II grant to scale the commercialization of the company's patented nematode pheromone extract for crop biocontrol.

FUNDING:

- [Seprify](#) (formerly Impossible Materials) secured \$3.8M in Seed funding and a \$2.6M grant to scale up their white pigment manufacturing.
- [Mycocycle](#) raised \$2.2M in Seed funding to build out its team and pilot facility.
- [Nanomik Biotechnology](#) raised \$0.8M in Seed funding to expand into new agricultural markets.
- [Retein](#) (formerly Aquammodate) raised \$1.1M in Seed funding to prepare their technology for scale.
- [Strong by Form](#) completed their \$5.2M Seed round to grow their team and build an industrial manufacturing facility.
- [Werewool](#) raised \$3.7M in Seed funding to expand manufacturing capabilities and expand their team.

INDUSTRY ENGAGEMENTS:

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