The New York Academy of Sciences

Shaping the

Future of Science

for over 200 years



200+ YEARS

The Lyceum of Natural History held its founding meeting on January 29, 1817, at the College of Physicians and Surgeons on Barclay Street near Broadway. It would be renamed The New York Academy of Sciences in 1876.



A History of Scientific Leadership Solving Global Challenges

***Our story begins in 1817**, when a group of science enthusiasts came together to create an organization open to anyone interested in natural science. **The intent was to provide a forum for the exchange of scientific ideas and advances with people of widely disparate backgrounds**. On January 29, 1817, the Lyceum of Natural History, which would become The New York Academy of Sciences in 1876, held its first meeting in downtown Manhattan.*

Over the next two centuries, the organization would welcome some of the most prominent scientific, civic and business leaders of its time, including such luminaries as Charles Darwin, Louis Pasteur, Alexander Graham Bell, Margaret Mead and Barbara McClintock, as well as U.S. Presidents Thomas Jefferson and James Madison.

Today, the Academy's mission is to drive innovative solutions to society's most pressing challenges by advancing scienti ic research, education and policy. Our more than 15,000 members — including over 35 Nobel laureates, senior corporate leaders, philanthropists and policymakers — are based in over 100 countries, and represent a broad range of backgrounds and perspectives from both scientific and non-scientific communities.

In building such an inclusive network, the Academy has leveraged its reputation as a trusted and neutral catalyst for public perspective and global debate around important issues facing society.

Most recently, in the early days of the pandemic, the Academy produced and hosted over two dozen comprehensive scientific symposia about COVID-19's spread and about the development of therapeutics and vaccines. Featuring the world's leading experts in infectious diseases, the discussions continued a proud tradition of bringing together diverse, international stakeholders to address this pandemic, as was done with antibiotics (1946), AIDS (1983), SARS (2003), H1N1 (swine flu — 2009), sustainability/climate change and childhood development.

As a 501(c)3 nonprofit organization, the Academy is supported exclusively through philanthropic grants, donations and membership dues.

15,000+
MEMBERS

100+
COUNTRIES

As Chair of the Board of Governors, Jill and I are thrilled to support The New York Academy of Sciences' renewed drive to create a positive impact and encourage science-informed decision-making to address the most challenging problems of our times.

JERRY and JILL HULTIN
Chair and Co-Founder, Global Futures Group, LLC

(The Academy) conferences are invaluable. They are well organized, thoughtfully designed and attentive to dissemination beyond a meeting. Addressing timely issues with diverse perspectives while allowing for debate, discussion and moderated questions from public audiences achieves something all too rare in dialogue on social media and other public forums on science, medicine and public health — respectful learning and even sometimes agreement.

ARTHUR CAPLAN, PhD
Founding head of the Division of Medical Ethics, NYU Grossman School of Medicine, Department of Population Health

THE NEW YORK ACADEMY OF SCIENCES IS A VITAL RESOURCE TO RESEARCHERS THROUGHOUT THE WORLD

100+
CONFERENCES

20K+
INVESTIGATORS AND SCIENCE ENTHUSIASTS

99+
COUNTRIES

89%
attendees said they gained new knowledge about research in their field

63%
reported they had a valuable discussion with at least one contact

AS A RESULT

1 in 3 participants changed the course of their research after participating in an Academy conference.

Shaping the Future of Science Through **a Holistic Approach...**

The Fourth Industrial Revolution heralds an age of AI and big data, machine learning, quantum computing, gene editing technologies, the cloning of human organs, and telemedicine to name but a few recent technological advances. Such developments have potentially limitless potential but also risky consequences, without the implementation of policies that include socially informed and deeply ethical perspectives.

As it continues into its third century, The New York Academy of Sciences is prioritizing its commitment to shape the public discourse about the role of new technologies in our society.

When brilliant minds come together, an exchange of ideas and influence is triggered, with vast potential to unlock something big. By taking a holistic approach to the future of science and what practices and policies need to be developed, we are fulfilling our commitment to having science serve the public good.

The New York Academy of Sciences' conferences and seminars have earned a world-renowned reputation for bringing together leading experts to discuss subjects that range widely across the sciences as well as affiliated fields and themes in the social sciences and humanities. Our neutral forums provide the conditions for the most impactful collaborations in the world through civic engagement, collaborative deliberation, cross disciplinary perspective, and the Academy's unwavering commitment to the ethical practice of science.

The result is multidisciplinary networking and knowledge-building opportunities designed to have impact for a wide variety of stakeholders, including early- to late-career researchers and educators, policymakers, corporate leaders, and lay audiences.

...Science Policy...

Translating science into information for public use is our ultimate goal. Through a collective action approach, the Academy seeks to create frameworks for broad discussions that combine the best of scientific expertise with a breadth of perspective and background, enabling insightful evaluations of issues of scientific importance and their policy implications.

In its capacity as a venerable, science-based organization, the Academy is often called upon to be a bridge, organizing and facilitating diverse groups — including funding agencies, legislatures, governments, companies, and universities — to develop solutions to global challenges.

Through our network, we have supported the identification of multiple public–private partnerships for joint ventures that can help advise national and local governments, industry, and academia on the development of informed science policy to optimize economic and social benefits for the public at large.

...International Science Reserve...

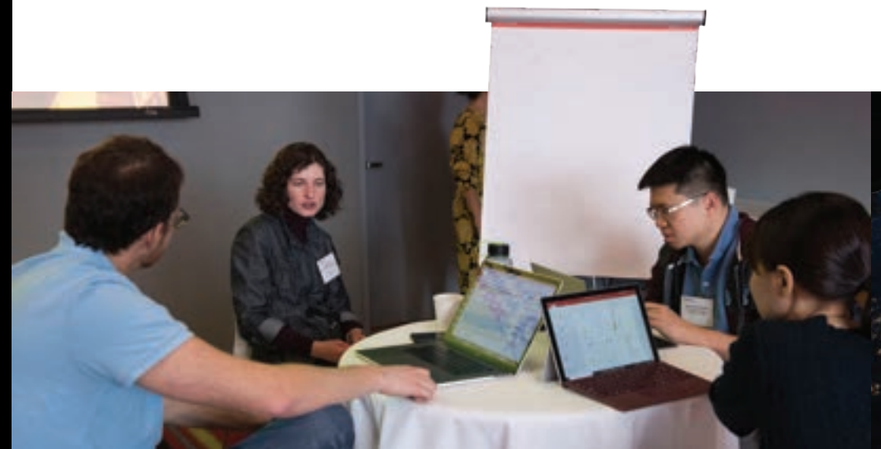
Science in a time of crisis is not "science as usual," and no individual country can handle the impact of a transnational crisis alone. In 2022, the Academy launched the International Science Reserve (ISR), an initiative designed to mobilize the global scientific community to respond to complex, fast-moving situations, across borders — such as climate-related disasters or the next pandemic.

In 2023, *Fast Company* honored the ISR as a "World Changing Idea" for its ongoing work to create global public-private partnerships focused on rapid crisis response. Thousands of scientists and scientific institutions from 100+ countries have joined the ISR community to connect and collaborate on applying their research to help people and protect communities from disaster.

... and Scientific Publications with Global Impact

First issued in 1824, *Annals of the New York Academy of Sciences* publishes leading scientific research of widespread public interest. Each monthly issue presents original research articles and commissioned reviews, commentaries, and perspectives. *Ann NY Acad Sci* is available in over 100 countries, rigorously peer-reviewed, and ranked among the top multidisciplinary journals worldwide. Its current 5-year impact factor is 6.290, *(2022; JCR Clarivate Analytics).*

In 2023, *Ann NY Acad Sci* began publication of a new series called "The Sciences", with content and scope evoking the original Academy publication *The Sciences*, our award-winning general science magazine published from 1961–2001 and digitally available via the Academy's website.



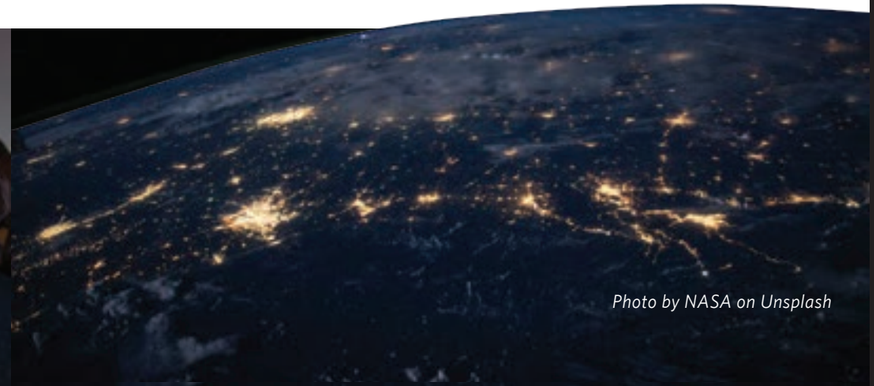


Photo by NASA on Unsplash

Pfizer has been a proud partner of the Academy for nearly 20 years, supporting multiple shared areas of interest, from supporting science and scientists through every stage of their careers, to driving a preparedness framework to empower scientists to act when the next global crisis hits.

AIDA HABTEZION, MD
Chief Medical Officer and Head of Worldwide Medical & Safety at Pfizer; The New York Academy of Sciences Board of Governors, and Executive Board member, International Science Reserve

The Academy's Policy Evaluation and Transformation ... capabilities have helped us improve the funding of science, create partnerships between universities and industry, develop greater scientific capacity, and improve the dissemination and the commercialization of new technologies — an outstanding service for the global community.

ZAKRI ABDUL HAMID, PhD
Science Advisor to the Prime Minister of Malaysia

Virtual format really helped make the event more accessible.

VARAANG BHANDULA, Graduate Student, The Scripps Research Institute, Department of Immunology and Microbial Science

I absolutely loved ... the breadth and quality of speakers. I look forward to more similar events!

RON NERIO, PhD Research Programs Director, City University of New York

FANTASTIC Meeting! The sessions, and panel discussions were amazing!

BALI PULENDRAN, PhD, Violetta L. Horton Professor and Professor of Microbiology andImmunology

Shaping the Future of Science Through **Opportunities and Outreach**

The next generation of scientists, engineers and STEM professionals will need to diversify their skill sets to effectively communicate across cultures, be innovative, nurture future STEM professionals and build learning communities to align scientific training with workforce needs.

To provide the support they'll need to enhance their careers, the Academy has created mentorship and educational programs that provide the tools and guide the mindset needed to tackle the challenges that lie ahead.

Professional Development Initiatives for Young Researchers

The New York Academy of Sciences' Science Alliance offers early-career researchers unparalleled opportunities to learn and network across institutions, disciplines and industries.

Available to over 7,000 undergraduate and graduate students and postdoctoral fellows, the program supports career development through communication and leadership training skills:

- **Skills-Building Workshops** on effective grant writing, securing research funding, communicating and career planning.
- **Online Courses** enabling researchers to earn career-building credentials in areas such as teaching and clinical research management.
- **Leadership Training** to equip undergraduate/graduate students and postdocs with the soft skills they'll need to succeed in today's competitive marketplace.
- **Mentoring and Networking** to connect early-career scientists and engineers with contacts and opportunities outside academia.



Expanding Expertise Through Fellowships

With every new scientific breakthrough, there are risks to mitigate and wider social issues to debate. This is why The New York Academy of Sciences is launching a series of fellowships to provide thought leadership on these emerging areas of interest.

Fellowships are programs designed to attract talented international, interdisciplinary scholars who are able to combine deep interest and expertise in science with a broad appreciation of the social, cultural, economic and technological complexities of our world. These fellows will add to, and expand upon, the existing intellectual assets at the Academy as well as provide further opportunities for the exchange of exciting new research and ideas from across the world.

The Leon Levy Scholarships in Neuroscience (LLSN) aim to promote groundbreaking neuroscience research in New York City. The scholarships support the most innovative young researchers during their postdoctoral research — a critical stage of their careers.

The New York Academy of Sciences Marine Science and Oceanography Teaching Fellows Program identifies innovative and diverse educators in the fields of Marine Science and Oceanography. Working with The New York Academy of Sciences, these fellows will help shape the Early Childhood to Grade 12 curriculum at NEOM for formal, informal and family education.

Travel Fellowships are available to encourage highly qualified early-career investigators, women, racial/ethnic minorities, persons with disabilities, and other individuals who have traditionally been underrepresented in science to pursue professional STEM careers. The Fellowships help to defray travel, lodging and registration costs for those individuals invited to attend and/or present at Academy symposia. Awardees are selected via a competitive application process.



We see these Leon Levy Scholars as the pathway to making great strides in neuroscience, so we are proud to support these gifted young researchers, providing them financial and career support, along with recognition, to advance their careers.

SHELBY WHITE Founding trustee, Leon Levy Foundation

ASU is very excited to join with The New York Academy of Sciences for this fellowship. Our goal is to create a powerhouse of trainees, mentors, ideas and resources to develop the next generation of AI researchers poised to produce ethical, humanistic AI applications to promote science for the greater good.

DAVID GUSTON , PhD Professor and Founding Director, School for the Future of Innovation in Society, Arizona State University

We strive to create knowledge that will aid in alleviating humankind's greatest challenges. Support from the Blavatnik Family Foundation will enable this goal by allowing us to approach these challenges in non-conventional ways.

HOSEA M. NELSON, PhD
2022 Blavatnik National Awards Laureate in Chemistry, California Institute of Technology

Winning the Innovators in Science Award is a great privilege for me as an early-career scientist. Not only does it signal a welcome to new researchers to help advance the field, it also recognizes the discoveries made possible by my talented and inspiring colleagues in the lab who share my dedication to uncovering interactions between the gut, its native microbes and the brain. This award will continue to motivate me to go where science leads and toward better understanding how life works in ways that I hope will one day benefit people.

ELAINE Y. HSIAO, PhD
2022 Early-Career Scientist Award winner, De Logi Associate Professor of Biological Sciences at UCLA

Shaping the Future of Science Through **Recognition and Support**

Over the past decade, The New York Academy of Sciences has built a global reputation for its highly regarded recognition programs for young researchers, providing crucial support at a key point of their careers. High-profile awards successfully launched by the Academy include:

Blavatnik Awards Young Scientists

BLAVATNIK FAMILY FOUNDATION

The Blavatnik Awards for Young Scientists — United States, United Kingdom, Israel and New York Tri-State Region

Considered the largest unrestricted prize ever created for early-career scientists, the Blavatnik Awards for Young Scientists were established in 2007 by the Blavatnik Family Foundation and are independently administered by The New York Academy of Sciences. The Awards honor exceptional young scientists and engineers 42 years of age and younger.

ISRAEL · UNITED KINGDOM · U.S. NATIONAL · U.S. REGIONAL





Japan Agency for Medical Research and Development

The Interstellar Initiative

The Interstellar Initiative connects Early-Career Investigators (ECIs) with peers, in related but distinct disciplines, under the guidance of mentors who are established scientists at the forefront of their respective academic fields. It provides ECIs with expert guidance from leading senior scientists on the preparation of a compelling research proposal, as well as networking opportunities with researchers from around the world to build international research collaborations.

TATA TRANSFORMATION PRIZE Powered by the New York Academy of Sciences

The Tata Transformation Prize

Launched in 2023, the Tata Transformation Prize supports breakthrough, innovative technologies that address India's greatest challenges. By recognizing and supporting the implementation at scale of high-risk, high-reward research, the Prize drives impactful innovation in scientific disciplines of importance to India's societal needs and economic competitiveness.

Takeda supports innovative science by partnering with The New York Academy of Sciences to create the Innovators in Science Award.

ANDREW PLUMP, MD, PhD
President, Research & Development, Takeda Pharmaceuticals

International collaboration is critical in many fields. From infectious disease outbreaks to cancer treatment and drug development, we can accomplish much more when we reach out, shake hands and collaborate.

MAKOTO SUEMATSU, MD, PhD
Former President of AMED and the Founder of The Interstellar Initiative

The Tata Transformation Prize will accelerate breakthrough innovations by ... bringing the transformational work of Indian scientists to light...

NATARAJAN CHANDRASEKARAN,
Chairman of the Board of Tata Sons

This experience left me feeling deeply connected to the school and reignited my passion to mentor and empower the next generation of scientists.

NAYEM HAQUE, PhD
Albert Einstein College of Medicine, student mentor at elementary school in South Bronx

During the first visit of my "Scientist-in-Residence" partner, I asked my students to draw a picture of "What comes into their minds if they hear the word "scientist.'" Notions depicted on their drawings still include the "Einstein Look", male, with big eyeglasses, messy hair. However this year, more females were drawn and even included the first Black woman to go into space in 1992. ... Our students are now aware that anybody, regardless of the age, gender and color, can be a scientist.

ROCHELI APILAN,
10th Grade Science Teacher, High School for Health Professions & Human Services, New York City

Shaping the Future of Science Through **the Next Generation of Scientists**

For over a decade, The New York Academy of Sciences has implemented programs through its education initiatives designed to help prepare today's youth for tomorrow's STEM careers. Founded in 2010 and focused almost entirely in Title 1 schools, Academy programs continue to provide high-quality, authentic learning opportunities for children.

Today, the Academy is focused on closing the opportunity gaps in high school research. Our programs include collaborative, mentored research projects; small-group mentorship; and a continually expanding portfolio of scientific talks and course opportunities.

Our new three-part Science Symposia for Academy students includes scientific talks that enhance research projects, in-depth peer-reviewed opportunities to present their work; and vibrant orientation and networking opportunities.

The Academy's STEM City initiative currently serves 65 sites that include the After-School STEM Mentoring Program, Scientist-in Residence and EnCorps Teaching Fellows.











The New York Academy of Sciences STEM education initiatives impact under-represented communities:

55%

of the students are female.

63%

of the students are students of color.

90%

say they'd like to pursue a STEM-based career



In 2023, The New York Academy of Sciences moved into a full floor of space at 115 Broadway, just seven blocks from its first "home" founded in 1817.



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