



Science Philanthropy Stories

Valerie Conn and Sandra J. Laney, PhD

Table of Contents

3	Overview
4	Long-Term Visionary
4	Cultivate Scientists at Every Career Stage - Exploring New Frontiers - Mid-Career Support - Bridging Scientific Disciplines
5	Seed Underfunded Gap Areas - Science That Starts Where the Need Is Greatest - Bridging Science and Society
7	Build Underlying Infrastructure and Tools - Big Science with Real-World Utility - Collaborative Funders Support Global Climate Initiative
9	Strategic Risk-Taker
9	Fund Where Others Won't or Can't - A Long Time Horizon - From Discovery to Treatment - Filling the Gap between Academia, Government, and Industry
11	Act Nimble and Take Risks - Moving Money Fast - Science for Humanitarian Emergencies
12	Challenge Conventional Thought - From Fringe Idea to Frontline Defense - Listen to the Scientists - Inspiring Interdisciplinary Research Beyond Science
15	Catalytic Innovator
15	Seed and Launch New Fields of Research - From New Knowledge to New Field - Private Science Philanthropy in Cancer - Making the Genetics Revolution Possible - Leveraging Research to Improve Lives
18	Catalyze Scientific Breakthroughs - People, not Projects - Bridging the Valley of Death - Giving Scientists Freedom to Pursue Bold Ideas
19	Incentivize Cross-Disciplinary Collaborations - Progress through Multidisciplinary Teams - Collaborating to Combat Parkinson's Disease - Sparkling Early Career Interdisciplinary Work
22	About the Authors
22	Acknowledgements
22	To Learn More

Overview

Science plays a crucial role in solving our world's problems. It is also an attractive area for philanthropists to fund, since science offers innovative solutions to complex societal challenges. Whether your passion is health, education, the environment, or economic opportunity, scientific research and technological advancements can provide powerful pathways to make progress. Some philanthropists support rigorous scientific methods and evidence-based approaches to maximize the impact of their giving and create lasting, sustainable change. Other philanthropists catalyze progress by funding high-risk, high-reward research that explores untested ideas and pushes the boundaries of scientific understanding, paving the way for future innovative solutions.

Getting started with science philanthropy might seem intimidating—particularly for donors who lack formal scientific or technical training—but it doesn't need to be. Following the footsteps of others can be a great way to start.

Here are three critical roles that philanthropists are uniquely positioned to play in the science ecosystem, and some of the ways they approach their funding:

Long-Term Visionary

- Cultivate scientists at every career stage
- Seed underfunded gap areas
- Build underlying infrastructure and tools

Strategic Risk-Taker

- Fund where others won't or can't
- Act nimbly and take risks
- Challenge conventional thought

Catalytic Innovator

- Seed and launch new fields of research
- Catalyze scientific breakthroughs
- Incentivize cross-disciplinary collaborations

The stories we have compiled provide examples of both well established funding programs and recently created models that demonstrate the breadth of possibilities. They map to the important roles that science philanthropists often play to help advance scientific progress and create social impact. We hope these stories will inspire and motivate you on your science philanthropy journey.



Long-Term Visionary

Long-Term Visionary

Cultivate Scientists at Every Career Stage

Exploring New Frontiers

The David & Lucile Packard Foundation (USA)

Background: In 1988, the Packard Foundation established the Packard Fellowships for Science and Engineering to provide the nation's most promising early-career scientists and engineers flexible funding to take risks and explore new frontiers in their fields of study.

Strategy: Each year, the foundation selects 20 Fellows from 50 invited institutions to receive individual grants of \$875,000, distributed over five years. Fellows are encouraged to think big and look at complex issues with a fresh perspective. They can use their funds in whatever way would best advance their research.

Outcomes: Since its inception, the Packard Foundation has awarded over \$500 million to support 710 scientists and engineers. Fellows have gone on to receive the highest accolades, including Nobel Prizes in Chemistry and Physics, and elections to the National Academies of Science, Engineering, and Medicine.

Mid-Career Support

Ross Brown Foundation (USA)

Background: When Ross Brown, CEO and founder of Cryogenic Industries, first decided to fund science, he met with advisors from Science Philanthropy Alliance and decided he could make the biggest impact on science by funding individual researchers in underfunded areas of physical science. Brown wanted to stay operationally lean and didn't want to build an organization or a staff to deploy his resources.

Strategy: Instead, Brown utilized the expertise of peer funders at the Packard Foundation, which allowed Brown to give while learning about Packard's Fellows selection process, and ultimately to fund vetted Fellows. In 2023, Brown made a \$400 million gift to establish the Brown Institute for Basic Sciences at Caltech. Brown partnered with Caltech, which oversees and administers the Brown Investigator Award

program. It's anticipated that eight awards will be made annually to mid-career researchers working in breakthrough areas in physics and chemistry in the United States. Each awardee will receive up to \$2 million over five years. Says Brown, "It helps that I never thought of it as my money—I was just the custodian."

Outcomes: In the first three years of the awards, scientists interviewed for the Journey of a Philanthropist, Part IV blog post, shared that the Brown award gave them the freedom to pursue lines of research sometimes deemed "risky" and follow their scientific ideas.

Bridging Scientific Disciplines

Burroughs Wellcome Fund (USA)

Background: Transitioning from postdoctoral training to a faculty role is a critical juncture in a scientist's career. Burroughs Wellcome Fund (BWF) recognized that many talented early-career researchers struggle with securing funding and establishing their independent research programs, especially when transitioning from one field of science to another. To address this gap, BWF launched the Career Awards at the Scientific Interface, aiming to provide targeted support for promising scientists at this pivotal stage when transitioning to biomedical sciences.

Strategy: BWF's Career Awards at the Scientific Interface provide \$560,000 over five years to bridge advanced postdoctoral training and the first three years of faculty service. These awards are open to US and Canadian citizens, permanent residents, and temporary residents.

Outcomes: Since 1999, the Career Awards at the Scientific Interface have helped researchers in the physical sciences, mathematics, computational science and/or engineering transition into postdoctoral work in the biological sciences. The program aims to systematically increase the success rate of early-career investigators and foster the next generation of innovative scientists.

Long-Term Visionary

Seed Underfunded Gap Areas

Science That Starts Where the Need Is Greatest

Open Philanthropy (USA)

Background: In a laboratory at the KEMRI Wellcome Trust Research Programme in Kenya, Dr. Mainga Hamaluba, collaborating with the Liverpool School of Tropical Medicine (LSTM), wanted to test a breakthrough idea. Rural communities across Kenya were suffering from snakebites, with limited access to expensive anti-venom treatments requiring refrigeration. Dr. Hamaluba's LSTM collaborators found pre-clinical evidence that unithiol, an existing generic oral drug used for heavy metal poisoning, might effectively treat these dangerous bites at a fraction of the cost. What Dr. Hamaluba lacked were the resources to test the idea through proper clinical trials—until Cures Within Reach (CWR) provided KEMRI Wellcome a \$50,000 grant in 2020 for a Phase I clinical trial.

Strategy: Open Philanthropy, guided by their primary funders Dustin Moskovitz, co-founder and CEO of Asana and previously co-founder of Facebook, and Cari Tuna, previously a Wall Street Journal reporter, follow effective altruism principles; they saw tremendous value in CWR's drug repurposing approach. Rather than spending billions developing new drugs, CWR identifies existing safe treatments that could be repurposed at dramatically lower costs by running open calls for investigators to propose their ideas. In 2023, Open Philanthropy provided \$800,000 to CWR to run open calls in low and lower-middle income countries (LMICs) to impact high disease burden. Dr. Hamaluba's snakebite trial had yielded such promising results that in 2024 Open Philanthropy provided LSTM a \$5.4 million grant to advance study of unithiol and another drug into Phase 2B clinical trials in Ghana and Brazil. This exemplified Open Philanthropy's strategy—identifying underfunded research with potential for outsized impact, particularly in LMICs.

Outcomes: The success of this drug repurposing approach led Open Philanthropy to renew their support in 2024 with an additional \$1.5 million grant to CWR's ReGRoW initiative, enabling 16 more researcher-led clinical trials across countries like Uganda, Tanzania, and Bangladesh for a range of repurposing trials. By allowing local scientists to determine their own health priorities and “de-risking” promising treatments at early stages, Open Philanthropy and CWR created a powerful multiplier effect. As Barbara Goodman, CWR's CEO noted, “Our favorite and most impactful way to measure our success is the follow-on funding that our researchers are getting,” turning initial investments into life-saving treatments for millions where traditional funding mechanisms often fail to deliver.

Bridging Science and Society

Rita Allen Foundation (USA)

Background: The Civic Science Fellows program, initiated by the Rita Allen Foundation, aims to foster a deeper connection between scientific research and community engagement. Launched in 2021, this innovative program recognizes the need for scientists to extend their influence beyond traditional academic settings. By deploying scientists as ambassadors for science, the initiative seeks to enhance public understanding of science and engage communities in meaningful dialogue about pressing societal issues.

Strategy: Civic Science Fellows are selected from a diverse pool of scientists who demonstrate a commitment to public engagement and community service. The program provides fellows training and resources to effectively communicate scientific concepts to non-expert audiences. By placing them in non-traditional settings—such as community organizations, museums, and media outlets—the initiative encourages fellows to actively participate in local discussions, promote scientific literacy, and advocate for evidence-based decision-making in various sectors.

Outcomes: In its first four years, the Civic Science Fellows program has funded 20 fellows. The program has raised \$4 million from a growing community of science philanthropists who are dedicated to enhancing public engagement with science and addressing community challenges through scientific understanding. By empowering scientists to serve as effective communicators and advocates, the program is reshaping the role of science in everyday life and fostering a more informed and engaged citizenry.

Build Underlying Infrastructure and Tools

Big Science with Real-World Utility

Paul G. Allen (USA)

Background: When Paul Allen, co-founder of Microsoft, launched the Allen Institute for Brain Science in 2003 with a \$100 million seed donation, he framed it as a mission to decode the brain's "astounding complexity" through systematic, open-science approaches (which means publishing data and results that are made publicly available for use).

Strategy: The institute's inaugural project was the Allen Mouse Brain Atlas, a groundbreaking effort to map gene expression across the entire mouse brain using "in situ" hybridization imaging. Paul noted, "By making the Atlas data accessible in the public domain, and by collaborating with scientific experts in the field, we believe this is an historic opportunity to unite the genome and the brain—to use the data and technology to tackle the challenges of neurodevelopmental, neurodegenerative, and psychiatric diseases."

Outcomes: The Allen Mouse Brain Atlas was completed in 2006. "This project is an unprecedented union of neuroscience and genomics," said Paul Allen. The Atlas provides researchers globally with invaluable time savings by consolidating vast amounts of data in a single location that would otherwise require decades of individual effort to compile. The open-science model proved transformative for the field, establishing a new standard for how large-scale biological data could be collected, organized, and shared to accelerate discovery across the research community. The Atlas demonstrated that large-scale, systematic approaches to biology could generate exponentially more value when data was freely shared, inspiring the Allen Institute to develop additional atlases including human brain maps and connectivity studies.

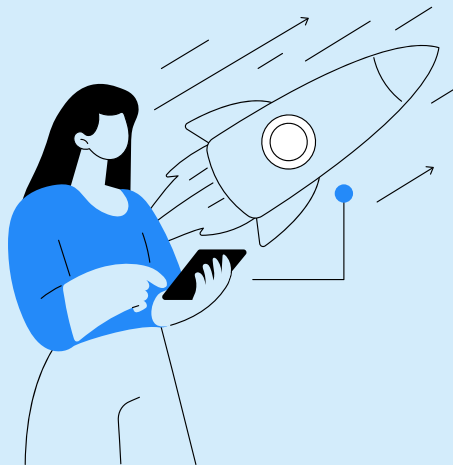
Collaborative Funders Support Global Climate Initiative

The Audacious Project (USA) with multiple funders

Background: Methane is a potent greenhouse gas with much higher global warming potential than carbon dioxide over a 20-year period. Despite its significance, methane emissions from agriculture, fossil fuel extraction, and waste are poorly tracked and under-regulated in many regions.

Strategy: Recognizing the urgent need to reduce methane emissions to combat climate change, a coalition of funders established the Global Methane Hub to coordinate stakeholders worldwide. The Hub funds innovative projects, policy initiatives, and technological solutions aimed at identifying, measuring, and reducing methane emissions globally. Global scientific infrastructure is being built with "...tools, processes, and capacity for tracking and analyzing accurate, real-time data on methane emissions." The initiative was transformed by The Audacious Project engaging over 30 philanthropies to support the Global Methane Hub, including the Bezos Earth Fund, Bloomberg Philanthropies, Children's Investment Fund Foundation, Gates Foundation, Grantham Foundation, Oak Foundation, Quadrature Climate Foundation, Skoll Foundation, Sobrato Philanthropies, Valhalla Foundation, and William & Flora Hewlett Foundation.

Outcomes: The Global Methane Hub is both a model of a funder collaborative and an example of how science research can be incorporated into an overall climate mitigation strategy. The science-oriented work includes real-time data collection and measurement for accountability. The Global Methane Hub also coordinates global research and development efforts, while working in tandem with policy and regulation, finance and investment, and capacity building efforts.



Strategic Risk-Taker

Strategic Risk-Taker

Fund Where Others Won't or Can't

A Long Time Horizon

Rockefeller Foundation (USA)

Background: The Rockefeller Foundation has profoundly shaped China's modern medical education and public health infrastructure through funding for over a century.

Strategy: The Rockefeller Foundation's flagship project was the establishment in 1917 of Peking Union Medical College (PUMC), which became a world-class medical institution modeled after Johns Hopkins University. Through the China Medical Board, the Rockefeller Foundation donated over \$20 million to PUMC for its construction, equipment, and operations. Beyond PUMC, the Rockefeller Foundation invested in other medical schools, libraries, scholarship funds, governmental health programs, and rural health demonstration stations across China. By 1946, \$45 million had been given to the China Medical Board, including a \$22 million endowment, and it became the largest of the foundation's undertakings, according to Wilder Penfield, in his book, *The Difficult Art of Giving: The Epic of Alan Gregg*.

Outcomes: These initiatives helped standardize medical education, train medical and public health professionals, and ultimately contributed to the creation of a national health system in China. This investment by the Rockefeller Foundation has left a legacy of excellence in medical training and care that led to the number 1 ranking of PUMC Hospital by the National Tertiary Public Hospital Performance Evaluation in 2019.

From Discovery to Treatment

Novo Nordisk Foundation (Denmark), Wellcome (UK), Gates Foundation (USA)

Background: In 1928, Alexander Fleming made a serendipitous observation when he noticed that mold growing on a contaminated petri dish had created a bacteria-free zone.

Strategy: Fleming's accidental discovery led to scientists at Oxford University developing methods to produce penicillin in larger quantities and test its effectiveness. During World War II, the US and British governments invested heavily in scaling up penicillin production, transforming it from a laboratory curiosity into a life-saving medicine.

Outcomes: The impact was immediate and profound. Penicillin dramatically reduced deaths from bacterial infections that were previously fatal. This triggered the "golden age" of antibiotic discovery, as research support enabled scientists to find many more antibiotics that we still use today. The story of penicillin shows how supporting research at every stage—from basic laboratory work to development and scaling—can create transformative tools that fundamentally improve human life. It's estimated that antibiotics have extended average human life expectancy by at least 10 years.

The penicillin story continues with urgency today. Antimicrobial resistance (AMR) represents one of the most significant threats to global health, creating what scientists call "superbugs"—bacteria that have evolved to resist our existing antibiotics. The challenge now is that while bacteria continue to evolve resistance to our current antibiotics, the pipeline for new antibiotics has slowed dramatically. In response to this global health priority, in February 2025, the Novo Nordisk Foundation, Wellcome, and the Gates Foundation jointly launched a new initiative, Gram-Negative Antibiotic Discovery Innovator (Gr-ADI) to drive innovation in early drug discovery for Gram-negative pathogens through a Grand Challenges open request for proposals.

Filling the Gap between Academia, Government, and Industry

Schmidt Sciences (USA) with multiple funders

Background: Some science projects are bigger than an academic lab, need more coordination than a consortium, and are too early stage to be profitable as an industrial R&D project.

Strategy: Convergent Research was initially funded by Schmidt Futures (now Schmidt Sciences) to build and operate Focused Research Organizations (FROs), a new type of scientific institution designed to fill this gap. FROs act like startups for large-scale, tightly coordinated, public benefit scientific projects. Each FRO produces a fundamental tool or capability, like massive datasets, next-generation research hardware, or open-source production protocols, designed to unlock maximum downstream impact. Each FRO is at the scale of \$30–\$50 million of funding from multiple funders over the course of the expected five-year lifetime of the FRO.

Outcomes: As the FRO model is new, none of the FROs have completed their cycle of scientific research, yet early positive indicators are that the funding has been secured, teams have been built, and research is underway.

Act Nimbly and Take Risks

Moving Money Fast

Patrick Collison (USA) with multiple funders

Background: During the emergence of the COVID-19 pandemic, philanthropists were trying to figure out how to respond and where their funding could have an impact on expediting prevention, treatment, and cures for the viral infection.

Strategy: Patrick Collison, CEO and co-founder of Stripe, and his colleague, George Mason University economist Tyler Cowen, launched Fast Grants, a fund to accelerate grant-giving to scientists working on COVID-19 related research. Grant applications were reviewed by experts and responses were given in anywhere from 48 hours to 14 days, which is significantly faster than traditional grant cycles.

Outcomes: Over the course of 2020, \$50 million was raised from philanthropists (mostly individuals who were willing to take this risk, with few established foundations participating), and over 260 grants were given. According to an article by Collison, Cowen and Hsu, in a survey to grantees, “64% of respondents told us that the work in question wouldn’t have happened without receiving a Fast Grant.”

Science for Humanitarian Emergencies

Paul G. Allen Family Foundation (USA)

Background: In 2009, years before Ebola would devastate West Africa, Paul Allen made a science philanthropy investment by funding a \$1.4 million project at Kansas State University to develop an Ebola vaccine for wild apes. While focused primarily on conservation of endangered chimpanzees and gorillas that had lost a third of their populations to the virus, this early research established crucial scientific foundations. Though the virus-like particle vaccine was never directly adapted for human use, it validated innovative approaches and built institutional expertise around Ebola that would prove invaluable during the coming crisis.

Strategy: When the 2014–2016 Ebola outbreak emerged as the largest in history, Allen’s earlier investment had positioned him to respond decisively. As the situation escalated across Guinea, Liberia, and Sierra Leone, Allen committed an extraordinary \$100 million to combat the disease, stating, “I am committed to doing my part in tackling this crisis...to prevent it from becoming a global epidemic.”

Outcomes: Allen’s pledge catalyzed additional philanthropic contributions, including \$50 million from the Gates Foundation and \$25 million from Mark Zuckerberg and Dr. Priscilla Chan. This rapid and flexible private funding provided critical resources when they were most needed, enabling the deployment of 500 emergency health responders and essential equipment while government funding mechanisms worked through slower bureaucratic processes.

Allen's contributions extended far beyond emergency response, funding both cutting-edge scientific research and sustainable recovery infrastructure. His leadership demonstrated how nimble private philanthropy could rapidly fill critical gaps while governmental mechanisms were still mobilizing, ultimately inspiring a coalition of donors to join the fight against Ebola. This collaborative approach—combining Allen's scientific vision with humanitarian urgency—complemented governmental and international efforts, creating a model of responsive science philanthropy that addresses both urgent humanitarian needs and long-term scientific progress.

Strategic Risk-Taker

Challenge Conventional Thought

From Fringe Idea to Frontline Defense

Gates Foundation (USA), Wellcome (UK), Tahija Foundation (Indonesia), MacKenzie Scott (USA), Oswaldo Cruz Foundation (Brazil)

Background: To combat mosquito-borne diseases like dengue, Zika, and chikungunya, philanthropists funded an unconventional idea and helped advance the World Mosquito Program's (WMP) innovative approach of introducing *Wolbachia*, a naturally occurring bacterium, into *Aedes aegypti* mosquitoes. Once released into the wild, these mosquitoes pass on *Wolbachia* to other mosquitoes and dramatically reduce their ability to spread viruses. In 2004, the Gates Foundation funded the early discovery science through Global Grand Challenges, and others, such as Wellcome, USAID, and local governments joined to support the translational research and development. A pivotal randomized trial in Yogyakarta, Indonesia—funded exclusively by the Tahija Foundation—showed a 77% drop in dengue cases and 86% fewer hospitalizations. These rigorous results unlocked the expansion of the WMP's *Wolbachia* approach.

Strategy: This approach defied conventional thinking at nearly every stage. Instead of using chemicals, genetic modification, or vaccines to fight disease, scientists proposed seeding a mosquito population with bacteria to make it safer. Many doubted this would work, or would spread widely enough to matter, or that mosquito releases would be accepted by the community. But philanthropists backed the vision across the arc of innovation, including a \$20 million contribution from novelist and philanthropist MacKenzie Scott, enabling large-scale implementation and scale-up of coverage. *Aedes Wolbachia* mosquitoes do not travel far from the release site, so adequate coverage relies on actively releasing additional mosquitoes in surrounding areas. WMP received a Microsoft AI for Earth grant in 2020 to develop machine learning models for optimizing mosquito release strategies. In March 2023, Brazil's Oswaldo Cruz Foundation (Fiocruz) entered into a major funding and partnership agreement with WMP to build one of the world's largest mosquito production facilities in Curitiba, Brazil. In March 2025, WMP announced a global technology alliance with Debug (a project by Alphabet), aiming to leverage automated mosquito release technologies to further scale up operations.

Outcomes: The World Mosquito Program's Wolbachia project has evolved from a university-led research initiative into a globally recognized public health program supported by a diverse array of funders. Its funding history reflects a mix of major foundations and individual philanthropists, national governments,

international agencies, and strategic technology partners, enabling it to expand operations and impact across four continents, protecting over 13 million people in 16 countries. Because *Wolbachia* spreads naturally in the local mosquito population, the benefits are self-sustaining and scalable through active local release strategies—a breakthrough in global disease prevention initiated by philanthropy's risky bet, challenging conventional thinking.

Listen to the Scientists

Michael Milken (USA)

Background: In 1993 at age 46, financier Michael Milken was diagnosed with terminal prostate cancer. He and his wife, Lori, had established the Milken Family Foundation a decade earlier and had experience funding science research.

Strategy: Milken jumped into action and founded the Prostate Cancer Foundation. In his conversations with doctors and researchers, Milken learned about the challenges they faced in doing research. He decided to encourage them to do things differently, challenging conventional research funding models. He implemented several paradigm-shifting approaches: reducing grant approval timelines from 18 months to 6 months, encouraging collaboration over competition among researchers, and requiring immediate data sharing rather than waiting for journal publication. Milken personally helped scientists with fundraising so they could focus on research rather than grantwriting. He leveraged media appearances to recruit study participants, generating over 3,000 new volunteers within two weeks for prostate cancer studies.

Outcomes: The Prostate Cancer Foundation emerged as the leading organization for prostate cancer research and patient support. Ultimately, the efforts of the Milkens, the Prostate Cancer Foundation, and an additional organization Milken founded, Faster Cures, changed the trajectory of prostate cancer research. Milken's approach of first listening to the scientific community and finding ways to solve the challenges slowing them down, and then expediting research and accelerating those discoveries into therapies, was successful. This innovative funding model has become a template for other foundations and philanthropists seeking treatments and cures for specific diseases.

Inspiring Interdisciplinary Research Beyond Science

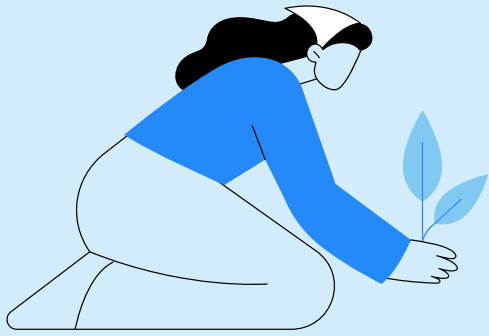
John Templeton Foundation (USA)

Background: Historically, science and religion have often been viewed as competing worldviews, but there is a growing recognition of their potential to complement each other in advancing scientific understanding and fostering ethical innovation. John Templeton Foundation's mission supports interdisciplinary research and catalyzes conversations that inspire awe and wonder.

Strategy: One of Templeton's funding areas is Religion, Science, and Society, which supports the discovery of meaningful and practical insights into the religious, spiritual, and cultural dimensions of humanity. Templeton funds research at the intersections of science, social science, and the humanities, such as the Global Flourishing Study, which is a longitudinal panel study of over 200,000 participants in 22 countries, spanning all six populated continents, with nationally representative sampling, and intended annual

longitudinal panel data collection for five years. The study is being carried out in collaboration between scholars at the Human Flourishing Program at Harvard and Baylor's Institute for Studies of Religion, and in partnership with Gallup and the Center for Open Science, with data collection coordinated by Gallup.

Outcomes: After an initial survey of 64% of the world's population, a report from the Global Flourishing Study shows that "The Flourishing Index and its sub-components identify some consistent relationships that cut across all countries but also reveal how different countries are flourishing in different ways." Templeton's cross-disciplinary funding throughout its programs has facilitated numerous dialogues and pilot projects demonstrating that faith-based organizations can be vital allies in promoting scientific literacy, ethical research, and sustainable development. It has led to increased collaboration between religious groups and scientific institutions, influencing policy discussions on bioethics, climate action, and social justice. The program also helped shift perceptions, showing that science and faith can work together to address complex societal issues.



Catalytic Innovator

Catalytic Innovator

Seed and Launch New Fields of Research

From New Knowledge to New Field

Baszucki Group (USA)

Background: Observing a family mental health emergency motivated author Jan Baszucki and her husband Dave, co-founder and CEO of Roblox, to fund scientific research to explore the link between metabolism and bipolar disorder. They quickly realized that metabolism relating to mental health was an underfunded area of scientific research, and they wanted to change that.

Strategy: One of the Baszucki Group's three audacious goals is reversing the worldwide epidemics of physical and mental illness with evidence-based ketogenic and metabolic therapies. The January 2025 State of Philanthropy Annual Report from Baszucki Group describes how they are growing the metabolic psychiatry ecosystem through multiple funding strategies including fellowships, early career awards, clinician awards, support to communicators, and support to individuals with lived experience. The Baszuckis were early funders to Breakthrough Discoveries for thriving with Bipolar Disorder (BD²), which is the first organization focused on funding and advancing research and care for bipolar research on a global scale. The collaborative is managed by the Milken Institute, with funding from Sergey Brin Family Foundation, Dauten Family Foundation, and Baszucki Family Foundation.

Outcomes: The Baszuckis' work has helped grow the field of metabolic psychiatry through advocacy, education, convenings, and community building. According to BD²'s Managing Director, Cara Altimus, "BD² is revitalizing and expanding the field, driving fundamental and innovative research, and providing new hope to those with bipolar disorder and their loved ones."

Private Science Philanthropy in Cancer

The Parker Foundation (USA)

Background: By 2030, cancer is expected to exceed heart disease as the leading cause of death in the US. The Parker Foundation, which funds science research in allergy, cancer, and immunology, aims to speed to market treatments with the potential to improve health outcomes, reduce healthcare costs, and save millions of lives. Sean Parker, the co-founder of Napster and first president of Facebook, co-founded the Parker Foundation along with his wife, Alexandra.

In 2016, the Parker Foundation committed \$250 million to launch the Parker Institute for Cancer Immunotherapy (PICI)—a bold bet to use the body's immune system to fight cancer. At the time, the emerging field of immunotherapy was promising but fragmented. Labs competed instead of collaborating. Trials were slow. Funding was piecemeal.

Strategy: Parker's vision was simple but radical: create a "dream team" model, uniting top cancer centers under one collaborative infrastructure—with shared data, shared intellectual property, and coordinated research agendas. Six leading US cancer research institutions joined as founding members. Scientists retain their university positions but collaborate through the Parker Institute. All discoveries are pooled in a shared IP model to accelerate translation and avoid duplication. Projects move faster, and legal and funding bottlenecks are removed. Parker invested not only in research, but also in infrastructure, people, and a collaborative culture.

Outcomes: After nearly a decade, the Parker Institute has pushed cancer immunotherapy from lab to clinic—supporting breakthroughs in CAR-T therapy and checkpoint inhibitors. It has funded trials that led to new insights and treatments for melanoma, pancreatic cancer, and other cancers. By creating PICI, Parker launched a new institutional model, demonstrating how private philanthropy can drive structural change in how science is done. As Sean Parker said, "We are trying to bridge two worlds, the entrepreneurial and academic ways of thinking. I'm hopeful this becomes a blueprint for other philanthropists."

Making the Genetics Revolution Possible

Sol Price, Bill Gates, and Bill Bowes (USA)

Background: CalTech professor Leroy Hood went to Sol Price, the entrepreneur who created the warehouse superstore concept behind Costco and Sam's Club, after his grant proposal for an automated DNA sequencer was turned down by the US National Institutes of Health.

Strategy: Price funded Prof. Hood for several years at \$200,000/year and by 1986 Hood's machine was ready and was soon capable of sequencing 150 million DNA base pairs.

Outcomes: Battelle Foundation estimated that Hood's DNA sequencer created in excess of \$800 billion of economic value. Later, Bill Gates gave \$12 million to Hood to continue his unconventional ideas for harnessing the flood of new data in biology by founding the Institute for Systems Biology (ISB). San Francisco Bay Area financier Bill Bowes later joined as a funder and with \$30 million in initial philanthropy, the ISB was launched, leading to numerous research publications and spinning out several for-profit companies.

Leveraging Research to Improve Lives

Dana Foundation (USA)

Background: Dana Foundation identified that neuroscience is in a renaissance—new discoveries and technologies hold the potential to transform healthcare, fuel tech innovation, and strengthen the economy. The Dana Foundation is focused on the field of “Neuroscience & Society” to bridge the gap between lab research and the real-world impact it can have to improve health, education, and justice.

Strategy: Dana Foundation has funded work in education, next generation training, and public engagement in areas such as brain-computer interfaces, mental health, and neural organoids. The Dana Center Initiative is a nearly \$20 million partnership that brings together research institutions, scientists, scholars from other fields, and the communities they serve—all working together to shape the future of neuroscience. The foundation also funds pilot programs and convenes stakeholders to elevate the importance of advancing science for the benefit of society.

Outcomes: Dana Foundation has a longstanding history of supporting neuroscience education for judges. Since 2006, in partnership with the American Association for the Advancement of Science and other judicial education organizations, Dana-supported programs on emerging issues in neuroscience and law have reached almost 900 judges and other legal professionals.

Through the Dana NextGen program, the foundation is supporting cross-disciplinary leaders through the Dana Career Network in Neuroscience & Society, which connects early-career scientists with mentors and interdisciplinary opportunities. The inaugural virtual career fair attracted over 1,800 participants.

Through the Dana Frontiers program, the Implantable Brain-Computer Interface Collaborative Community (iBCI-CC) brings together diverse stakeholders, including patients with implanted brain devices, to ensure these technologies are safe, effective, and aligned with societal values. The Collaborative Community developed the first comprehensive matrix of patient-centered iBCI clinical outcome measures that describe how an individual feels and functions. This is crucial because clear clinical endpoints are essential for moving neurotechnology from the lab to real-world applications.

Catalyze Scientific Breakthroughs

People, not Projects

Howard Hughes Medical Institute (USA)

Background: Howard Hughes Medical Institute (HHMI) is a biomedical research organization and philanthropy dedicated to unlocking the fundamentals of biology through support to basic science research. HHMI's hallmark initiative is the HHMI Investigator Program.

Strategy: These premier scientists do research that radically changes our understanding of how biology works. With generous funding of \$11 million per investigator over a renewable seven-year term, each scientist pushes the boundaries of basic biological and biomedical sciences, working across many scientific disciplines in a wide range of organisms, at more than 60 institutions in the US. The significant funding and long time horizon on the funding are some of the hallmarks of this successful program.

Outcomes: Established in the late 1950s, HHMI investigators' fundamental discoveries have been broadly recognized by the scientific community, including Nobel Prizes to more than 30 current or former investigators. In his paper assessing the program, Pierre Azoulay and co-authors concluded that HHMI's long-term grants to high-potential scientists made those scientists 96% more likely to produce breakthrough work.

Bridging the Valley of Death

The Feng Foundation of Biomedical Research (China)

Background: Founded by visionaries Dr. Huang Xin and Dr. Wang Liming from Co-Win Ventures, the Feng Foundation of Biomedical Research aims to address the critical "valley of death" in biomedicine where promising research often fails to transition into practical applications.

Strategy: The Feng Foundation adopts a model that emphasizes long-term, stable funding to support original scientific ideas with the potential to reshape paradigms. What distinguishes Feng's approach is its focus on funding scientific discoveries that show potential for clinical applications. The foundation "invests in people," selecting candidates based on their potential, audacity, and deep understanding of clinical needs. By offering awards of RMB 5 million (approximately \$700,000 USD) over five years, which are renewable, it fosters an environment conducive to breakthrough research. The foundation's lean science advisory team, comprised of five esteemed advisors from leading research institutions in China and the US, ensures that innovative ideas can surface without bureaucratic hindrance. The foundation also experiments with a non-consensus approach to identify the most promising researchers in its latest selection rounds.

Outcomes: By effectively bridging the funding gap between discovery and clinical application, the Feng Foundation empowers scientists to pursue groundbreaking research with autonomy and flexibility. Its commitment to reduced reporting requirements allows researchers to focus on their work rather than administrative burdens. This people-focused program not only stimulates original research but

also contributes significantly to advancing biomedical science, ultimately leading to innovations that can transform healthcare and improve patient outcomes.

Giving Scientists Freedom to Pursue Bold Ideas

New Cornerstone Science Foundation (China)

Background: The New Cornerstone Science Foundation, established with a groundbreaking commitment from Tencent of RMB 10 billion (approximately \$1.4 billion USD) over 10 years, aims to foster original research and innovation in China. Inspired by the Howard Hughes Medical Institute Investigator Program, New Cornerstone Science Foundation adopted a philosophy of “People, not Projects,” prioritizing support to exceptional scientists and their bold ideas.

Strategy: Their initiatives include the New Cornerstone Investigator Program, which provides substantial funding to both established and promising researchers, enabling them to pursue high-risk, high-impact projects. The foundation employs a flexible and supportive funding model, offering grants of 15 million or 25 million RMB in total over five years (approximately \$2.1 million or \$3.5 million USD), with the potential for renewal. This approach allows principal investigators the freedom to explore innovative ideas without stringent key performance indicators or timelines for deliverables.

Outcomes: Since its founding in 2022, the New Cornerstone Investigator Program has successfully selected 104 investigators, significantly contributing to advancements in basic science and frontier technologies. Projects funded under the Investigator Program have already begun to yield measurable results, including breakthroughs in areas like materials science and biotechnology. By creating a dynamic community that encourages interdisciplinary collaboration, the foundation facilitates scientific forums and symposia, fostering an environment where original innovation and collaboration can thrive. Providing stable long-term support encourages the freedom to pivot as needed, and the foundation has empowered researchers to pursue transformative discoveries that have the potential to reshape scientific landscapes and address critical challenges facing society today.

Catalytic Innovator

Incentivize Cross-Disciplinary Collaborations

Progress through Multidisciplinary Teams

Alfred P. Sloan Foundation (USA)

Background: Alfred P. Sloan Foundation is dedicated to fostering original research in various scientific fields, with a significant focus on energy and environmental initiatives. Through its Energy and Environment program, the foundation seeks to shape the future of energy systems decarbonization by supporting collaborative, interdisciplinary scholarship that bridges the social and natural sciences. The foundation recognizes that addressing the complex, interconnected issues of climate change and energy transition requires insights from a broad range of disciplines working together in new and innovative ways.

Strategy: Sloan Foundation leaders, [Evan S. Michelson](#) and [Adam F. Falk](#), have written that one of the most important roles that foundations can play is to support research that draws on more than one discipline, both because the most creative scholarship is often pursued near and across disciplinary boundaries and because work that spans disciplines in new ways is notoriously difficult to slot into existing categories supported by federal funding agencies.

Sloan Foundation's strategic funding model is designed to incentivize and enable collaborations among researchers from diverse fields—such as economics, atmospheric science, and energy systems analysis—to tackle the urgent challenge of decarbonizing energy systems. By prioritizing originality and breakthrough potential in its grantmaking, the foundation ensures that funded projects catalyze innovative, high-risk, high-reward research that might otherwise go unexplored.

Outcomes: The Sloan Foundation's catalytic approach has already yielded significant results. For example, the foundation funded a pioneering project to develop new methods for more accurately [measuring methane emissions](#) in the US—work that required expertise from atmospheric scientists, engineers, and data analysts. The foundation has also supported the development of novel carbon dioxide removal technologies, essential for achieving net-zero emissions, and launched an industrial decarbonization program that integrates economic, policy, and technological research to accelerate the energy transition. By providing stable, long-term funding and fostering a culture of open, interdisciplinary collaboration, the Sloan Foundation is not only advancing scientific understanding but also enabling practical, scalable solutions that support long-term sustainability and environmental resilience.

Collaborating to Combat Parkinson's Disease

Sergey Brin Family Foundation (USA)

Background: In 2017 the Sergey Brin Family Foundation identified that there was a global need to better understand the roots of Parkinson's disease, and to deliver fast and better outcomes.

Strategy: Brin created the [Aligning Science Across Parkinson's \(ASAP\)](#) initiative. The approach is to make large, long-term commitments to scientists to work together to understand Parkinson's. The touchstone program is the [ASAP Collaborative Research Network](#), an international multidisciplinary, multi-institutional network of collaborating investigators working to address high-priority science questions. To date, 35 teams (including 163 investigators as team leaders), have received \$290 million in grant funding over four years.

Outcomes: Through this global effort, 14 countries and more than 80 institutions are represented across the leadership teams. ASAP has stimulated new scientists to enter the field, including 53 early-career team leaders, and more than 90% of teams report having team leads that are new to Parkinson's research. Through their consistent convenings and open science approach, ASAP has created a culture of cross-disciplinary collaborations amongst their grantees.

Sparkling Early Career Interdisciplinary Work

Research Corporation for Scientific Advancement (USA)

Background: Research Corporation for Science Advancement (RCSA) launched the Scialog program in 2010, aiming to accelerate breakthroughs in science by fostering interdisciplinary collaborations among early-career researchers. Scialog, short for “science + dialog,” focuses on addressing complex scientific challenges of global importance through intensive discussion, community building, and research partnerships.

RCSA's funding approach for Scialog involves selecting promising early-career scientists to participate as Fellows in focused research areas. These Fellows engage in intensive workshops where they form multidisciplinary teams to develop novel research proposals. The program incentivizes collaboration by providing seed funding for innovative projects, with awards typically ranging from \$50,000 to \$60,000 per team member.

Strategy: RCSA partners with other foundations to co-sponsor specific Scialogs, enhancing the resources available for collaborative projects and demonstrating the value of interdisciplinary research. Each Scialog series typically involves 50-60 early-career scientists and spans three years, with annual meetings designed to encourage innovative project ideas and new partnerships.

Co-funding partners, such as the Alfred P. Sloan Foundation, contribute to the financial support and thematic development of Scialog initiatives. For example, the Sloan Foundation and RCSA sponsored the Scialog: Negative Emissions Science initiative. Similarly, RCSA, Frederick Gardner Cottrell Foundation, and the Canadian Institute for Advanced Research sponsored the Scialog: Molecular Basis of Cognition initiative with Kavli Foundation and Walder Foundation providing additional support.

Outcomes: Scialog has catalyzed groundbreaking research collaborations across various scientific disciplines for 15 years. During the three years of the Scialog: Molecular Basis of Cognition, 48 individual awards were made to 20 multidisciplinary teams, totaling more than \$2.4 million advancing understanding in cognitive sciences. Likewise, 30 multidisciplinary teams received awards for the Scialog: Negative Emissions Science initiative, funding eight projects focusing on critical environmental challenges over four years totaling more than \$4.1 million.

By fostering a culture of interdisciplinary collaboration and innovation, Scialog has enabled early-career scientists to secure additional funding and contribute meaningfully to their fields. For example, barely a year after RCSA's Scialog: Negative Emissions Science, the collaborative team, co-funded by the Thistledown Foundation, created a startup company to commercialize zero-carbon cement production powered by renewable electricity. The Scialog-spawned team was also awarded a \$2.5 million ARPA-E grant to further their research to integrate CO2 capture with recycling technology.

About the Authors

Valerie Conn is a leader in the modern era of science philanthropy advisors; after 25 years as a university science fundraiser (Illinois Institute of Technology, Stanley Manne Children's Research Institute and University of Chicago), she went on to lead Science Philanthropy Alliance, helping drive more than \$1 billion in private funding to basic science research in five years. Currently, as the founder of Future Science Now, she is a trusted philanthropic strategist connecting more funding, faster, for science. Valerie has worked with more than 40 science philanthropists in the past decade.

Sandra J. Laney, PhD is the founder and president of the Strategic Journey Lab, Inc., where she catalyzes meaningful giving by advising high and ultra-high-net-wealth individuals, family offices, private foundations, and corporations on their philanthropic strategies at the intersection of science and society. A scientist by training, Dr. Laney brings over two decades of experience across field and laboratory research, global health, philanthropy, and policy—including leadership roles at the U.S. Department of State, the Bill & Melinda Gates Foundation, Paul G. Allen's Ebola Program, and the Walder Foundation. She works closely with donors and investors to align their capital with their purpose, designing legacy-driven strategies that turn intent into real-world impact.

Acknowledgements

We wish to thank the Gates Foundation for supporting development of this guide. We would also like to acknowledge David Bowermaster, Stefanie Choi, Sofia Michelakis, Fil Randazzo, Erin Rist, Jane Roskams, and Tian Tian for their contributions to this report. (June, 2025)

To Learn More

We invite you to join the journey of funding science. Also available is the **Science Philanthropy Giving Guide** that guides philanthropists and their advisors through the science philanthropy giving journey. Facilitated learning workshops, curated events globally, and expert-sourced giving opportunities can be made available upon request.

The **Gates Foundation** is guided by the belief that every life has equal value, and works to help all people lead healthy, productive lives. The foundation's Philanthropic Partnerships team inspires and enables more informed and intentional generosity by all. Ruixi Hao: ruixi.hao@gatesfoundation.org

Future Science Now is a science philanthropy advisory group that educates and connects philanthropists and scientists to accelerate strategic science philanthropy now. Valerie Conn: valerie@futuresciencenow.com

Strategic Journey Lab, Inc. helps donors give their money meaning by advising at the intersection of impact, science and society. Sandra J. Laney, Ph.D.: sandra@sjladvancing.com