

Chan Zuckerberg Science

Our Mission

Supporting science and technology that will help make it possible to cure, prevent, or manage all diseases by the end of this century.

Our Values

People. In every field, and especially in science, talented and motivated people move the field forward. Supporting scientific excellence and creativity is the most effective way to drive progress.

Technology. New tools enable new discoveries -- especially tools that are reliable, robust, scalable, and sharable. Creating and disseminating high-quality technology will improve all of science.

Collaboration. Progress accelerates when people work together, within and across fields. Interdisciplinary teams of experimental biologists, computational scientists, engineers, physicians, and patients can dramatically expand our understanding of the human body and illness — the science behind medicine.

Open science. The velocity of science and pace of discovery increase as scientists build on each others' discoveries. Sharing results, open-source software, experimental methods, and biological resources as early as possible will accelerate progress in every area.

Our Approach

Accelerating science. To advance toward solving all diseases, we must accelerate biomedical discovery. Our approach is to support open, collaborative and networked models of research, and to develop transformative new technologies. Collaboration is the key to success, and technology is our differentiated impact.

We fund -- and we build. By funding research done by great scientists, we can make a direct impact on specific scientific and medical goals. By building technology through the work of our own computational biologists and software engineers, we can enable scientific discovery across the entire scientific community. We pair these approaches by working side by side with our collaborators in the scientific community. All tools that we build and fund will be freely available for all non-commercial uses, including pre-commercial use by for-profit entities.

We support collaborations between science, medicine, and engineering. By encouraging close collaboration between basic scientists, physicians, computational scientists, and engineers, we will enable breakthroughs that grow from their combined expertise. To that end, we will support new incentives, rewards, and career paths for collaborative research.

We develop tools and technologies. We work closely with the scientific community to support

transformative technologies to empower and advance all of science. Our computational biologists and software engineers work with scientists on the ground to identify challenges and build open-source tools for analyzing, visualizing, and sharing data, using cutting edge engineering, data science, machine learning, and cloud computing approaches.

We build support for science. We are part of a movement to support basic scientific research. That means recruiting more private and public funders, working with policymakers and advocates, and supporting grassroots public engagement in science. With government, industry, academia, the philanthropic community, and patients and their advocates working together, we will win our fight against disease.

We don't have all the answers, and we continue to learn along the way. We are a new organization. We actively seek the advice of scientists, physicians, national and international science funding organizations, engineers, patients and their advocates, and experts of every kind. We believe that collaboration, risk taking, failing fast, and staying close to the scientific community is our best opportunity to accelerate progress in science.

Supporting Projects

How we choose projects. We believe good ideas can come from anywhere. We choose projects by engaging deeply with the scientific and medical communities to identify unmet needs and barriers to success. We learn by reaching out to leaders formally, through meetings and workshops, and informally. Some leaders are found in scientific societies, government agencies, disease foundations, the biotechnology industry, and philanthropic foundations. Some leaders are young visionaries who are still in training. With their advice, we identify projects that align with our goals and values: collaboration is the key to success, and technology is our differentiator.

How we support science. We use a variety of mechanisms to support science, including targeted grantmaking as well as open competitions in specific areas (Requests for Applications). We prioritize supporting research communities and not just individual researchers, so we support workshops, hackathons, and travel that enables collaboration among our partners.

Policies

Software. We will release software developed by our own team and our funded partners under maximally permissive open-source licenses, and develop software collaboratively in the open through sites like GitHub.

Intellectual Property. We do not request rights to IP developed by our partners. However, any IP generated by a CZI-supported investigator and/or as part of a CZI-funded research project must be made freely available for all academic and non-commercial uses, including pre-commercial use by for-profit entities.

Data Sharing, Maintenance, and Security. We support open sharing of data, because it lets scientists build on each others' work to make new discoveries, faster. We are committed to the long-term sustainability of our projects, and when needed, we will ensure long-term data access through permanent archives. In all projects involving human subjects, we will work with our external partners and with regulatory groups to support data privacy and security, and ensure that data requiring protection or controlled access are handled in agreement with national and international standards.

Publication. We support full publication without conditions or restrictions. We strongly encourage, and in some cases, may require, researchers to deposit manuscripts as preprints before peer review to increase access to research findings and to communicate results more quickly.

Ethics. We hold ourselves and our scientific partners to the highest ethical standards. We require compliance with institutional and national standards for human subjects research and non-human animal research. In addition, we have specific policies addressing scientific misconduct, attribution of credit, respectful treatment of all persons without discrimination, and responsible use of grant funding.

Evaluation

We seek to support scientists, research projects, and programs that make a long-term impact on important biomedical problems. We will evaluate this work through our own analysis and through expert advice.

We will evaluate the quality, productivity, reach, and scholarly collaboration of the programs and individuals we support. We will apply these criteria when making overall commitments to new and existing research programs, when reviewing individual grant applications, and during ongoing reviews of supported research through mandatory progress reports, investigator meetings, and lab visits.

Scientific output. We will evaluate scientists, research projects, and programs by the new knowledge that they produce, emphasizing the quality, robustness, and rigor of that work.

Evidence of productivity includes:

- Published papers
- Preprints
- Datasets
- Protocols and methods
- Software and code
- Scientific reagents and resources

Tools & resource dissemination. We will measure the reach of science through its dissemination, data re-use, resource sharing and adoption of tools. Evidence of reach includes:

- Deposition in open community repositories, including but not limited to:
 - Github for software code

- Addgene for plasmids
- Protocols.io for methods
- JAX for mice
- bioRxiv and arXiv for preprints
- Clinical and public health application
- Commercial development
- Citations of resources and papers
- Links, forks, pulls, and maintenance of software code
- Requests for reagents and resources, and their further use by the community

Collaboration. We will evaluate contributions to collaborative communities. Evidence includes:

- Leadership and participation in collaborative research projects
- Co-authored publications, protocols, and software code
- Career success of trainees and staff scientists associated with the research
- Acknowledgments for contributions to community resources and datasets