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REQUEST FOR APPLICATIONS
Accelerating Cryo-ET Through Improved Vitrification and Monitoring

Biohub invites applications for two-year research projects to accelerate advances in cryo-electron tomography (cryo-ET) by supporting the development of innovative vitrification methods and real-time monitoring technologies that improve the consistency, efficiency, and scalability of sample preparation of cells and tissues.

Opportunity

Overview

At Biohub, we build the technology to help scientists around the world use AI-powered biology to study how cells operate, organize, and work as part of systems to understand why disease happens and how to correct it. With unprecedented scale of compute, AI research and engineering, and state-of-the-art technology for measuring, imaging, and programming biology, Biohub is leading the first large-scale scientific initiative combining frontier AI with frontier biology.

Biohub seeks to support two-year projects that will improve two crucial areas in cryo-electron tomography (cryo-ET): sample freezing (vitrification) and methods for monitoring the success of the freezing process.

Objectives of the RFA / Scope

This RFA will advance sample preparation for cryo-ET imaging through 1) development of new sample vitrification techniques and 2) new methods to monitor and analyze the vitrification process.

Recent advances in cryo-ET technologies have the potential to image the internal architecture of the cell at near-atomic resolution. However, vitrification, the process of rapidly freezing materials to preserve native structures in vitreous ice, is far from an optimized process. Vitrification success rates can be low and often require extensive optimization for each sample type. Poor freezing leads to crystalline ice formation, disrupting structural preservation. There remains a need for improved freezing techniques that enhance the efficiency, reliability, and scalability of sample vitrification to support advanced imaging pipelines.

An inability to assess successful vitrification immediately after freezing also hampers throughput. Currently, vitrification preservation success is typically evaluated during

transmission electron microscope (TEM) imaging, which occurs at the end of the complex sample preparation pipeline. Such delays not only hinder sample processing and data collection but also lead to the inefficient use of research funds, equipment, and investigator effort. New methods to monitor vitrification are needed to accelerate cryo-ET sample preparation and increase data collection rates.

Examples of potential areas within the scope of this RFA include, but are not limited to:

- Development of novel vitrification approaches or improvements to high-pressure freezing for thick biological samples;
- Engineering of sample carriers, interfaces, or instrumentation that enhance heat transfer and freezing reliability;
- Real-time or post-freezing methods to assess vitrification quality prior to or during focused ion beam (FIB) milling;
- Integrated systems that combine vitrification with monitoring and feedback control; and
- Cross-disciplinary approaches from fields such as cryogenics, heat transfer, and materials science that enable improved control and understanding of ice formation in biological specimens.

The physics of ice structure and formation are an area of interest beyond the cryogenic electron microscopy field. We therefore aim to attract proposals from experts in adjacent fields such as ice physics, cryogenics, heat transfer engineering, and materials science, where complementary expertise may unlock novel approaches to vitrification and monitoring challenges.

Out of Scope

Examples of areas outside of the scope of this RFA include:

- Vitrification of purified proteins and protein complexes in solution for single-particle cryo-EM;
- Methods to address single particle averaging preferred orientation;
- Downstream cryo-ET imaging, reconstruction, or data analysis methods;
- End-point quality assessment at the TEM stage rather than early or real-time monitoring;
- Systems for BSL2+ and above sample preparation;
- Incremental optimization of existing vitrification systems without substantive innovation; and
- Purely theoretical studies without a clear path to experimental validation in cryo-ET workflows.

Application Requirements

Detailed application instructions are available below. All applications must be completed and submitted through our online grants management portal. Applicants are encouraged to familiarize themselves with this portal well in advance of the application deadline. Deadline extensions will not be granted.

Key Dates

June 4, 2026	Application portal opens
July 16, 2026	Applications due by 2 pm Pacific Time
Late October 2026	Earliest notification of decisions (subject to change)
December 1, 2026	Expected start date (subject to change)

Award period: Awards will be two years (24 months) in duration with an expected start date of December 1, 2026.

Budget: Grants will be awarded for two types of projects:

- Vitrification Monitoring: up to $250,000 USD total costs (inclusive of up to 15% indirect costs) over 24 months for projects that measure and monitor the vitrification of biological samples.
- Vitrification Methods: up to $500,000 USD total costs (inclusive of up to 15% indirect costs) over 24 months for projects that explore new methods for sample freezing.

Proposed budgets should reflect the project scope, which should be appropriate for a two-year project. Indirect costs cannot exceed 15 percent of direct costs.

Team composition: Each application must include at least one principal investigator (PI), who will serve as the Coordinating PI, and may designate up to two additional Co-PIs.

ELIGIBILITY

- Applications may be submitted by domestic and foreign nonprofit and for-profit organizations, public and private institutions, such as colleges, universities, hospitals, laboratories, units of state and local government, companies, and eligible agencies of the federal government. As part of the application process, for-profit organizations may need to provide additional information on the charitable purposes of the proposal. Grants are not permitted to individuals, only to organizations.
- An organization may submit more than one application.
- Each application should designate one Principal Investigator (PI) as the Coordinating Principal Investigator (Coordinating PI). The Coordinating PI will act as the administrative contact between Biohub and all PIs on the grant. The Coordinating PI must submit the application on behalf of all PIs. The Coordinating PI must be affiliated with the institution submitting the application, and grant funds will be awarded to that institution, which will take responsibility for distributing funds to any other institutions. **Note that institutions outside the U.S. may not subcontract to U.S. institutions, so please be mindful when selecting the Coordinating PI/institution.**
- Each application should have a minimum of one PI (Coordinating PI), but may designate up to three total PIs (one Coordinating PI and up to two Co-PIs).
- PIs may only serve as the Coordinating PI on one application, but may serve as a Co-PI on applications different from the one they submitted.
- Co-PIs may serve as a Co-PI on multiple applications.

- PIs/Co-PIs on one application may be employed at the same or at different institutions.
- PIs and Co-PIs must hold a PhD, MD, or equivalent degree.
- PIs and Co-PIs must each run laboratories in which they control their budget, their space, and their research. Independence in an academic setting is typically demonstrated by a full-time faculty appointment, a tenure-track position, allocated space, a start-up package, and institutional commitment as defined or verified in a letter from a department chair or equivalent. Independence may be defined differently in other organizations. *Note: an upload of the letter or proof of independence is not required at the time of application.*
- Meta employees, including employees of any subsidiary Meta entities, as well as employees of Chan Zuckerberg Initiative, LLC and Biohub are not permitted to apply.
- Biohub reserves the sole right to decide if an applicant and applicant organization meet the eligibility requirements.
- Biohub reserves the right to request budget changes prior to award.
- Biohub welcomes applications from any country, provided the proposed work is compliant with the United States Treasury Department's Office of Foreign Asset Control (OFAC) sanctions program. Prior to award, all grant applications will be reviewed for compliance with the United States Treasury Department's Office of Foreign Asset Control (OFAC) sanctions program, the United States Department of Commerce's export administration regulations, the Foreign Corrupt Practices Act (FCPA), any other applicable U.S. laws and regulations, and any corresponding laws and regulations in the country where the applicant is based. All grant agreements will also require the grantee to comply with these laws and regulations. For additional information, please refer to the U.S. Treasury Department's resources, the International Trade Administration's website on US Export Controls, and the Department of Justice's website on the FCPA.
- While applicants from all countries are welcome to apply, because of required ongoing compliance with U.S. sanctions and export controls, an applicant's funding eligibility may need to be reassessed if the applicable laws and regulations change at any time. As a result, even if an applicant is eligible to receive funding at the time the application is reviewed, the applicant's status may change later in the process or during the course of the grant term.

We suggest that you consult your home institution to determine eligibility to apply for this grant and your institutional policy on indirect costs. For questions about eligibility for this award or the application process, please contact us in advance of the proposal deadline at sciencegrants@chanzuckerberg.com. Deadline extensions will not be granted.

Selection Process and Evaluation Criteria

Biohub will evaluate all applications for scientific merit through expert review. Final decisions will be made by Biohub staff in consultation with our scientific advisors. There is no expectation of any specific number of awards, and Biohub reserves the sole right to not recommend the funding of any applications. Biohub does not provide feedback on decisions for unfunded proposals.

Selection of awardees will be based on:

- The quality of the proposal and the expertise and capacity of the group for addressing the proposed project.
- Significance and potential impact of the project.
- Potential of the awardee to contribute to and benefit from interactions with Biohub Imaging staff.

Reporting and Progress

Production, validation, and availability of intermediate outputs demonstrating progress are key mechanisms by which we evaluate the progress and impact of funded projects. Awardees will be required to submit annual progress reports, ensuring that the project is progressing toward their defined set of deliverables. Deliverables could consist of milestones related to:

- Development and validation of technologies for 1) rapid freezing of biological samples with no disruption of native structures or 2) monitoring and assessing the ice state of vitrified samples.
- Deployment of scalable, robust methodologies enabling broader community adoption and use.
- Data and resource sharing that enable reproducibility, interoperability, and secondary use by the scientific community.
- Sharing experimental protocols on open platforms such as protocols.io to enable adoption and adaptation by others.
- Publishing findings in peer-reviewed venues and on open-access preprint servers (e.g., bioRxiv, medRxiv), supporting rapid dissemination.
- Regular communication with Biohub program staff, including potential check-ins, progress calls, or cohort convenings, to discuss milestones, resource sharing, and collaborative opportunities.

All investigators supported under this RFA will be expected to collaborate openly and contribute to the collective goals of advancing preparation methods for cryo-electron microscopy, thereby accelerating sample preparation and data acquisition.

Policies

- Funds from this award are intended to support research activities. Grants are made to organizations to support the work of the named Principal Investigator, and reasonable flexibility on how these funds are utilized is allowed, provided that funds are used to support research activities related to the project. A detailed budget is required at the time of application.
- For awarded projects, financial statements and progress reports will be due at the conclusion of each grant year and occasionally more frequently. Specific deliverable requirements will be outlined in the award notification. Grantees of funded projects will be required to participate in regular meetings.

- Grantees may obtain funds for their research from other funding sources, provided that there is no conflict with meeting the terms of the award.
- Unused research funds may be carried over to the following year, and requests for no-cost extensions will be considered at the end of the overall project period and upon receipt of an annual report.
- Indirect costs cannot exceed 15 percent of direct costs. Indirect costs may not be assessed on capital equipment or subcontracts, but subcontractors may include up to 15 percent in indirect costs of their direct costs.
- International grantees must use all grant funds exclusively for activities conducted outside the United States of America. Travel expenses to the United States must not be covered by the requested grant funds.
- **Ethical Conduct:** We advocate the highest standards for the ethical conduct of research. In addition to requirements of their own countries, grantees must adopt procedures for the use of animals in research and for the ethical treatment of human subjects and tissue donors, including obtaining their or their appropriate proxy's written informed consent. We regard the policies of the National Institutes of Health as a strong model for such procedures.
- **Data, Publications, and Dissemination Policies**: To accelerate scientific discovery and collaboration, we support a consent, sharing, and publication policy for open and rapid dissemination of research results, including methods, data and reagents, and a policy for software development that maximizes accessibility, reuse, and shared development. Under rare circumstances, exceptions to the above may be considered where there are specific situations that make meeting these goals impossible or counterproductive to the project.
    - **Software Code**: We require the sharing of software code developed by its grantees to be made publicly available on GitHub (or a similar public service). All new code must be released under a permissive open source license (MIT, BSD 2-Clause, BSD 3-Clause, or Apache v2.0). All pre-existing and derivative code must be licensed under the most permissive license possible, given the licensing terms of the pre-existing code. All analysis packages must be released through the appropriate language-specific package manager (e.g., PyPi for Python, Bioconductor, and CRAN for R) with documentation, example data, and interactive demos (e.g., Jupyter notebooks), and the use of Docker or similar container technologies to ensure portability and reproducibility. Software code supported by Biohub must be archived for long-term digital preservation and citability, when applicable.
    - **Content and Data Sharing:** We are committed to developing and using platforms that disseminate data openly and freely. Any dataset, either curated or generated through the proposal must be made as publicly available and easily accessible through an appropriate data repository as legally permissible, when applicable, under an Open Definition conformant license. Ideally, data sets would not include personally identifiable information, but if they do, consent to sharing the data must be obtained. Metadata, documentation, and intended use cases, as appropriate, must be made available under an Open Definition conformant

license, preferably CC0 or CC BY/CC BY SA for content that requires explicit attribution.

- **Publications**: To encourage rapid dissemination of results, any publications related to this funded work must be submitted to a preprint server (such as bioRxiv, medRxiv, arXiv, or any appropriate preprint repository), at or before the first submission to a journal. Experimental protocols should be made publicly available through a protocol sharing service, such as protocols.io. We request that scientific publications, preprints, and presentations that result from this award acknowledge support from this funding.
- **Reagent Sharing**: Resources and reagents developed with this funding support must be available for rapid dissemination to the community, where possible in an accessible community repository, such as Addgene (for plasmids/DNA reagents/viruses), Jackson Labs (for model systems lines), etc. This requirement applies to cell lines, transgenic organisms, plasmids/clones, antibodies, and other reagents.
- **Consent**: All human tissues must be adequately and fully consented to permit maximal sharing of the resulting data and any resulting tools, subject to applicable laws, regulations, or institutional ethical requirements. Any desired exceptions to this policy must be identified at the time of application, and such requests may affect the application's chance of success. We are aware that there may be circumstances where broad consent may be challenging, and in some cases, consent may be subject to alteration or revocation; we encourage investigators to discuss these cases with Biohub scientific staff. As a reference, the Human Cell Atlas (HCA) community has developed ethics guidelines and a toolkit with template consent forms.
- **Intellectual Property Rights:** Biohub does not require assignment of ownership to any data, published results, or any other intellectual property that results from the work funded by these grants, but will have the same rights generally granted to others. We support and promote policies that enable results and technologies to have the broadest reach and impact. To this end, all newly developed software must be made available through permissive open source licenses as described more fully above. Other technology and intellectual property rights (such as patents) must be made freely available for all academic and non-commercial use, and where intellectual property rights are commercialized, they must generally be subject to non-exclusive commercial licenses that enable broad availability and dissemination.

- Applications selected through this process will either be funded by the Chan Zuckerberg Initiative Foundation (CZIF) or recommended for funding through a donor-advised fund at the Silicon Valley Community Foundation (SVCF).

Collaboration and Open Science

We seek investigators who will enthusiastically contribute to and benefit from a highly collaborative, dynamic, and interdisciplinary approach.

Investigators will have the opportunity to learn from, collaborate with, and interact with the community of investigators and groups, as well as with Biohub scientists and software engineers. Investigators and key personnel will participate in regular investigator meetings, meetings for students, postdocs, and staff, as well as mentorship and training opportunities.

Our mission is at the interface of technology and science. Investigators and Biohub staff will work together to identify resources and technology that can drive the bioengineering field forward.

We support open science values and principles. To accelerate scientific discovery and collaboration as well as rapid dissemination, we support a consent, sharing, and publication policy for open and rapid dissemination of research results and a policy for software development that maximizes accessibility, reuse, and shared development.

Investigators will commit to the rapid dissemination of all resulting data, protocols, code, reagents, and results prior to publication through resources such as protocols.io, GitHub and preprints.

Use of Generative Artificial Intelligence (AI) Tools

We support the use of generative artificial intelligence (AI) tools to facilitate the drafting and preparation of grant proposals and to support grant reviews in ways that ensure the integrity and confidentiality of the grantmaking process, protect user privacy, and preserve the individual accountability and responsibility of each applicant and reviewer. Please read our full guidelines on AI for grant applicants.

Confidentiality

Generally, Biohub will treat submitted applications and related materials as confidential (and will use such materials solely for the purposes of administering and evaluating applications, managing awards, and other related operational and compliance activities). Access to application materials will be limited to Biohub personnel, affiliated entities, external reviewers, advisors, and service providers who have a need to know basis for these purposes and who are subject to confidentiality obligations. Biohub may disclose application materials: (i) as required by applicable law, regulation, legal process, or governmental request; or (ii) to enforce Biohub's legal rights. Biohub may publish or otherwise disclose non-confidential, high-level information about applications (e.g., project titles, abstracts, general areas of research, and aggregate statistics). For applications selected for funding, Biohub may publicly share summaries of funded projects and outcomes. Application materials will not be returned.

Personal Data

As part of the application process, you may provide personal data (e.g., names, contact details, professional information, and biographical information). You should only provide personal data that is necessary for the application and that you are authorized to share. We will use and store such personal data for grant-related purposes (e.g., administering and evaluating applications,

managing grants and related communications; compliance, legal, and reporting obligations; and improving grantmaking processes in a de-identified or aggregated manner where feasible). The Chan Zuckerberg Initiative Foundation, Chan Zuckerberg Initiative, LLC (collectively "CZI") and Chan Zuckerberg Biohub, Inc. will act as independent or joint controllers, as applicable, for personal data processed in connection with your application. Such data may be transferred to and/or processed in countries other than your country of residence, including the United States. Where required, appropriate safeguards will be used to protect such transfers. Personal data may be shared with reviewers, advisors, collaborators, service providers, authorities or other third parties where required by law. Personal data will be retained only for as long as necessary to fulfill the purposes described above, including for recordkeeping, reporting, and legal compliance. If you have any questions or concerns regarding our privacy practices, the collection or use of personal data, or data subject requests (e.g., to access, correct, delete, or restrict the use of your personal data), you may contact us at privacy@chanzuckerberg.com.

Detailed Application Instructions

We use SurveyMonkey Apply as our grants management portal. All applications must be submitted through this portal (https://apply.chanzuckerberg.com). SMApply is configured to work best using the Google Chrome browser. It is recommended that you familiarize yourself with this portal well in advance of any deadlines. Deadline extensions will not be granted.

To complete and submit an application:

1. Go to https://apply.chanzuckerberg.com.
2. Register and/or log in.
3. Click on the **Programs** link in the upper right corner.
4. Find the **Accelerating Cryo-EM Through Improved Vitrification and Monitoring RFA** and click **More**.
5. Click the green **Apply** button in the upper right corner.
6. **Enter the title** of your application. The project title is limited to 60 characters, including spaces.
7. Complete the sections described below and **submit by no later than 2 pm Pacific Time on July 16, 2026.**

The application consists of the following sections (called tasks in the grants portal): Coordinating PI Details, Organization Details for Coordinating PI, Project Details, Project Proposal, Budget, Biosketches for Coordinating PI and Co-PIs, and Letters of Commitment (optional).

- **Coordinating PI Details:** Complete all fields in this task; **all fields are required.** The information entered should be for the Coordinating Principal Investigator (Coordinating PI), who will be the person submitting the application on behalf of the team. The Coordinating PI will take responsibility for managing the group collaboration and be the administrative point of contact for Biohub and any partners. Note that institutions outside the U.S. may not subcontract to U.S. institutions, so please be mindful when selecting

the Coordinating PI/institution. Information about the Co-Principal Investigator on the proposal should be entered where requested in the Project Details part of the application.

- Name and email (auto-filled): To edit your name or email, please do so in your account information by clicking your name in the upper right corner and clicking My Account in the dropdown menu.
- Degree(s).
- Organization, Title/Position, Department or equivalent.
- Career status: Select early-career (0 to 6 years), mid-career (6+ to 10 years), or neither. **Note: We encourage participation and leadership from early-career researchers; however, early- or mid-career status is not required to be eligible for this RFA.**
  - Early-Career Definition: In the context of this RFA, an early-career investigator is someone who has been in an independent position for zero to six years at the time of application.
  - Mid-Career Definition: In the context of this RFA, a mid-career investigator is someone who has been in an independent position for more than six to 10 years at the time of application.
- Short narrative biography of the Coordinating PI (maximum of 100 words).
- ORCID iD: Enter in format XXXX-XXXX-XXXX-XXXX. ORCID iDs are unique, digital identifiers that distinguish individual scientists and unambiguously connect their contributions to science over time and across changes of name, location, and institutional affiliation. ORCID iDs will be used to streamline reporting in our applications and grant reports to reduce the burden on grantees. For more information, please visit https://orcid.org/register.

- **Organization Details for Coordinating PI:** Complete all fields in this task; **all fields are required.** The information entered should be for the organization of the Coordinating Principal Investigator (Coordinating PI), who will be the person submitting the application on behalf of the team. The Coordinating PI must be affiliated with the organization listed, and grant funds will be awarded to this organization, which will take responsibility for distributing funds to the institutions of the other team members.
  - Type of Organization (Academic, Other Non-profit, Industry/company, Government, Other). If Industry/company is selected, an additional set of questions will need to be completed in the portal to determine eligibility.
  - Organization name/Street address/City/State/Country/Website.
  - Tax ID: Enter your organization's Employer Identification Number (EIN), as assigned by the Internal Revenue Service in the 9-digit format (XX-XXXXXXX; 10 characters total). Foreign organizations or others who do not have an EIN should enter 44-4444444.
  - Organizational/Administrative Contact: List the name and contact information for the administrative contact to discuss additional information needed, if selected for award.
    - First name, Last name, Title/Position, Email.

- Signing Official: List the name and contact information of the person authorized to sign on behalf of your organization.
  - First name, Last name, Title/Position, Email.
- Press Contact / Public Relations Official: List the name and contact information for the person to discuss press releases and media.
  - First name, Last name, Title/Position, Email.
- Institutional Approval Form (Last updated May 2026): Upload as a single PDF. This form should be reviewed and signed by a person authorized to sign on behalf of your institution, agreeing to the stated institutional and investigator requirements and commitments on data, resource sharing, and publication policies, as well as endorsing/verifying your application materials and confirming their ability to receive funding for the proposal. In the event of an award, all funds will be awarded to the Coordinating PI institution as the prime institution, and the Coordinating PI institution will be responsible for ensuring compliance of all of the terms, including compliance of all partners/subcontract institutions. **These policies are non-negotiable so this form should only be signed if the organization is able to comply with the terms as stated.** While we do not require sign-off by all of your partner institutions, please refer to what your institution requires. **Note: digital signatures are permitted as long as the document is not encrypted or password-protected.**

- **Project Details:** Complete all fields in this task; all fields are required.
  - Project Title: Auto-filled; limited to 60 characters, including spaces. If you need to edit your project title, navigate to your application summary page, click on the three dots to the right of the application title (next to the Preview link), and select Rename from the dropdown menu.
  - Project Purpose: Summarize your research project; limited to one sentence; maximum of 200 characters including spaces. **Please use a third-person voice.** *Example: to develop a measurement system that returns information on the ice state of vitrified samples.*
  - Abstract/Project Summary: (maximum of 250 words) Describe your project. Please use a third-person voice (example).
  - Milestones: (maximum of 250 words, list format) Summarize the main milestones for your project, including yearly deliverables that demonstrate progress. Please use list format and a third-person voice.
  - Award Type: (dropdown menu)
    - Vitrification Monitoring: up to $250,000 USD total costs
    - Vitrification Methods: up to $500,000 USD total costs
  - Total Amount Requested: Enter the total budget amount requested in U.S. dollars, including indirect costs; this number should match those described in the Budget section. Enter whole numbers only (no dollar signs, commas, or cents).
  - Co-PI Information: Indicate whether you have Co-PIs on your proposal. If Yes, provide the following information for each Co-PI (up to two). **Do not include the Coordinating PI in this section**. Please provide:

        - Co-PI name, Title/Position, Degrees, ORCID iD (format: XXXX-XXXX-XXXX-XXXX), Email, Career status
            - In the context of this RFA, an early-career investigator is someone who has been in an independent position for zero to six years at the time of application, and mid-career as someone who has been in an independent position for more than six to 10 years at the time of application.
        - Organization Name, Country, Website
        - Type of organization (drop-down menu: Academic, Other Nonprofit, Government, Industry/company, Other).
        - Tax ID: Enter your organization's Employer Identification Number (EIN), as assigned by the Internal Revenue Service in the 9-digit format (XX-XXXXXXX; total of 10 characters). Foreign organizations or other entities without an EIN should enter 44-4444444.

- **Project Proposal:** Upload your project proposal as a single PDF; the font must be 11 point or larger, and margins must be at least one-half inch (top, bottom, left, and right) for all pages (letter size required). Include the following sections:
    - Proposal Body: (maximum of 1500 words, which includes 250 words for the Abstract)
        - Abstract: Copy your Abstract/Project Summary entered in the Project Details section.
        - Background: Briefly describe previous work related to the proposed technology.
        - Project Goals: Detail the specific goals of the two-year project.
        - Project Plan: Describe clearly the research and development strategy to be employed, main milestones, expected outcomes, deliverables, and associated timeline.
        - Resources: Briefly describe the resources and infrastructure available to the team to complete the proposed project.
    - Figures (optional): Limited to one page, including legends. Figure legends do not count toward the word count.
    - References Cited in Your Proposal: No word/page limit; include complete source references.

- **Budget:** Budgets should be uploaded in two parts.
    1) Tabular budget: Provide a tabular budget with details for each year, separating out the costs by institution. An optional budget template is available for use. **Tabular budgets should be converted to and uploaded in PDF format.**
    2) Narrative budget description: Upload in PDF format; font must be Arial 11 point or larger and margins must be at least one-half inch (top, bottom, left, and right) for all pages (letter size required); no page limit.
        - Description of the costs to be funded by this grant at a high level, outlining costs for personnel (including names, if known), supplies, equipment,

travel, meetings/hackathons/sprints, subcontracts, other costs, and up to 15 percent indirect costs (excluding equipment and subcontracts).
    - Budget should be requested in US dollars and should not exceed $250,000 USD total costs (inclusive of up to 15% indirect costs) over 24 months for Vitrification Monitoring projects and $500,000 USD total costs (inclusive of up to 15% indirect costs) over 24 months for Vitrification Methods projects.
    - Indirect costs are limited to up to 15 percent of direct costs and are included within the budget total. Indirect costs may not be assessed on capital equipment or subcontracts, but subcontractors may include up to 15 percent indirect costs of their direct costs. **Non-charitable entities must include a clear allocation and explanation for any indirect costs included in a proposed budget.**
    - International grantees must use all grant funds exclusively for activities conducted outside the United States of America. Travel expenses to the United States (including round-trip tickets) should not be covered from the requested grant funds. Any attendance at Biohub meetings in the US will be covered by Biohub outside of requested grant funds.
    - Application budgets must reflect the actual needs of the proposal. Biohub will work closely with successful applicants to arrive at a mutually acceptable budget after review.

- **Biosketches for Coordinating PI and Co-PIs:** Upload the biosketches in PDF format for the Coordinating PI and for the Co-PIs (if applicable). Biosketches can be uploaded in a combined single PDF or one PDF for each PI, a maximum of 5 pages per biosketch; NIH format or similar. **Do not include any biosketches for any additional collaborators beyond the Coordinating PI and the Co-PIs, as listed.**

- **Letter of Commitment (optional):** Upload a signed letter from each Co-PI briefly describing their role and contribution of the Co-PI to the overall team and project; **do not** include a letter from the Coordinating PI. The letter should be in PDF format (letter size) and can be uploaded as a single PDF for each co-PI. **Note: digital signatures are permitted as long as the document is not encrypted or password-protected.**

The formatting and component requirements, including word and page limits indicated above, will be enforced by the review team. Any submitted materials that exceed the word and page limits or do not follow the requirements will not be considered during the application review process.

RFA Contact

For administrative and programmatic inquiries or other questions pertaining to this RFA, please contact sciencegrants@chanzuckerberg.com. For technical assistance with SMApply, please click on the information ”i” link in the upper right corner at https://apply.chanzuckerberg.com/.