REQUEST FOR APPLICATIONS

Advancing Technologies for Spatiotemporal Omics in Live Tissue

Chan Zuckerberg Biohub Network and the Chan Zuckerberg Initiative invite applications for two-year initial research projects that merge cutting-edge engineering with deep biological inquiry to illuminate the dynamic molecular landscape of health and disease, unlocking new frontiers in high-precision interventions. This RFA represents a strategic investment in transformative research with the potential to drive breakthroughs that significantly advance our health.

Opportunity

Overview

Current spatial omics technologies that can comprehensively profile the proteome and metabolome rely on frozen or fixed tissue sections, making it difficult to capture dynamic physiological processes over time. The limitation severely constrains our ability to monitor evolving molecular changes, investigate physiological processes as they unfold, and perform longitudinal analyses in models of health and disease. To overcome this critical gap, there is an urgent need for innovative, biocompatible, minimally invasive sampling and analytical technologies that enable real-time, high-resolution interrogation of proteomic and metabolomic landscapes in live tissues. With a focus on immunology and autoimmune disease, this program aims to catalyze the creation of scalable, engineering-driven solutions that support both *ex vivo* and *in vivo* applications.

The RFA program will be centered on the development of instrumented tissues that provide precise spatiotemporal insights into immune processes in tissue and disease models. These platforms are expected to monitor immune responses in real time and empower the development of artificial intelligence (AI)-driven computational models of cellular behavior (biomodels). By enabling comprehensive, dynamic characterization of inflammation and immune regulation, these technologies promise to uncover new mechanisms of disease, reveal early markers of cellular dysfunction, and accelerate therapeutic discovery. Integration with imaging, simulation, and closed-loop intervention systems would expand the biological insight and translational potential of these platforms. Broad dissemination of the resulting tools will amplify their impact, advancing fundamental research and fostering transformative translational innovation across the biomedical community.

Chan Zuckerberg (CZ) Biohub Chicago and the Chan Zuckerberg Initiative (CZI) are advancing a bold vision to decode and control tissue-scale inflammation through the development of next-generation bioengineering technologies. This mission aligns with the CZ Biohub Chicago's Grand Challenge to create new tools for sensing and directly measuring inflammation within tissues in real time. At the core of this effort is the development of *Instrumented Tissues:* engineered living systems embedded with devices enabling real-time, spatiotemporal monitoring of molecular signals. These groundbreaking platforms will enable an unprecedented view into the biological circuitry of human tissues, transforming how we measure, map, and modulate the immune system in health and disease.

CZ Biohub Chicago is pioneering technologies to study inflammatory processes dynamically, with the goal of revealing the design rules that govern tissue function and dysfunction. These capabilities will empower researchers to construct 4D maps of inflammation, decode complex cell-cell signaling networks, and identify actionable drivers of autoimmune diseases. This funding opportunity will support interdisciplinary collaborations at the nexus of bioengineering, systems biology, and AI. The goal is to catalyze the development of transformative platform technologies that enable continuous immune surveillance, elucidate the underlying mechanisms of immune responses, and advance precision interventions. By integrating advanced instrumentation with cutting-edge computational analysis, CZ Biohub Chicago is laying the groundwork for precision diagnostics, predictive modeling, personalized interventions, and proactive health strategies — all anchored in a deep, dynamic understanding of inflammation as a central driver of human biology.

Objectives of the RFA

This RFA invites applications proposing to:

- Develop novel, minimally invasive-technologies for real-time spatial profiling of proteomic and metabolomic landscapes in live tissues, including *in vivo* and complex immune-competent *ex vivo* systems.
- Engineer and validate "instrumented tissue" systems enabling dynamic proteomic and metabolomic sensing in live tissues for continuous molecular interrogation and mapping the immune dynamics in health and immune-mediated disorders.
- Advance integrated sampling and detection platforms capable of capturing dynamic molecular changes with high spatial and temporal resolution in intact, living biological systems. Ideally, platforms will enable spatial resolution of at least 10-100 microns and temporal resolution of 5-10 minutes for metabolomics and < 1 hour for proteomics.
- Enable serial and longitudinal analysis of tissue microenvironments to monitor immunological processes, including immune activation, progression, suppression, and physiological adaptation over time.
- Establish standardized performance metrics for evaluating spatial, temporal, and molecular resolution, sensitivity, biocompatibility, and longitudinal stability of new technologies.
- Incorporate advanced computational and data modeling approaches to support real-time data integration, spatial mapping, and systems-level interpretation of multi-omics data.
- Demonstrate utility in a relevant biological model(s) (e.g., organoids, human explants, immune competent animal models), with a focus on immunology and autoimmune diseases.
- Foster interdisciplinary collaboration among engineers, biologists, chemists, and computational scientists to drive innovative platform development.
- Promote scalability, robustness, and reproducibility, enabling broad adoption of the technologies across diverse biological systems and research settings.

- Support dissemination and sharing of tools and raw data, including open source hardware/software, protocols, metadata standards, and reference datasets, to maximize impact and accessibility across the biomedical research community.

Scope

Proposals should address the following areas:

1. Scientific Innovation

- Clearly describe how the proposed platform/approach represents a transformative advancement in spatial omics, particularly for real-time, high-resolution interrogation of the proteome and metabolome in living tissues.
- Emphasize how the approach overcomes limitations of current fixed-tissue methods by enabling dynamic, *in situ* molecular profiling in intact biological systems.
- Introduce novel concepts, tools, or frameworks that create new opportunities for studying tissue physiology, immune responses, and disease mechanisms.

2. Technical Approach

- Propose innovative, scalable, and minimally invasive technologies capable of capturing spatial and temporal molecular data *in vivo* or *ex vivo.*
- Eligible technologies may include (but are not limited to):
    - Spatial sampling systems coupled with metabolomic and proteomic analysis technologies.
    - Live tissue monitoring systems that can track simultaneously > 100 proteins or small molecules.
- Describe system performance characteristics such as sensitivity, spatial precision, and temporal resolution, multiplexing capacity, and long-term fidelity, and include clear validation strategies in physiologically relevant tissue models.
- Integration with computational pipelines for real-time spatial mapping, signal processing, and systems-level interpretation is strongly encouraged.

3. Impact and Relevance

- Explain how the proposed technology will enable new biological insights currently inaccessible through existing methods.
- Demonstrate relevance and applicability to immunology and autoimmune disease models, especially those capable of serial or longitudinal molecular analysis.
- Articulate the broader applicability of the platform across diverse biological systems and tissue types.
- Address practical deployment factors, including biocompatibility, device stability, and ease of use in real-world settings.

4. Collaborative Efforts

- Interdisciplinary collaboration is encouraged across domains such as bioengineering, chemistry, immunology, systems biology, and computational sciences.
- Clearly define the roles and expertise of each collaborator or highlight how team composition enhances the project's potential for success.
- Applicants should commit to open sharing of tools, protocols, and data where feasible to maximize the broader impact of the research.

Out of Scope

The RFA will not consider applications that fall into any of the areas below:

- Transcriptomic-only studies
    - Projects centered on RNA-seq, spatial transcriptomics, single-cell or bulk transcriptomics are outside the mandate.

- Subcellular or organelle-isolated proteomics/metabolomics
    - The RFA prioritizes tissue-level or microenvironment-level mapping.
- Fixed or frozen tissue approaches
    - Methods that rely on chemically fixed, frozen, paraffin-embedded, or otherwise non-viable tissue sections for molecular analyses are excluded. Only live tissue-compatible platforms will be considered.
- Non-longitudinal/single time point analyses
    - Studies that generate only a single time-point data set are out of scope.
- Approaches with limited multiplexing
    - At least 100 analytes must be tracked across space and time. Priority will be given to scalable approaches with high coverage of the human proteome and metabolome.
- Exclusively imaging-based morphology studies
    - Proposals that use imaging (optical, electron, etc.) solely to visualize structure without primary proteomic or metabolomic measurement are not aligned with the objectives of the RFA.
- Technology extensions without live-tissue validation
    - Methods that demonstrate exclusively in cell lysates, culture supernatants, or acellular standards, with no plans for *in vivo* or advanced *ex vivo* validation, are not sufficient.
- Computational-only or *in silico* modeling projects
    - Purely computational efforts that do not develop or validate a physical platform for live-tissue sampling and analysis will not be considered.

Application Requirements

Key Dates

September 16, 2025	Application portal opens
November 13, 2025	Applications due by 2 pm PT / 5 pm ET
Late February 2026	Earliest notification of decisions (subject to change)
April 1, 2026	Expected award start date (subject to change)

Award Period

Awards will be structured in two phases: initial awards and potential supplemental awards. Initial awards will be for two years (24 months) in duration with an expected start date of April 1, 2026. At the conclusion of the initial two-year award period, we anticipate that successful initial projects may be eligible to apply for an additional two-year supplemental award. Supplemental two-year awards will be awarded to a subset of the eligible projects.

Budget

Grants will be awarded at two levels:

- *Focused Projects*: $500,000 USD total costs (inclusive of up to 15% indirect costs) over 24 months (maximum of $250,000 total costs per year, inclusive of up to 15% for indirect costs) for exploratory, risky technology development strategies; and
- *Expanded Projects*: $1,000,000 USD total costs (inclusive of up to 15% indirect costs) over 24 months (maximum of $500,000 total costs per year, inclusive of up to 15% for indirect costs) for projects that provide end-to-end solutions for live tissue proteomics and/or metabolomics.

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 / Number of Principal Investigators
This opportunity will support active or new collaborative research teams to address key biological questions in the field of bioengineering, systems biology, immunology, artificial intelligence, or their interface. Teams may include up to a total of three principal investigators (PIs) composed of one Coordinating PI and up to two Co-PIs. While there are no formal requirements regarding the minimum number of investigators, this RFA is particularly suited to research efforts that leverage close, multidimensional collaboration. We strongly encourage interdisciplinary and cross-institutional teams that bring together teams of researchers with complementary expertise and resources to address high-risk, high-reward problems that address the scope outlined above and are unlikely to be addressable by a single lab. All teams are expected to contribute to the larger community via regular engagement and sharing of learnings, data, samples, and other resources. Proposals should highlight the unique strengths and contributions of each team member and how the combined expertise will synergistically address the challenges of the proposed project.

All applications must be completed and submitted through CZI's online grants management portal. It is recommended that applicants familiarize themselves with this portal well in advance of the application deadline.

Eligibility

- Applications may be submitted by domestic and foreign nonprofit organizations, including public and private institutions, such as colleges, universities, hospitals, laboratories, units of state and local government, and eligible agencies of the federal government. For-profit organizations are not eligible to receive funding, but may be involved in projects as collaborators. All grants will be awarded to institutions, not individuals.
- 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 us and all other PIs on the grant (Co-PIs). 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 institution. **Note that institutions outside the U.S. may not subcontract to U.S. institutions, so please be mindful when selecting the Coordinating PI/institution.**
- Teams may include a total of three PIs. Each application must have one Coordinating PI, but may designate up to three total PIs (one Coordinating PI and up to two Co-PIs).
- Principal Investigators may only apply to join and serve as Coordinating PI or Co-PI on one application. Participation in multiple projects as an unfunded collaborator is allowed and encouraged.
- PIs/Co-PIs on one application may be employed at the same or different institutions.

- PIs and Co-PIs must each be permitted to receive grant support from the organization they are applying with. This criterion may be defined differently in different types of organizations. Examples of eligible positions are:
    - Tenure track faculty;
    - Non-tenure track faculty or staff scientists who lead a lab or are engaged in academic activities and are permitted to apply for grants by their institution;
    - Researchers with expertise in the relevant areas who are affiliated with or supported by an institution and permitted to apply for grants; and
    - Co-PIs from for-profit companies are permitted as long as no funds are requested to support them or their work.
- Early-career investigators are strongly encouraged to apply as Coordinating PIs and Co-PIs.
- Meta employees, including employees of any subsidiary Meta entities, as well as employees of Chan Zuckerberg Initiative, LLC and Chan Zuckerberg Biohub, Inc. (the Biohub Network), are not permitted to apply.
- CZI and the Biohub Network reserve the sole right to decide if an applicant and the applicant organization meet the eligibility requirements.
- CZI and the Biohub Network reserve the right to request budget changes prior to award.
- We welcome 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

We adhere to core values in both proposal selection and evaluation of progress. We will evaluate all applications for scientific merit and will seek independent expert review. Final decisions will be made by CZI and Biohub Network staff in consultation with our scientific advisors. There is no expectation of any specific number of awards, and we reserve the sole right not to recommend the funding of any applications. We do not provide feedback on decisions for unfunded proposals.

Applications will be evaluated by a panel of experts in spatiotemporal omics, bioengineering, systems biology, immunology, and translational research. Proposals will be reviewed based on the following criteria:

- **Scientific and Technical Merit:** The novelty, clarity, and conceptual strength of the proposed work, as well as soundness of the experimental design, and feasibility of the approach.
- **Investigator Qualifications:** The relevant expertise, past contributions, and demonstrated ability of the applicant team to carry out the proposed work.
- **Potential Impact:** The anticipated contribution to advancing immunological research, and the relevance, scalability, and translational potential of the proposed work.
- **Collaborative and Institutional Support (Resource Adequacy):** The degree to which the proposed project leverages complementary expertise, interdisciplinary collaboration, and appropriate institutional resources or infrastructure.
- **Budget Justification:** The appropriateness and clarity of the proposed budget relative to the project scope, goals, and anticipated deliverables.

Reporting and Progress

Production, validation, and availability of intermediate outputs that demonstrate progress are key mechanisms by which we evaluate the progress and impact of funded projects. Awardees will be required to submit annual progress reports that demonstrate advancement toward a clearly defined set of deliverables aligned with the goals of this RFA, with an emphasis on applications in immunology and autoimmune disease.

Deliverables could consist of milestones related to:

- Development and validation of minimally invasive, high-resolution technologies for real-time spatial profiling of proteomic and metabolomic landscapes in living tissue models of health and disease.
- Engineering and deployment of instrumented tissue systems capable of dynamic longitudinal measurements of disease-relevant immune activity and molecular trajectories across multiple spatial and temporal scales.
- Creation of scalable, interoperable tools and robust, standardized methodologies enabling broader community adoption and use.
- Data and resource sharing that enable reproducibility, interoperability, and secondary use by the scientific community.
- Timely deposition of raw and processed data, analytical pipelines, metadata, and code to appropriate open-access repositories, using community standards that facilitate exploration and reuse by bioengineering, immunology, systems biology, and AI researchers.
- Sharing experimental protocols on open platforms such as protocols.io to enable adoption and adaptation by the scientific community.
- Publishing findings in peer-reviewed venues and on open-access preprint servers (e.g., bioRxiv, medRxiv), supporting rapid and equitable dissemination.
- Active engagement with the broader Biohub Network bioengineering, spatiotemporal omics, autoimmunity, and immunological disease biology research community, including attending annual meetings and participating in quarterly working groups aimed at fostering collaboration, troubleshooting, and identifying shared challenges and solutions.

- Regular communication with Biohub Network program staff, including check-ins or progress calls to discuss milestones, address technical or strategic bottlenecks, explore dissemination strategies, and identify opportunities for resource sharing and collaborative alignment.

All investigators supported under this RFA will be expected to collaborate in an open and interdisciplinary manner toward the shared goal of advancing spatiotemporal omics technologies and tissue instrumentation. These collective efforts aim to uncover early markers of cellular dysfunction, reveal novel disease mechanisms, and identify targeted intervention points to accelerate therapeutic intervention and predictive modeling.

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, including annual scientist meetings (which may be in person or virtual). Travel support for these meetings will be provided by CZI or the Biohub Network separately from the requested grant funds.
- 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 CZI or the Biohub Network 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 Network 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:** CZI or the Biohub Network 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), the Biohub Network, 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 CZI and Biohub Network 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, CZI, and Biohub Network 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 the Human Cell Atlas Data Coordination Platform, Chan Zuckerberg CELL by GENE, protocols.io, GitHub, MassIVE Repository, Proteomics Identification Database (PRIDE), ProteomeXchange, Metabolomics Workbench, MetaboLights (EBI-EMBO), GNPS (UCSD), MetabolomeXchange 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

All submitted applications will be kept confidential, except (1) as necessary for our evaluation or to comply with any applicable laws; and (2) to the extent that the application is made public or available to others without a duty of confidentiality through no fault of CZI or the Biohub Network. Notwithstanding the foregoing, certain information, including brief summaries of the proposed projects, project metrics, and types of organizations that have applied for funding, may be made publicly available in aggregate form. Proposals that are selected for funding may be made publicly available and/or shared with other grantees or collaborators. Application materials will not be returned to applicants.

Personal data

Where we ask for personal data of individuals in grant applications, please only submit personal data that you have the right to provide. We will use and store any personal data collected through the

application process for grant-related purposes (e.g., administering the grant, analyzing and improving our grant practices). The Chan Zuckerberg Initiative Foundation and Chan Zuckerberg Initiative, LLC (collectively "CZI") and the Biohub Network will be the "data controllers" for any such personal information, and the data may be stored on servers outside of your home country, including within the United States. If you have any questions or concerns regarding our privacy practices or the collection or use of personal data, you can 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 **Advancing Technologies for Spatiotemporal Omics in Live Tissue** 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 p.m. Pacific Time / 5 p.m. Eastern Time on November 13, 2025.**

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 us 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(s) 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: Early- or mid-career status is not required to be eligible for this RFA, although we encourage participation and leadership from early-career researchers.**

        - 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.
    - Organization name/Street address/City/State/Country/Website.
    - Type of Organization (Academic, Other Non-profit, Government, 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; 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 September 2025): 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.
    - Type of project: Designate if the project is a Focused ($500K limit) or Expanded ($1M limit) project.
    - Amount Requested: Enter the amount requested per year (limited to $250K USD total costs per year for Focused projects and limited to $500K USD total costs per year for Expanded projects), as well as the total budget requested (limited to $500K USD total costs for Focused projects and limited to $1M USD total costs for Expanded projects) for all years in U.S. dollars, including indirect costs; these numbers should match those described in the Budget section. Enter whole numbers only (no dollar signs, commas, or cents).
    - Project Purpose: (maximum of 200 characters including spaces) Summarize your research project; limited to one sentence. Please use a third-person voice.
        - Example: *to engineer instrumented 3D tissue systems that enable dynamic, high-resolution proteomic and metabolomic mapping during immune activation*
    - 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.**
    - Number of Co-Principal Investigators: Indicate the number of Co-Principal Investigators, not including the Coordinating PI. Provide the following information for each Co-PI (maximum of two). **Do not include the Coordinating PI in this section**. For each Co-PI, 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, Company/industry, 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 others who do not have an EIN should enter 44-4444444.
    - Role Description of Each PI: (maximum of 500 words) Describe the role of each PI on the project.

- **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). The project proposal should be for the initial two-year project only. Include the following sections:

- Proposal Body: (maximum of 2000 words (approximately 4 pages single-spaced), which includes 250 words for the Abstract)
  - Abstract: Copy your Abstract/Project Summary entered in the Project Details section here.
  - Scientific proposal:
    - Specific Aims: Clearly defined goals and milestones of the proposed project.
    - Research Strategy: Detailed narrative covering the significance, innovation, and methodology of the research.
    - Preliminary Data: Where available, include preliminary results or feasibility studies that support the proposed work.
    - List expected outcomes, learnings from tools and data generated, main deliverables, and associated timeline.
- Figures/Preliminary Data (optional): Limited to two pages, 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 (one-page maximum per PI):** Upload in PDF format; budgets can be uploaded in a combined single PDF or one PDF for each PI; one-page maximum per PI; 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). Provide a detailed description of the costs to be funded by this grant at a high level and in tabular form, 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). If budgets are provided for individual components, the PI should also generate a summary of no more than one page highlighting the distribution of grant funds across the PIs.
  - Grants can be requested at two levels. Proposed budgets should reflect the project scope:
    - *Focused Projects*: $500,000 USD total costs (inclusive of up to 15 percent indirect costs) over 24 months (maximum of $250,000 total costs per year, inclusive of up to 15% for indirect costs) for exploratory, risky technology development strategies; and
    - *Expanded Projects*: $1,000,000 USD total costs (inclusive of up to 15 percent indirect costs) over 24 months (maximum of $500,000 total costs per year, inclusive of up to 15% for indirect costs) for projects that provide end-to-end solutions for live tissue proteomics and/or metabolomics.
  - Indirect costs are limited to up to 15 percent of direct costs. Indirect costs may not be assessed on capital equipment or subcontracts, but subcontractors may include up to 15 percent of indirect costs of their direct costs.
  - Budget should be requested in U.S. dollars.
  - 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 by the requested grant funds. Any attendance

at CZI/Biohub Network meetings in the U.S. will be covered by us outside of requested grant funds.
    - Application budgets must reflect the actual needs of the proposal. Biohub Network and Chan Zuckerberg Initiative 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 each of the Co-PIs. 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 Co-PIs, as listed.**

- **Letters 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. Letters should be in PDF format (letter size) and can be uploaded in a combined single PDF or one PDF for each Co-PI and/or partner. **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.