

Single-Cell Biology Data Insights

Chan Zuckerberg Initiative (CZI)

Coordinator: Tiffany Worboy, Office of Foundation Relations (tworboy@emory.edu)

Submission Limitations: Unlimited (*no internal selection process needed*)

Foundation Deadline: **December 14, 2021 by 5 p.m. Pacific Time**

Website: <https://chanzuckerberg.com/wp-content/uploads/2021/10/Data-Insights-RFA-Announcement-and-Instructions-COMBINED.pdf>

*Please contact your RAS unit *and* Tiffany Worboy to inform them of your intent to submit.*

Overview:

The Chan Zuckerberg Initiative (CZI) seeks applications for projects that aim to use and gain insights into health and disease from existing single-cell datasets to help accelerate progress toward challenges associated with the compilation and exploration of large atlas-scale data. **Given the growth of single-cell biology and the rapid increase in available data, CZI is looking to support projects that will advance the fields of single-cell biology and data science.**

Grantees will be expected to interact with a network among participating groups that builds community and accelerates progress. Applications are encouraged from computational experts outside the field of single-cell biology but with expertise relevant to overcoming current bottlenecks. Projects may include dedicated efforts to refine existing computational tools, benchmark classes of tools, improve standards, integrate available data that enables greater biological insight, develop new features that support interoperability of data or tools, and other major challenges brought forward.

This request for applications is the first of three cycles planned for the coming years, with successful projects receiving 18 months of funding support.

Budget & Timeline:

Applications for two types of grants are welcome and will be reviewed independently. The maximum budgets for proposed projects are \$400,000 total costs for *Expanded Projects* and \$200,000 total costs for *Focused Projects*. All projects awards will be for an 18-month duration:

- ❖ **FOCUSED PROJECTS:** \$200,000 total costs (inclusive of up to 15% indirect costs) for grants that primarily support the effort of one to two full-time employees (FTEs) working on a given project.

These efforts will benefit from additional collaborations in the network but will generally be directed towards benchmarking tools, extension of existing toolchains, or curating/integrating existing datasets to boost their utility for the field; and,

- ❖ **EXPANDED PROJECTS:** \$400,000 total costs (inclusive of up to 15% indirect costs) for networked grants that will require the participation of two to four FTEs.

These projects may require dedicated effort from multiple projects to improve standards, improve toolchain interoperability, or undertake more extensive integration or benchmarking tasks.

Please note: Funding is not intended to support experimental data generation. Proposed projects should be 18 months; actual start date may vary.

All applications must be completed and submitted through CZI's online grants management portal at <https://apply.chanzuckerberg.com>.

Chan Zuckerberg Initiative

REQUEST FOR APPLICATIONS Single-Cell Biology Data Insights

The Chan Zuckerberg Initiative invites applications for the first of three cycles for 18-month projects focused on advancing tools and resources that make it possible to gain greater insights into health and disease from single-cell biology datasets.

OPPORTUNITY

Overview

The Chan Zuckerberg Initiative (CZI) seeks applications for projects that aim to use and gain insights into health and disease from existing single-cell datasets to help accelerate progress toward challenges associated with the compilation and exploration of large atlas-scale data. Given the growth of single-cell biology and the rapid increase in available data, CZI is looking to support projects that will advance the fields of single-cell biology and data science. Grantees will be expected to interact with a network among participating groups that builds community and accelerates progress. Applications are encouraged from computational experts outside the field of single-cell biology but with expertise relevant to overcoming current bottlenecks. Projects may include dedicated efforts to refine existing computational tools, benchmark classes of tools, improve standards, integrate available data that enables greater biological insight, develop new features that support interoperability of data or tools, and other major challenges brought forward. This request for applications is the first of three cycles planned for the coming years, with successful projects receiving 18 months of funding support.

Scope

Applications for two types of grants are welcome and will be reviewed independently. The maximum budgets for proposed projects are \$400,000 total costs for *Expanded Projects* and \$200,000 total costs for *Focused Projects*. All projects awards will be for an 18-month duration. The goal of this opportunity is to create a network of projects that address broad computational challenges and needs within single-cell biology at a variety of scales. If applicants wish to highlight existing or prospective collaboration among projects, that is encouraged and allowable, but all applications will be reviewed for their individual merit and impact.

Single-cell biology has undergone rapid growth over the last five years, with a recent increase in the volume of available and openly accessible data. This funding opportunity is specifically intended to motivate and incentivize the development, refinement, and implementation of tools and approaches that make it possible for greater insights to be gained from available single-cell data. With this in mind, any form of data generation is considered out of scope. Projects must propose and rely on existing

data that is openly and freely available (count matrices at minimum) at the time of application via the inclusion of a link to specific datasets in the applications. Furthermore, we strongly encourage applications to utilize data generated outside of their labs to enable interoperability and advances that are extensible to a wider segment of interested researchers.

Addressing computational challenges and bottlenecks in single-cell biology will drive the field forward and make it possible for a greater number of scientists to benefit from emerging datasets and tissue atlases. This opportunity puts forward a broad scope that fundamentally aims to enable greater insight to be gleaned from single-cell data. Successful proposals are likely to incorporate some, or multiple, of the following attributes:

- Increase the robustness and performance of tools of broad interest for various tasks, such as data integration, scaling to higher dimensionalities, or mapping new data sets to a reference atlas that allow deeper insights.
- Develop benchmarking frameworks, tasks, and infrastructure that enable comparisons among a class of tools and methods to stimulate future development that increases scale, efficiency, and reproducibility and accelerates scientific discovery in the field.
- Aggregate multiple datasets that result in an integrated representation and allow for deeper biological insights and queries than would be possible from any single dataset.
- Improve existing tools, standards and/or increase interoperability among multiple tools.

It is also an explicit goal of this effort to build a community among international participants that encourages collaboration and coordination, and we envision that the overlap between funding cycles will allow continuity and learning. CZI will support the coordination of this community and promote opportunities for training, documentation, and knowledge sharing across projects and cycles.

ELIGIBILITY

- Applications may be submitted by domestic and foreign nonprofit organizations, 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 a collaborator. All grants will be awarded to institutions, not individuals.
- Organizations may be based in any country.
- There may be more than one application submitted by each organization.
- 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 CZI 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 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.
- All key personnel must be named in the grant in the budget section along with their percent effort. This includes graduate students, postdocs, and staff scientists. Although recruiting new members to the lab is allowable, it is strongly encouraged that key personnel are in place at the outset of the grant to allow for consistent community building and project progression.

- Each application must 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).
- Principal Investigators may serve as Coordinating Principal Investigator on multiple applications provided that the proposed scope of work for all applications is non-overlapping.
- Principal Investigators may serve as Co-PI on multiple applications provided that the proposed scope of work for all applications is non-overlapping.
- PIs/Co-PIs on one application may be employed at the same or at different institutions.
- PIs and Co-PIs must each be permitted to receive grant support by the organization they are applying with. This criteria 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 that are affiliated with or supported by an institution and permitted to apply for grants; and
 - Postdoctoral fellows and graduate students who are permitted to apply for grants by their institution and apply through the institution at which they will conduct the research.
 - For graduate students or postdoctoral scholars who wish to participate in a grant but are not eligible to apply for grants through their institution, applications must be submitted through one of the eligible parties listed above.
 - Co-PIs from 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 as well as Co-PIs.
 - We [believe](#) that the strongest teams incorporate a wide range of voices. Those underrepresented in science and technology are strongly encouraged to apply.
 - Should a project be funded in an initial round of the CZI Single-Cell Data Insights RFA, an extension or elaboration of the work will be eligible for application in subsequent rounds. These applications will be evaluated alongside new applications.
 - Facebook employees, including employees of any subsidiary Facebook entities, as well as employees of Chan Zuckerberg Initiative, LLC, are not permitted to apply.
 - CZI reserves the sole right to decide if an applicant and applicant organization meet the eligibility requirements.
 - CZI reserves the right to request budget changes prior to award.
 - 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](#).

CZI suggests 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.

APPLICATION REQUIREMENTS

Key Dates:

We invite applications for consideration for funding during three distinct cycles:

Cycle	Application opening date	Application due date	Notification of decisions	Earliest start date of grant
1	October 5, 2021 by 9 a.m. Pacific Time	December 14, 2021 by 5 p.m. Pacific Time	Mid-May 2022	July 1, 2022
2	Mid-June 2022	Late July 2022	Mid-December 2022	February 1, 2023
3	Mid-May 2023	Mid-June 2023	Late October 2023	January 1, 2024

All dates for the second and third cycles are subject to change. Please sign up for our [mailing list](#) to stay updated on these dates as they are announced and future funding opportunities. Successful awardees from the first cycle are eligible to apply in the subsequent cycles, with a budget and scope of work that can be either similar or altered depending on project needs.

Award period and start date: Proposed projects should be 18 months; actual start date may vary.

Budget:

- Grants will be awarded at two levels:
 - \$200,000 USD total costs (inclusive of up to 15 percent indirect costs) for grants that primarily support the effort of one to two full-time employees (FTEs) working on a given project. These efforts will benefit from additional collaborations in the network but will generally be directed towards benchmarking tools, extension of existing toolchains, or curating/integrating existing datasets to boost their utility for the field; and
 - \$400,000 USD total costs (inclusive of up to 15 percent indirect costs) for networked grants that will require the participation of two to four FTEs. These projects may require dedicated effort from multiple projects to improve standards, improve toolchain interoperability, or undertake more extensive integration or benchmarking tasks.
- Funding is not intended to support experimental data generation; and
- Indirect costs cannot exceed 15 percent of direct costs for any grant proposal.

All applications must be completed and submitted through CZI's online grants management portal at <https://apply.chanzuckerberg.com>. It is recommended that applicants familiarize themselves with this portal well in advance of the application deadline. Detailed application instructions are available on the [Chan Zuckerberg Initiative website](#), as well as in the [grants management portal](#).

SELECTION PROCESS

The Chan Zuckerberg Initiative's [core values](#) center around people, technology, collaboration, and open science. We adhere to those values in both proposal selection and evaluation of progress.

CZI will evaluate all applications for scientific merit and will seek independent expert review. Final decisions will be made by CZI staff in consultation with our scientific advisors. There is no expectation of any specific number of awards, as this will depend on team size and project budgets, and the Chan Zuckerberg Initiative reserves the sole right to not recommend the funding of any applications. CZI does not provide feedback on decisions for unfunded proposals.

Application and funding in earlier rounds will not impact eligibility for subsequent rounds. If a project is not funded, it will be eligible for subsequent rounds if revised and submitted. Identical applications are eligible but discouraged. Should a project be funded in an initial round of the CZI Single-Cell Data Insights RFA, an extension or elaboration of the work will be eligible for subsequent rounds. In these cases, metrics and output from the earlier project will be included for reviewers to consider.

Reporting & Progress: Annual reports will be required to ensure progress toward project deliverables. Measures of progress will include project deliverables and engagement with the community consistent with the selection criteria for proposals. These include:

- Participation in regular meetings and virtual as well as (hopefully) in person jamborees;
- Open sharing of processed data, such as count matrices, using tools such as [cellxgene](#) that make it possible for the scientific community to explore the data;
- Software code must be published in an open repository such as GitHub;
- Regular updates to documentation, extensible notebooks, and documentation that enable all members of the community including non-expert users to benefit;
- Continued confirmation and deposition of all data used in the project into openly and freely available data repositories, such as cellxgene, the Human Cell Atlas (HCA) Data Coordination Platform, Gene Expression Omnibus (GEO), European Genome-phenome Archive (EGA), etc.;
- Publishing results along with submission to open-access preprint servers (e.g. bioRxiv, medRxiv, arXiv etc.); and
- Interacting with other Data Insights teams and efforts to develop generalizable, benchmark data and other outputs that encourage ecosystem progress.

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 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 CZI 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 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 from the requested grant funds.
- **Ethical conduct:** CZI advocates 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. CZI regards the policies of the National Institutes of Health as a strong model for such procedures.
- **Data, publication, and dissemination policies:** To accelerate scientific discovery and collaboration, CZI supports a consent, sharing, and publication policy for open and rapid dissemination of proposal 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:** CZI requires sharing of software code developed by its grantees generally 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 should be archived for [long-term digital preservation](#) and [citability](#), when applicable.
 - **Content and data sharing:** CZI is committed to developing and using platforms that disseminate data openly and freely. Any dataset utilized in this proposal must be publicly available and easily accessible. For data not already available through an appropriate [data repository](#), we strongly encourage uploading it for greater accessibility and reuse by the community.
 - **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 must be made publicly available through a protocol sharing service, such as protocols.io. Scientific publications, preprints, and presentations that result from this award should 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) and 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 full sharing of the resulting data and any resulting tools, in accordance with laws and regulatory requirements, or other 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 revocation; we encourage investigators to discuss these cases with CZI scientific staff. As a resource for researchers in the HCA community, the HCA has [provided ethics guidelines and developed an ethics toolkit](#) with template consent forms.
- **Intellectual property rights:** CZI 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. CZI supports and promotes 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 the Chan Zuckerberg Initiative Donor-Advised Fund (CZI DAF) at the Silicon Valley Community Foundation (SVCF).

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. Notwithstanding, successfully funded proposals may be made publicly available and/or shared with other grantees or collaborators. Unfunded proposals will remain confidential as provided herein; however, information, including brief summaries of the proposed projects, project metrics, and the types of organizations that have applied for funding, may be made publicly available in aggregate form. Application materials will not be returned to applicants.

RFA CONTACT

For administrative and programmatic inquiries, or other questions pertaining to this RFA, please contact sciencegrants@chanzuckerberg.com.

IMPORTANT DOCUMENTS

[Application Instructions](#)

[Institutional Approval Form](#)

Chan Zuckerberg Initiative

APPLICATION INSTRUCTIONS Single-Cell Biology Data Insights

Some helpful information as you get started:

- This document contains:
 - [General guidance on using the portal](#)
 - [How to submit an application](#)
 - [Application details specific to this RFA](#)
- Please review the [Request for Applications](#).
- The Chan Zuckerberg Initiative uses SurveyMonkey Apply (SMAppl) as its grants management portal. All applications must be submitted through this portal (<https://apply.chanzuckerberg.com>). SMAppl 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.
- **Key dates:** We invite applications for consideration for funding during three distinct cycles. **All dates for the second and third cycles are subject to change.** Please sign up for our [mailing list](#) to stay updated on these dates as they are announced and future funding opportunities.

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3	Mid-May 2023	Mid-June 2023	Late October 2023	January 1, 2024

- **Application specifics:**

- **Eligibility:** Please refer to the RFA announcement.
- **Grant period and start date:** Proposed projects should be 18 months in duration; actual start date may vary.
- **Grant amount:** \$200,000 USD total costs (inclusive of up to 15 percent indirect costs) or \$400,000 USD total costs (inclusive of up to 15 percent indirect costs). Indirect costs cannot exceed 15 percent of direct costs.
- **Number of Principal Investigators (PI and Co-PIs):** Each application must 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). Principal Investigators may serve as Coordinating Principal Investigator on multiple applications provided that the proposed scope of work for all applications is non-overlapping. Principal Investigators may serve as Co-PI on multiple applications provided that the proposed scope of work for all applications is non-overlapping. PIs/Co-PIs on one application may be employed at the same or different institutions.
- Institutional sign-off is required.

GETTING STARTED

Account setup: The applicant must first set up an account in the CZI online grants portal at <https://apply.chanzuckerberg.com/>.

To set up an account:

1. Go to <https://apply.chanzuckerberg.com/>.
2. Click the green **Register** button in the upper right corner.
3. Complete the requested fields and then click the green **Create Account** button.
4. Click the green **Continue** button to proceed to the site.

Please note you will need to verify your account through the auto-email that you receive after registering. You will not be able to submit an application until your account is verified.

Personal data: Where we ask for personal data of individuals in grant applications, please only submit personal data that you have a 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, LLC (collectively “CZI”) 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 collection or use of personal data, you can contact us at privacy@chanzuckerberg.com.

Navigating the portal: Once you have set up an account, you can log into the grants portal at <https://apply.chanzuckerberg.com/>. Using the links in the upper right corner, you can access available programs (which includes RFAs for all CZI areas, not just Science) and any applications you have in preparation or previously submitted. Use the information (“i”) link to get help with the portal. To access your account information, click on your name in the upper right. Your application will pre-populate with

the name and email listed in your account information so if you need to edit it, click on your name in the upper right corner to make any necessary changes.

Forgotten username or password: If you have forgotten your username or password, please navigate to the grants portal at <https://apply.chanzuckerberg.com/> and click on the **Log In** link located in the upper right corner. Click the “Forgot your password?” link and then enter the email address associated with your SMAApply account. You will then receive an email with information to reset your password. Please note that your username is your email address.

Other questions: If you have other questions about using the portal, please use the information (“i”) link in the upper right corner of the window. Here you will find a link to FAQs about using the portal, as well as links to submit specific help requests. If you have specific questions about the RFA, please contact us at sciencegrants@chanzuckerberg.com.

SUBMITTING AN APPLICATION

To submit an application:

1. Go to <https://apply.chanzuckerberg.com/>.
2. Log in.
3. Click the green View Programs button that is displayed or click on the Programs link in the upper right corner. This will bring you to a listing of all programs/RFAs that CZI is hosting in SMAApply. To **find the program/RFA** you are looking for, you may need to scroll down.
4. Find the program/RFA you are interested in and click the green **More** button.
5. Click the green **Apply** button in the upper right and complete all sections (details below).
 - a. You will first be prompted to **enter the title** of your application, after which you will have access to the application tasks to complete. Project title is limited to 60 characters, including spaces. If you need to **edit your project title**, click on the My Applications link in the upper right and click the green **Continue** button on the application you wish to edit. Once the application page opens, click on the three dots to the right of the application title (next to the Preview link) and select Rename from the dropdown menu.
 - b. The application is made up of several sections called tasks that are listed in a menu on the left side of the page. To **open a task**, click on the one you would like to work on. You can edit and complete tasks in any order. You may need to scroll down to see the remaining tasks.
 - c. Once you **complete a task**, click the green **Mark as Complete** button within the task. All tasks must be marked as complete before submitting. To **edit a task** after marking it as complete, click the three dots in the upper right of the task and select edit, which will re-open the task.
 - d. Your application will autosave every few seconds, but you can also click the Save & Continue Editing on each task as you go along to **save your application**.
 - e. For tasks that require a PDF upload: If you need to **delete and replace a PDF** after you have uploaded it, click on the three dots to the right of the file under the Attach

- File section within the task and select **Remove** from the dropdown menu.
- f. To **download your application**, click on the three dots in the upper right corner of the application page and select download. If you are within a task, first click on the Back to application link in the upper left. Please **be aware of any pop-up blockers** in your browser that may prevent downloading your application.
 - g. To **access an application that you have previously saved**, click on the My Applications link in the upper right and click the green **Continue** button on the application you wish to edit.
6. Once all tasks are completed, click the green **Submit** button to **submit your application**.
- a. If the button is grayed out, it means your application is not yet complete; please be sure all required fields and uploads are complete within each task and that you have clicked the **Mark as Complete** button within each task.
 - b. To **download your application**, click on the download link in the upper right corner. Please be mindful of **any pop-up blockers** that may be active in your browser that prevent/hide downloads.
 - c. Review your application in the window (or in the PDF that you have downloaded). If you want to make changes, navigate back to your application and reopen/edit any tasks that need editing. **It is strongly recommended that you download your application as a PDF (instructions above in 5f. and 6b.) to review your application before clicking submit.**
 - d. Once you are **ready to submit**, click the green **Submit Your Application** button on the left side of the window. You will need to confirm your submission by clicking the green **Submit** button in the pop up window. **Once your application has been submitted, it cannot be edited. Please be sure that your application is complete BEFORE submitting.** If you inadvertently submit your application and it is before the deadline, please contact sciencegrants@chanzuckerberg.com.
7. Once your application is submitted, you will **receive an auto-email** confirming submission within a few minutes. If you do not receive a confirmation email within a few minutes, please check your spam folder. If you still did not receive your confirmation email, please email sciencegrants@chanzuckerberg.com.
8. If you would like to view your application after you have submitted it, it can be accessed through the My Applications link in the upper right corner.

The application consists of the following sections (called tasks in the grants portal):

Coordinating PI Details, Organization Details for Coordinating PI, Equal Opportunity & Diversity, Project Details, Budget Description, Biosketches, Optional Attachments.

- **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 CZI 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 no more than six years at the time of application, i.e. started their first independent position between December 14, 2015 and December 14, 2021. Graduate students and postdocs who are eligible to apply should select this option.
 - 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, i.e. started their first independent position between December 14, 2011 and December 13, 2015.
 - 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>. (Please contact us at sciencegrants@chanzuckerberg.com if you wish to opt out).
- **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 Nonprofit, 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 for 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: Upload as a single PDF. This [form](#) should be reviewed and signed by a person authorized to sign on behalf of your organization 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 project. 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. This form should only be signed if the organization is able to comply with the terms as stated.** While CZI does 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.**
- **Equal Opportunity & Diversity**: CZI Science supports the science and technology that will make it possible to cure, prevent, or manage all diseases by the end of this century. Everyone is affected by disease, yet different communities are affected by or experience disease in different ways. Moreover, due to systemic barriers, the scientific enterprise itself is not a place where all voices and talents thrive. We believe the strongest scientific teams — encompassing ourselves, our grantees, and our partners — incorporate a wide range of backgrounds, lived experiences, and perspectives that guide them to the most important unsolved problems. To enable our work, we incorporate diverse perspectives into our strategy and processes, and we also seek to empower community partners to engage in science.

We request demographic information associated with applications submitted to CZI in response to our open calls. This information helps us learn from the RFA process, as well as improve our strategies to help ensure members of underrepresented or marginalized groups in science are aware of and able to apply to CZI opportunities. **Please note that answering all questions below is voluntary, and demographic information will not be used to make final grant funding decisions.** All responses will be shared only with limited personnel, who will use that information only for the purposes described in this paragraph.

If you have any additional questions about why we ask this, what we do with the data, or to share suggestions for improvement, please reach out to sciencegrants@chanzuckerberg.com.

The information below may be entered for the applicant. **Please note that completing the below is voluntary, and demographic information will not be used to make final grant funding decisions.**

- What is your race/ethnicity? (optional)
- What is the year of your last academic degree? (optional)
- What is your gender? (optional)
- Are you transgender? (optional)

- Are you a member of the LGBTQ community? (optional)
- Do you have one or more disabilities? Please specify (optional)

The information below may be entered for the Co-Principal Investigators listed (if any and up to two maximum) in the Project Details section. **Please note that completing the below is voluntary, and demographic information will not be used to make final grant funding decisions.** Please also let your Co-Principal Investigators know if you choose to enter the below in case they object to your providing that information to CZI.

- Do any of the Co-Principal Investigators self-identify as one of the following? Woman, Man, Non-binary/Third gender, Prefer not to state, Prefer to describe (optional)
 - If yes, how many of the listed Co-Principal Investigators self-identify as one of the above gender identities? **Please do not include requested information on a per person basis; we are looking for aggregated information (optional)**
- Do any of the Co-Principal Investigators self-identify as one of the following? Two or More Races, Black and/or African American, Asian, White, Hispanic or Latinx, Middle Eastern or North African, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Prefer not to state, Prefer to describe (optional)
 - If yes, how many of the listed Co-Principal Investigators self-identify as one of the above race/ethnicities? **Please do not include requested information on a per person basis; we are looking for aggregated information (optional)**
- **Project Details:** Complete all sections in this task. **All sections are required.**
 - Project Title: Auto filled. 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 (maximum of 60 characters, including spaces)
 - Project Purpose: One sentence (maximum of 200 characters including spaces). Please use a third-person voice.
 - Example: *To develop a series of workshops and tutorials to increase utilization of single-cell data in biomedical research.*
 - Award Type: Single selection: Focused (\$200k limit) or Expanded (\$400k limit)
 - Amount Requested: Enter the amount requested for the entirety of the project in U.S. dollars, including indirect costs; these numbers should match those described in the Budget Description. Enter whole numbers only (no dollar signs, commas, or cents).
 - Co-Principal Investigators: Indicate the number of Co-Principal Investigators (maximum of two), not including the Coordinating PI. Complete the table with the following information for each Co-PI. **Do not include the Coordinating PI in this section.** You may need to use the scroll bar at the bottom of the table to scroll right to view and complete all fields. Alternatively, you can tab to move through and complete the fields. 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 faculty position (or equivalent) for no more than six years at the time of application, i.e. started their first

independent position between December 14, 2015 and December 14, 2021, and mid-career as someone who has been in an independent faculty role (or equivalent) for more than six to 10 years at the time of application, i.e. started their first independent position between December 14, 2011 and December 13, 2015.

- Funded/Unfunded by this CZI grant to support the proposed work
 - 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.
- **Abstract:** Describe your project in brief (maximum of 250 words).
 - **Project /Work Plan:** A description of the proposed work, including an overview of the primary challenges that the project seeks to address, and existing work that serves as a foundation (maximum of 1,000 words).
 - **Utility:** Summarize how the project supports scientific researchers to gain more insight from single-cell data. Clarify the anticipated impact and utility it will have for the community (maximum of 500 words).
 - **Data:** Projects must propose and rely on existing data that is openly and freely available at the time of application. List all datasets that will be utilized in the proposed work along with URLs and/or DOIs where they can be accessed (maximum of 25). If you would like to include more than 25, please include a table for the additional datasets in the Optional Attachments section.
 - Dataset or publication name
 - DOI link or URL
 - Short description (maximum of 50 words)
 - Version (if not applicable, enter n/a)
 - **Milestones and Deliverables:** List expected milestones and deliverables, and their expected timeline. Be specific and include (where possible) any goals for metrics the project is expected to reach upon completion of the grant. Please use a third-person voice (maximum of 250 words).
 - **Diversity, Equity, and Inclusion (DEI) Plan:** Advancing diversity, equity, inclusion, and representation is a core value for CZI, and we are requesting information on your efforts that will clarify how your project and/or team will incorporate similar values into the proposed project. Potential areas of focus may include efforts to incorporate reproducible notebooks, documentation that encourages reuse, trainings, work that addresses health disparities, or other efforts (maximum of 250 words).
 - **Community Statement:** In addition to the technical achievements of this RFA, there is a goal of building a community of projects that will complement one another and provide collaborative opportunities among participants. Please clarify what the proposed project aims to gain and contribute to the larger network (maximum 250 words).

- **Budget Description (one page maximum per PI):** Upload in PDF format; budgets can be uploaded in a combined single PDF or one PDF for each Co-PI; one page maximum per PI; font must be 11 points 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 multiple PIs, the Coordinating PI should also generate a summary of no more than one page showing the distribution of grant funds across the PIs.
 - 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% 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 from the requested grant funds. Any attendance at CZI meetings in the U.S. will be covered by CZI outside of requested grant funds.
 - All key personnel must be named along with their percent effort. This includes graduate students, postdocs, and staff scientists. Although recruiting new members to the lab is allowable, it is strongly encouraged that key personnel are in place at the outset of the grant to allow for coordinated community building and project progression.
 - Application budgets must reflect the actual needs of the proposal. The 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 Co-PI; maximum of five 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.

- **Optional Attachments:** Upload in PDF format; attachments should be uploaded in a combined single PDF. Include up to a maximum of three pages of additional information. This section can include figures, charts and tables, references for the project, or any additional material in support of the project. Uploading any additional information is completely optional and not required.

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.

QUESTIONS?

For administrative and programmatic inquiries pertaining to this RFA, please contact sciencegrants@chanzuckerberg.com. For technical assistance with SMAApply, please contact support@smapply.io, or while logged into SMAApply, click on the information “i” link in the upper right corner and submit a help request ticket.