



The Chan Zuckerberg Science Initiative -- Mission

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

10 Year Plan

Accelerating biomedical science by developing **new tools and technologies** and supporting **open, collaborative** models of research.

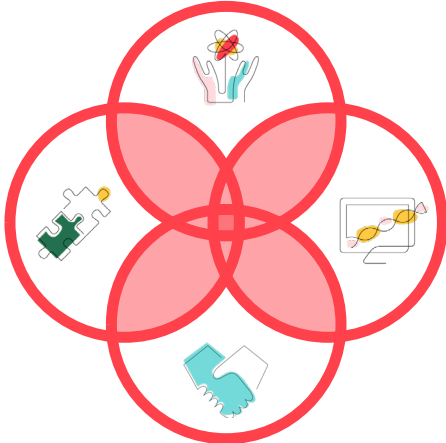
Our Values

People
Technology
Collaboration
Open Science



Accelerating Biomedicine

**We Fund
Grants and RFAs**



We Collaborate

**We Build
Science Tech Team**



**We Engage
Science in Society**

Phil Smooth
Head of Science Technology
Vice President of Engineering



Programs

Experiments in
accelerating science

Building tools and
resources, for and
with scientists

Changing the culture
of science



CZ Biohub



Single-Cell Biology



Neurodegeneration Challenge Network



Science in Society



Imaging



Open Science

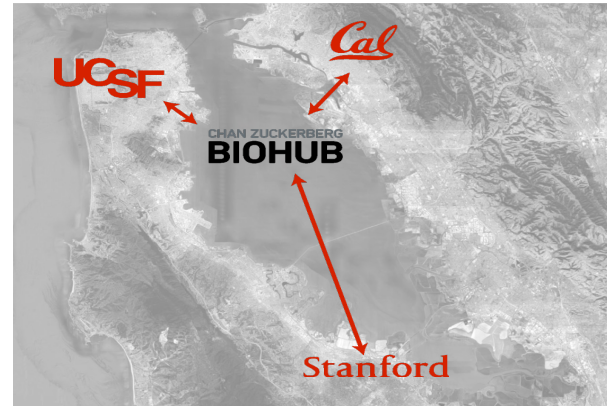
Chan Zuckerberg Biohub



A technology-focused research site that brings together scientists, engineers, and physicians, **linking 80+ faculty members from UCSF, Berkeley, and Stanford University**

Steve Quake (cell bio) and Joe DeRisi (ID)
Co-Presidents

March 2020: Sars-CoV-2 testing in SF





Chan Zuckerberg Biohub + CZI



Dr. Diane Havlir, UCSF



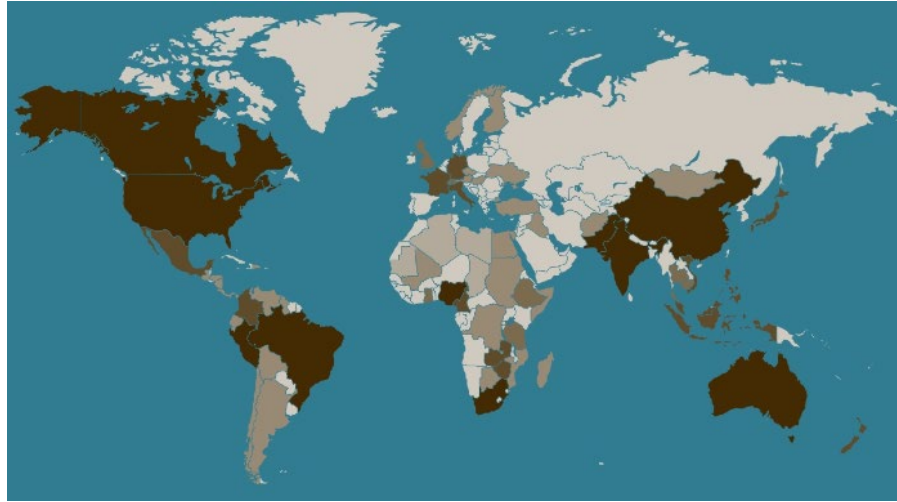
Jon Jacobo, Latino Task Force



Building Capacity for Pathogen Sequencing

Metagenomics: IDseq

Sars-CoV-2: Aspen



Open Science

1. Tools & resources for research

2. Education & capacity building

3. Metrics & incentives

4. Sharing platforms

5. Improved infrastructure technology & integration

bioRxiv

medRxiv

THE PREPRINT SERVER FOR HEALTH SCIENCES



BMJ Yale

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medRxiv is receiving many new papers on coronavirus SARS-CoV-2. A reminder: these are preliminary reports that have not been peer reviewed, and should not be used to guide practice/health-related behavior, or be reported in news media as established information.

COVID-19 SARS-CoV-2 preprints from medRxiv and bioRxiv

8583 Articles (6766 medRxiv, 1817 bioRxiv)

 protocols.io

meta

 ASAPbio

 THE
CARPENTRIES

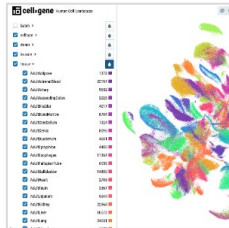
Single-Cell Biology

Defining and describing the parts list of the human body



Human Cell Atlas *funding*

A global effort to map all 37 trillion cells in the human body as a resource for studies of health and disease



Tools *funding and building*

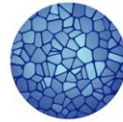
cellxgene

Human Cell Atlas Data Coordination Platform

Single-Cell Biology

Defining and describing the parts list of the human body

COVID-19 Cell Atlas



HUMAN
CELL
ATLAS



Healthy donors

Patient donors

Reference data should be representative

The image shows two panels side-by-side. The left panel has a pink decorative header and a 'DUE 25 May' badge. The right panel has a teal decorative header and a 'CLOSED' badge. Both panels describe RFA opportunities for single-cell biology reference data.

Topic	Status	Application Period
Ancestry Networks for the Human Cell Atlas	Open	Until May 25
Pediatric Networks for the Human Cell Atlas	Closed	Not applicable

Left Panel: Ancestry Networks for the Human Cell Atlas

REQUEST FOR APPLICATIONS
SINGLE-CELL BIOLOGY

Ancestry Networks for the Human Cell Atlas

This RFA supports researchers to contribute healthy, single-cell reference data from ancestrally diverse tissue samples to the Human Cell Atlas, with the aim of creating a more globally representative resource to understand disease.

[How to Apply](#)

Right Panel: Pediatric Networks for the Human Cell Atlas

REQUEST FOR APPLICATIONS
SINGLE-CELL BIOLOGY

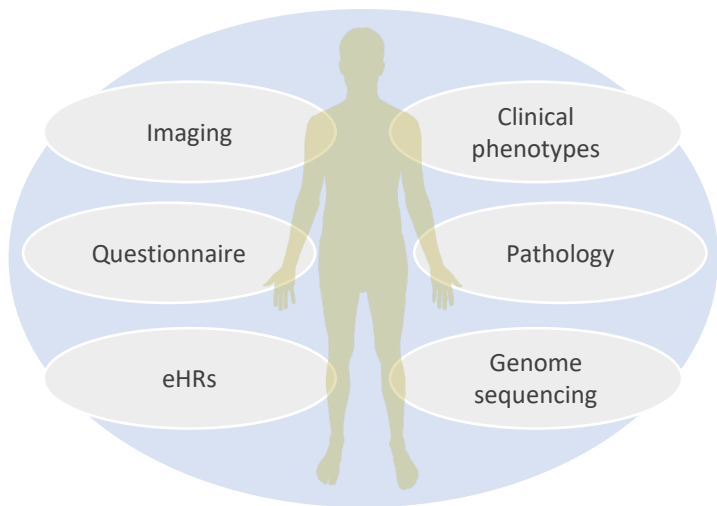
Pediatric Networks for the Human Cell Atlas

This grant program supports researchers to contribute pediatric tissue samples to the global Human Cell Atlas as a foundation for understanding how cells and organs progress and relate to disease onset in children.

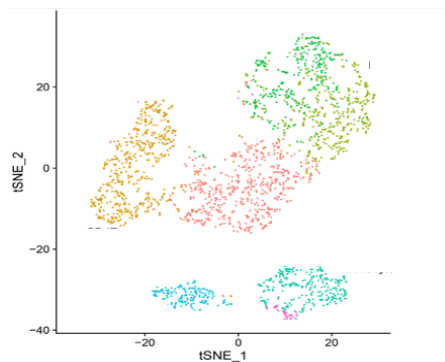
[RFA Details](#)

Population-scale single-cell RNA sequencing of blood cells from multi-ethnic cohorts

Deeply phenotyped cohort



scRNA profiling of PBMCs



Integrative analyses

Comprehensive characterisation of blood cell types, states, and ratios in diverse human populations

Contributions to human biomedical traits and diseases

Principal investigators

- Nicole Soranzo (WSI)
- Sarah Teichmann (WS)
- Oliver Stegle (WSI/DFKZ)
- Hilary Martin (WSI)
- David van Heel (QMUL)



Imaging and Microscopy: Access, Training, Sharing

IMAGING SCIENTISTS

- **Technical Experts** 40 imaging experts in the US and Europe supporting local communities of biomedical researchers

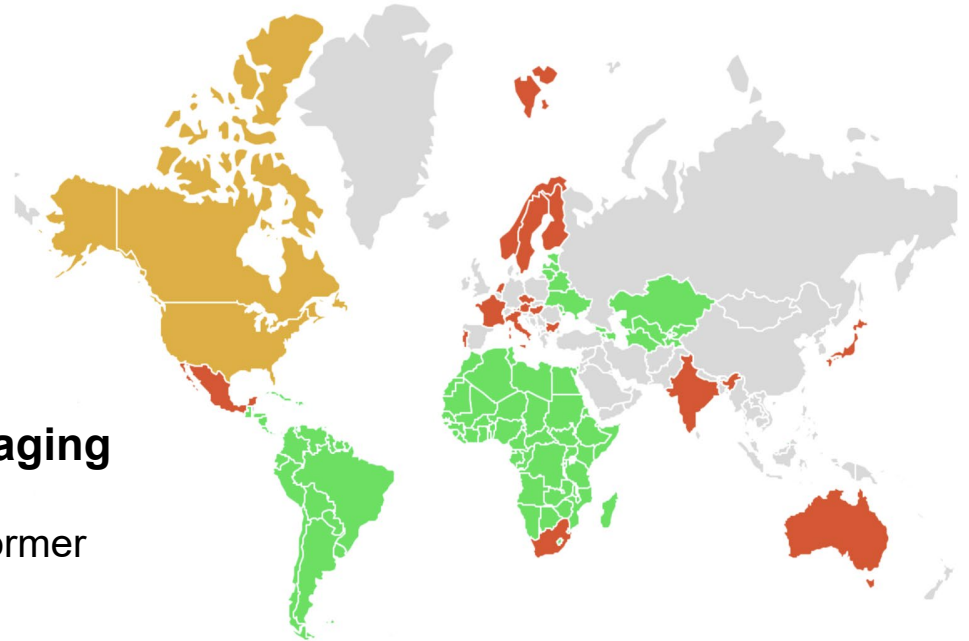


NETWORKS

- **Global Bioimaging (GBI)**
11 countries worldwide
- **Bioimaging North America (part of GBI)**
United States, Canada, Mexico

EQUITY

- **Expanding Global Access to Bioimaging**
(new RFA, opens today)
Africa, Latin America and the Caribbean, former Soviet countries



Diversity, Equity, and Inclusion in Science



Supporting Student Diversity in STEM -- California

With CZI support, UC San Diego and UC Berkeley are implementing aspects of UMBC's Meyerhoff Scholars Program to support underrepresented students in STEM.



An Equity Lens for Our Work -- US and International

Who benefits from science? To cure all diseases in all people, we cannot propagate existing biases and omissions, but must focus our work on the people with the greatest unmet needs.



Partners and Grantees -- Everyone

We encourage applications from a wide variety of expertise areas, fields, geographic locations, and institutions, led by teams made up of individuals of different ethnicities and genders.



What does success look like?



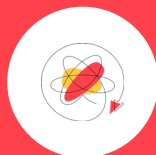
Productivity

Publications, preprints, software, datasets, protocols, resources



Reach

Deposition in public repositories, requests and re-use citations, clinical applications, commercial development



Collaborative contributions

Diversity, equity, and inclusion, leadership, co-authorship, success of students and postdocs



Thank you!