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.

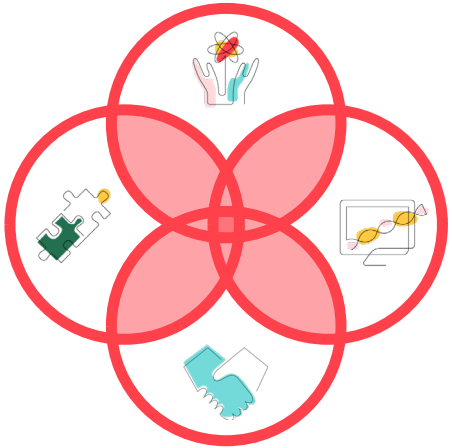
Our Values

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

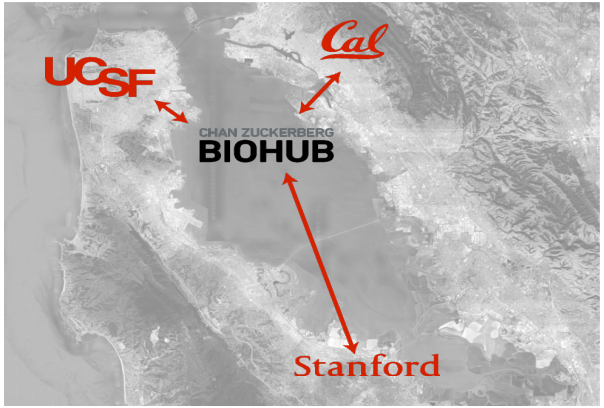
- CZ Biohub
- Single-Cell Biology
- Neurodegeneration Challenge Network
- Science in Society
- Imaging
- Open Science

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

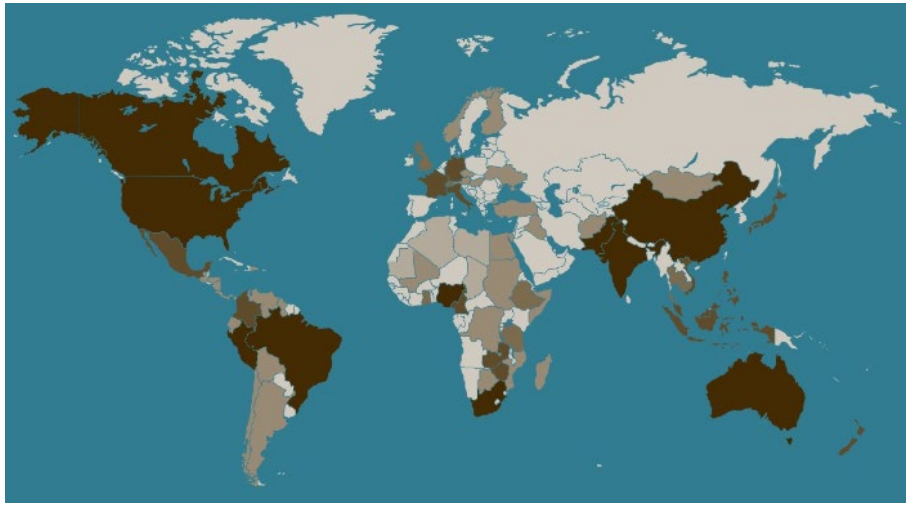
Jon Jacobo, Latino Task Force

UNIDOS EN SALUD UNITED IN HEALTH
SAN FRANCISCO

Building Capacity for Pathogen Sequencing

Metagenomics: IDseq

Sars-CoV-2: Aspen



CHAN ZUCKERBERG INITIATIVE

CHAN ZUCKERBERG BIOHUB

BILL & MELINDA GATES foundation

AFRICA CDC
Centres for Disease Control and Prevention
Safeguarding Africa's Health

CDPH
California Department Of PublicHealth

Open Science

1. Tools & resources for research

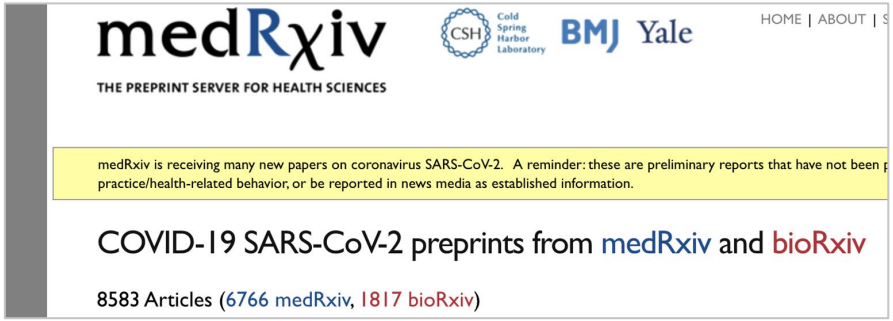
2. Education & capacity building

3. Metrics & incentives

4. Sharing platforms

5. Improved infrastructure technology & integration

bioRxiv



protocols.io

meta

ASAPbio

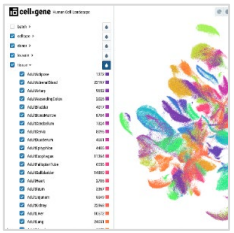
THE CARPENTRIES

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*

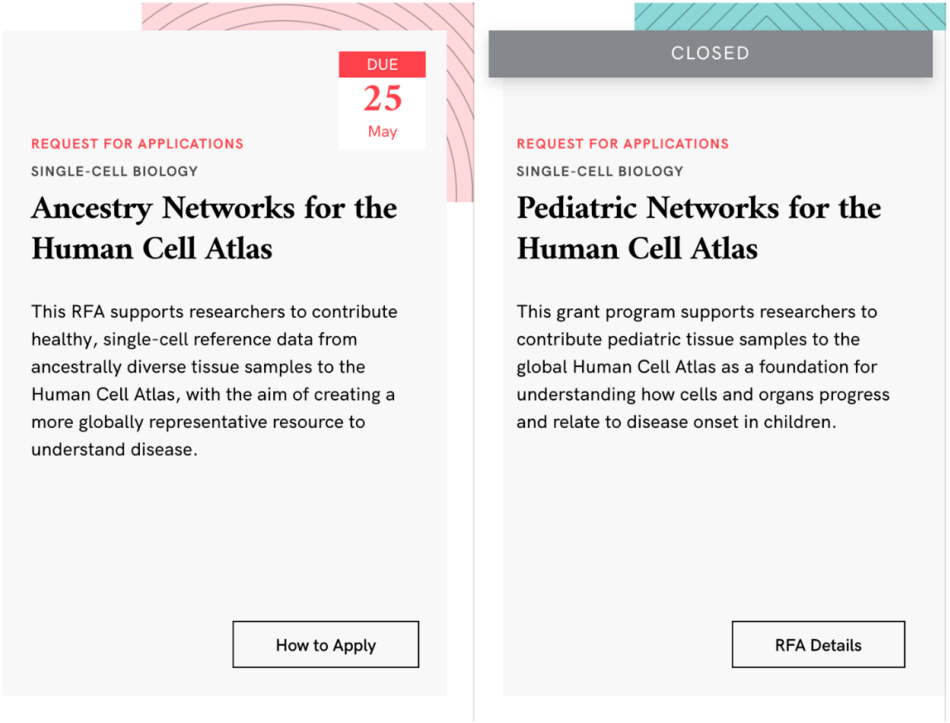
cellxgene

Human Cell Atlas Data Coordination Platform

Single-Cell Biology

Defining and describing the parts list of the human body

Reference data should be representative

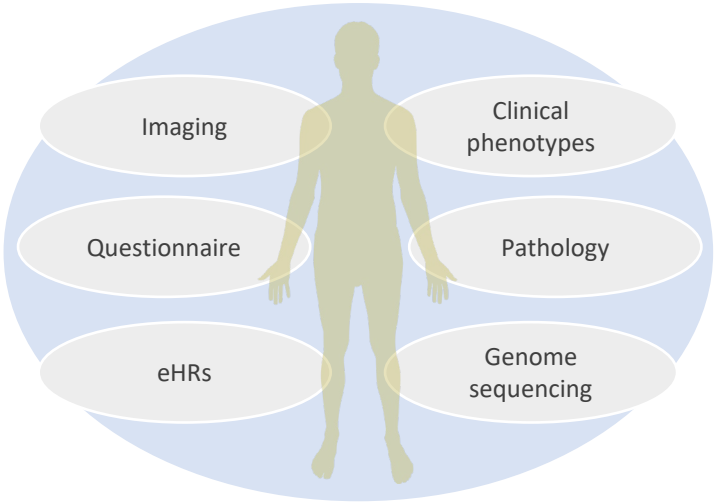


Population-scale single-cell RNA sequencing of blood cells from multi-ethnic cohorts

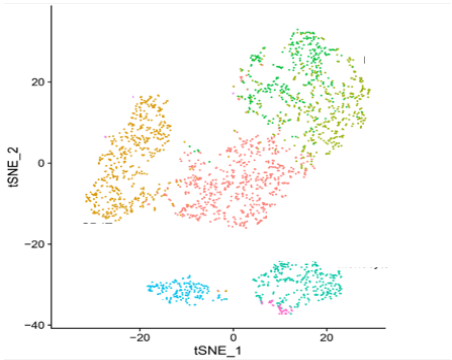
biobank uk

East London Genes & Health

Deeply phenotyped cohort



scRNA profiling of PBMCs



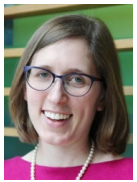
Integrative analyses

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/DKFZ)
- Hilary Martin (WSI)
- David van Heel (QMUL)




Queen Mary University of London

dkfz.

wellcome sanger institute

Imaging and Microscopy: Access, Training, Sharing

IMAGING SCIENTISTS

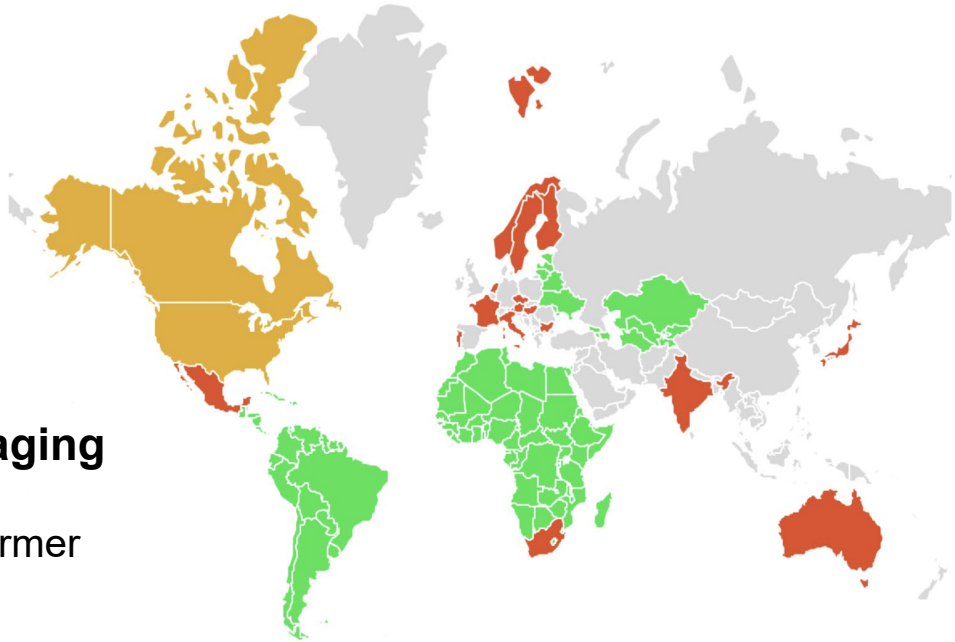
- **Technical Experts** 40 imaging experts in the US and Europe supporting local communities of biomedical researchers

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!