Chan Zuckerberg Initiative

A Future For Everyone:

Education, Justice, Opportunity, Science

Chan Zuckerberg Science

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

81 years

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

10 years

Accelerating Biomedical Research

Collaboration between scientists, physicians, patients, and engineers

Enabling tools and technologies that are robust, reliable, scalable, and sharable

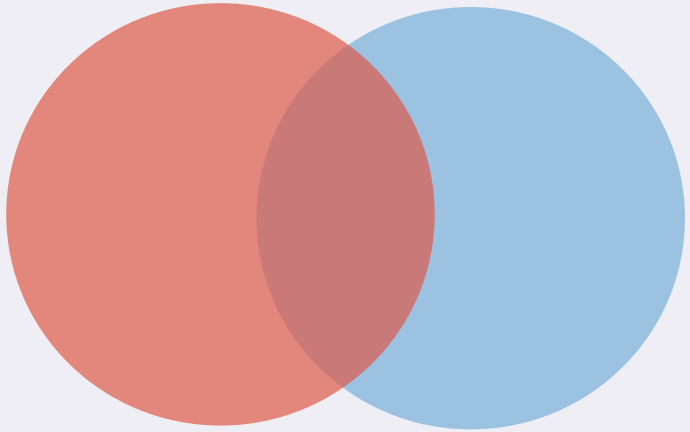
Building support for science

People – Technology – Collaboration – Open Science

Our Approach

WE FUND

- Grants & partners worldwide
- Science Programs

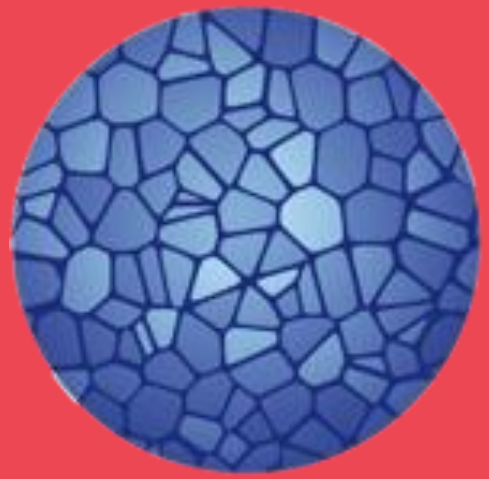


WE BUILD

- Open-source software
- Science Tech – engineers,
- Product managers, user experience

We collaborate

Learning on the ground

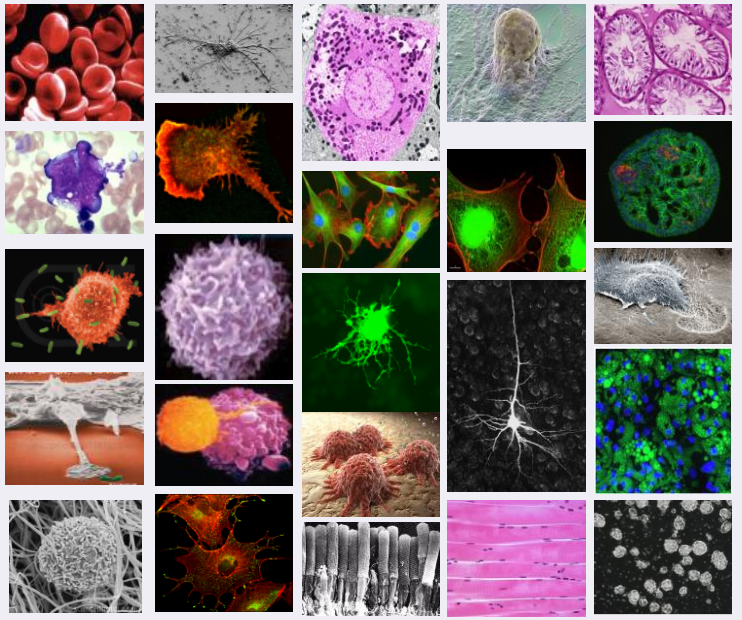


CZI’s Support of the Human Cell Atlas

Transformative Technology for Biomedical Science

HUMAN CELL ATLAS

humancellatlas.org



A free, open reference map of all cells in the healthy human body

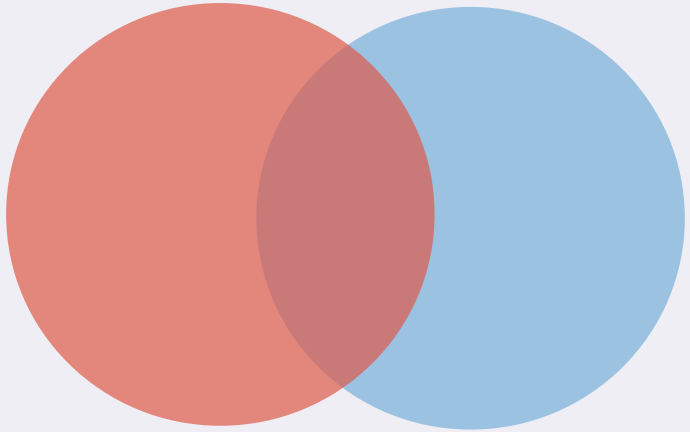
TYPES, NUMBERS, LOCATIONS, NEIGHBORS, MOLECULAR COMPOSITION

CZI's support for the Human Cell Atlas:

WE (HELP) BUILD
a data coordination platform

WE FUND

Researchers worldwide



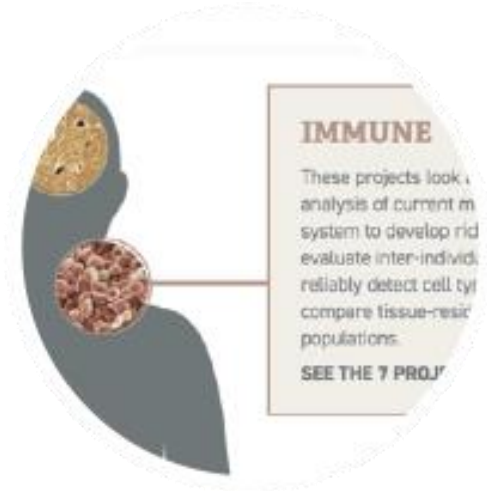
WE BUILD

Analysis tools for the community

Also engaged

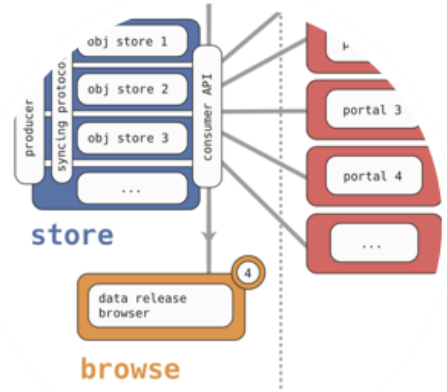
Helmsley, Wellcome, NIH, Klarman Foundation, EU, DFG, RIKEN, Wallenberg Foundation

CZI grants that support the Human Cell Atlas:



Pilot Projects
for the HCA

Collaborative
Computational Tools



Building a
Data Coordination Platform

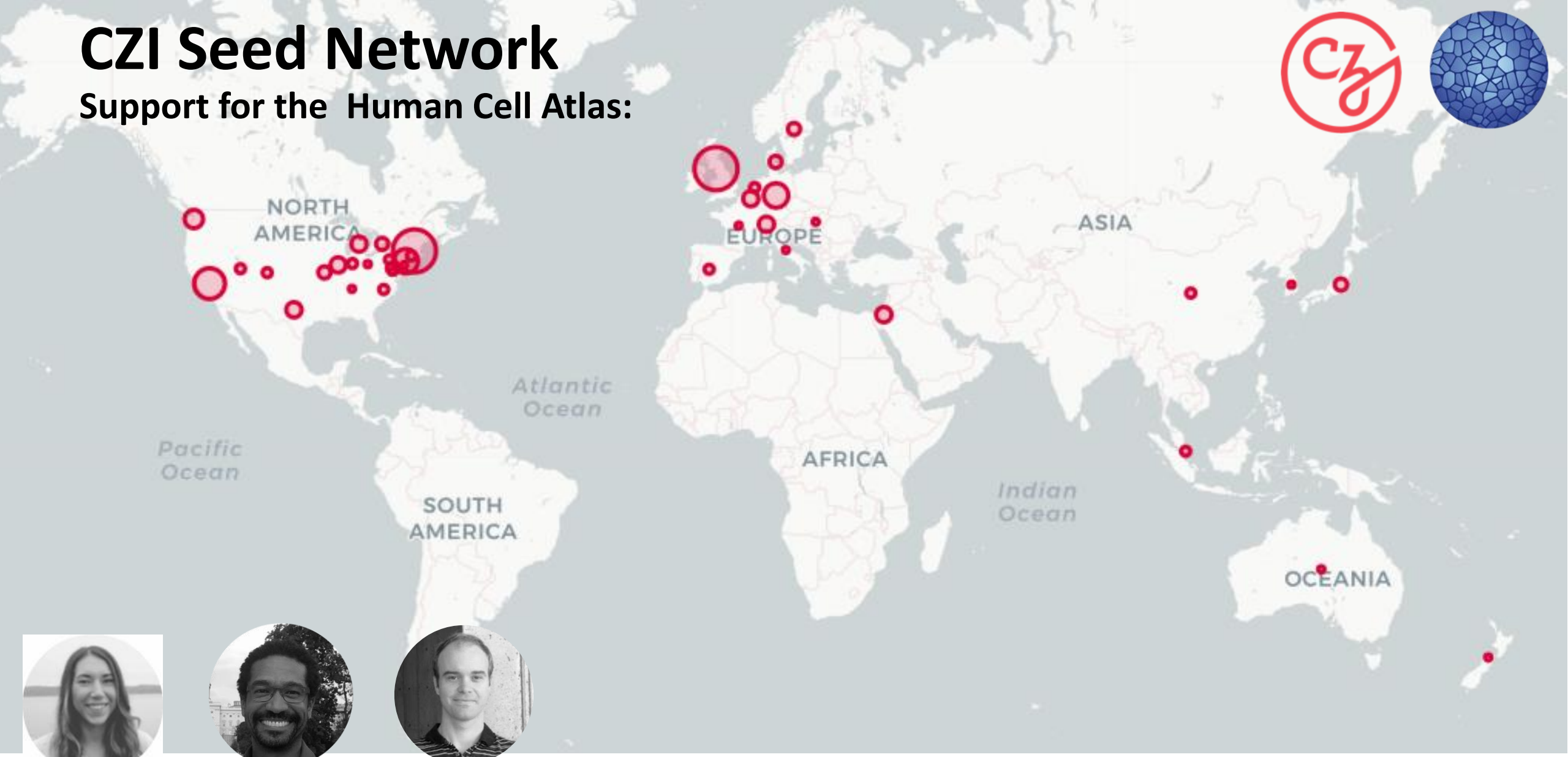
+Tissue resources & ethics framework (w/ Helmsley & Klarmann)
We want to learn from other atlas/consortia project and you.

NINA CARDOZA

TIFFANY WOON

CZI Seed Network

Support for the Human Cell Atlas:



FIONA GRIFFIN

NORBERT TAVARES

JONAH COOL

38 Projects, 3 years, 204 labs, 20 countries, 10 organ systems

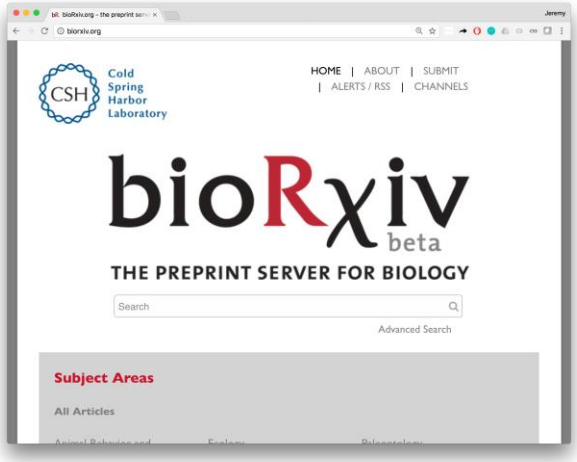
Community Building:

the journey can be as important as the result

Transformative Technology

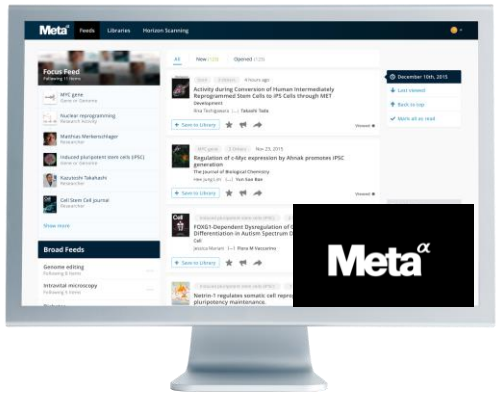
Open Science: Accelerating Knowledge Sharing and Discovery

We Fund



protocols.io

We Build



Meta is a tool that uses machine learning to help researchers discover **papers and preprints in real time.**

Building Resources Together: Open Source Computational Tools

Why GitHub? Enterprise Explore Marketplace Pricing Search

Explore Topics Trending Collections Events

human-cell-atlas

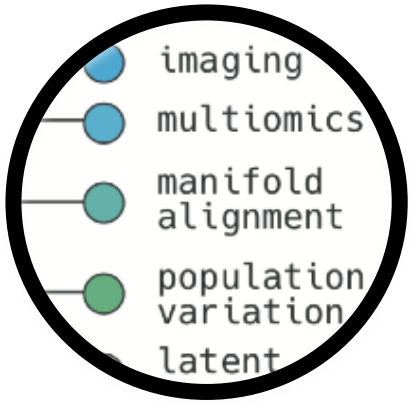
REPOSITORIES 45 Language: All Sort: Best match

satijalab / seurat ★ 507

R toolkit for single cell genomics

human-cell-atlas single

R Updated yesterday




SHANNON AXELROD


TONY TUNG


AMBROSE CARR

starfish: unified pipelines for image-based transcriptomics https://spacetx-starfish.readthedocs....

transcriptomics imaging human-cell-atlas python

1,059 commits 61 branches 32 releases 18 contributors MIT


SIDNEY BELL


COLIN MEGILL


JUSTIN KIGGINS

An interactive explorer for single-cell transcriptomics data https://chanzuckerberg.github.io/cell...

scientific visualization scrna-seq transcriptomics dataviz

857 commits 13 branches 24 releases 17 contributors

Single Cell Analysis of Inflammation RFA

Deadline Nov. 19th 2019

1) People: Teams of 2-3 labs
   - interdisciplinary, early career scientist, global participants, etc.

2) Projects: 2 year pilots to develop and apply tools
   - transcriptomics, imaging, analysis methods, system integration, diverse tissue
   - Up to $175k in total cost per lab

3) Connect: improved *in vitro* model to the clinic
   - Promote collective progress, identify emergent themes, capture many forms of diversity

Goal: community growth and identify bottlenecks

JONAH COOL

More information at: https://chanzuckerberg.com/rfa/single-cell-analysis-inflammation/

Essential Open Source Software RFA

Domain-specific tools

Domain-specific software for analyzing, visualizing, and otherwise working with the specific data types that arise in biomedical science.

Foundational software

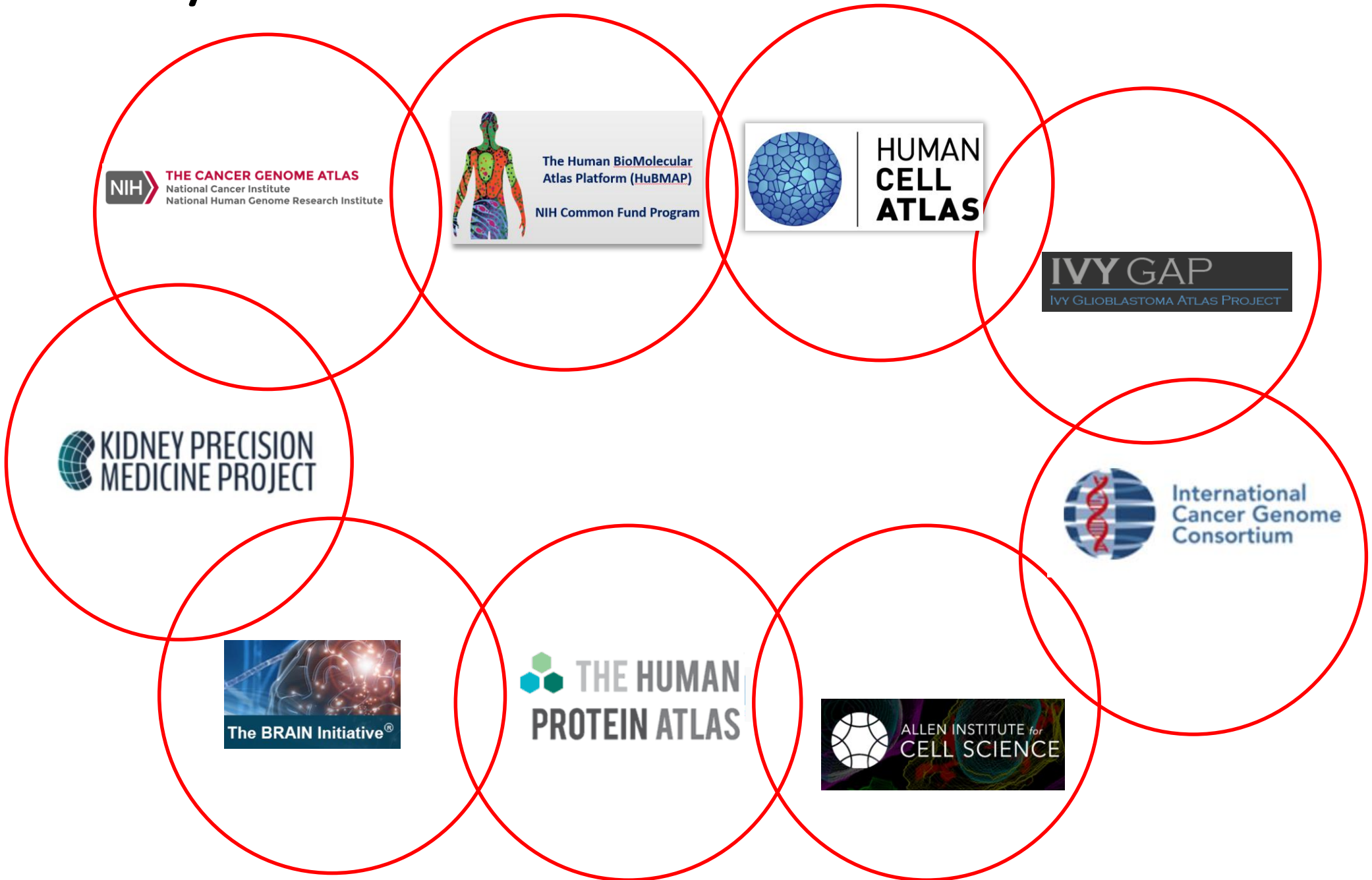
Cross-cutting tools and infrastructure that enable a wide variety of computational research (e.g. data structures, workflows, numerical computing).

- Funding: $50K - $250K
- Grants are for one year
- 3 cycle in June 2019, **Dec 2019, June 2020**

https://chanzuckerberg.com/rfa/essential-open-source-software-for-science/

DARIO TARABORELLI

One of Many: Cross-Atlas Collaboration & Coordination



One of Many: Cross-Funder Coordination

Chan Zuckerberg Initiative

Thank you.