

Supporting Researchers Through the Technologies of the Global Health Discovery Collaboratory Platforms



Request for Proposals

Applications due no later than December 16, 2022, 11:30 a.m. U.S. Pacific Time

Background

The Global Health Discovery Collaboratory (GHDC) Platforms program at the Bill & Melinda Gates Foundation - or "[Collaboratory Platforms](#)" - enables access to specialized research platforms to accelerate the discovery and translation of transformative solutions to global health inequity. These Platforms enable access to cutting-edge technologies and unique expertise to guide the design, execution, data analysis and interpretation to support a wide variety of initiatives, including discovery for vaccines and biologics, human immune monitoring, biomarker discovery, characterization of host-pathogen interactions, and more. Scientists in low- and middle-income countries (LMICs) have the local knowledge and perspective crucial to finding the right solution and directing it to the right problem, and the Gates Foundation is committed to ensuring that scientists based in LMICs have opportunities to advance their work through partnership with the Collaboratory Platforms.

The Challenge

We seek creative projects that are led by investigators in LMICs¹ and whose path to global health impact would be accelerated through partnership with the Collaboratory Platforms. Proposed ideas should be in alignment with the GHDC focus areas listed below. They should also align with the Gates Foundation's [strategic priorities](#), including but not limited to tuberculosis, HIV, malaria, pneumonia (e.g., influenza, RSV, coronavirus), enteric diseases (e.g., *Shigella*, rotavirus), HPV, and neglected tropical diseases. The details and scope of the involvement of the Collaboratory Platform will be co-developed once finalists are identified.

GHDC focus areas:

- Development of vaccines and biologics
- Drug discovery
- Biomarker discovery
- Maternal, neonatal, child health
- Reproductive health technologies
- Translational sciences

¹ See [World Bank - Low & Middle Income](#) Countries for definitions. Subject to the eligibility requirements in the Rules & Guidelines, investigators in low- and middle-income countries are invited (in connection with the organization with which they are affiliated) to apply through the Bill & Melinda Gates Foundation's application portal. We reserve the right to determine eligibility for this call based on these characteristics.

Funding level: up to USD \$250,000 for each project, with a grant term of up to two years depending on the scope of the project.

What We Are Looking For

We are looking for proposals from investigators based in LMICs* that are aligned with our [strategic priorities](#). Proposed activities involving data and sample collection and experiments performed at the LMIC institution will be funded via new direct grants, while work performed by the Collaboratory Platform partners will be funded directly by the Gates Foundation through a separate funding mechanism. Proposed ideas may be entirely new projects or ideas that will enable further in-depth analysis to complement an existing project. Pilot studies to generate initial data that may lead to potential larger follow-on studies (via separate funding) or proposals aimed at generating hypotheses are acceptable, as are studies designed to test specific hypotheses. In addition to collaborating with Gates Foundation-funded investigators, some Platforms can train interested collaborators in wet lab or analytical techniques in the context of a specific project.

Your proposal should include:

1. A description of your idea and how you intend to test it
2. A description of what you will do at your institution with the funds provided
3. The name of the Collaboratory Platform you wish to work with during your project and why this platform will enable you to more effectively test your idea(s). We do not expect proposals to contain detailed descriptions of work done by the Platforms, as we expect workplans will be jointly developed after finalists are selected. You do not need to provide a budget for the Platform in your proposal.

Please visit the Global Health Discovery Collaboratory [website](#) to learn more about the GHDC and the individual Collaboratory Platforms. Representatives from each Collaboratory Platform are attending the 2022 Grand Challenges Annual Meeting and will be presenting posters at the poster session. We encourage interested parties to visit the poster session and also to attend the GHDC scientific track sessions at the meeting to learn more.

Collaboratory Platforms focus areas:

- [Adjuvants & Formulations](#): Access high quality adjuvants, formulation expertise, and small-animal immunogenicity studies.
- [Antibody Dynamics](#): Providing qualified/validated GCLP compliant antibody measurements for specificity, isotype/subclass, avidity, affinity, and function; immune systems computational expertise to define immune correlates of protection.
- [Antigen Arrays](#): High throughput microarray technology enables measurement of antibody responses to thousands of proteins in a single assay.
- [Human immunoglobulin repertoire mice](#): Interrogate immunogens against a human immune repertoire. Discover and isolate mAbs to support your research or advance product development.
- [Protein Sciences](#): Provides in-depth structural characterization of immunogens using a variety of structural and biophysical techniques.

- [Metabolomic Biomarker Discovery](#): Offers untargeted mass spectrometry-based molecular profiling to measure thousands of distinct small molecules in biosamples to accelerate discovery of biomarkers of health and disease.
- [Proteomic Biomarker Discovery](#): Quantify thousands of proteins using liquid chromatography mass spectrometry (LC-MS) to obtain signatures reflective of health or disease status.
- [SARS-CoV-2 Immunoassays](#): Access validated / qualified assays to evaluate vaccines or mAbs for SARS-CoV-2 (Opportunities to develop assays for other global health diseases).
- [Single Cell Analytics](#): Provides experimental and computational single-cell genomic profiling for in-depth molecular characterization of biological specimens.
- [Systems Immunology](#): Offers comprehensive and standardized immune monitoring, cutting-edge technologies and novel analytics.
- [Systems Serology](#): High-throughput biophysical profiling and functional assays linked with systems biology/machine learning algorithms to characterize protective humoral immune responses.
- [Vaccine Immunology Statistical Center](#): Access expert biostatistical support for study design, data management, high-dimensional data analysis, statistical and machine learning methods to advance global health research.
- [HTS Teratogenicity Assessment](#): High-throughput imaging-based teratogenicity platform utilizing Human iPSCs for assessing reproductive and developmental toxicity.
- [Humanized Drug Metabolism Mice](#): A humanized mouse model that expresses human P450 enzymes and metabolizes drugs like humans, gives human-like pharmacokinetics, and generates human drug metabolites in vivo.
- [Enabling mRNA Immunogens](#): A solution for formulating high-quality research-grade mRNA-LNP immunogens for preclinical research studies.

We Will Not Consider Funding for:

- Clinical trials
- In-vivo studies in non-human primates
- Investigators whose primary appointment is in a high-income country
- Proposals that do not include the use of the Collaboratory Platforms
- Proposals that do not align with the scope/remit of the Collaboratory Platforms
- Purchase of capital equipment
- Institutions that are unable to sign the [Collaboratory Guiding Principles](#) by the time of grant execution.