

GLOBAL BIODATA COALITION

LETTER OF UNDERSTANDING

The Global Biodata Coalition (GBC) is a forum supported by research funders that aims:

- To be a forum for funders of biodata resources to better coordinate and share approaches for efficient management and growth of this infrastructure and share strategies.
- To stabilize and ensure sustainable financial support for the global biodata infrastructure, with a focus on an identified and prioritized set of Global Core Data Resources that are crucial for sustaining the broader infrastructure.

This Letter of Understanding sets out the shared understanding of how the GBC will be developed. It is an informal document and is not legally binding. The GBC Board of Funders will develop statutes for the operation of the organization once the location of the Secretariat and the legal structure is established.

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Background

We support biological, life sciences, and biomedical research that generates high volumes and many types of data that are deposited in publicly accessible biodata resources. These biodata resources are essential for academic and private-sector research by scientists worldwide and collectively form a global infrastructure that is now central to almost all forms of biomedical and life sciences research.

Though used universally, funding for this infrastructure comes from national and charitable research funders, with little coordination.

This leads to duplication, inefficiencies, and difficulties in access, and means that funders and the scientists they support are often unable to meet open-access goals and requirements. Equally important is also the real risk that important resources might disappear if funding for biodata resources is abruptly cut.

Greater coordination among funders will benefit scientists, the funders, and use of the data for public and private purposes.

The challenges for biological, life sciences, and biomedical research funders are many. They include:

- the near universal use of biodata resources in funded research,
- the duplication that comes from an absence of strong coordination,
- the exponential growth in the production of data, and
- the requirement of almost all funders to ensure that data from the funded research are openly accessible to all scientists everywhere.

Already, best estimates are that the world's research funders spend at least USD 500 million annually to support biodata resources.

We are forming the GBC so that together, we can help ensure sustainable and efficient support of biological, life sciences, and biomedical data.

Rationale for forming GBC

As funders of biomedical and life sciences research:

1. We recognize the essential role and growing importance of biomedical and life sciences biodata resources in current and future scientific research.
 - a. Biomedical and life sciences biodata resources are essential infrastructure for public and private research by scientists worldwide. Research funding organizations spend at least USD 500 million every year supporting such biodata resources.
2. We recognize that the biodata resource infrastructure is both fragmented and fragile.
 - a. Biodata resources are growing exponentially as new technologies enable greater data production.
 - b. These resources are crucial to current and future biomedical and life sciences research and are required for managing the open-access policies being adopted by most funders.
 - c. This infrastructure has developed piecemeal over recent decades and to a large extent without significant coordination among funders or biodata resource managers. As a result, the infrastructure is fragile and fragmented, and in parts duplicative and non-strategic.
3. We recognize that biomedical and life sciences funders would benefit from working together to manage funding for biodata resources.
 - a. The GBC is being formed to assist funders with their future strategies to address the challenges associated with biodata resources, to ensure that essential biodata resources remain freely available to all researchers everywhere around the globe (and not restricted to higher financial resources regions), to address the fragility and potential loss of biodata resources that would damage both public and private research, and to share strategies for the further expansion of biodata resources (e.g., for imaging data).

GBC Aims

Accordingly, we agree that the GBC will have the following two key missions:

- To be a forum for funders of biodata resources to better coordinate and share approaches for efficient management and growth of this infrastructure and share strategies.
- To stabilize and ensure sustainable financial support for the global biodata infrastructure, with a focus on an identified and prioritized set of Global Core Data Resources that are crucial for sustaining the broader infrastructure.

Scope

The GBC will focus initially on only those biodata resources that are available with unrestricted access.

It will not deal with controlled access or patient data at this time. These more complex biodata resources that manage human data require consent for access and will be addressed in the future, including via collaboration with other organizations working to develop policies for such data (e.g., the Global Alliance for Genomics and Health, GA4GH).

We agree that the GBC should take as a fundamental principle that life sciences and biomedical biodata resources should be open and freely available to all.

The GBC will support the FAIR (findable, accessible, interoperable, and reusable) principles associated with data, as well as the CARE (collective benefit, authority to control, responsibility, ethics) principles for indigenous data governance.

Benefits—for funders, scientists and industry

The GBC will benefit funders by managing coordination of spending on data resources globally. This will reduce duplicate spending on similar resources and encourage greater participation of all funders in overseeing the broader biodata ecosystem. Research funders will also benefit from coordinated approaches in support of the open-access data policies that most funders have now implemented.

The work of the GBC will benefit scientists and national infrastructures through safeguarding open-access scientific data and aiding funders in coordinating long-term support for the data infrastructure that is crucial for all biomedical and life sciences research.

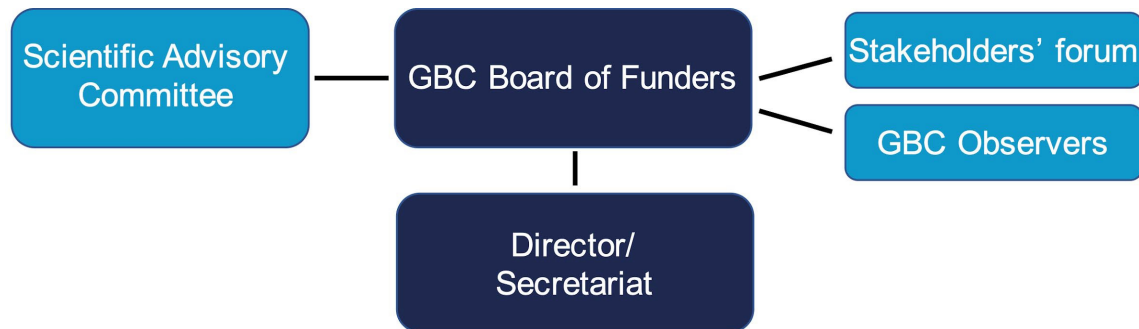
The work of the GBC will be of benefit to industry and the commercial sector because biodata resources are used extensively in patents, drug development, diagnostics development, and other biotechnology areas which, altogether, provide extensive societal and socio-economic benefits.

Governance

We agree that the GBC is a voluntary collaborative endeavour. Financial and in-kind contributions to the GBC are voluntary. A just and fair system for the contributions to support the operation of the GBC and its activities is agreed as below.

The GBC will establish GBC as a legal entity, after agreeing upon a location for its Secretariat (whether independent or as part of a host organization). Offers to host the GBC secretariat are sought so that the secretariat can be established as soon as possible. The aim is to complete this during 2021.

We support the following GBC overall structure of governance.



The GBC welcomes all biomedical and life sciences research funders worldwide to participate in the organization.

GBC Members

GBC Members may be national government funding bodies, international bodies that support the GBC, charitable funding bodies, or other entities delegated by such organizations.

Members agree with the Letter of Understanding and support the GBC financially and/or via in-kind means, in accord with principles agreed by the Board.

Essential regional and invited GBC Members.

GBC seeks to address biodata resource issues that affect scientists throughout the world. For this reason, the Board may invite additional bodies to join to better ensure comprehensive coverage of all continents and regions of the world, and to include transnational/international critical infrastructure bodies that can assist the GBC in its mission.

For the purposes of this document, Members authorize the Coalition to use, under Board supervision, their name and logo on the GBC website.

The Board of Funders

The Board is the governing and decision-making body whose powers and responsibilities are to:

- provide financial and/or in-kind contributions
- adopt rules (bylaws) to achieve the GBC aims
- adopt a (multi-year) strategic plan, work plan and budget for the GBC, and authorize expenditure of the budget
- appoint the Executive Director, approve regulations governing the work of the Secretariat, and monitor its work
- establish relationships with other organizations (e.g., the Global Alliance for Genomics and Health)

The Board consists of individuals who are appointed by GBC Members and who act on behalf of the Members to ensure that GBC operations fulfil the aims of the strategic plan and follow the agreed-upon work plan. The Board will strive to make decisions by consensus.

The Executive Director and the GBC Secretariat

The Executive Director and the Secretariat is mandated by the Board of Funders to carry out operational activities according to the agreed-upon work plan, including spending of, and

accounting for, the annual budget. The GBC Secretariat is headed by an Executive Director, who shall initially be appointed for a 5-year period. The Executive Director will implement the work program approved by the Board, be responsible for the hiring of all staff directly employed by the GBC, and supervise the work of the GBC Secretariat and staff as well as any consultants and seconded personnel.

Scientific Advisory Committee

There will be a Scientific Advisory Committee (SAC) to provide expert scientific advice to the Board, appointed by the Board and reporting to the Board. It will be geographically diverse.

The SAC provides advice to the GBC Board of Funders and the GBC Executive Director in all aspects of the development and implementation of the GBC's scientific mission. These include reviewing GBC scientific and coordination activities and providing external input about proposed activities and strategic plans. The SAC members are expected to make the GBC aware of new data resources, technologies, and strategic initiatives that might be relevant to the GBC's mission.

The Board may also appoint SAC subcommittees to give it advice on specific matters.

The Stakeholders' Forum

The Stakeholders Forum comprises of data resource managers, data infrastructure managers, scientists, technical experts, and funders will meet annually and provide insights on developments in the life sciences and associated biodata resources that will inform development of the GBC strategy.

Observers.

GBC Observers are nominees of funding organisations that agree with the aims of the GBC but cannot (or cannot yet) support GBC financially. Observers will be invited to attend GBC Board meetings and participate in discussions. This arrangement will be for 2021 and 2022.

Funding the GBC

We recognize that the development phase of the GBC has been supported financially by contributions from the Wellcome Trust, the National Human Genome Research Institute of the U.S. National Institutes of Health, the U.S. National Science Foundation, and the Agency for Science Technology and Research (Singapore).

We agree to share future financial support for the GBC based on the following Principles:

- We will agree to a GBC budget on a rolling three-year basis and together commit to provide cash and in-kind support to meet this obligation.
- GBC members will be expected to provide cash contributions. The initial amount will be based on members reported annual life sciences and/or biomedical sciences research budget.
 - Band 1 - Research Funders with a total annual research funding in biology/life science/biomedical science of USD 5 billion or more.
 - Expected minimum annual contribution: USD 300 thousand.
 - Band 2 - funders with total annual research funding in biology/life science/biomedical science of USD 0.5–5 billion.
 - Expected minimum annual contribution: USD 100 thousand.
 - Band 3 supporters: funders with total annual budgets in biology/life science/biomedical science of less than USD 0.5 billion.
 - Expected minimum annual contribution: USD 30 thousand.
 - Essential regional and invited Members will not be expected to provide a cash contribution, though in-kind contributions may be sought.

- The amount of the annual contribution will be reviewed by the Board regularly and may be adjusted upwards or downwards after review of GBC’s activities, the number of contributing members, and other costs.
- With Board approval, some funders may provide a portion of their contribution via in-kind support. The in-kind contributions may include actions such as paying for consultation services, conducting the Global Core Data Resource selection process, provision of office space and utilities, funding GBC plenary meetings, and website development/maintenance.

Rigorous review

The Board will commission an independent formal review of GBC after three years of its establishment.

Scientific activities

We note that work has begun on:

- Developing a process to select a set of Global Core Data Resources (GCDRs), which will help to focus the efforts of the GBC. The notion of “Core Data Resources” was developed by ELIXIR to identify in Europe a set of biodata resources that are fundamental to the entire biomedical and life sciences data infrastructure. The GCDRs will extend this concept to the entire world, identifying for funders a set of resources that are most critical for biomedical and life sciences research worldwide, encouraging funders to ensure their long-term sustainability. A transparent and rigorous process to identify and periodically review Global Core Data Resources will be developed.
- Survey of the global biodata resource landscape. This will give a first-ever worldwide overview of biodata resources, providing a basis upon which the GBC can work successfully on the first aim of the GBC—to be an informed forum for funders of biodata resources that will facilitate better coordination and shared strategies for efficient management and growth of the global biodata infrastructure.

We further note the activities set out in the GBC RoadMap.

Consultation and inclusion

There are many stakeholders involved with the international biodata resource infrastructure whose input is essential if the GBC is to achieve its goals. The GBC will consult with managers, curators, and users of biodata resources at meetings and through the GBC website www.globalbiodata.org, and through convening annual plenary meetings of the Stakeholders’ Forum.

Duration

This initial letter of understanding is a time-limited document, agreed upon with the purpose of developing and establishing the GBC.