



CALL FOR PROPOSALS

Global Genome Initiative 2020 Rolling Awards Program

The Rolling Awards Program sponsored by the Global Genome Initiative (GGI) provides funding for projects that support expeditionary research, the collection of genomic quality archival biological tissues, and the development of genomic biodiversity science at the SI. Smaller requests for up to \$10,000 to enhance field work or acquire genomic collections are strongly preferred and encouraged; however, requests for up to \$30,000 will be considered. All requests must be accompanied by clear and specific budget justifications. **Considering the program's timeline for completion, only proposals that can be completed within one year of funding will be considered. This will be the final call for GGI rolling proposals.**

Proposals will be accepted on a rolling basis until funds for FY20 are no longer available. Proposals must be submitted at least two months prior to the project start date. For proposals that involve the collection and deposition of biological material, final funding decisions may be contingent on demonstration of valid permitting or other authorizations. The evaluation and selection process may require several months after submission of the proposal, so plan accordingly, especially concerning time-sensitive projects involving seasonality, complex travel planning, or other logistics.

Note that this proposal call is separate and distinct from the GGI Peer-Review Awards Program. PIs may apply to both programs but should not submit overlapping or interdependent proposals.

Eligibility

All SI staff, affiliated agency staff, resident research associates, and fellows (fellows' advisors required as co-PI's), who are pursuing science-related scholarship or seek to build and improve genome-grade cryo-collections, are eligible to apply as the Principle Investigator (PI). Multiple proposals per PI will be considered. Other Smithsonian personnel and non-Smithsonian colleagues may be included as co-PIs.

Proposals

Requests for support will be considered for fieldwork, genomic research, and/or barcoding, to the extent that it adds non-barcoded families (especially) and genera to NCBI.

Activities to be funded must support the goals of GGI, including

- (1) collecting *genomic quality* samples (i.e., likely to produce 50% of DNA fragments \geq 9KB) of phylogenetically important representatives of families and genera (sampling at genomic observatories, such as ForestGEO and TMON sites, or ex situ-conservation sites, such as zoos and botanic gardens may be considered);
- (2) increasing the visibility and discoverability of SI's genome quality samples through public release on GGBN (http://www.ggbn.org/ggbn_portal/) and of their DNA sequences (including DNA barcodes) on GenBank;
- (3) DNA barcoding gene regions from taxa in an attempt to "illuminate" as many lineages for which little or no high quality/BARCODE flagged taxonomically specific genetic data exists ("dark" taxa) in GenBank. More information on the BARCODE Data Standard is found [here](#); and/or
- (4) promoting new technologies to solve de-novo sequencing problems, applying new technologies across the tree of life, and promoting better understanding of genomically "dark" taxa.

Field work is expected to enhance the genomic collections of the Smithsonian. Proposals focused solely on collecting genomic samples will be considered. Applicants should make use of the [GGI Gap Analysis Calculator](#) when developing their proposals in order to identify if sampling and/or barcoding addresses familial or generic gaps in GGBN and/or GenBank, respectively. Genomic research should address Smithsonian science priorities and advance sequencing technologies (e.g. improved genome assemblies, or cutting-edge technologies such as Illumina, Pacific Biosciences, Dovetail Genomics, 10X Genomics, Oxford Nanopore Technologies, New England Biolabs, etc.).



All projects must support the research activities of the PI and result in the timely publication of tissue and DNA samples on GGBN, release of genomic data on GenBank (See [Rapid Data Release policy](#)), and publication of new discoveries. Funds will support genomic research, genomic technical or bioinformatics support, travel, shipping, supplies, sequencing, and permits. Funding requests for salaries or stipends will not be considered.

Proposal Format

Applicants must fill out the GGI Awards Program Application Form (available at <https://naturalhistory.si.edu/research/global-genome-initiative/resources>). In addition to the cover sheet and appendices, the PI must submit a 500 word summary of the proposed work.

The PI and all co-PIs should also submit a two-page CV (NSF format). The past productivity of applicant(s), as indicated by the submitted CV(s), will be considered when evaluating proposals.

A short email is also requested from your supervisor indicating the PI's name, project title, and approval of the submission. If the project will result in the accession of new samples into an SI department, an approval email following the same criteria must be sent by the relevant SI department chair as well.

Applications that do not conform to these guidelines will be rejected.

Submission

All application materials should be emailed to GGI@si.edu.

Please consult the following checklist to ensure that your application package is complete.

<p>1. Application packet, attached as a single .pdf:</p> <ul style="list-style-type: none"> a. GGI Award Application Form, including: <ul style="list-style-type: none"> i. Cover sheet, with project abstract (100 words) ii. Proposal Summary (500 words) iii. Completed Appendices A through D b. CV for all PIs (2 pages each, NSF format) <p><i>Please name the .pdf using the following convention: Rolling_FY19_[PI last name]_Proposal.pdf</i></p>
<p>2. Gap analysis results (from Appendix A), attached as an excel spreadsheet (.xlsx)</p> <p><i>Please rename the file using the following convention: Rolling_FY19_[PI last name]_GapAnalysis.xlsx</i></p>
<p>3. Approval emails, sent separately</p> <ul style="list-style-type: none"> a. From your supervisor b. From SI Department chair (if depositing new collections)

Selection and Notification

Proposal requests for \$10,000 or below will be evaluated by the GGI Director and GGI Research Working Group Chair and may be sent out for peer-review at their discretion. Proposal requests for over \$10,000 will be peer-reviewed by a panel of researchers selected by the GGI Operations Team. Please contact Seán Brady (bradys@si.edu) for questions regarding scientific scope and evaluation criteria.

After proposal evaluation, PIs of selected proposals should expect to meet with GGI committee members to discuss logistics and to answer questions. For proposals that involve the collection and deposition of biological material, final funding decisions may be contingent on demonstration of valid permitting or other authorizations.

EVALUATION CRITERIA



(1) Scientific Importance. GGI seeks to fund activities that will enhance current research activities or provide new research opportunities for Smithsonian scientists. Research-based proposals will be evaluated on scientific merit and potential impact on the specific field of study, and should include the following information:

- a) What are the research question(s) addressed by the project?
- b) What will be the specific outcomes, publications or other products of this project?
- c) How will GGI support contribute toward obtaining these goals?
- d) If you received funding from a GGI awards program in the past, please provide an update on results.

(2) Genomic Novelty. GGI funds efforts that contribute towards developing a synoptic collection of genomic-grade material from all major branches of life. Please address the following criteria:

- a) How many families and/or genera will be targeted for collection?
- b) Do these families and/or genera occur on branches of the tree of life that are currently under-represented in biorepositories or GenBank by genomic-grade tissues and data? (the GGI gap analysis calculator can be used to help answer this question, see [GGI Gap Analysis Tool](#)).
- c) What collecting methods will be used and how will these methods result in high quality (*genome grade*) tissues and DNA extractions? If genome grade tissues are not feasible, explain why.
- d) How would the target taxa contribute to current genomic sequencing initiatives?

(3) Technical Impacts.

- a) What are the technical impacts of this project (e.g. how does this project help to advance sequencing technology)?

(4) Matching Resources.

- a) Are matching funds or other matching resources available for this project? If so, describe.

(5) Broader Social Impacts.

- a) What are the broader social impacts of this project (e.g. education or public outreach)?

(6) Timeline for completion.

- a) Will this project be completed within one year of funding? Please provide a detailed project timeline.



Additional information about GGI can be found at <http://ggi.si.edu>