

Symbiosis in Aquatic Systems Initiative

Request for Proposals

Gordon and Betty Moore Foundation
May 1, 2026

1. Overview

The [Symbiosis in Aquatic Systems Initiative](#) at the Gordon and Betty Moore Foundation supports novel methods development and research that substantially advances knowledge of symbiosis in marine and freshwater environments.

Through this [request for proposals](#), the Initiative seeks to catalyze new collaborations that combine **disciplinary expertise in aquatic symbiosis** with **leading-edge techniques from other areas of science and/or complementary disciplines** to enable and accelerate discovery that will address – in new ways – fundamental and often long-standing questions regarding the origin, function, and evolution of symbiotic relationships of aquatic organisms. Competitive proposals will articulate how innovative collaborations will open new lines of scientific inquiry, redefine existing paradigms, or overcome critical methodological and technological limitations in the study of aquatic symbioses.

Symbioses within scope for this call must inhabit an aquatic environment and include a microbial partner. Microbes include bacteria, archaea and single-celled eukaryotes. Microbe-microbe associations are within scope.

The Initiative supports scientists at eligible institutions globally.

2. Goals

Within the three topic areas described below under item 4. Areas of Interest, the Initiative aims to support projects that:

- Develop new tools, methods and data resources.
- Develop and test new theoretical frameworks.
- Integrate approaches and perspectives into aquatic symbiosis research from other scientific and engineering disciplines – such as biomedicine and synthetic biology – to enable new pathways of discovery and to support novel system design and technologies that further decode symbiotic associations.
- Address long-standing questions in the ecology, evolution, and mechanisms of symbiotic interactions in compelling new ways.
- Pursue ambitious and high-risk approaches with the potential for significant impact.

Align with the Initiative's scope and scientific priorities.

3. Team composition

The foundation strongly encourages proposals to include collaborators who bring new methodological, theoretical, and disciplinary perspectives to aquatic symbiosis research. The foundation is particularly interested in collaborations that bring together disciplines that have not historically interacted, where the integration of perspectives creates the potential for qualitatively new approaches and insights.

Team structure

Each proposal must be submitted by a **team of two**.

Required expertise

Each team must include:

- **One researcher with demonstrated expertise in aquatic symbiosis;** and
- **One researcher with complementary expertise** who strengthens and expands the project's aims and approaches.

Complementary expertise may include, but is not limited to:

- Artificial intelligence
- Bioengineering
- Biophysics
- Cell biology
- Cell culture
- Chemistry and chemical analysis
- Computational biology
- Ecology
- Evolutionary theory and modeling
- Fluid dynamics
- Imaging and microscopy
- Limnology
- Oceanography
- 'omics
- Population genetics
- Robotics
- Synthetic biology
- Terrestrial symbiosis

Participation limit

An individual may participate in only one proposal submission in response to this solicitation.

4. Areas of interest

Proposals must align clearly with one or more of the following topic areas.

Topic area 1: Aquatic environments

Research addressing how the physical, chemical, and biological features of aquatic environments shape symbiotic interactions.

For example, projects may include (but are not limited to):

- Environmental constraints and opportunities unique to marine or freshwater systems.
- Effects of fluid dynamics, light, temperature, nutrients regimes, or chemistry on symbiotic partnerships.
- Mechanisms by which symbiotic partners detect and encounter one another in horizontal and mixed symbiont transmission associations.
- Processes governing specificity in aquatic symbioses.
- Comparative analyses of aquatic and terrestrial symbioses.
- Use of engineered or simplified model systems to isolate and test environmental drivers of symbiotic interactions.
- Development of controllable or reconstituted symbioses to understand how environmental parameters shape partner interactions.

Topic area 2: Evolutionary ecology

Research exploring interactions between ecological context, evolutionary processes, and symbiotic partnerships.

Topics may include (but are not limited to):

- Processes governing the origin, maintenance, and breakdown of symbioses.
- Effects of environmental change on the evolution of symbiotic relationships and partners.
- The role of symbiosis in shaping evolutionary processes, including selection, drift, mutation, and gene flow
- Integration of theoretical or computational models with empirical symbiosis research to test or refine evolutionary theory.
- Effects of symbiosis on genome evolution and co-evolution.
- Mechanisms and evolutionary consequences of vertical, horizontal and mixed symbiont transmission.
- Experimental evolution or synthetic approaches to test hypotheses about the origin, stability, or breakdown of symbioses.

Topic area 3: Novel methods

Projects focused on developing new methods, tools, or analytical approaches that enable novel capabilities to study aquatic symbioses. Proposals in this topic area should emphasize ambitious methods and tool development with clarity on how the new techniques would subsequently be used but should not aim to answer scientific questions or carry out research in the standard sense.

Methods development may include (but is not limited to):

- Advanced imaging techniques.
- Artificial intelligence, deep learning and machine learning.
- Engineering and robotics-enabled experimental design.
- Single-cell 'omics methods and technologies.
- Synthetic biology, including creating engineered or synthetic symbiotic systems as experimental platforms.

5. Proposal requirements

Projects are expected to span three years. Proposals must clearly describe the scientific vision of the project idea and its relevance to the goals of the Symbiosis in Aquatic Systems Initiative. Submissions must not exceed **six pages** (excluding references) and must include the components described below. Applicants should use 11-point Times New Roman font on 8.5 x 11" paper with 1-inch margins. Figures encouraged.

A. Project description

Provide a focused description of the proposed research or methods development, including:

- Overview of the methodological and/or disciplinary interface(s) that underpin the project.
- Project aims.
- Description of the approaches and methodologies to be used or developed, and a description of how results would be synthesized.
- For topic areas 1 and 2, key research questions and objectives and how expansion of the interdisciplinary interface will enable these questions to be asked.
- For topic area 3, an articulation of what questions could subsequently be asked if the project is successful.

B. Impact potential

Describe the specific way in which this project could fundamentally change understanding of aquatic symbiosis or how capabilities to study aquatic symbioses would be expanded. What would be different in the field if this project succeeds? Why is the team well suited to carry out this work? And, looking ahead, if the project is successful, would adding an additional methodology or discipline substantially enhance its impact? If so, describe how.

6. Additional documentation

In addition to the proposal, applicants must provide the following:

Biosketch

For proposal lead and co-submitter, upload a biosketch (or CV) as separate PDFs. Biosketches for graduate students, postdoctoral researchers, or other laboratory personnel should not be included. Applicants are encouraged to keep biosketches concise and are welcome to repurpose biosketch documents prepared for other funders. Each biosketch should include:

- Contact information.
- Professional preparation.
- Appointments.
- Honors and awards (excluding grant funding).
- Most significant publications (not to exceed one page).

Budget sketch

Proposals must include a brief budget sketch (one page maximum). The aim is to help foundation staff understand project cost drivers, but not to estimate a specific dollar amount at this time. Please include the number and role of laboratory personnel critical for project success and what each person would do. Note that we strongly prefer to support postdoctoral fellows and technicians as opposed to graduate students. Please also describe any non-standard materials & supplies and equipment requirements, as well as information about the scope of contracts required for activities such as sequencing. If any equipment request would be more than \$25,000, please note an approximate cost; quotes are not necessary to obtain at this point in the process, however.

Please do not include travel, publication fees or indirect cost estimates. Detailed budgets will be developed for projects that are selected to advance in the process and will need to abide by the foundation's [indirect cost policy](#).

Current and pending

For proposal lead and co-submitter, provide a list of all active awards and grants (including funding source and amount of funding you are receiving) as well as a list of pending grant

applications (including funder and amount requested for your laboratory). Applicants are welcome to repurpose current and pending documents prepared for other funders.

7. Review process and deadline

Proposals will be evaluated by foundation staff and external reviewers.

Review criteria will include:

- Creativity.
- Degree of integration across disciplines and/or robustness of methodological interface.
- Clarity and rigor of the proposed approach for topic areas 1 and 2.
- Clarity on research avenues that would be opened if successful for topic area 3.
- Strength and complementarity of the team.
- Potential for impact.
- Alignment with initiative priorities.

The submission deadline through the [Moore Foundation Application Portal \(via SmartSimple\)](#) is Friday, July 31, 2026 at 11:59 p.m. Pacific Time.

8. Additional information

Please direct questions to: symbiosis@moore.org

To sign up for future announcements and the Initiative newsletter, please complete this [form](#). Please share this form with others who may be interested, including students, postdoctoral fellows and technicians who may be interested in the Initiative newsletter.

Noting that this request for proposals is distinct from past open calls, we encourage applicants to view previously awarded projects on the [Initiative dashboard](#).

Please navigate to the [Moore Foundation Application Portal \(via SmartSimple\)](#) to create a log-in for submitting proposal materials. **When creating your user account, please use an email address that you check regularly, as all communications and status updates regarding your application will be sent to that address.** After submitting your proposal, you may return to review and edit it at any time before the deadline.