Request for Expressions of Interest: Increasing the Potential of Marine Microeukaryotes as Experimental Model Systems through the Development of Genetic Tools

Marine Microbiology Initiative
Gordon and Betty Moore Foundation
November 21, 2014

The Marine Microbiology Initiative (MMI) at the Gordon and Betty Moore Foundation aims to enable scientists to uncover the principles that govern the interactions among microbes and that influence nutrient flow in the marine environment. MMI is targeting closing gaps in and supporting the advancement of experimental model systems in microbial oceanography to enable new ways to uncover fundamental biological mechanisms.

We are soliciting expressions of interest (EOIs) for early-stage research projects to develop methods to genetically manipulate marine microeukaryotes as a first step in breaking current bottlenecks in the advancement of experimental model systems. MMI has two primary foci for this expression of interest:

1. Development of genetic tools for diatoms. Diatoms are key players in the world's oceans, generating ~20% of the world's organic carbon, and a strong community of researchers is in place suggesting broad use of successfully developed methods. We are specifically interested in projects to develop reverse and/or forward genetics.
2. Screening laboratory-scale culture collections for transformable marine microeukaryotes.

MMI will also consider projects to develop genetic tools and methods with other microeukaryotes that show promise for expanding the way the field can test hypotheses. If your idea does not fit category 1 or 2 above, please contact us prior to submitting your EOI.

MMI encourages EOIs from "inter-organismal" teams of researchers – i.e., complementary groups that have experience in a well-established model system *and* with a microeukaryote that is not currently genetically tractable – whose collaborative effort will bring innovative approaches to the field.

MMI invites you to send an expression of interest via email that briefly outlines a research project (one paragraph or less), using the following template:

1. The lead researcher's name, institution, and expertise.
2. Indication of focus on genetic tools for diatoms (category 1 above) or laboratory culture screening for transformability (category 2 above).
3. For category 1, the name of the organism(s); or, for category 2, the taxonomic group(s) to be screened.
4. A methodological or technical challenge that is hindering the development of a genetically manipulable marine microeukaryotic system that is ripe for solving and how you would address this challenge (3-5 sentences).
5. The research team that would tackle this challenge, and why each team member's expertise is relevant (one sentence per team member; please include institutional affiliations).

The opportunities that best align with MMI's strategies and goals will be invited to submit proposals. MMI has allocated $7–10M to support this effort and anticipates making multiple, 2–3 year awards beginning in mid-2015.

Please submit your EOI by Tuesday January 6, 2015 to Samantha Forde at samantha.forde@moore.org.