ExFAB Fall 2026 Call

Track 2: Pre-Proposal Guidelines

Please include the following information in a 1-2 page document, to be submitted as a PDF attachment through our web portal.

1. **Identifying details**. Include the project title, authors and affiliation(s), the ExFAB Grand Challenge most relevant to your project, and the submission date. See below for a description of ExFAB's Grand Scientific Challenges.
2. **Potential collaborations**. List at least one ExFAB-affiliated researcher with whose work the proposed project most closely aligns.
3. **Objective**. Provide a 2-3 sentence objective that includes both your general motive and specific experimental goal(s).
4. **Background and justification**. Briefly discuss the proposed work's connection to extreme/exceptional microbes. Explain how the work will advance knowledge in microbial Biosynthesis, Bioremediation, or Rules of Life.
5. **Methods**. Describe the proposed experiments to be conducted at ExFAB. If known at this time, include details about your planned or proposed collaboration with an ExFAB-affiliated researcher.
6. **Anticipated outcomes**. Highlight any new protocols or workflows that will be developed during your project. Explain how the proposed work will benefit the ExFAB community (e.g. through the creation of knowledge, data, or tools).

ExFAB's Grand Scientific Challenges:

- **AI-driven design and editing of anaerobic microbial communities from bioproduction to biomedical applications.** ExFAB is particularly well suited to phenotype and enrich functions within human and animal-sourced microbiomes.
- **Cell-free production & screening of redox-sensitive & bioremediation pathways at scale**. Of particular interest for this call are oxygen-sensitive pathways and proteins using iron-sulfur clusters (e.g. ferredoxins), especially those for which there are established methods for tracking pathway performance (e.g. colorimetric assays or established LC-MS workflows).
- **MPG: Integrating Metabolomes, Phenotypes, and Genomes for Discovery of Extreme Traits at Scale**. Seeking users with interests in integrating metabolomic and genomic data
- **High-Throughput Functional Genomics in Extreme Microbes for Fungal Biotechnology**. We are especially interested in advancing yeast and fungal transformation in high-throughput.
- **Rewriting our understanding of compartmentalization to control microbial resilience**. We especially seek partners with access to large culture collections that can be imaged and phenotyped (e.g. cyanobacteria, large sulfur bacteria, etc.).