



MOLECULE
MAKER LAB
INSTITUTE

2022 Seed Grant Solicitation

The [Molecule Maker Lab Institute](#) (MMLI), founded in 2020, provides funding for innovative proof-of-concept projects consistent with the Institute's mission to develop new artificial intelligence (AI) and new chemistry to radically accelerate and democratize molecular synthesis and functional materials discovery. The Institute anticipates that the seed grant projects will contribute new fundamental insights and innovation at the interface of AI and chemistry.

Deadline: April 30, 2022

Eligibility

Principal investigators are limited to one proposal annually and may apply for a renewal in subsequent years. Principal investigators must be based in the United States. Awards are not made directly to individuals.

Proposal Preparation and Submission Instructions

Types of Proposal:

Two types of proposals are accepted. Projects should either 1) broadly align with the MMLI mission and vision or 2) fill a specific need or gap in the MMLI research portfolio, which includes:

- Chemistry-specific solutions for AI
- Search and summarization
- Foundational AI advances
- Late-stage functionalization of complex molecules/catalysts
- Autonomous optimization
- Self-driving laboratories
- Heterogenous catalysis
- Synthesis planning tool development
- Use of AI in process optimization
- AI-guided synthesis and design of polymers

All projects should be scoped and resourced for one calendar year.

Proposal Preparation Instructions:

The application should be formatted on 8 ½ x 11-inch paper using 11-point font size and consist of:

1. Cover sheet, including project title, project abstract, total funds request from MMLI Seed Grant Program, and name/contact information of the principal investigator.

2. One or two paragraph equivalent of an executive summary.
3. In four or fewer pages (including references and figures), a project description that includes brief sections on:
 - a. Impact / Significance
 - b. Innovation / Intellectual Merit
 - c. Alignment with the MMLI mission and vision
4. Two-page biosketch for each of the principal personnel, following [NSF format](#).
5. One-page categorical budget. If this is part of a larger project, provide an overview of the total budget and other sources of support.

Send all materials compiled in one PDF file to moleculemaker@illinois.edu

Budgetary Information:

The amount of support requested is determined by the applicant. The Institute recommends a proposal within \$50,000 – \$100,000. Partial contributions to larger scale efforts will be considered. Funds are intended for the purposes described in the proposal and any changes in direction and budget request Institute approval.

Indirect costs are allowable, preferably at a rate of 15% calculated on Total Direct Costs (TDC), or another approved institutional Industry Affiliated Program rate, or based upon a federally negotiated Facilities & Administrative (F&A) rate. Funds will be provided to the awardees as a subaward through the University of Illinois Urbana-Champaign from September 1, 2022 – August 31, 2023.

Due Date: April 30, 2022

Proposal Review Criteria

The following criteria will be used for the merit review process:

- Impact / Significance
- Innovation / Intellectual Merit
- Alignment with MMLI mission and vision
- Feasibility
- Investigator / Environment

The Institute highly encourages proposals from minority-serving institutions and historically black colleges and universities, including early investigators from underrepresented groups.

Award Administration Information

Expectations of Funded Proposals:

All personnel on funded proposals will be invited to join the Molecule Maker Lab Institute activities, including All-Institute meetings, relevant Thrust meetings, and Annual Retreat.

Acknowledgement of Support:

All publications and presentations describing the supported project should acknowledge the Molecule Maker Lab Institute Seed Grant Program.

Intellectual Property Requirements:

Partner-level members of the Molecule Maker Lab Institute Industrial Partnership Program have the right to a non-exclusive, royalty-free, non-commercial license for in-house use of patentable inventions or copyrightable materials developed under the auspices of the MMLI Seed Grant Program. Funded proposals must comply with the MMLI Seed Grant IP Policy.

Award Reports:

A final report is to be submitted when the project is essentially complete and no later than 30 days prior to the end of the award. The report should include:

1. Accomplishments of the funded project
2. Categorical financial report
3. Optional statement of newsworthy stories related to the project

Please direct all questions regarding the application process to moleculemaker@illinois.edu.