

MSU-MDG Pilot Grants

Application Due Date: Friday, March 29, 2019 at 5:00 PM

The Michigan State University Molecular Discovery Group (MSU-MDG) has been established in the Department of Pharmacology & Toxicology to provide pilot funding¹ to accelerate the discovery and development of chemical technologies with applications for human health, animal health and agricultural use (max \$30,000; average: \$10,000-15,000). The primary aim of these funds is to advance projects toward extramural funding or to the creation or development of intellectual property and commercialization. Specific goals include:

- Assisting investigators in advancing their programs in the early phases of the discovery process with long-term commercialization in mind.
- Supporting early activities (e.g. screening) not readily funded by other sources.
- Providing additional data to support extramural grant applications.
- Aiding in the discovery or development of intellectual property.
- Accelerating therapeutics or diagnostics discovery and development programs.

The funds come from the College of Osteopathic Medicine and the College of Human Medicine with matching support from the VPRGS. At least 90% of the funds should be used to support work done in the MDG Core facilities (Assay Development and Drug Repurposing Core (ADDRC), Medicinal Chemistry Core, and/or In vivo Facility).

1) Examples of the specific types of projects that are envisioned include grants for:

- high throughput assay development
- chemical tool/probe development for target validation
- the purchase of commercial compounds for early structure activity relations (SAR) analysis
- synthesis of analogs for more advanced SAR development
- development of optimized linker chemistry for antibody-drug conjugates (ADCs) or theranostics
- re-synthesis/scale-up of small molecule hits and leads
- liver microsome drug stability and metabolism screening
- *in vivo* pharmacokinetics studies
- exploratory, non-GLP tolerance/toxicity studies
- *in vivo* efficacy testing of novel therapeutics or diagnostics

The budget (max \$30,000) should be limited to that sufficient to accomplish a specific step needed to advance the project. At least 90% should be spent on core facility use. ***Investigators must obtain a formal quotation from the relevant core lab before preparing the budget.*** Allow sufficient time (1-2 weeks) for preparation of quotations. Special reagents or other materials needed within the PI's lab may be purchased but no salaries are allowed.

2. Eligibility

- All tenure-stream or fixed-term faculty members employed by Michigan State University are eligible to submit applications.
- A faculty member may be the PI on only one proposal per cycle.
- Co-investigators and collaborations are encouraged.

3. Evaluation Criteria

The primary goal of this pilot program is to advance toward commercial applications small molecule, biomolecule or conjugate discovery or development for specific biomedical, veterinary, or agricultural applications.

Successful applications will address the following points:

- Clearly outline the goal of the project.
- Describe how the proposed concepts, approaches, and/or methodologies are novel.
- Provide a compelling scientific rationale for the approach chosen.
- Describe how the strategy and methodology are appropriate to accomplish the specific aims of the project including IP development and projected product profile (commercial requirements and endpoints)
- Consider the liabilities/risks and how they can be mitigated.
- Explain how the project utilizes the MSU core laboratories.
- Describe how success in the project will lead to research funding, produce intellectual property (IP), or advance commercialization of existing IP.

4. Details of Proposal (5-page maximum - *see application template document for details*)

Include:

- Scientific background and significance
- Target project profile (a detailed description of the primary commercial application, if applicable – see template)
- Key work to be completed
- Plan for future funding or commercialization

5. Deadlines and submissions

- Application deadline **Friday, March 29, 2019 at 5:00 PM**
- Submit as a single PDF to **Tom Dexheimer – dexheim1@msu.edu**

6. Review Process and Awards

Proposals will be reviewed by a joint internal/external review panel representing expertise across multiple industries. All information in the proposal will be kept confidential. If a proposal is not accepted, the applicant(s) will receive feedback and will have the opportunity to resubmit in the future. The review process is anticipated to be complete within four to six weeks. Funded proposals should expect funds to be available within weeks of award.

Contacts:

For budget quotations or information on the overall program, please contact the director (or staff) of the core that is most relevant to your project. If you are unsure, please contact Dr. Ellsworth below.

MSU Assay Development and Drug Repurposing Core

Tom Dexheimer, Ph.D.

Director

dexheim1@msu.edu

Phone: (517) 884-4998

MSU Medicinal Chemistry Core

Edmund Ellsworth, Ph.D.

Director

ellswo59@msu.edu

Phone: (517) 353-7145

MSU In Vivo Core

Marc Bailie, Ph.D.

Director

invivo@msu.edu

Phone: (517) 432-7763

8. Reporting

- Mid-term progress report (one-page)
- Final report due 12 months after award date summarizing accomplishments, outcomes, publications, and any submitted grants. Any publications supported by these pilot grants should cite “Supported by MSU-Molecular Discovery Grant (2019)”
- Annual reports thereafter will be requested on outcomes including publications, grants, patents, etc.
- Reports submitted to **dexheim1@msu.edu**.