**Request for Applications**

**PIDD Hit to Lead Program**

**Announcement Date: February 15, 2019**

**Proposal Deadline: April 26th, 2019**

**Introduction**

To assist in the advancement of drug discovery projects, the Institute for Drug Discovery is announcing a call for its new Hit to Lead Program. The Hit to Lead program will help identify chemistry collaborators (internal or external CROs) to partner with faculty who have a “hit” molecule (i.e. a compound that has been identified through high-throughput, computational or another means of screening) that still requires further chemical optimization. The collaborating pair can then request funds from the Institute to begin the hit to lead process. Funding could be requested for but are not necessarily limited to:

1. Synthesis of the initial hit compound for further in vitro testing
2. Chemical modifications to improve activity (potency, solubility, PK, etc.)
3. Synthesis of SAR (structure-activity-relationship) compound sets
4. Assistance with identification of compounds for “SAR by catalogue”
5. Scale up of compounds for in vitro/in vivo testing

**How the Hit to Lead Program Will Work**

Applications from faculty seeking synthetic chemistry assistance for hit to lead optimization will apply to this RFA. Applications first will be reviewed for their significance, scientific merit, responsiveness to the scope of this RFA, and propensity to lead to positive follow-on activities (e.g. submission for additional external funding, high impact publications, IP generation, successful progression on the drug discovery pipeline, start-up company creation, etc.). The most promising projects then will be provided to the chemistry faculty committee for technical review. Any chemistry faculty who would be interested in collaborating on the hit to lead project will be paired with the submitter. The chemistry faculty and submitter will then need to jointly prepare a brief project plan with budget necessary for successful completion of the proposed hit to lead process. This plan and budget will be submitted to the Institute for further consideration and upon acceptance, funding will be provided to the team for the collaborative work. If a willing chemistry faculty collaborator can not be identified, external chemisty facilities such as another University’s medicinal chemistry core facility or commercial contract research organizations may be engaged to complete the project.

**General Guidelines**:

1. **Qualification** – Submitting PI must currently be or become a member of the Institute for Drug Discovery.
2. **Proposal Length** – Proposal should be single-spaced and a maximum of **2** pages in length (Calibri or similar font at 11pt) with no less than 0.5 inch page margins. References are not part of the page limit.
3. **File format** – Only .doc, .docx, or .pdf files will be accepted. Any figures should be embedded in the document and must fit within the maximum page limit.
4. **Future Reporting** – If a collaborating faculty member is identified, a joint project and budget will need to be created by both collaborative faculty (more information will be provided after submission and when a collaborator is identified) for the team to receive funds. Additionally, any funding, publications and other tangible outcomes that are generated from this activity must be reported to the Institute (Karson Putt, [puttk@purdue.edu](mailto:puttk@purdue.edu)).
5. **Deadline** – Applications must be received by Karson Putt ([puttk@purdue.edu](mailto:puttk@purdue.edu)) by 5:00 pm on April 26th, 2019. Applicants **do not** need to work with pre-award/SPS to submit an application for this internal RFA.

**Award**:

A budget request will be made to the Institute to perform the work outlined for the joint project. Funding as deemed appropriate by the Institute then will be provided to each collaborating pair.

Funds cannot be used for faculty salaries, hospitality expenses, F&A nor capital equipment.

**Application Format:**

The following information must be included within the maximum 2 page limit:

1. Overview of the project
2. Description and significance of the disease or impact to human health
3. Description of “hit” molecule(s) to include
   1. chemical structure
   2. how “hit” molecule was identified
4. Primary and secondary synthetic goals if known or applicable of project (e.g. scale up for in vivo testing, increase in potency, increase in water solubility, reduce off target binding, etc.)
5. How successful completion of this project will help translate lab discoveries into positive clinical outcomes for patients or otherwise impact human health

Additional information that must be included (not included in the page limit requirements)

1. References
2. NIH Biosketches for submitting faculty

**Review Criteria**:

Initial scope and scientific merit review:

1. Project meets the scope of this RFA
2. Potential for the proposed project raising the prominence of Purdue and the Institute for Drug Discovery
3. Scientific merit
4. Potential for subsequent external follow-on activities (Center grants, multi-PI grants, R01s, publications, IP generation, successful progression on the drug discovery pipeline, start-up company creation, etc.)

Second chemistry committee review:

1. Synthetic tractability (i.e. can the molecule/derivatives be synthesized?)
2. Estimated duration and cost of project
3. Scientific match

Publications resulting from Drug Discovery support should be acknowledged as follows:

“The authors gratefully acknowledge support from the Purdue University Institute for Drug Discovery”