

Walther Oncology Physical Sciences & Engineering Research Embedding Program

Request for Embedding Project Proposals

**Initial Tier One Planning Projects (\$40,000 each)
Tier Two Follow-up Projects (Up to \$200,000 - \$250,000 each)**

Tier One Due Dates: October 15, 2018

The Walther Oncology Physical Sciences and Engineering Research Embedding Program (Walther Embedding Program), a joint program between the Indiana University Simon Cancer Center (IUSCC) and Purdue Center for Cancer Research, announces Phase 2 of the Embedding Program. The program is funded by the Walther Cancer Foundation with the goal of creating an environment where clinical perspectives drive the design of new technologies and predictive models to increase the effectiveness of cancer detection, diagnosis, and treatment. The program funds interdisciplinary, collaborative projects between Purdue University and IUSCC. Each team must include: 1) at least one Purdue faculty PI either from the physical or chemical sciences, computer science, mathematics, or engineering, 2) at least one senior clinical faculty PI from the IUSCC, 3) a Purdue postdoctoral trainee/senior graduate student, and 4) an IUSCC medical fellow/resident/junior faculty. There is an expectation that each funded trainee will spend significant time embedded in the other team members' laboratory/environment or clinic.

Allowed expenses for the Walther Embedding Program include:

1. Postdoctoral trainee/senior graduate student salary
2. Medical fellow/resident/junior faculty salary
3. Project supplies as appropriate to the project
4. Travel between institutions

The program is structured in a two-tier award system.

Tier One

Tier One projects(\$40,000/project) will support small, "embedding" pilot projects for the development of innovative ideas for the clinical translational of new technologies. Successful Tier One projects, upon completion, will have demonstrated: 1) an in-depth, impactful, and implemented embedding plan for the junior trainees (postdocs, senior graduate students, medical fellows/resident, or IUSCC junior faculty) in each research team; 2) a carefully developed research plan that demonstrates the clinical influence in the design of advanced technologies/models/tools; and 3) preliminary prototype/data/technology that demonstrates the feasibility and clinical impact of the project. The project period is five months and no-cost extensions are not allowed. The deadline for the Tier One program: **October 15, 2018**.

Tier Two

Based on the successful implementation of the embedding plan, and scientific and technical merit, the three most successful Tier One projects will be awarded up to an additional \$200,000 - \$250,000 each during the Tier Two, or implementation phase of the project. During this phase, a continued iterative refinement will occur through scheduled progress meetings with the Walther Embedding Program leadership team. Tier Two project period is one year and six months.

All project are expected to result in a high impact on the career direction of the funded trainees, high quality publications and as appropriate, applications to federal funding agencies for fellowships or grants or advancement to commercialization of new technologies/tools.

Interested faculty in need of collaborators should contact Luanne Bermel at Purdue University (lmi@purdue.edu; 765.496.9316) or Elizabeth Parsons at the IUSCC (eparsons@iupui.edu; 317.278.0078).

APPLICATION PROCESS

TIER ONE

The Application

Section 1: Applicant Information

- Title of the Application
- Contact Information for the Purdue PI(s) and IUSCC PI(s), including email, phone #, department/affiliation, and institution
- Statement for each Purdue PI(s) and each IUSCC PI(s) describing:
 - Specific role in the project (less than 100 words)
 - Expertise relevant to the project (less than 100 words)

Section 2: General Information

- If there is a conflict of interest associated with the project, please describe.
- If animal or human use is involved in the research, indicate the status of regulatory approval. All approvals must be in place prior to release of funds. If no regulatory approvals are necessary, please indicate "No Human or Animal Use".

Section 3: The Proposal

- Sections A-E indicated below must be sent as a **single PDF document** to Luanne Bermel at lmi@purdue.edu
- Formatting: single spacing; font size of 11 points or larger; ½ inch margins around; consecutively number pages

The project must represent a collaborative effort between the Purdue and IUSCC investigators and include sections A-D below.

- Section A - Lay Description (1/2 page)
- Section B – Abstract (1/2 page)
- Section C – Project Plan (2 pages maximum)
 - Project Goals
 - Embedding Plan (the leadership places significant importance on the embedding plan, see below)
 - Research Plan – brief overview of anticipate specific aims addressing the disparate expertise of the research team and how the collaboration will result in a novel clinical impact.
- Section D – Biosketches
 - Provide a NIH Biosketch, including Other Support, for the IUSCC and Purdue PI(s) named in Section 1
 - Provide a *curriculum vitae* or NIH Biosketch for the postdoctoral trainee/senior graduate student and medical fellow/junior faculty

Embedding Plan Expectations - The goal of this program is to expose junior trainees to an additional training experience that is different, but highly relevant to their current research environment. Junior trainees in the physical, mathematical, computational sciences or engineering disciplines will be expected to gain a deep and meaningful understanding of: 1) the cancer patient's perspective on their disease, and 2) the clinical decision making process that goes into the diagnosis and treatment plan for cancer patients.

Junior trainees in the clinical sciences will be expected to: 1) develop an understanding of the scientific research process, and 2) an appreciation for the high failure rate of an individual experimental approach and the iterative nature of scientific research.

REVIEW CRITERIA

- Depth of the embedding plan for junior trainees
- Clinical Impact and scientific merit
- Integration of physical/chemical/engineering/computer sciences and clinical research
- Cancer focus
- Potential for national funding or commercialization

The Walther Embedding Leadership Team will review the applications. The team reserves the right to consider previous funding from Cancer Center (IUSCC and/or PCCR) sources in awarding Embedding Projects. Proposals funded through the Walther Oncology Physical Sciences & Engineering Research Embedding Program cannot exhibit scientific overlap with other funded projects.

TIER TWO

The Application

Section 1: Applicant Information

- Title of the Application
- Contact Information for the Purdue PI(s) and IUSCC PI(s), including email, phone number, department/affiliation, and institution
- Statement for each Purdue PI(s) and each IUSCC PI(s) describing:
 - Specific role in the project (less than 100 words)
 - Expertise relevant to the project (less than 100 words) (Tier Two projects are encouraged to include others in disciplines relevant to the translation of the project, including, but not limited to individuals with experience in public health, behavioral sciences, nursing, commercialization.)

Section 2: General Information

- If there is a conflict of interest associated with the project, please describe.
- If animal or human use is involved in the research, indicate the status of regulatory approval. All approvals must be in place prior to release of funds. If no regulatory approvals are necessary, please indicate "No Human or Animal Use".

Section 3: The Proposal

- Sections A-E indicated below must be sent as a **single PDF document** to Luanne Bermel at lmi@purdue.edu
- Formatting: Single spacing; font size of 11 points or larger; ½ inch margins around; consecutively number pages

The project must represent a collaborative effort between the Purdue and IUSCC investigators and include sections A-E below.

- Section A - Lay Description (1/2 page)
- Section B – Abstract (1/2 page)
- Section C – Project Plan (5 pages maximum)
 - Project Goals
 - Description of the Embedding Plan including a brief discussion of the Tier One embedding plan, its successes and challenges, and the impact the embedding experience had on the design of the research project
 - Research Plan
 - Tasks
 - Timeline
 - Statement addressing the collaborative nature of the project
 - Statement clearly defining the potential clinical impact
- Section D – Literature Cited
- Section E – Biosketches

- Provide a NIH Biosketch, including Other Support, for the IUSCC and Purdue PI(s) named in Section 1
- Provide a *curriculum vitae* or NIH Biosketch for the postdoctoral trainee/senior graduate student and medical fellow/junior faculty

REVIEW CRITERIA

- Success of the Tier One embedding plan for trainees and fellows/junior faculty
- Scientific merit and potential clinical impact
- Integration of physical/chemical/engineering/computer sciences and clinical research
- Cancer focus
- Potential for extramural funding; high impact publications, sustainability and/or commercialization

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