Cancer Center at Illinois
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

2025 Seed Grant Program
Request for Proposals

DATES AND DEADLINES

- Proposal Due Date — March 12, 2025, at 11:59 PM
- Award Notification — May 14, 2025
- Earliest Start Date — July 1, 2025

PROGRAM GOALS

The Cancer Center at Illinois (CCIL) is soliciting interdisciplinary team research proposals to initiate new collaborations and enhance existing collaborations among faculty. This seed grant program aims to enable faculty teams to:

1. Develop novel cancer-focused research ideas that require the involvement of multiple cancer investigators from different disciplines.
2. Formulate a hypothesis-driven or technology-focused research project that relates to one or, ideally, both of the CCIL research programs and their accompanying themes (*Descriptions of CCIL research programs*).
3. Collect preliminary data or other relevant information to support a feasible approach for grant proposals to an NCI-recognized funding agency.
4. Garner external funding for multi-investigator, program project level research projects using CCIL support as a catalyst.
5. Mentor the next generation of cancer researchers by providing students with hands-on opportunities to engage in research, foster their professional development, and prepare them for impactful careers in oncology and related fields.

The CCIL funds research proposals based on the merit of the proposed projects and their applicability to the CCIL's goals. The initiative will not provide interim or incremental support for existing research programs or projects. Projects should not anticipate additional internal funding after the seed funds are exhausted. We also encourage using CCIL Shared Resources as part of the project (*Descriptions of CCIL Shared Resources*).

Proposals that span the research themes of both of the CCIL research programs are of particular interest as well as those that advance the work of one of CCIL's current research Working Groups (*Description of CCIL Working Groups*). Other areas associated with cancer research will be considered.

Research teams must host a student from one of the CCIL educational and training programs. Proposals should clearly identify how a CCIL trainee from one of the CCIL educational and training programs will be integrated into the project, detailing their anticipated role and contributions.

RESEARCH TEAM ELIGIBILITY

Proposals must reflect the substantive involvement of multiple investigators from different scientific disciplines or academic departments. Projects should demonstrate substantive collaboration between CCIL members and must specifically address CCIL research program strategic themes. Proposals should include a description of the innovative nature of the research and the team's capabilities, where the contribution of each collaborator's expertise is evident. **At least two of the team members must be current CCIL members.**

Research teams must host a student from one of the CCIL educational and training programs. Please note that funding from the CCIL Seed Grant does NOT need to be allocated towards supporting these training program students. Please see the Mentorship Survey for more information on these training programs.

Although not limited to these topics, the CCIL is particularly interested in proposals that:

- Seek to identify novel biological targets for anticancer therapy.
- Seek to identify or develop new anticancer compounds.
- Develop and use improved artificial intelligence and machine/deep learning algorithms for identifying patterns in image-based or numerical-based data for diagnostics.
- Develop multimodal, multiscale imaging approaches (including hardware, algorithms, modeling, and simulations) that connect molecular- and cellular-scale processes in carcinogenesis with clinical tumor, tissue, and body-scale imaging for cancer screening, diagnosis, and monitoring.
- Develop robust and reliable collection, isolation, purification, and characterization processes for extracellular vesicles (including bioassays and analysis methods to determine vesicle content).
- Utilize large genomic or proteomic data sets to derive novel biomarker targets for cancer diagnostics.
- Involve the conception and development of novel biochemistry approaches for ultra-selective recognition of biomarker molecules, especially approaches that do not require enzymatic amplification.
- Develop novel engineered models of cancer.
- Advance the work of one of CCIL's current Working Groups (*Description of CCIL Working Groups*).

PRINCIPAL INVESTIGATOR ELIGIBILITY

Each proposal will identify a lead principal investigator (PI) who assumes organizational leadership for the project. A faculty member may only be PI on one submitted project. However, there is no limit to being a co-investigator on other projects. Applicants are strongly encouraged to include faculty at the Assistant Professor rank on their teams. Priority will be given to projects for which PIs are existing CCIL members. Preference will be given to investigators who have not previously received substantial CCIL research support funding.

PIs must fill out the Cancer Research Training and Education Coordination (CRTEC) Mentorship Survey to be eligible to receive funding.

FUNDING EXPECTATIONS AND RESTRICTIONS

Each research team may submit proposals for up to $200,000 for up to a 2-year period. Funds will be disbursed in two phases as follows: up to $100,000 in funding for Year 1 and up to $100,000 in support for Year 2.

CCIL funding to launch research projects is expected to be catalytic. Projects will be expected to achieve milestones and actively seek significant external support in the form of a multi-PI research proposal to NIH, NSF, DOD, or other federal agencies, industries, or foundations. Investigators must submit progress reports at critical time points which may affect continued support.

The CCIL will release Year 2 funds only after successfully completing the stated goals and metrics outlined in Year 1. This must include a collaborative proposal submission that is at least at the R01 level. A National Cancer Institute (NCI) submission is **HIGHLY** preferred. The Cancer Center at Illinois must be listed as the institute of record for the submission.

Project costs may include UIUC supplies, staff time, and research facility use fees. Funds to be sent to other institutions or organizations must receive prior approval from the CCIL. The funds cannot support tenure-track faculty salaries.

REPORTING REQUIREMENTS

Two written reports are required: (1) Year 1 Progress Report and (2) Final Project Report. Each should highlight the collaborative nature of the research and address progress made toward the specific goals, milestones, and metrics. Each project PI must present at the CCIL Annual Retreat (on the progress of Year 1 and Final Project).

The PI and Co-PIs are expected to serve on the review panel as Ad-hoc members during the life of the seed grant.

Reporting requirements for hosting a trainee will depend on the specific program with which the student is affiliated. For more information, please contact Marci Pool (mpool@illinois.edu).

PROPOSAL PREPARATION

Format: Proposals should not exceed seven (7) pages (single space, 0.5-inch margins, Arial 11-point font, including figures and tables). Guidelines and the maximum number of pages for each section are below. Supplemental attachments are not permitted.

Coversheet/Title Page: (1 page)

- Include the project title, the names of all research team members, their role on the team (Principal Investigator, Co-Principal Investigator, Co-Investigator), primary affiliation, position/title, and contact information, and the funding amount requested.
- Include the name and contact information for a University of Illinois department business contact responsible for administrative or budgetary matters.

Proposal Content:

Section 1. Project Abstract (1 page)

- Limit length to 30 lines or less of text
- Include the project's broad, long-term objectives and specific aims
- Include a description of the research design and methods for achieving the stated goals
- Write in plain language so even a non-scientist can understand the importance of the project

Section 2. Project Narrative (3 pages)

- Describe the research project and its cancer relevance, including its potential for broad impact. Please note the review criteria listed below
- Discuss how the proposed activities will leverage existing strengths across CCIL programs and themes
- Include a statement of the potential translational application of the proposed research
- Describe the role and qualifications of the PI, co-investigators, and other members of the team for whom funding is requested
- Outline how a CCIL trainee from one of the CCIL educational and training programs will be integrated into the project, including their roles, responsibilities, skill development, and contributions to project goals.

Section 3. Project Milestones (1 page)

- Provide a list of scientific and organizational milestones over the 2-year period

- Identify the specific goals and metrics for Phase 1 and for the completed project
    - Year 1 milestones must include significant progress toward developing a project proposal for an NCI-recognized funding agency. Submission of collaborative publications is highly encouraged.
    - Year 2 milestones should include the submission of collaborative publications. Submission of additional collaborative proposals is highly encouraged. When feasible, the CCIL may assist the team in assembling the proposal and obtaining external reviews before submission.
    - Evidence of substantive collaboration (including periodic joint meetings, workshops, and publications) must be prominent in the proposal and details presented in the Year 1 progress report.

Section 4. References cited (no page limit; include titles of papers)

Section 5. Budget and Budget Justification (1 page)
Provide a budget estimate, with narrative justification that does not exceed $100,000 in funding for Year 1 and up to $100,000 in support for Year 2. Researchers should divide estimates into major expense categories (e.g., personnel, equipment/use fees, supplies, support). PIs should also specify the anticipated utilization and costs of CCIL Shared Resources. Expenses for use of external shared resources in lieu of campus facilities must be specifically identified, justified, and approved.

Indirect costs and salaries for the PIs are not permissible.

REVIEW CRITERIA
Reviewers will evaluate each criterion on a scale of 1-9, consistent with the standard practice for NIH applications.

- **Significance:** Does the project address an important problem or a critical barrier to progress in the field? Is there a strong scientific premise for the project? If project aims are achieved, how will scientific knowledge or technical capabilities be enhanced? How will the successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive the field of cancer research? How will this project contribute to the CCIL scientific program(s) and support and advance the goals of the CCIL?
- **Investigator(s)/Research Team:** Are the PIs, collaborators, and other researchers well suited to the project? If the PI is an early-stage investigator or in the early stages of their independent career, do they have appropriate experience and training? For this collaborative project, do the investigators have complementary and integrated expertise that spans the themes of the CCIL programs?
- **Innovation:** Does the proposal seek to shift current cancer research paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions?
- **Approach:** Are the overall strategies, methodologies, and analyses well-reasoned and appropriate to accomplish the project's specific aims? Have the investigators presented strategies to ensure a rigorous and unbiased approach, as appropriate for the work proposed? Are potential problems, alternative strategies, and benchmarks for success presented?
- **Milestones:** Are milestones provided that ensure a high likelihood of progress? How likely is the formulation and submission of a multi-PI project application to a funding agency?

ADDITIONAL QUESTIONS?
Refer to our *Frequently Asked Questions* handout.