

UT-Oak Ridge Innovation Institute Call

Pilot Collaborative Grant Applications to support the Development and Advancement of Radiopharmaceutical Therapies (DART) Convergent Research Initiative

The purpose of this pilot funding is to initiate and establish collaborations within the radiotherapeutics-related research community that will enable future successful collaborative funding applications and jumpstart work with newly recruited convergent research initiative (CRI) investigators.

Applications are encouraged from collaborative teams of researchers (at least 2 different research labs or groups should be involved) from UTK, UTHSC, and/or ORNL. The team must involve at least one UTK partner, and collaborations with ORNL are encouraged but not required. The proposed research should relate to one of the following areas, and should propose a plan that will gather preliminary data to move the collaboration toward applications for external funding:

- Any aspect of precision targeting of cancer cells, including:
 - Identifying cancer-specific signatures to target
 - Molecular characterization of potential targets
 - Development of novel targeting agents (nanobodies, antibodies, or small molecules)
- Design of novel chelators and nanocarriers to attach and retain radionuclides
- Radioimaging or theranostic approaches
- Cancer model systems for future testing of candidate radiotherapeutics (organoids, tumor microenvironment co-cultures, animal systems)
- Assays that will measure the impact of radiotherapeutics on cells and tissues (advanced microscopy, genomics/proteomics, molecular pathways, DNA damage, etc.)
- Dosimetry or computational modeling of radiotherapeutic effects

The long-term goal of the Development and Advancement of Radiopharmaceutical Therapies (DART) CRI is to establish the scientific workforce and dedicated research environment in Tennessee to support a thriving statewide ecosystem for medical radioisotope production and radiopharmaceutical therapy (RPT) design, testing, implementation and understanding. The CRI will be centered around developing RPT to target the most difficult to treat cancers e.g., ovarian, and pancreatic cancers that are resistant to conventional chemotherapies. The effort aims to identify unique cancer specific signature(s) to be targeted, select the radioisotope whose properties are the best match for imaging and therapeutic intervention, select the chelator or nanoconstruct for trapping and retaining the radioisotope, and select the targeting vector for optimal delivery. Any research that supports this overall mission can be proposed as a pilot grant.

This pilot funding is co-managed and co-funded through UT-ORII and the Science Alliance. Direct funds must be used at UTK or UTHSC but can be used to support Bredesen Center graduate students working in ORNL labs or for supplies used in the collaboration.

Typical awards will be \$75k for 1 year. The number of awards is dependent on the quality of proposals submitted, as well as available funds. Projects will be funded for one year, with a chance for second-year funding if the project shows strong promise of receiving new external funding as a result of the collaborative activities leading to preparation of a joint proposal for external funding that is deemed meritorious in the second year's proposal evaluation process.

Review Process and Criteria

A review committee appointed by the director of Science Alliance will review the proposals and make recommendations for funding. Proposals will be evaluated based on the following criteria:

- Technical merit of the proposed research
- Potential for the establishment of a meaningful and sustainable collaboration with the CRI, including joint publications, student mentoring, team development, etc.
- Likelihood for future external funding and target funding call/notice
- Inclusion of graduate students in the research

Application Instructions

A complete year-one application will include the following:

A. Research Proposal (3-page max, add additional pages for references)

- Project summary, referencing how this work will aid the CRI effort (150-word max)
- Description of the proposed research
- Description of specific funding opportunities that will be targeted for future support and how this project represents a new interaction in a new scientific/engineering area
- Description of how this collaboration will help build the CRI network and what contacts you expect to have with other CRI researchers.

B. Appendices

- Appendix A: Budget and budget justification
- Appendix B: A letter from the collaborating PI supporting the partnership and outlining the level of commitment
- Appendix C: A one-page bio for each UT/ORNL PI that includes most recent grants, professional awards, and recent relevant publications

The deadline for proposals is July 5, 2024, with funding anticipated to begin on August 1, 2024. Award notifications will be sent out no later than August 1, 2024.

Please contact Amber Mathes, acolbur1@utk.edu, if you have any questions about the application procedure.

To learn about other grant opportunities through the UT-Oak Ridge Innovation Institute and the Science Alliance, visit www.utorii.com.