



## CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:  
RP140105

Project Title:  
Cancer Research Training Grant

Award Mechanism:  
Research Training Award Continuation Grants for Years 4 and 5

Principal Investigator:  
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Entity:  
The University of Texas Health Science Center at San Antonio

### Lay Summary:

The overall program goal of the Cancer Research Program at the University of Texas Health Science Center at San Antonio (UTHSCSA) is to train individuals in all aspects of cancer research so that they will have an appreciation of the basic science, translational and clinical areas of research. To accomplish this goal, we have developed a training program that spans pre- and postdoctoral education as well as undergraduate education. Its objectives are as follows: 1) Predoctoral students will be trained in the Cancer Biology track of the Integrated Multi-disciplinary Graduate Program (IMGP) and the Radiological Sciences Graduate Program. Six Ph.D. and/or M.D./Ph.D. students will participate in this training each year; 2) Postdoctoral trainees (Ph.D. and/or M.D. fellows) will be trained by mentors in these two programs (Cancer Biology and Radiological Sciences) as well as in three post-residency fellowship programs: Medicine/Hematology-Oncology, Pediatric/Hematology-Oncology, and Urologic Oncology. Seven postdoctoral fellows will be supported each year; 3) Minority undergraduate students will be introduced to research in a summer program where they will have the opportunity to train with mentors in the program. Twelve undergraduate students will participate each summer. Pre- and postdoctoral trainees will participate in structured (didactic coursework) and unstructured (individual research) activities. Two courses in Cancer Biology are required, one of which covers the molecular biology of cancer and the other covers specific cancers and addresses problems in clinical investigation. Trainees are also required to take a "Scientific Writing" course, where they learn how to write research proposals, and a Responsible Conduct of Research Course that teaches ethics in research. In addition, trainees will participate in cancer-focused journal clubs and be required to attend seminar series organized by the NCI-designated Cancer Center, the Cancer Therapy and Research Center (CTRC). The complete Ph.D. curriculum for the Cancer Biology Track or the Radiological Sciences Program is required for predoctoral trainees. The predoctoral students enter the program after they complete qualifying examinations and are admitted to Ph.D. candidacy. All pre- and postdoctoral trainees are required to submit proposals for support of their research to a national agency (e.g. NIH, DoD) in the second year of support. The research training will be under 54 funded preceptors with a broad range of expertise in cancer research including genomics/proteomics, cell signaling and receptor biology, DNA repair, metastasis, radiology, drug discovery, pediatric oncology, urologic oncology and carcinogenesis and prevention, offering trainees a breadth of choice. The curriculum stresses both basic and translational research to provide the broad background in oncology needed for today's research. These experienced mentors will guide the trainees in developing and executing research

projects and also aid them in developing their careers. All pre- and postdoctoral trainees will present their research at an annual retreat which will allow an assessment of the progress of trainees and also provide trainees an opportunity to present their research and hone presentation skills. In addition, each trainee will be required present his/her research at one national meeting each year. The undergraduate research program will select 12 students from institutions across Texas and nationwide to participate in a summer program. Two-thirds of the slots will be reserved for students from underrepresented minority populations. The goals of the summer program are to: a) introduce talented undergraduates to a rigorous research-orientated program in cancer research; b) equip students with basic tools to prepare them for successful careers in research; c) develop a sense of camaraderie/community among participants, a critical component in maximizing and retaining the interest of these students in research long-term. At the end of the summer the students will present their research at a half-day poster session. UTHSCSA has demonstrated its commitment to this training program in several ways. First year graduate students are supported exclusively by the Graduate Dean. CTRC has also consistently supported cancer research training at all levels. Both the CTRC and the Graduate Dean have provided funds for training summer students and for recruitment and travel; both have also pledged continued support of the annual retreat and a recruitment weekend for postdoctoral fellows. UTHSCSA has excellent to outstanding facilities for research and also supports several core resources that are available to all training faculty and trainees. This program has all the key elements needed to produce the next generation of cancer researchers. With the support of committed faculty preceptors, the CTRC, and the institution, our trainees will receive comprehensive training in cancer research.