

Our proposed continuation of the UTHealth-CPRIT Innovation in Cancer Prevention Research Training Program (UTHealth-CPRIT 2.0 or “2.0”) builds on 10 years of successful training of 25 doctoral students, 20 postdocs, and 206 undergraduates. Past trainees—from the U.S. and 11 other countries - have achieved meaningful results at U.S. academic institutions, and in industry, and 40% have remained in Texas. One-third of our summer undergraduate-interns, who have gained valuable career experience in the cancer prevention space, are from underrepresented minority groups.

In this renewal application, our training focus shifts from general cancer research, to cancer prevention along each step of the cancer control continuum. What will not change is our pursuit of projects that take bold, imaginative leaps in cancer control innovation, emphasizing career skills, transdisciplinary communication and problem solving. And we will expand and diversify recruitment - particularly of underrepresented minority trainees - among both trainees and mentors by leveraging the unique regional campus infrastructure of UTHealth School of Public Health across Texas. We will place highest priority on the reduction of cancer-related disparities through cancer prevention research, facilitated by substantial institutional commitment which has allowed us to increase the number of trainees beyond the scope of this training grant. Specifically, we propose to train and mentor 18 doctoral students, 9 postdocs, and 64 undergraduates, with at least 30% of new recruits who are from U.S. underrepresented minority groups, and majority of whom are female.

The 2.0 program will be led by an accomplished cancer prevention scholar who is a long-standing CPRIT grantee, successful mentor, leader, and training grant director. She is also a Latina and has focused much of her research on cancer prevention among underserved minorities and has extensive experience mentoring pre and postdoctoral fellow and junior faculty from diverse backgrounds. Each partnering school—public health, bioinformatics, and biomedical sciences—is represented by a Co-Director. We have invigorated the rolls of successful mentors with additional CPRIT rising stars and other outstanding cancer researchers, particularly those who will serve as role models for minority trainees and have updated the membership of the Executive Committee. And we have designated Cancer Prevention Innovation Scholars to take an active role in the training program.

To increase the cadre of cancer control scientists from underrepresented ethnic/racial minority trainees with the tools for innovative and transdisciplinary thinking, we will leverage (1) the diversity of SPH doctoral students and the SPH regional campus and communications network, especially campuses in Brownsville and El Paso; (2) the new outreach of the SBMI on-line doctoral training in underserved areas of Texas; and, (3) high priority initiatives at UTHealth to recruit and mentor minority doctoral students and postdocs.

We will build on our unique and impactful training program by adding: 1) An innovative trainee selection process using interviews and group problem-solving exercises; 2) Training in evidence-based tools to increase innovative thinking through a Massive Open Online Course (MOOC) developed with CPRIT funding and books that teach and apply the toolbox; 3) Training in team science and support for transdisciplinary projects; 4) Multi-faceted mentoring, with outstanding cancer prevention scientists; 5) Career skill training, emphasizing oral and written communication, proposal writing, responsible conduct of research; 6) Faculty/alumni guidance for cancer-focused research careers in academia and industry/start-ups; 7) Supportive services, e.g., editing services/tutorials, pronunciation and communication, voice and body language training, and U.S. professional etiquette; 8) New recruitment resources for African American and Latino/Hispanic trainees and revision of the selection process to increase diversity; 9) Options for trainees to remain in home doctoral programs/enter on-line programs to avoid the sometimes-insurmountable challenge of relocating to Houston; 10) New courses and certificate programs to increase core skills for the era of 5G, health informatics, breakthroughs in understanding the molecular basis for cancer risk, intervention design, and dissemination and

implementation science; 9) Entrepreneurial involvement, e.g., TMC Innovation Lab, Cancer Prevention Innovation Scholars; 10) Support services tailored to the needs of new trainee groups

The proposed continuation and expansion of our successful program will equip trainees with the tools to increase innovative thinking and training in D&I science that will lead to cancer prevention innovations that can be rapidly implemented and disseminated in real-world settings thus improving population health and health equity in Texas.