

MULTIPLE PI LEADERSHIP PLAN

The proposed project will be led by a team of three PIs who have complementary background and expertise to oversee various tasks to accomplish the aims of the project and best serve the needs of the STARS trainees.

Dr. Atkins (Corresponding PI and PI-1) has already supervised research training of 46 undergraduate students including 37 underrepresented students in the past 4 years. Two of these students have matriculated to biomedical PhD programs and 6 to other graduate or doctoral programs. Her undergraduate trainees have produced 34 presentations at local, regional, or national meetings and won numerous awards. She has developed an innovative CURE project to discover novel genes involved in *Drosophila* eye and head development through an interinstitutional collaboration between SHSU and University of Houston- Downtown (both HSIs). This project is externally funded from Society of Developmental Biology this year to host a scientific symposium at Baylor College of Medicine and created opportunities to introduce these students to summer research experiences, graduate school and employment opportunities. Dr. Atkins will oversee the curriculum and training designs and implementations including the seminar series, BIOL 2110 course, outreach activities, academic advising and success for the trainees, faculty learning community, and annual Bootcamp. She will provide guidance to the STARS trainees who will be trained externally in other partner institutions.

Dr. Donovan Haines (PI-2) has leadership skills to supervise research students and to oversee administrative processes necessary for the research capacity building among both students and mentors. His experience as the Chair of the Chemistry Department, which is in the top 20% in the country by number of undergraduate majors with over 50% URM, 75% female, and 47% first generation, will be leveraged for coordinating the tasks of the STARS program. Over his career, he has mentored many underrepresented students including multiple McNair Scholars, a student who received the national American Chemical Society Women Chemist Committee Overcoming Challenges Award, students with disabilities including a deaf student, and students who have joined graduate schools in the fields of Chemistry, Biochemistry, or Forensic Science. Strikingly, >5% of Forensic Science PhDs in the U.S. were trained as undergraduate research students in his lab and approximately 10 have gone to medical schools over the years. Dr. Haines will oversee recruitment and program administration for the proposed STARS program including recruitment of the trainees, mentor training for inclusive practices, academic affairs, program evaluation, and periodic dissemination of results of the program. Additionally, he will assist PI-1 to implement the seminar series and supervise the multi-level mentoring to improve trainee outcomes.

Dr. Khalid Khan (PI-3) has a strong research portfolio in neurotoxicology and epidemiology and has experience in managing external grants creating research opportunities for undergraduate students. He is the PI of an ongoing NIH-funded brain health study (Award Number: R01ES032149). In this NIH R01 project, he is leading an interdisciplinary research team from multiple R1 institutions including Columbia University and University of Houston. Dr. Khan has published articles in peer-reviewed journals and presented his research activities in national and international conferences with undergraduate student co-authors. He is now supervising four underrepresented research students at SHSU. Two of these students have recently participated in American Public Health Association (APHA) annual meeting and a regional conference as co-authors. Dr. Khan's NIH project management skills will be leveraged in the proposed study. Dr. Khan will oversee the research and laboratory rotation experience for the trainees, help Co-Is design and implement RCR and Reproducibility curriculum development and training. In addition, he will oversee laboratory rotation of the trainees at the College of Osteopathic Medicine (COM).

The three PIs will work closely with the co-investigators (Co-Is) to implement the tasks of the workplan. Most notably the multi-PI team will manage and coordinate activities for the monthly leadership meetings to 1) review and modify recruitment strategies as needed, 2) select candidates based on applicant qualifications, 3) review the candidate selection process to balance trainees across majors, 4) annually review and modify the STARS based on trainee and mentor feedback, 5) review the progress of the trainees and productivity of prior trainees, and 6) discuss the data on program evaluation followed by the modification of future strategic plan based on current data. The multi-PI team will also lead the annual STARS Retreat to discuss the status of the STARS program. Members of the leadership team have already