

The CTSI Translational Workforce Development Program will lead efforts to document and align UF resources to improve translational workforce diversity, and it will support the 2015-2020 UF Health Strategic Plan recommendation that all HSC Colleges implement a diversity office. The CTSI's diversity initiatives are led by Dr. Talline Martins, Director of Diversity & Inclusion Initiatives and Bioscience Pipeline, and by the Diversity and Inclusion Working Group (DIWG). The DIWG is chaired by Dr. Martins and includes leaders of UF HSC programs that focus on D&I issues. Accomplishments of the DIWG include: implementation of a Diversity and Inclusion Action Plan for the 2015 – 2020 Strategic plan for the UF Health Science Center, aligned with the UF President's Council on Diversity; as one of four programs serving UF HSC Graduate and Postgraduate Education Programs, it has impacted >700 bioscience trainees currently enrolled at UF HSC; it has supported ongoing D&I activities and initiated new D&I Programs, including D&I representation from all six HSC Colleges, an annual D&I Forum, and strengthening ties with Historically Black Colleges and Universities in Florida and nationally. The DIWG will work closely with the other programs to support their recruitment and retention efforts to enhance diversity, including development, implementation, and monitoring of plans to enhance diversity in training grant applications, and support faculty applying for NIH diversity supplements.

By providing a hub for the HSC activities in recruitment and retention for underrepresented groups, we will be able to bring together URM Scholars to provide support, career development, and visibility to the leaders of tomorrow. By drawing URM Scholars together, their collective strength, leadership potential, and scientific knowledge will be visible not only to themselves but to other institutions. As the flagship university in the state of Florida, UF is already a dynamic leader among colleges and universities with important outreach to URM students across the state.

**History.** The recruitment and retention plan builds on the established success of UF in recruiting and retaining diverse students into graduate and professional education programs. UF has been successful at recruiting URM students and is the only major public university in Florida to have fully recovered its minority enrollment following a State legislative ban on the granting of admission preference to minority students. In 2017, 7.18% of all UF students were Black or African American, and 14.62% were Hispanic/Latinx. From 2013-2017 UF ranked 4<sup>th</sup> among all US Universities in the number of Black or African American and Hispanic/Latino students receiving doctoral degrees, and 2<sup>nd</sup> overall in Biological and Biomedical Sciences<sup>1</sup>. Also in 2017, UF ranked #3 as a source of Black or African American and #2 for Hispanic/Latinx students applying to US medical schools<sup>2</sup>. For STEM programs, the number of PhD awards increased 100% percent since 2001. Graduate enrollment level increased from 10,000 to 12,000 graduate students from 2005 to 2015, and from 10% to 13% URM enrollment.

**A. Students from Underrepresented Minorities (URM).** We will benefit from long-standing institutional efforts by UF to successfully recruit minority students, as described below, but we are still not where we want to be as an institution, thus the CTSI is placing emphasis on workforce diversity and is implementing new recruitment and retention programs, as described below.

Institutional Leadership. Recruitment and retention of URM students at the University level is a collaborative effort between the academic units and the UF Office of Graduate Diversity Initiatives (OGDI). Established in 1984, OGDI looks to increase the number of graduate students who are ethnic/cultural minorities, underrepresented in their field of study, low-income or first-generation college students, while advancing and promoting professional development for all students at the graduate level. OGDI has a two-fold mission: (1) increasing the number of graduate students from underrepresented ethnic or racial groups; and (2) providing prospective and enrolled graduate students in underrepresented demographic groups with material aid and mentoring to help in their successful pursuit of a graduate degree. UF has also made a concerted effort in the recruitment and retention of underrepresented faculty, including hiring a new Chief Diversity Officer, recruiting potential URM faculty at the Southern Regional Education Board yearl

Institutional Recruitment Efforts. Notable among the university federally funded programs that focus on increasing the number of STEM baccalaureate degrees and subsequent graduate enrollment among URM are the Bridges to the Doctorate Program, the Florida-Georgia Louis Stokes Alliance for Minority Participation (a coalition of twelve institutions in Florida and one in Georgia that includes over 1,000 talented undergraduates

<sup>1</sup> NSF Survey of Earned Doctorates 2016 ([www.nsf.gov/statistics](http://www.nsf.gov/statistics))

<sup>2</sup> Association of American Medical Colleges

in STEM), and the Bioscience Scholars Program, all awarded to UF by the National Science Foundation, and the McNair Scholars Program, funded by the U.S. Department of Education. NIH-funded initiatives include the Cancer Health Equity Center, a bicoastal research and training center, the MARC GatorSTAR Program and the SF2UF Bridges Program (to engage students from the two year Santa Fe College in research experiences at UF to facilitate successful transfer and degree completion). Regional initiatives include the Historically Black Colleges and Universities-UF (HBCU-UF) Master's to PhD Pathway Project to identify top-performing students in master's programs at participating HBCUs who demonstrate the capacity to be strong PhD students as indicated by their creativity, intellectual curiosity, ability to think critically, and their academic performance. This project is highly effective by developing and producing high-performing PhD students from a pool that is not effectively tapped. UF also participates in the Florida A&M University Feeder Program (UF provides 3 to 5 fellowships annually to this program designed to increase the number of Florida A&M University African-American students enrolled in graduate programs at participating universities), and the Florida Board of Education Summer Fellowship Program (an orientation program designed to prepare URM students for graduate education). UF is also a member of the National Name Exchange, a consortium of universities that annually collect and exchange the names of their talented URM students in their junior or senior years of undergraduate education.

Institutional Retention Efforts. The OGD I retention efforts include a variety of social/networking programs, professional development workshops, and scholarships. The OGD I works in collaboration with the Graduate School's Office of Graduate Professional Development to provide a number of workshops annually on topics such as academic writing, thesis and dissertation, financial and stress management, summarizing and critiquing readings or scientific articles, effective oral and poster presentations, passing qualification examinations, publishing, using professional meetings to advance one's career, networking and branding, and writing and receiving research grants. Programs with significant student financial support include the McKnight Doctoral Fellowship, the Delores Auzenne Dissertation Award, the Florida Board of Education summer fellowship program, the GEM fellowship program, the McNair Graduate Assistantship Program, and sponsorship to participate in the Institute on Teaching and Mentoring for URM students.

UF HSC Programs. UF HSC investigators work with a number of programs to encourage workforce diversity, including the Center for Precollegiate Education and Training, which links UF faculty, graduate students, and postdocs with in-service teachers and students from underprivileged backgrounds in grades six through twelve through numerous programs, including through a NIH Science Education Partnership Award (SEPA), and the UF Area Health Education Center Health Care Summer Institute, a 4-week program for 25 rural and under-represented students interested in healthcare professions. The Colleges of Medicine and Pharmacy offer the Florida Prostate Cancer Research Training Opportunities for Outstanding Leaders, funded by the Department of Defense, to attract outstanding underrepresented minority students to UF graduate and medical schools from HBCUs. The College of Dentistry offers the Summer Learning Program for underrepresented minorities and educationally and economically disadvantaged students. The students shadow dental students to learn about opportunities in dentistry. Numerous efforts also link UF HSC to HBCUs. In 2014, UF partnered with Florida Agricultural and Mechanical University (FAMU) to establish the Florida Minority Cancer Research & Training Center. Funded by the NIH/NCI, the Center aspires to increase the number of underrepresented minority cancer researchers in Florida. In 2018, NCI awarded UF and partner institutions Florida A&M University and the University of Southern California a US\$16 million grant to establish a Health Equity Center at UF, which includes training of URM students. The HSC also participates in a Visiting Scholars Program with Meharry College, funded by the Robert Wood Johnson Foundation. Doctoral fellows visit partner universities for mentoring, and faculty from partner universities serve as visiting professors at Meharry. The College of Medicine hosts an R25 Award from NINDS entitled: "Mentoring Institute for Neuroscience Diversity Scholars (MINDS)" coordinating a national mentoring program for URM early career faculty, adding 10 new neuroscience investigators each year to a national network of mentors and workshops. Finally, in 2016, the Colleges of Dentistry and Medicine were awarded a Summer Health Professions Education Grant from Robert Wood Johnson Foundation to host intensive innovative experiences for URM undergraduate students from across the US interested in pursuing professional and research doctoral degrees in biomedical sciences.

CTSI Programs. As we have described above, CTSI is committed to recruitment and retention activities and to the success of individual programs in HSC. The CTSI Translational Workforce Development (TWD) Program will enhance and strengthen these already successful individual efforts by providing a hub of activity for URM Scholars and their faculty mentors. Recruitment efforts: UF has a strong presence at the Annual Biomedical Research Conference for Minority Students (ABRCMS) for some individual activities, with attendance each

year by faculty members and UF URM students. By gathering the research success stories across the individual programs of our outstanding URM students, the TWD program will be in a position to develop materials that highlights the strength and breadth of URM Scholars at UF. The TWD Program will work with the CTSI Communications and Dissemination Program to develop display and advertising materials that highlight the scientific success of our URM trainees, which will convey to trainees attending as well as the program directors a larger picture of the strength of the scientific community of URM trainees at UF. Using recruiting funds from multiple training programs will allow more cost-effective recruiting at national meetings such as ABRCMS, and the addition of a presence at the annual meeting of the Society for Advancement of Hispanics/Chicanos and Native Americans in Science (SACNAS).

Example Plan for Recruitment: Recruiting materials (PowerPoint presentations and brochures) will be provided to faculty members who are invited speakers at other institutions that traditionally enroll a high percentage of minority students, so that they may make additional presentations to describe the program to undergraduate students and/or meet with students (prospective recruits) and career advisors. Prospective minority Scholars will be introduced to training opportunities and career perspectives offered by UF via a webpage which outlines our program, our faculty and research, and potential career opportunities that arise from being a successful trainee in the program. We hope that incoming trainees take into account these unique opportunities when making their decisions about graduate and postgraduate programs. Based on past surveys of UF HSC program applicants, the most important recruiting tools will be websites providing detailed and accurate information about program features and research opportunities; thus the CTSI Communications and Dissemination Program also will invest significant effort in updating the CTSI website to reflect the expanded career and professional development opportunities and changes. A full-time Communications Specialist is available to provide IT help to UF training programs. Websites for all partner programs will be updated to include links to CTSI Programs and to other relevant web sites, such as the NSF BioLink website ([www.biolink.org](http://www.biolink.org)), and the Florida Department of Education website ([www.fldoe.org/college](http://www.fldoe.org/college)).

Retention efforts available to UF HSC faculty and students include the Mentor Academy, a structured program which promotes a culture support and provides training for optimizing mentoring relationships; the Educational Scholarships Program, which provides awards for participation in teaching and educational research activities; and multiple professional development resources and activities through the Office of Biomedical Research Career Development, including grant writing workshops, career explorations groups, and the Leadership in Action summer workshop. In 2014, the CTSI created the OneFlorida Minority Education Program in collaboration with Florida A&M University (FAMU) and Edward Waters College, two HBCUs. The program links junior faculty and graduate students with faculty mentors from UF, the University of Miami, or Florida State University on the design and conduct of pragmatic clinical trials and implementation science studies to prevent or reduce health disparities, with an initial focus on cancer control and prevention. The CTSI Mentor Academy will proactively recruit faculty members from underrepresented groups to serve as mentors, and the CTSI will develop a Personal Roadmap Program for trainees and junior faculty who are underrepresented minorities to link them to appropriate mentors.

Example Plan for retention: Academic performance and research progress will be followed closely by the Program Director via regular progress reports from the mentors, monitoring of academic performance and participation in professional and career development activities, and annual personal interviews. Close monitoring will allow early intervention if the need arises, which may take advantage of services offered by the UF Dean of Students Office and/or counseling services available at the college and university level. A dedicated student counselor is available in the COM to Scholars seeking guidance on personal and academic and career issues. We have limited experience with peer mentoring of entering students by advanced PhD students, but will encourage peer mentoring for URM undergraduate or graduate students by URM postdoctoral fellows.

**B. Students with Disabilities and Disadvantaged Backgrounds.** Information on applicants with disabilities or from disadvantaged backgrounds has not been collected historically at UF, but data collection has begun. The University has prioritized accessibility for students challenged with differing abilities. Through the Disability Resource Center, students and trainees can receive a variety of “Disability Accommodations and Services”, such as: American Sign Language interpreters; Assistive Technology; Assistive Transportation Arrangements; Books on Tape; Classroom Accessibility; diagnostic referrals; distraction-reduced exam sites; enlarged print; FM systems; in-class note-takers; preparation of accommodation requests for postgraduate entrance examinations; readers and scribes; and time extensions for class exams. The University is ADA-compliant, and all spaces used by trainees are accessible.

Example plan for recruitment and retention: All marketing and communication materials will provide information on accommodations and disability support, and UF's strong commitment to diversity and inclusion, including disabled students. Similarly, program webpages will feature disability-related resources available on campus and regionally. Prospective trainees will be prompted for requests for accommodation through all stages of communication. Recruitment efforts will be coordinated with the Director of Diversity and Inclusion Initiatives (Dr. Talline Martins) and include targeted advertisement to individuals with disabilities, and outreach efforts with existing programs such as with the Institute for Accessible Science, which advertises current opportunities for students with disabilities, the University of Washington's AccessSTEM Project, which promotes changes to make STEM programs more inclusive and connects students with opportunities, and the NSF-funded South East Alliance for Persons with Disabilities in STEM (SEAPD-STEM), which focuses on improving the quality and quantity of students and faculty with disabilities in STEM through collaboration of efforts, resources, and pipeline bridges among post-secondary institutions. Because disabilities are self-reported, all trainees matriculating in the program will be provided with information on campus and local disability resources, and if desired, will be connected with a mentor that is sensitive to the necessary accommodations of the trainee. Faculty and trainees will also be encouraged to participate in the ongoing collaboration between the HSC and the Florida School for the Deaf and Blind on a number of clinical and educational programs. All mentors will be directed to complete the UCSF self-paced online training module to guide faculty who work with students with disabilities (<http://meded.ucsf.edu/msds/faculty-training-modules>).