$3.5 million NIH grant will teach young scientists how to teach

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By Will Sansom

A five-year, $3.5 million grant from the National Institutes of Health (NIH) to the Health Science Center will enable postdoctoral research scientists to hone their teaching capabilities and skills at three undergraduate universities in San Antonio, leaders announced today. In a domino effect, the young scientist-instructors will enhance their own career potential while inspiring undergraduate students to enter research careers, ultimately strengthening the city's scientific workforce.

The Institutional Research and Academic Career Development Award (IRACDA) is an award from NIH's National Institute of General Medical Sciences to support the San Antonio Biomedical Education and Research (SABER) Program. Undergraduate partner institutions are St. Mary's University, Trinity University and Our Lady of the Lake University.

"By placing postdoctoral fellows on these university campuses, we are taking exciting science there and the young researchers are peer mentoring the next generation about science, while at the same time developing their teaching skills," said SABER IRACDA program co-director Linda McManus, Ph.D., director of the Office of Postdoctoral Affairs at the Health Science Center.

"Postdoctoral fellows may be doing wonderful research, but that does not equip them to stand up to teach a class of freshmen, or seniors for that matter," SABER IRACDA program co-director Kay Oyajobi, Ph.D., said. "Through this program, we encourage young researchers to think about all the things that will confront them in the classroom if they teach at a primarily undergraduate institution. We can equip them with the tools they need to succeed by leveraging the teaching excellence at our partner institutions."

Three years of training

IRACDA supports three years of training for postdoctoral fellows. "While conducting cutting-edge research at the Health Science Center, they gradually phase in the teaching component over those three years," said James Lechleiter, Ph.D., SABER IRACDA program co-director. "They teach progressively more as they learn, until about 40 percent of their time is spent in classroom instruction during the third year."

Dr. Lechleiter noted that the focus of science education in an undergraduate university is very different from the UT Health Science Center. "The goal of the undergraduate institution is not to cure cancer, but to ask how research can be used to inform or educate the students," he said.

Timothy Raabe, Ph.D., associate dean and chair and professor of biological sciences at St. Mary's University, said, "The SABER program is a win-win for all institutions involved since the postdocs will receive hands-on classroom experience, while our students benefit from being exposed to a potential mentor who can provide advice regarding the variety of career paths in the field of biomedical sciences."

James Hall, Ph.D., professor of biology at Our Lady of the Lake University, echoed this sentiment and
mentioned that this IRACDA award targets trainees who are underrepresented in science. The UT Health Science Center, St. Mary’s and Our Lady of the Lake are recognized as Hispanic Serving Institutions by the U.S. Department of Education.

**Preparing the local workforce**

The young minds in the lecture halls at St. Mary’s, Trinity and Our Lady of the Lake represent prized human capital in a city where health care and the biosciences is a $30.6 billion industry, the largest sector of the economy. “If you think about San Antonio’s workforce needs, the city requires more than professors; it also requires people working in academic, industry and clinical labs,” Dr. McManus said. “We anticipate that our IRACDA program will enhance the educational programs of our partner institutions, strengthen collaborations in research, and prepare the local workforce of tomorrow.”

Dr. Lechleiter said the Health Science Center and its three undergraduate partners competed for an IRACDA program award that is held only by some of the nation’s elite research-intensive institutions, from Stanford University and the University of California, San Francisco to the University of Pennsylvania, UT Austin and Emory University. Currently, only 19 other institutions have IRACDA-supported postdoctoral training programs nationwide.

Most of today’s science faculty started out in research and were never formally trained to teach. “When I was a graduate student, I was handed an assignment to give a lecture,” Dr. Lechleiter said. “I spent weeks preparing this lecture, and in the end, I really wished I had some formal training in the art of teaching.”

The SABER IRACDA program will change that, not only for scientists that the program supports but for others who are welcome to attend SABER IRACDA-sponsored workshops and seminars.

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