

UC San Diego's Socrates Fellows Program Prepares Next Generation of Science Leaders and Educators

July 14, 2010

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Last winter, President Obama announced the STEM (Science, Technology, Engineering and Math) Initiative, calling for a series of nationwide programs to educate and inspire students to excel in science and math, especially among underrepresented groups.

The University of California, San Diego (www.ucsd.edu), renowned for its innovative and groundbreaking research, has for years offered a myriad of opportunities to advance STEM education at all levels, including its Socrates Fellows Program - a yearlong endeavor to enhance scientific learning at all levels through mutual learning activities. On Friday, July 16, UC San Diego Ph.D. candidates and San Diego teachers and high school students will participate in a collaborative day of science education as part of the Socrates Fellows Program, facilitated by the UC San Diego science outreach effort, ScienceBridge (formerly known as BioBridge).

Founded in 2008 with a grant from the National Science Foundation, the Socrates Fellows Program supports nine teacher-doctoral pairs as they work together to integrate the doctoral student's research focus into compelling and inquiry-based science lessons for the teacher's classroom. Each fellow receives a stipend of \$30,000 plus tuition for the year to participate in the program.

On July 16, a special group of high school students will be the first to test these newly created classroom activities and hands-on experiments.

They are participating as members of the Science Leadership Institute, another outreach program supported by ScienceBridge that serves students from six San Diego high schools: Morse High School, Lincoln High School, Clairemont High School, Mission Bay High School, San Diego High School and Mira Mesa High School.

"We encourage students to explore their own interests in science by engaging them in relevant and exiting ways, with the hope that they might also embark on a rewarding journey in science," said Carmen Vélez, a graduate student studying organometallic chemistry and a current Socrates Fellow.

A mutually advantageous learning experience, graduate students contribute by bringing cutting-edge research into the classroom while experienced teachers help them become more effective communicators. From nanochemistry to biofuels and genomic data, Socrates Fellows and teachers develop relevant classroom lessons that inspire and excite students.

"Through the Socrates Fellows Program, we are changing the perception that researchers don't care about teaching - because they do care," said Jeremy Babendure, executive director of ScienceBridge. "We are bridging the gap between science and science education."

Sam Lasse, who plans to complete his Ph.D. in cell biology in 2011, was one of the first doctoral students to participate in the program. Through the Socrates program, Lasse helped lead an after-school project for students at High Tech High International in San Diego. Called the "DNA Damage Project," the after-school activity brought

biotechnology experience to high school students as they learned to design experiments, test hypotheses, analyze data and interpret results.

"Many people think of graduate school as only a training ground for future faculty," said Lasse. "The Socrates program greatly broadens the educational experience of Ph.D. students by exposing them to partnerships and collaborations with teachers and other graduate students from diverse disciplines, which boosts their teamwork and problem-solving skills and broadens their professional outlook."

A campus and community resource, ScienceBridge is changing the landscape of education in San Diego. This innovative educational outreach program facilitates a variety of programs-like the Socrates Fellows Program-for middle and high school classes that include hands-on training and mentorship to support the next generation of science leaders. These programs primarily reach out to underserved schools, such as those in the Sweetwater High School and San Diego Unified School Districts, providing the academic resources to help these students excel in science education.

However, for programs that rely on dwindling state and federal funding, such as ScienceBridge, private support is crucial to ensure the continuation of these outreach efforts. For more information about supporting ScienceBridge, please contact (858) 534-0263 or stuaffairsdev@ucsd.edu.

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