

Changing the Face of Science

BY MARY LOU DE LEON SIANTZ

Chancellor Linda Katehi and the NSF-funded UC Davis ADVANCE team are leading efforts to transform the face of STEM scientists on campus by: 1) building a vibrant, welcoming and diverse STEM research community, starting with Latinas; 2) establishing an institution-wide inclusive climate in STEM departments that values diversity; 3) promoting equitable career advancement, achievement, and recognition among all STEM faculty; 4) investigating barriers and catalysts for Latinas in STEM through original social sciences research, and 5) developing a regional employment network with services to enhance recruitment and retention of dual career faculty. A core component of institutional transformation at UC Davis is the Center for the Advancement of Multicultural Perspectives on Science (CAMPOS). Its mission is to support the discovery of knowledge by promoting women in science, especially Latinas, through an inclusive environment that is diversity driven, mentorship grounded, career success focused.

CAMPOS has partnered with the UC Davis Vice Provost of Academic Affairs and STEM colleges and departments to nominate newly recruited tenure-track faculty with a demonstrated commitment to diversity for the CAMPOS Faculty Scholar Award. CAMPOS Faculty Scholars are selected for their transformative thinking, unique perspectives, interdisciplinary approaches, and leadership potential to impact their STEM disciplines in profound and enduring ways. They serve as role models for future scientists and scholars who share their vision of diversity and inclusion, as key components of the Academy in the 21st Century.

Since January 2014, we have welcomed a diverse, interdisciplinary group of nine CAMPOS Faculty Scholars to campus, seven of whom are Latinas. As these women of science exemplify, UC Davis is leading and achieving its goal to change the face of STEM scientists. The campus aims to reflect the diversity of the local and global community in the 21st century. UC Davis is on track to become a Hispanic Serving Institution by 2018. Ultimately, our goal is to inspire the next generation of Latina women in science!



Jacqueline Barlow

Assistant Professor of Microbiology and Molecular Genetics, College of Biological Sciences. The Barlow lab studies how DNA replication stress induces genome instability and contributes to cancer initiation and progression using the mouse immune system as a model. Her research goal is to illuminate how spontaneous DNA damage arises in proliferating cells, in order to promote earlier identification of tumors and develop more effective cancer treatments.

Natalia Caporale

Assistant Professor of Neurobiology, Physiology and Behavior, College of Biological Sciences. Dr. Caporale will arrive on campus in January 2016. She will be engaged in teaching and research on the role of metacognition in the learning process and identification of instructional elements that increase student retention in STEM disciplines. Specific areas of focus will include using active learning strategies and novel technologies to improve teaching effectiveness in large enrollment courses.

Magdalena Cerdá

Associate Professor of Emergency Medicine, Vice Chancellor's Endowed Chair in Violence Prevention, Associate Director, Violence Prevention Research Program, School of Medicine. Dr. Cerdá investigates the neighborhood causes and mental health consequences of violence, life course influences on substance use trajectories, and the emergence of new drivers and forms of substance use.



Lillian Cruz-Orengo

Assistant Professor of Anatomy, Physiology and Cell Biology, School of Veterinary Medicine. Dr. Cruz-Orengo studies rodent models of neurological disorders, including trauma, chronic pain, and inflammatory-induced neurodegeneration. She has used a novel technique to assess blood-brain barrier (BBB) permeability *in vivo* in animal models of neuro-inflammation.

Fernanda Ferreira

Professor of Psychology, Division of Social Sciences, College of Letters & Sciences. Dr. Ferreira's area of research is psycholinguistics. The fundamental aim of her investigations are to uncover the mechanisms that enable humans to understand and generate language in real time and in cooperation with other cognitive systems.

Cindy Rubio González

Assistant Professor of Computer Science, College of Engineering. Dr. Rubio Gonzalez' work spans the areas of programming languages and software engineering, with a specific focus on program analysis. She designs and builds tools to help software developers write more reliable and efficient software and has developed program analyses to automatically detect incorrect error handling in large software systems.



Anna La Torre

Assistant Professor of Cell Biology and Human Anatomy, School of Medicine. In the La Torre lab, researchers investigate how stem/progenitor cells differentiate into multiple cell types. Dr. La Torre is interested in using *in vitro* models as platforms to understand basic principles of development and disease.



Alexis Patterson

Assistant Professor of Elementary Science Education, School of Education. Dr. Patterson's research focuses on the impact of inequity in science classrooms and the peer influence of historically marginalized groups in science on the desire of these groups to pursue advanced studies and careers in STEM.

Mariel Vazquez

Professor of Mathematics, College of Letters & Science; Professor of Microbiology and Molecular Genetics, College of Biological Sciences. Dr. Vazquez focuses on the applications of topological and discrete methods to the study of DNA. She is a 2012 recipient of the U.S. Presidential Early Career Award for Scientists and Engineers.

