GRANTS ROUNDUP

Between April and June 2014, The University of Texas at El Paso received research grants to study a range of topics. The following is a sampling of grant research in each college started during that 3-month period.

COLLEGE OF SCIENCE

Igor Almeida, Ph.D., professor of biological sciences, received funding from the Texas Biomedical Research Institute to test a vaccine for preventing Chagas.

With funds from the Department of Defense, **Cristian E. Botez, Ph.D.**, associate professor of physics, will acquire a PANalytical Empyrean X-ray scattering system that will be used to replicate conditions under which certain functional materials actually operate.

Studying the seismic activity at Mount Saint Helens, **Steven H. Harder, Ph.D.**, director of the J.W. Miller Geophysical Laboratory, will provide source support for the iMush active experiment using funds from Rice University.

Robert A. Kirken, Ph.D., dean of the College of Sciences, received a grant from the National Institutes of Health's National Institute on Minority Health and Health Disparities to enable high quality research on health-related problems prevalent on the U.S.-Mexico border.

Through the collaborative efforts of **Jorge Gardea-Torresdey, Ph.D.**, chair of the chemistry department and UTEP's principal investigator, three researchers at UTEP – **Mahesh Narayan, Ph.D.**, associate professor of chemistry; **Geoffrey Saupe, Ph.D.**, associate professor of chemistry; and **David Zubia, Ph.D.**, associate professor of electrical and computer engineering – secured funding from the Academy of Applied Science to have high school students participate in the Research and Engineering Apprenticeship Program (REAP). The program allows high school students to work directly with a mentor at UTEP.

The Texas Higher Education Coordinating Board awarded a grant to an interdisciplinary team from UTEP. Team members include **Kien H. Lim, Ph.D.**, associate professor of mathematical sciences; **Laura F. Serpa, Ph.D.**, department chair and professor of geological sciences; and **Olga M. Kosheleva, Ph.D.**, associate professor of teacher education. Their project will provide professional development for teachers and principals to strengthen the integration of concepts for mathematics and science, particularly algebra, through building teams and enhancing teaching practice.

Mahesh Narayan, Ph.D., associate professor of chemistry, received a grant from the Medical Center of the Americas Foundation to study drug-receptor interactions and halogen bonding in drug design to enhance Post-Traumatic Stress Disorder (PTSD) drug discovery and therapies.

With funding from the National Institutes of Health's National Institute of General Medical Sciences, **Chuan Xiao, Ph.D.**, assistant professor of chemistry, will study mammalian circadian rhythm functions to aid therapeutic strategies to treat sleep disorders and shorten or reduce the effects of altered sleep patterns.

COLLEGE OF LIBERAL ARTS

Edward Castañeda, Ph.D., professor of psychology, was awarded a supplemental grant from the National Institutes of Health's National Institute on Drug Abuse for the Vulnerability in Drug Abuse (VIDA) project. The grant will fund a three-year stipend for postdoctoral trainee **Luis Carcoba, Ph.D.**, who will be co-mentored by Castañeda and associate professor of psychology **Laura O'Dell, Ph.D**. Carcoba received his doctorate in biology from UTEP. His work on the VIDA project will develop his skills at a behavioral, neurochemical and molecular level, and ensure he is competitive for faculty positions at the end of the proposal.

Craig Field, Ph.D., associate professor of psychology, was awarded a grant from the Patient-Centered Outcomes Research Institute for a project titled "Culturally Adapted Brief Motivational Intervention for Heavy Drinking Latinos." Latinos, particularly men of Mexican origin, are more likely to drink heavily and experience alcohol-related problems, but less likely to seek help for these problems compared to non-Latino men. Field's research team was the first to evaluate differences in the effectiveness of brief motivational interventions for alcohol use and related problems among Latinos and non-Latinos, demonstrating that heavy-drinking Latinos who received these interventions were significantly more likely than those receiving standard care to reduce alcohol use at six and twelve months after the intervention.

Laura O'Dell, Ph.D., associate professor of psychology, received two grants from the National Institutes of Health's National Institute on Drug Abuse for the project "Sex Differences in the Mechanisms that Promote Nicotine." Given that women are more vulnerable to the long-term health consequences of smoking than men, O'Dell's project will determine the neural mechanisms that promote tobacco use in females. This research will lead to more effective treatments that will reduce health disparities in women.

COLLEGE OF ENGINEERING

Arturo Bronson, Ph.D., professor of mechanical engineering, and **Vinod Kumar, Ph.D.**, assistant professor of mechanical engineering, received funding from the Air Force Office of Scientific Research (AFOSR) to investigate alloys and design oxidizing scales for ceramic-ceramic composites.

Funded by Czech Technical University, **Christopher D. Kiekintveld, Ph.D.**, assistant professor of computer science, will explore the optimization of intrusion detection systems in large, real-world networks through statistical network traffic analysis.

Iowa State University will fund a co-design project by **Shirley V. Moore, Ph.D.**, associate professor of computer science; Patricia Teller, Ph.D., professor of computer science; and **Ramon J. Ravelo, Ph.D.**, associate professor of physics. Moore, Teller and Ravelo will use application code characterization, hardware platform design, adaptive modeling and heterogeneous scheduling, and static and dynamic mapping to enable improved performance and scalability alongside decreased power consumption.