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\$52M NIH Grant Advances Clinical and Translational Research at UC San Diego

Federal funding will help further on-going efforts to translate discoveries to clinic

The Clinical and Translational Research Institute (CTRI) at University of California, San Diego has received a five-year Clinical and Translational Science Award (CTSA) for approximately \$52 million from the National Center for Advancing Translational Science, part of the National Institutes of Health.

Established in 2010, CTRI is part of the national CTSA consortium of 62 medical research institutions created to energize efforts to translate basic science

discoveries into new treatments for patients. The

institute was awarded a \$37.2 million grant at that time to create innovative programs that advance research into the causes and cures of human disease. The new award recognizes CTRI's success during its initial funding under the CTSA program.

“The first five years transformed our research environment and the way discoveries move from the lab to the clinic,” said Gary S. Firestein, MD, director of CTRI and dean and associate vice chancellor of translational medicine at UC San Diego. “The next five will be about accelerating that process, expanding training programs and improving information systems tools for research.”

Firestein said greater emphasis and resources will be directed toward developing clinical trials that exploit the power of big data. “Rather than rely upon the traditional method of studying large numbers of patients, we’re moving toward massive data collection on individual patients. The goal is to integrate diverse approaches and disciplines to find new drugs and therapies and advance individualized treatments.”



Altman Clinical and Translational Research Institute, slated to open in 2016.

The new award supports the expansion of the CTRI-mentored career development program to support young faculty members and funded research experiences for medical and pharmacy students; development of a phase I unit at the Center for Clinical Research; expansion of biomarker and biocomputational capacity; new infrastructure to speed the regulatory processes for reviewing research involving human subjects; and new informatics solutions to help researchers recruit for clinical trials. The CTRI, which had previously supported three junior faculty through the CTSA grant program, will now support eight and create a new post-doctoral fellowship focused on team science and managing complex projects.

“Medical science is changing, more rapidly and more dramatically than ever,” said David Brenner, MD, vice chancellor for health sciences and dean of the School of Medicine. “But progress also means new and sometimes daunting complexities and challenges. The CTRI is a critical element in solving those puzzles of health and disease. UC San Diego and the CTRI have a proven track record of success in translational science.”

Firestein, who is the principal investigator on the CTSA grant, said the continued funding will provide the resources to build upon existing and emerging strengths. “San Diego is a unique ecosystem of scientific innovation, basic research, biotechnology and clinical investigation. The role of CTRI is to nurture and promote the outcome of that work in the form of improved health.”

The NIH grant will enable the creation of the Center for Lifespan Research, which will bring together investigators of childhood health, aging, and lifespan transitions. Led by Christina Chambers, PhD, MPH, the unit will develop infrastructure to support Rady Children’s Hospital-San Diego, the UC San Diego Women’s Center of Excellence, the Stein Institute of Research on Aging, and numerous other centers such as those focused on autism and cystic fibrosis. Dedicated project managers, ethics support and clinical research infrastructure will be provided to assure integration of research efforts on vulnerable populations, special populations and diverse populations across the age spectrum.

“It’s not just about drug development and testing,” Firestein said. “We’re investigating the full breadth of human health and disease, which includes understanding how behavior, the environment and risk factors play roles. Our research encompasses the human lifespan, from infants to seniors and all of the transitional points in between. For example, what happens when a child who has diabetes or cystic fibrosis becomes an adult? How does their treatment or care need to change to assure the best health care?”

The CTRI provides infrastructure and support for translational and clinical research throughout the San Diego region and facilitates the training and education of the next generation of researchers. It carries out its activities in collaboration with institutional and corporate partners and currently has more than 1,000 members. The research will largely be performed in the new Altman CTRI building, slated to open in 2016.

“We are thrilled to hear the news that the NIH has awarded a five-year grant to the CTRI,” said Mitchell Kronenberg, PhD, president and Chief Scientific Officer of the La Jolla Institute for Allergy and Immunology. “As a partner of the CTRI, we share the goal of making an impact on the translation of laboratory research into new diagnostics and therapeutics. This new award strengthens our partnership and further encourages multi-disciplinary biomedical research leading to the prevention, treatment and cure of a wide range of human diseases.”

During its first five years, CTRI has helped transform the biomedical research landscape at UC San Diego and beyond. It created a hub for translational science that reaches across traditional institutional barriers and serves as the epicenter for health research at UC San Diego, supporting nearly every clinical trial at the institution. The CTRI also provides advanced informatics tools, research infrastructure and education and training programs for both working scientists and students in the School of Medicine. The institute enables collaborations with research and clinical affiliates, bringing clinical relevance to basic science at research institutes and research expertise to its community partners.

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