

UC San Diego Receives \$2.5 Million NIH Grant To Establish Digestive Diseases Research Center

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In a major boost to important research into gastrointestinal disease being conducted at the UC San Diego School of Medicine, a \$2.5 million basic research core grant to establish a Digestive Diseases Research Development Center (DDRDC) has been awarded to UC San Diego's Division of Gastroenterology. The grant, funded by The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health (NIH), is the first-ever NIH Center award for the division, adding them to the ranks of only 19 other NIH-funded digestive disease centers in the United States.

"The UCSD Division of Gastroenterology researches and treats digestive diseases, ranging from stomach ulcers to colon cancer, that affect more than 65 million Americans," said Division Chief John M. Carethers, M.D. "This grant will enable our researchers to better understand how these diseases originate at the molecular and genetic levels, with the goal of developing better drugs and treatments."

The grant for the DDRDC, sometimes called a "mini-center," will fund several core research areas that share a common theme: inflammation, attempted repair and transformation.

Carethers explains, "Digestive diseases, like acid reflux or fatty liver disease, often cause inflammation, an indication that the body's immune system is attempting to fix things. If left untreated, the attempted repair can cause the kind of cell transformation that leads cancerous tumors. One of the aims of the Center is to understand the triggers of inflammation and how the body's immune system regulates it in order to stop the progression before it becomes cancerous."

The research grant has 28 founding members, including David A. Brenner, M.D., Vice Chancellor for Health Sciences and Dean of the School of Medicine and Kim Barrett, Ph.D., dean of graduate studies at UC San Diego.

"By contributing to scientists' evolving understanding of how inflammation contributes to cancerous tumors and how damaged genes and proteins might be repaired, this grant will put UC San Diego on the map for digestive disease research," said Brenner, a noted physician-researcher who began his career at UC San Diego, pursuing specialty training in gastroenterology.

The core research areas of the DDRDC include an animal model core, led by Lars Eckmann, M.D., associate professor of medicine; an imaging core, led by Joe Gleeson, M.D., associate professor of neurosciences and Hui Dong, M.D., Ph.D., assistant adjunct professor of medicine, that offers researchers the capacity to conduct microscopic and ion imaging; and a molecular patho-biology core, that includes gene expression studies led by Carethers; and a gene chip core led by Gary Hardiman, Ph.D., assistant professor of medicine and director of the BioMedical Genomics Microarray Facility (BIOGEM.)

These cores will provide physician-scientists with low-cost or no-cost access to pilot experiments and sophisticated imaging techniques for macro- and micro-cellular studies. It will also allow researchers who are

members or associate members of the DDRDC to follow ions, or electrically charged atoms, as they move through cells and to utilize sophisticated technologies in the study of gene expression.

Carethers hopes that the success of this mini-center will encourage more multi-departmental and multi-institute collaborations. "The funding will enable us to enhance research productivity and foster new research interactions among scientists with different backgrounds," he said.

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