

Keck Foundation awards UCSD two million dollars for biomedical research

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Media Contact: Mario Aguilera, (858) 534-7572, maguilera@ucsd.edu

KECK FOUNDATION AWARDS UCSD TWO MILLION DOLLARS FOR BIOMEDICAL RESEARCH

The W.M. Keck Foundation of Los Angeles has made two \$1 million awards to the University of California, San Diego.

One award will establish two state-of-the-art satellite sites linked to UCSD's San Diego Supercomputer Center (SDSC) in support of interdisciplinary biomedical research. A second \$1 million award has been given to Partho Ghosh of UCSD's Department of Chemistry and Biochemistry under the Keck Foundation's new Distinguished Young Scholars in Medical Research program.

The satellite sites, one each in the Division of Natural Sciences and the School of Medicine, will serve as a new kind of interactive, collaborative laboratory. In this high-speed virtual laboratory, researchers at different sites will be able to simultaneously explore 3-D models and remotely access instruments and data.

Over the last 20 years, science has blossomed in its ability to capture more information across the biological spectrum from sequence and structure data describing DNA and proteins, to internal cellular structure data captured by electron microscopy to data on the cellular organization of the heart and brain. The capabilities to acquire and store this information have grown exponentially and show no signs of slowing down.

Linking data resources with tools for advanced computational analysis and data exploration will allow important interdisciplinary work across different levels of biological structure. The Natural Sciences Satellite will focus on molecular explorations and connect advanced computational and data resources, data collection devices and tools for multidimensional visualization. The School of Medicine site will concentrate on both human and electronic interconnections linking biomedical scientists to data about biological structure and function.

The two satellites will be connected to each other and to SDSC resources by a very-highspeed network.

Partho Ghosh's research will be supported for three to five years as one of the first five recipients of the recently established W.M. Keck Distinguished Young Scholars in Medical Research Program.

"The grant awarded to Partho is a tremendous opportunity. Partho has rapidly built an active research group and has recently made and published some spectacular results," said Mark Thiemens, Dean of the Division of Natural Sciences and Professor of Chemistry. "With the grant from the Keck Foundation, his ability to delve into these new areas is expanded considerably and we are all eager to see what emerges."

According to the Keck Foundation, the five-year, \$25 million initiative is designed to support groundbreaking research into fundamental mechanisms of human disease by investigators who exhibit extraordinary promise early in their careers.

"This program was developed in response to the difficulty many extremely talented young investigators have securing sufficient funding for their pursuit of very promising but unproven ideas," said Robert A. Day, Chairman and President of the W.M. Keck Foundation. "While many of these scientists are at a time in their careers when they have great creative potential, they lack the kind of substantial, flexible and largely unrestricted research funding that can enable them to make groundbreaking discoveries."

Ghosh, whose research crosses the boundaries of medicine, biophysics and biology, is a leading investigator in structural biology and a noted expert in protein crystallography and recombinant DNA biochemistry.

The primary aim of his research is to understand how bacterial and protozoan pathogens gain entry into mammalian cells during disease processes. His research carries implications for devising ways to combat infectious diseases and in identifying specific cellular targets for drugs or vaccines.

After graduating from Yale University, Ghosh conducted graduate research in biochemistry and biophysics at UC San Francisco and postdoctoral work at Harvard University as an Irvington Medical Institute Scholar. He joined UCSD in September 1997.

The San Diego Supercomputer Center (SDSC) is a research unit of the University of California, San Diego, and the leading-edge site of the National Partnership for Advanced Computational Infrastructure (<http://www.npaci.edu/>), which unites 46 universities and research institutions to build the computational environment for tomorrow's scientific discovery

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