

UCSD science faculty members cited for achievements

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UCSD SCIENCE FACULTY MEMBERS CITED FOR ACHIEVEMENTS

Six members of the faculty at the University of California, San Diego (UCSD) are recipients of recent honors or awards of scientific achievement.

The recipients, representing the departments of physics, chemistry and biochemistry, and biology, are:

Kit Pogliano, assistant professor of biology. Pogliano has been named recipient of a 1998 Searle Scholars Program award (funded by the estates of Mr. and Mrs. John Searle of Chicago), and the Beckman Young Investigator Award (from the Arnold and Mable Beckman Foundation of Irvine, Calif.). Both awards are given to outstanding scientists and faculty at selected institutions to support research in chemistry and biomedical sciences.

Specializing in bacterial cell biology, Pogliano is studying a step in the spore formation pathway of the soil bacterium *Bacillus subtilis* in which one bacterial cell engulfs another. This engulfment process provides a model system for studying cell membrane fusion, subcellular protein targeting, membrane dynamics and cell-to-cell communication in bacterial cells. Pogliano received her Ph.D. in Microbiology and Molecular Genetics from Harvard Medical School and was a Damon Runyon-Walter Winchell postdoctoral fellow at Harvard University.

M. Brian Maple, director of UCSD's Institute for Pure and Applied Physical Sciences (IPAS) and the Center for Interface and Materials Science (CIMS). Maple has been elected to receive a Humboldt Research Award for Senior U.S. Scientists. Bestowed annually on internationally recognized foreign scholars by the Humboldt Foundation of Bonn, Germany, the award cites Maple's past research achievements including his considerable contributions to the study of condensed matter physics.

Maple's areas of interest include superconductivity, magnetism and other novel phenomena exhibited by complex materials. The co-owner of five patents related to superconductivity, Maple received his Ph.D. from UCSD.

Raffi Aroian, assistant professor of biology, and Nathaniel Finney, assistant professor of chemistry and biochemistry. Both are recipients of the 1998-99 Hellman Faculty Fellowship Award. Named for UCSD benefactors Mr. and Mrs. F. Warren Hellman, the Hellman Faculty Fellowship is intended to support substantially the research and creative activities of promising assistant professors who display a capacity for outstanding distinction in their work.

Aroian is studying the fundamental link that exists between cellular structure and cellular function, particularly how a major architectural structure of cells, the actin cytoskeleton, participates in early embryonic development. Such investigation could lead to a better understanding of how cells develop at the embryonic stage. Aroian received his Ph.D. from the California Institute of Technology and completed postdoctoral studies at the University of California, San Francisco.

The research of Finney is three-fold: to synthesize complex, natural biochemical products in order to better understand certain biological activity and lay the groundwork for the development of new therapeutic agents; investigate methods of constructing a new class of molecules to serve as selective catalysts in organic synthesis, and study the potential of fluorosensor technology, a powerful tool in providing real-time optical measurement and imaging of actual molecular activity. Finney received his Ph.D. from the California Institute of Technology and was a National Institutes of Health Postdoctoral Fellow at Harvard University.

Marshall Rosenbluth, professor emeritus, physics. Rosenbluth has been elected to the American Philosophical Society. A fusion researcher and a recipient of the National Medal of Science in 1997, he is particularly known for his fundamental contributions to plasma physics, his leadership in efforts to develop controlled nuclear fusion, and his wide-ranging contributions to national security.

Vivek Sharma, associate professor, physics. Sharma has been named a Cottrell Scholar by Research Corporation, a foundation for the advancement of science and technology based in Tucson, Ariz. The award recognizes faculty who excel at both teaching and research. Sharma has also been named member of Project Kaleidoscope Faculty for the 21st Century (PKAL F21), a national network of more than 700 scientists of varying disciplines intended to promote the exchange of ideas, professional growth, mutual support and leadership in both research and science academics.

Sharma's research centers on the investigation of experimental particle physics, which involves colliding matter and anti-matter particles and looking at the resulting debris in an attempt to understand the fundamental elements of the universe. Sharma, who was appointed associate professor of physics at UCSD in 1995, received his Ph.D. from Syracuse University.

NOTE: Pogliano, Rosenbluth and Sharma are residents of La Jolla; Maple of Del Mar; and Aroian and Finney of University City.

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