University of San Diego
Academic Grant Awards – Fall 2011

Diane (Dee) Aker, PhD, Deputy Director, Joan B. Kroc Institute for Peace & Justice (IPJ), has received a $210,000 grant from the Fred J. Hansen Foundation (Foundation). The Foundation’s support has once again been received for the 2011 Women PeaceMakers Program, the associated Conference, and a 10th Anniversary Book.

Scott Anders from the Energy Policy Initiates Center (EPIC) has received a contract from SDG&E for his project “Borrego Springs MicroGrid Demonstration Project.” He has received $82,500 to lead a project providing technical and policy advice to SDG&E in the areas of energy policy, regulatory provisions and rate incentives that might support DER-based microgrids.

Lauren Benz, PhD, Chemistry and Biochemistry, received a $35,000 Cottrell College Science Award from Research Corporation. Her project, “Surface Supported Metal-organic Frameworks: A Fundamental Investigation of Adsorption and Reactivity of Energy Relevant Molecules” began July 1st and is expected to provide new, fundamental insight into the interaction of gases with metal-organic frameworks (MOFs) and thus provide guidance for improvements in energy storage and catalysis by MOFs. Undergraduate researchers will share in the experience.

Rachel Blaser, Psychology, has received funding from the National Institutes of Health for her research project “Nicotine Induced Preference in Zebrafish.” Total funding for the project is $94,404 for a two year project. The purpose of this project is to enhance the quality of behavioral phenotyping and drug screening techniques for zebrafish and to explore the response of zebrafish to nicotine across a series of behavioral measures. The project will explicitly compare behavior in a conditioned place preference task with that in an anxiety related task to assess the relative effects of nicotine on anxiety-related and reward-related behaviors.

Michel Boudrias, PhD, MARS and Scott Anders, EPIC have received supplemental funding from NSF for their CCEP-I project “Climate Science Meets Social Psychology and Strategic Communications: Applying Proven Learning and Communication Strategies to Climate Literacy in the San Diego Region.” The $249,875 supplement will allow early implementation of their project to the community through videos to test the theoretical framework for climate education strategies.

Dean Mary Boyd, PhD, has received $599,414 from the National Science Foundation for her project “Advancing Female Faculty: Institutional climate, Retention and Mentoring (AFFIRM).” Along with Co-PIs Lisa Baird, PhD, Michelle Camacho, PhD, Jane Friedman, PhD, Susan Lord, PhD, Perla Myers, PhD and Sandra Sgoutas-Emch, PhD, Dean Boyd will lead the project. AFFIRM, a four year award funded through the NSF ADVANCE program has three primary goals. It will foster an environment that understands, embraces, and supports a diverse faculty, recruit women faculty (with a particular emphasis on women of color), and support the retention and advancement of female faculty.

Timothy Clark, PhD, Chemistry and Biochemistry successfully transferred to USD year two and three of his three-year NIH grant, “Developing the Synthetic Utility of the Copper-Catalyzed Diboration of Carbonyls and Imines.” The project funded by NIH proposes to establish the synthetic utility of the resulting diboration products for accessing challenging functional group arrays. Research funds remaining for years two and three total $431,180.

Christopher Daley, PhD, Mitchell Malachowski, PhD, and Robert Dutnall, PhD, Chemistry and Biochemistry, have successfully procured funding from the National Science Foundation for “MRI: Acquisition of a Multipurpose X-Ray Diffraction System for Chemical and Biochemical Research, Training, and Undergraduate Education.” The $268,000 equipment will add state-of-the-art instrumentation for structure determination; enhance the curricular emphasis on structure through the incorporation of X-ray diffraction into the laboratory setting starting with organic chemistry through to upper division laboratory courses in
instrumental, organic, inorganic, and biophysical chemistry; increase the amount of meaningful materials-related chemistry in the curriculum, and significantly augment faculty research programs.

David De Haan, PhD, Chemistry and Biochemistry, has received a research grant of $337,508 from the National Science Foundation (NSF). This three-year Research in Undergraduate Institutions (RUI) program award will support twenty diverse undergraduate students who will be mentored in first research experiences. In year two the funding will allow for the addition of a postdoctoral teacher/researcher. This project, “Secondary Organic Aerosol and Brown Carbon Formation from Aldehydes, Ammonium Salts, and Amines,” proposes to address two questions: (1) Do common atmospheric C1 – C3 carbonyl compounds (GHAF) form aerosol material in clouds via reaction with ammonium salts and amine compounds; and (2) What contribution do aldehyde/amine reactions in clouds and aerosol make to the formation of light-absorbing material (brown carbon) in the atmosphere.

Denise Dimon, Associate Provost for Internationalization, has received a grant, co-sponsored by the Aspen Institute's Center for Business Education and the Institute for Peace and Economics (architects of the Global Peace Index), to help identify and develop teaching resources for faculty to include topics of peace in business and management education. She is using this grant to provide research opportunities for graduate students in the School of Business Administration and the School for Peace Studies to work together to help further develop the Aspen Institute's CasePlace.org teaching portal with topics related to peace.

The Children's Advocacy Institute (CAI) under the direction of Robert Fellmeth and Elisa Weichel has received a two-year, $140,000 renewal grant from The California Wellness Foundation to 1) inform and participate with policymakers and stakeholders in implementing AB 12, to ensure that the state scheme provides maximum flexibility and offers age-appropriate post-18 opportunities for foster youth that will meaningfully prepare them to become healthy, independent and self-sufficient young adults; and 2) inform policymakers and stakeholders about other promising alternatives for improving the health and well-being of former foster youth, such as the Transition Life Coach proposal.

Voices for America’s Children (Voices) has awarded Robert Fellmeth, Executive Director of the Center for Public Interest Law (CPIL), Children’s Advocacy Institute (CAI), along with Elisa Weichel, Administrative Director of the CAI, $15,000 to support Voices’ activities and programs to increase investments in support of children from birth to age eight. Specifically, CAI with utilize these funds to build and strengthen the capacity of the organization, networks and coalitions to engage in federal advocacy efforts; engage in a variety of non-partisan analysis and public education activities to educate federal policymakers, the media and the public on a variety of federal issues; and engage in organizing and mobilization activities to keep children’s issues in the spotlight.

Eben Goodale, PhD, Biology, has begun a one year project funded by The San Diego Foundation, Blasker Science and Technology Grants Program. The $35,916.00 grant supports research on “How Social Bees Respond to Information about Predation in San Diego County: Teaching Science Through Research on Critical Pollinators.” The research hopes to understand how social bees, important but declining pollinators in San Diego County, use the olfactory information other bee species deposit on flowers to gather information about their predators.

Sarah Gray, PhD, Marine Science and Environmental Studies, is once again awarded funding from the National Oceanic and Atmospheric Administration (NOAA): Coral Reef Conservation Program (CRCP). Previous funding has supported Sara’s ongoing studies since 2008 in St. John, US Virgin Islands where sediment constitutes the largest pollutant of coastal waters by volume and is thought to be the primary cause of coral reef degradation. This current 18-month award of $94,844 will allow her to continue monitoring the Bay to assess the effectiveness of erosion and sediment control practices put in place to reduce sediment-loading rates into the coastal waters and coral reefs.

Engineering faculty members Ming Huang, PhD, Kathleen Kramer, PhD, and Rick Olson, PhD, have been awarded $600,000 from the National Science Foundation (NSF) for their proposal, “Enhancing Professional
Development through a Mentoring Scholarship Program.” The goals of the project are to attract students to engineering and to increase retention by offering scholarships, a comprehensive mentorship program, research internships, and a professional development seminar series designed to help students to bridge the gap between the classroom environment and the expectations and realities of the workplace.

For the second time, Jeremy Kua, PhD, Chemistry and Biochemistry, has been awarded funding from The Camille and Henry Dreyfus Foundation, Inc. This 5-year 2011 Henry Dreyfus Teacher-Scholar Awards Program grant award for $60,000 supports Jeremy’s current project “Multiscale Modeling of Formaldehyde Chemistry.” With this award, he has received the designation of a Henry Dreyfus Teacher-Scholar. The long term goal of Dr. Kua’s research is to establish a systems-chemistry approach to understand chemical self-assembly, whereby “simple” small molecules react to form oligomers, macromolecules and complex systems. The approach is both multi-layered and modular – complexity can be introduced in many small stages. Besides making useful contributions to the understanding of self-assembly, his research has the potential to shed light on known problems in industrial chemistry, atmospheric chemistry, catalysis, and prebiotic chemistry.

Susan Lord, PhD, Engineering, has received funding from NSF for her project “Understanding Diverse Pathways: Disciplinary Trajectories of Engineering Students.” Funding of $198,233 will be used to capitalize on a unique opportunity to conduct a longitudinal, multi-institutional, and multivariate study of the trajectories of students in specific engineering disciplines. Institutional data already compiled will be used to answer the research question, “How do the trajectories of engineering students in different engineering disciplines vary by both race and gender?” The project will focus on the large fields of mechanical, electrical, and computer engineering, that have few women and the smaller fields of chemical, biomedical, and industrial engineering that attract more women.

Melinda Martin, MA, SOLES, has once again received funding for from the County of San Diego in the amount of $25,000. This money is to support the ELDA Spotlight: A Speaker’s Series. The Speaker Series is research based and focuses on best teaching and learning practices designed to benefit educators and students in schools and classrooms throughout the county. Ms. Martin has also received an additional year of funding in the amount of $150,000 from the Stuart Foundation to support the ELDA program’s grant “Principals Ongoing Support and Training Program (POST).”

The ASIA Network, consortium of liberal arts colleges to promote Asian studies, has awarded Yi Sun, PhD, History, a Freeman Student-Faculty Fellows grant award. This 15-month, $22,400 grant made possible summer 2011 research travel to The People’s Republic of China by Professor Sun and her undergraduate students. Her mentorship plays an important leadership role in expanding Asian studies and her students’ academic development, a priority of both Yi and the University.

Debbie Tahmassebi, PhD, Chair, Chemistry and Biochemistry, has received an $18,500 award from The Camille and Henry Dreyfus Foundation to support a Jean Dreyfus Boissevain Lectureship and to provide financial aid to two Jean Dreyfus Boissevain Scholars, to be determined by a faculty committee. Dr. Colin Nuckolls, Professor of Chemistry at Columbia University will be the USD Jean Dreyfus Boissevain Lecturer. In order to maximize impact on campus and the opportunities for him to interact with a large number of students regarding their undergraduate research, his visit will coincide with both the 2012 National Undergraduate Research Week and Creative Collaborations - USD undergraduate research conference to be held April 19, 2012. Dr. Nuckolls’ research is centered on integrating reaction chemistry into electrical devices and would be primarily of interest to students and faculty in the departments of Chemistry and Biochemistry, Physics and Engineering.

Necla Tschirgi, PhD, Kroc School of Peace Studies, has received an award from the Alliance for Peacebuilding. The $31,800 award will support her project entitled “Mapping the Field of Peacebuilding: A Base for Future Efforts.” Her project will look to identify, catalogue, and describe the size, scope, economics and dynamics of the organizations and professionals actively engaged in peacebuilding. This pioneering work will look to develop a description of peacebuilding that will set the parameters for the kinds of organizations that fall
within the definition of peacebuilding and serve as a vital resource for organizing peacebuilding initiatives, donors and further research.

**Matt Zwolinski**, PhD, Philosophy, has received an award of $10,303 from the Charles G. Koch Charitable Foundation for his project entitled “Philosophical and Economic Foundations of Political Liberty.” His project will support course development, student fellowships and an undergraduate reading group. Students in the reading group will meet weekly to discuss David Boaz’s *The Libertarian Reader* and will include guest speakers from around the San Diego area on various topics relating to political and economic liberty.