Research News

The University of South Dakota Office of Research and Sponsored Programs

Fall 2008



Outstanding Researchers Recognized at The U

Professor Patrick Garry, Dr. Xuejun Wang, Dr. Gina Forster, and Dr. Mary Berry were honored during President's Research Day at The U on Oct. 15. These prolific and productive researchers were recipients of the 2008 President's Awards for Research Excellence.

Established in 1997, initially through the State EPSCoR Program and the Board of Regents, the President's Awards for Research Excellence recognize extraordinary research and creative activity. The awards honor faculty who make outstanding contributions to knowledge and artistic expression while bringing positive national visibility to USD. Awards are made in two categories, Early/Mid-career Faculty and Established Faculty. Nominations are evaluated by internal and external reviewers. Each first-place winner receives a plaque and a \$3,000 grant, while the honorable mention recipients receive a certificate of accomplishment.



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Professor Patrick Garry School of Law

President's Award for Research Excellence, Early/Mid-career Category

Professor Garry is the author of nine scholarly books, with a tenth book soon to be released. His books have addressed various legal and constitutional issues and have been widely praised by leading legal scholars. Garry takes an interdisciplinary approach, incorporating research from other fields of study, such as political science, history and communications studies. His book on how the Supreme Court's power and role have changed over the past half century has received praise from 10 different legal scholars. Taking a social science approach, Garry has undertaken empirical research not just to explore the doctrinal basis of law, but to examine the social impact of law. His most recent research project explores the degree to which Native American tribes have incorporated First Amendment norms into their social and legal structures. He has been named a national authority on the First Amendment and has been interviewed and quoted widely by the national media, including CBS Network News and MSNBC.



Xuejun Wang, Ph.D. Sanford School of Medicine

President's Awards for Research Excellence, Established Faculty Category

Dr. Wang's research skills and productivity earned him praise from Dean Ron Lindahl as "one of the most respected scientists in the School of Medicine". Wang's research has been funded continuously from a variety of external sources throughout his career. He currently has funding to support his primary research interests in the form of three NIH R01 grants and an American Heart Association Established Investigator Award. Wang was centrally involved in the cardiovascular Center of Biomedical Research Excellence, a grant awarded to USD in 2003. Currently, he is developing a new research focus in the Division of Basic Biomedical Sciences centered on the theme of molecular pathogenesis. Dr. Wang has a total of 62 referred publications, and more than half his papers have been published in the seven years since he returned to USD. He is currently the advisor for three Ph.D. students, mentor to four post-docs and has mentored a number of undergraduate research and honors students during his career.

New Course Offered at the Missouri River Institute



Students at The U now have the opportunity to focus on studying the broad range of issues related to the Missouri River. "Introduction to River Studies" covers topics in the areas of geology, biology, ecology, culture, history and water law policies. Five instructors share teaching duties and students attend weekly lectures and frequent field trips to observe the river and its tributaries. By exposing students directly to the river and its habitats, the "Mighty Mo" serves as a hands-on laboratory and provides an integrated understanding of the riparian system. Although the topics attract science majors, the class is broad enough that students from any discipline can participate.

"Over time, the ecology and the environment of the river have changed and, of course, there's the significant cultural history of the river," described Tim Cowman, director of the Missouri River Institute at USD. "The course is an overall education about the Missouri River."



AAHRPP Accreditation for the Second Time since 2005

Recently, the USD Office of Human Subjects was honored once again. This full accreditation by the Association for the Accreditation of Human Research Protection Programs (AAHRPP) is their second since 2005.

The accreditation process is voluntary, peer-driven and educational. During the process, organizations must demonstrate that several safeguards are considered for every level of research; they must show system-wide improvement, provide greater protection for research participants and ensure integrity in research.

Full accreditations are valid for three years. The University of South Dakota is the only accredited institution in South Dakota and one of only 138 accredited organizations nationwide.



Heaton Mines Genetic Gold

Timothy Heaton, Ph.D., chair and professor of the Department of Earth Sciences at USD, made a discovery that earned him *Discover* magazine's number 32 spot for the top science story in 2007.

Heaton discovered a jawbone while excavating in the On Your Knees Cave, located on Prince of Wales Island in southeast Alaska. Tests conducted on the jawbone revealed that the human remains are nearly 10,300 years old. Heaton's discovery is significant, as it is the oldest genetic sample ever recovered in the Americas and it supports the scientific theory that humans first arrived in North America about 15,000 years ago.

In addition to this excavation, Heaton and USD undergraduate students have spent a total of six summers excavating caves on the Prince of Wales Island. The excavations were funded by grants from the National Science Foundation and the National Geographic Society.

Faculty Achievements

Faculty at The U continue to impress with their extraordinary achievements. The following examples are only a fraction of the many publications, honors, citings, and grant awards garnered in recent months:

- Kelly Duncan, Ph.D., NCC, LPC, Department of Counseling and Psychology in Education, recently received a \$15,000.00 grant for the South Dakota School Counselor Professional Development Series. The series of professional development sessions, designed specifically to meet the needs of school counseling professionals, are being held on a monthly basis via Webinar and are open to all school counselors and other school personnel in the state.
- Robert Weber, chair of the division of Health, Physical Education, and Recreation, will be presenting two sessions at the 37th National Adapted Physical Education Conference held in San Diego, Calif., Nov. 20–22. The sessions are titled: "Fishing: A Lifetime Activity for Individuals with Disabilities, How to Get your School and Students Involved" and "Golf Instruction for Individuals with Disabilities, From School to the Golf Course."
- The Sioux Falls School District, in partnership with their business community, the United Way and the Governor's office has a three-year pilot Pre-K program. In his State of Address, Governor Rounds announced that USD would be doing the research component of this pilot. **Gera Jacobs**, Ph.D., has been coordinating this research, which includes pre– and post-testing the children, evaluating the classroom quality with the Classroom Assessment Scoring System (CLASS) at the beginning and end of the school year, and interviewing parents at the beginning and end of their children's participation.
- Michelle O'Malley, Contemporary Media and Journalism, was selected as a NATPE (National Association of Television Program Executives) Faculty Fellow. This internationally competitive fellowship is for persons interested in entertainment media. This fellowship program will be located in Las Vegas from Jan. 25–29.
- Published by Sage Publications on behalf of the American Academy of Political and Social Science was "Neuroendocrine Mechanisms, Stress Coping Strategies, and Social Dominance: Comparative Lessons about Leadership Potential," William D. Anderson (Political Science) and Cliff H. Summers (Biology). The ANNALS of the American Academy of Political and Social Science 2007; 614; 102 DOI: 10.1177/002716207305585.
- Brennan Jordan, College of Arts & Science, was awarded \$23,590.00 from the National Science

Foundation to conduct research on Arnes Central Volcano in northwest Iceland.

- Xuejun Wang, Basic Biomedical Sciences, will conduct research on Molecular Pathogenesis of Protein Surplus Cardiomypathy with \$333,048 grant dollars from the U.S. Department of Health and Human Services.
- With \$60,000 grant dollars awarded from the U.S. Department of Energy, **Dongming Mei**, Earth Science and Physics, will research Monte Carlo simulations relevant to design of dark matter experiments.
- Wade Druin, director of the Business Research Bureau, was awarded \$223,216 from the S.D. Department of Health to conduct a Tobacco Control Program.
- David Swanson, Biology, will be researching Avian Influenza Sampling in Shorebirds in Western Minnesota with a \$52,151 grant from U.S. Fish and Wildlife Services.
- A \$223,722 grant from the U.S. Department of Health and Human Services was awarded to Gina Forster, Basic Biomedical Sciences, for research on Neural Sensitivity to Stress During Drug Withdrawal.
- The U.S. Department of Health and Human Services awarded a \$94,352 grant to **Dan Engebretson**, Biomedical Engineering Program, for research on equipment for the Graduate Education and Applied Research Center.
- Yuyu Sun of the Biomedical Engineering Program was awarded \$227,820 by the U.S. Department of Health and Human Services for Rechargeable Antimicrobial Dental Unite Waterline Tubing.
- The U.S. Department of Health and Human Services has awarded a \$138,745 grant to **Carlos Telleria**, Basic Biomedical Sciences, for research on Growth Inhibition Induced by Mifepristone in Ovarian Cancer.
- James Hoefelmyer, Chemisty, has received a \$1,052,000 grant from the U.S. Department of Energy for establishment of S.D. Catalysis at USD & SDSM&T: Addressing Basic Research Needs for Solar Energy Utilization.
- \$50,000 was awarded to **Raymond Ring**, Economics, for research on the effects of property taxes on the elderly. This grant was given by Lincoln Institute of Land Policy.



Laura J. Jenski, Ph.D. Vice President for Research

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OUR VISION

Research and creative work are integral to and highly visible in the daily life of The U. They are the foundation of rigorous graduate education and a distinguishing factor in the undergraduate liberal arts experience. Drive to generate new knowledge is well balanced by ambition to convert that knowledge into tangible benefits to the state economy and societal well being. Research of high impact is achieved through organized centers of interdisciplinary teams of faculty and students, focused on complex projects. The quality of research and creative work is recognized through dissemination in prestigious venues and an increase in competitively awarded funding.

Outstanding Researchers continued from page 1



Gina Forster, Ph.D. Sanford School of Medicine

Honorable Mention, Early/Mid-career Category

Dr. Forster's research skills make her one of the brightest young scientists in the School of Medicine. She has been highly successful in attracting grant support for her research. Her successes include an NIH R03 grant and an NIH R01 grant that was awarded on its initial submission, a rare occurrence these days. She also continues to have a research component in USD's second neuroscience Center of Biomedical Research Excellence funded by NIH and she co-directs the Center's Behavioral Testing Core Facility. Forster has 22 refereed research papers, four invited reviews and two book chapters, with five additional manuscripts in review. Thirteen of the papers and three of the reviews have been published since she became an assistant professor. The papers are in a range of excellent journals and reflect the breadth of her research interests. Forster has already graduated her first Ph.D. student and is advisor to two other Ph.D. students, as well as undergraduate researchers and honors students.



Mary Berry, Ph.D. Chemistry

Honorable Mention, Established Faculty Category

Since arriving at The U, Dr. Berry has demonstrated a consistent record of publication in journals recognized as some of the most

significant and important in her field, with a cumulative total of nearly 20 papers. She is recognized as an expert in her field, as evidenced by invited presentations at international and national meetings. Her success with external funding agencies includes grants from the National Science Foundation, American Chemical Society, Camille and Henry Dreyfuss Foundation and Research Corporation. Berry is a principal contributor to the successful 2010 Center for Research and Development of Light-activated Materials and is leading the state's proposal to the NSF EPSCoR program to improve research infrastructure. She's been instrumental in bringing nearly \$4.5 million to the University, contributing to the research infrastructure, benefitting graduate and undergraduate students and providing research experiences for students at predominantly undergraduate and tribal colleges. In addition to these research activities, she has led the Department of Chemistry for the past six years, and was successful in the development and approval of a Ph.D. in Materials Chemistry to further the research mission of The U.

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