Celebration of Research month kicks off with “State of Research” address and Research Expo

November is "Celebration of Research" month at Ohio State – an annual recognition of the depth and breadth of research at the university. During November, the Office of Research sponsors a series of events highlighting the innovative research taking place at the university as well as the wide range of support services available to researchers. The month kicked off on November 3rd with the annual Research Expo, featuring the inaugural “State of Research at The Ohio State University” address. The address, presented by Dr. Caroline Whitacre, vice president for research, focused on multidisciplinary collaboration – specifically, how Ohio State researchers are working across traditional boundaries to face some of the world’s biggest challenges including assuring the safety and security of the world’s food supply, developing an alternative energy portfolio to reduce oil consumption, discovering new ways to combat poverty, chronicling the rate of global climate change, and seeking remedies for the harmful effects of man’s presence on the planet. Following the address, the 2010 Innovator of the Year awards were presented. Tobin Smith, vice president for policy, Association of American Universities, delivered the keynote address on post-election politics and federal funding. Researchers were provided with an opportunity to hear firsthand from Ohio State faculty and students who have engaged in unique research partnerships at the Center of Science and Industry (COSI). Additional interactive panel discussions focused on securing awards from private foundations and building successful partnerships with industry.

Ching-Shih Chen and Subha Raman named Ohio State’s 2010 Innovators of the Year

Two new university-wide awards were established to honor Ohio State’s Innovator of the Year and Early Career Innovator of the Year. Each award recognizes an Ohio State researcher who is working to actively promote commercialization of university intellectual property, through invention disclosures filed, patents applied for and/or received, technologies licensed, or spinoff companies formed. These activities support economic development in the central Ohio region, and serve to attract companies that create a base of operations within the state. The establishment of these awards underscores the value placed by the university on these activities.

Dr. Subha Raman, associate professor of internal medicine and medical director of the CMR/CT, was named the 2010 Early Career Innovator of the Year. Dr. Raman has leveraged her background in electrical engineering and her expertise in cardiac imaging to build an exciting commercialization portfolio. Dr. Raman has focused her commercialization efforts in two areas: the detection of vulnerable plaque through noninvasive, noncontrast magnetic resonance (patent pending), and more accurate diagnosis of cardiovascular disease through innovations in stress testing (patent pending). She and her co-inventors have formed a university technology start-up company (EXCMR Ltd.) to commercialize the treadmill CMR technology. Her track record of engineering-based innovation directed at improving cardiovascular health has also garnered considerable extramural investment in Ohio State, starting with her efforts that led to OSU securing its first Third Frontier grant in 2003.

Dr. Ching-Shih Chen, professor in medicinal chemistry and pharmacognosy, is the recipient of the 2010 Innovator of the Year award. Dr. Chen exemplifies the “bench to bedside” goal of translational science in his approach to cancer biology research and anti-cancer drug discovery, particularly in the development of a new class of cancer therapeutic agents. The success of his drug discovery program is exemplified by the licensing of two new anti-cancer drugs to Arno Therapeutics Inc., the subsequent Investigational New Drug (IND) approval by the Food and Drug Administration for both agents, and initiation of clinical trials at the James Cancer Hospital and Solove Research Institute. In addition to the two compounds that are currently licensed, this innovator has been granted 11 U.S. patents and has 17 U.S. patents pending. He is currently supported by over $2 million in annual extra- and intra-mural funding and has over 170 publications.

The awards were presented at the inaugural “State of Research at The Ohio State University” address on November 3, 2010. Nominees for the two awards were also recognized.
Two NSF Major Research Instrumentation awards coming to Ohio State

Two teams of Ohio State researchers have won National Science Foundation (NSF) Major Research Instrumentation (MRI) awards. The MRI program supports the acquisition of major state-of-the-art instrumentation; fosters the development of the next generation of instrumentation; enables disciplinary, multidisciplinary, and multi-organizational collaboration; and promotes partnerships for instrument development between the academic and private sectors. Kari Green-Church, associate director of the Campus Chemical Instrument Center and adjunct assistant professor in molecular and cellular biochemistry, and her team of researchers will acquire an ultra-high resolution time-of-flight mass spectrometer that will support a variety of research projects including the translational analysis of insect proteins during environmental stress and the mapping and development of amino acid analogs. Chris Hammel, professor of physics and director of the Center for Electronic/Magnetic Nanoscale Composite Multifunctional Materials, and his team of materials researchers will benefit from the acquisition of a high-field, physical properties measurement system combined with a compatible cryogenic Atomic Force/Magnetic Force scanning probe microscope. This versatile instrument, currently not available to the Ohio State materials community, will allow measurements of electronic transport, spin transport, and magnetic properties of materials as well as topographic and magnetic imaging over a wide range of temperatures and magnetic fields.

Four Ohio State faculty members inducted into the American Academy of Arts and Sciences

The American Academy of Arts and Sciences is an international learned society, drawn from science, scholarship, business, public affairs, and the arts, to conduct a varied program of projects and studies responsive to the needs and problems of society. Ohio State’s newest Academy members are: Henri Cole, professor, Department of English, College of Arts and Sciences; Carlo Croce, director and John W. Wolfe Chair, Human Cancer Genetics Program, chair, Department of Molecular Virology, Immunology, and Medical Genetics, College of Medicine; Richard Petty, Distinguished University Professor and chair, Department of Psychology, College of Arts and Sciences; and John Wilkins, Ohio Eminent Scholar and professor, Department of Physics, College of Arts and Sciences.

Nisonger Center creating opportunities for students with intellectual disabilities

The U.S. Department of Education has awarded Ohio State’s Nisonger Center a five-year, $2.5 million grant as part of two new federal programs that create opportunities for students with intellectual disabilities to attend and succeed in higher education. The Nisonger Center, a University Center for Excellence in Developmental Disabilities, was founded in 1966 to provide assistance to people with disabilities, families, service providers and organizations by promoting inclusion of people with disabilities in education, health, employment, and community settings. The center is one of 27 grant recipients through the Transition Programs for Students with Intellectual Disabilities. This multi-site, collaborative project will provide transition-to-college, employment, and housing services for students with intellectual disabilities utilizing college students studying special education, assistive technology, occupational therapy, social work, and other related fields. College students majoring in disability-related disciplines will gain authentic experiences that will enhance their professional growth. Approximately 100 students with intellectual disabilities between the ages of 18 and 26 will participate at Ohio State, North Central State College, the University of Toledo, and Xavier University.

Ohio State receives HUD award to promote sustainable planning for the Gulf Coast

For the first time ever, the U.S. Department of Housing and Urban Development (HUD) is awarding nearly $100 million in new grants to support more livable and sustainable communities across the country. Ohio State’s city and regional planning program in the Knowlton School of Architecture and the Kirwan Institute will collaborate with the Gulf Regional Planning Commission to help the Gulf Coast recover from Hurricane Katrina and the Deepwater Horizon oil spill. The partnership will use their $2 million grant from HUD to develop and execute a regional plan that integrates affordable housing, jobs, quality schools, and transportation in the Mississippi Gulf over the next three years. Faculty and students from city and regional planning will complete several aspects of the planning process. The Kirwan Institute will provide training and support in designing the public engagement process to gain public input. Jennifer Evans-Cowley, professor of city and regional planning, will lead the partnership for Ohio State.

NSF grant to study national energy policy and technology impacts

Ohio State’s College of Engineering, College of Food, Agricultural, and Environmental Sciences, and the Ohio Supercomputer Center received a four-year, $1.675 million federal grant to develop a computer tool that researchers, government leaders, and the public can use to study and understand changes in energy-related technology, policy, and pricing. Researchers will develop a computational system called the Integrated Computational System for Energy Pricing and Policy (ICS-EPP), which models the national power grid. This system will enable analysis of various scenarios including the cost of adding electric vehicles to the grid, the effect of various pricing and incentive structures for users, changes in the demand on the system, and resulting environmental impacts. The program will build on collaborations between the Ohio State Center for Automotive Research and the electric utility and automotive industries. The project is led by Ramteen Sioshansi, assistant professor of integrated systems engineering.