New UMD Center Partners with FDA to Advance Regulatory Science

University of Maryland researchers are partnering with the U.S. Food and Drug Administration to further its mission of safeguarding the nation’s food and drug supply, testing and approving new biomedical devices and providing health-related information to consumers nationwide.

The just-announced (Oct. 20) University of Maryland Center of Excellence in Regulatory Science and Innovation, or UM-CERSI, is the first center of its kind to assist the FDA in strengthening its position as a science-based regulatory agency, university officials say.

It is funded by a grant of $1 million per year for three years from the FDA and is expected to fuel scientific exchanges between university experts and the federal agency, while also providing training opportunities for current and future FDA employees.

“The FDA wants a much more intimate exchange between their scientists and the talent available at top research universities,” says William Bentley, chair of bioengineering at Maryland.

UM–CERSI includes researchers from College Park, the School of Pharmacy in Baltimore and the Institute for Bioscience and Biotechnology Research in Shady Grove, Md. Bentley is providing coordination on the College Park campus while James Poli, a professor of pharmaceutical sciences, will have a leadership role with the scientists and clinicians in Baltimore.

What this combined group of Maryland researchers can bring to an FDA partnership, Bentley says, is expertise in emerging areas like nanoscale drug delivery, pharmacokinetics — what the body does to drugs, as opposed to what drugs do to the body — and genomic protein design that can result in new therapeutic strategies for disease.

“This is taking the very best science at three of our campuses and using it to help the FDA expand its efforts in testing and approving new lifesaving drugs, or in informing consumers about a wide range of FDA-regulated products,” says Ken Gertz, UMD’s associate vice president for research development who helped negotiate the partnership.

A key component of the new center, says Bentley, will be professional training programs for FDA employees and other educational opportunities that will teach regulatory science at the College Park campus.

Another part of the agreement will build a consortium of university researchers, FDA scientists and private companies involved in FDA-regulated research and development.

“We need to understand better how industry interacts with the FDA so that we can improve the science that allows for better, safer products that are brought to market more quickly and efficiently,” Bentley says.

UMD/Smithsonian Seed Grant Winners Announced

Intriguing research funded through an interdisciplinary seed grant program between the university and the Smithsonian Institution includes projects to unlock the secrets of black holes, protect priceless artifacts and enhance the museum experience of autistic children.

Now in its second year, the program provides startup funds for cross-institutional teams to further their research while seeking additional support from other sources. “It’s a great way to stimulate innovative partnerships between our faculty and some of the world’s best scientists and curators working at the Smithsonian, which is basically right next door,” says Anne Geronomos, UMD’s director for research development who oversees the seed grant program.

The five seed grant projects funded for 2011 are:

Mohamad Al-Shikhly and Richard Livingston, both in materials science and engineering, are working with a Smithsonian conservator to develop noninvasive techniques using neutron beams to measure moisture in artifacts, allowing curators to provide the optimal environment in protecting artifacts and works of art.

Shannon Hill in art history, Mary Corbin Siss and Psyche Williams-Forson in American studies, Julie Silva in geography, Jack Sullivan in landscape architecture and Ray Weil and Bruce James from environmental science and technology are partnering with Smithsonian scientists and historians to explore the complex relationships between Africans and the land on which they work and live.

Karen Lips in biology has teamed with Smithsonian conservationists to study the dramatic decline of salamanders in Appalachia.

The School’s Mega Subramaniam, Paul Jaeger and Leslie Langa are working with Smithsonian educational specialists to develop desktop and mobile Web applications that enhance the museum experience of families with children affected by autism.

Christopher Reynolds in astronomy will join forces with a Smithsonian astrophysicist to investigate techniques for estimating the spin and mass of black holes.
We introduce you to new faculty and research scientists in the Maryland research community.

**FACULTY**

Marian Moser Jones is an assistant professor of family science. Her research investigates the organizational evolution of America’s public-private welfare state and how that has shaped the nation’s response to public health crises.

Patrick Wohlforth is an assistant professor of government and politics. His research examines judicial influence on the executive branch and the impact of public opinion on the U.S. Supreme Court.

Casey Dawkins is an associate professor of architecture. His research centers on U.S. housing policy, metropolitan housing market dynamics and the link between land-use regulations and housing affordability.

Joshua Singer is an assistant professor of biology. He researches neural circuitry in the retina, with an emphasis on preventing blindness from diseases like retinitis pigmentosa.

Stephanie Yarwood is an assistant professor of environmental science and technology. Her research focuses on environmental microbiology, including the interaction between fungi, bacteria and single-celled microorganisms in forest soils.

**AWARDS & HONORS**

**Norma Allewell**, professor of cell biology and molecular genetics, is one of 13 researchers nationwide to receive a Jefferson Science Fellowship from the U.S. Department of State. These yearlong fellowships—administered by the National Academies of Science—engage senior American scientists, engineers and medical experts in the formulation and implementation of U.S. foreign policy.

**Frank Olver**, professor emeritus of mathematics with an appointment in the Institute for Physical Science and Technology, received the U.S. Department of Commerce’s highest honor, a Gold Medal. The award recognizes Olver’s contributions to the federal government’s Digital Library of Mathematical Functions.

**Deborah Speece**, professor in the Department of Counseling, Higher Education and Special Education, was recently named commissioner of the National Center for Special Education. Speece is a leader in special education research, best known for her innovative studies on classifying and diagnosing learning disabilities.

**Accelerating Health-Care Transformation**

A recent summit joined Maryland faculty with government officials and private stakeholders to stimulate research and collaboration in health information technology, or HIT, in the state of Maryland and beyond. Hosted by the university’s Center of Excellence in Health IT Research, or COEHITR, the Oct. 7 event featured research briefs and panel discussions involving health IT policy, technology, accessibility, entrepreneurship and more.

Keynote speaker Joshua Sharfstein, M.D., Maryland’s secretary of health and mental hygiene, addressed the need to accelerate health IT initiatives by forming cross-disciplinary teams from universities, industry, clinical organizations and advocacy groups.

“We recognize that any significant advances in transforming the health-care system will come from all of these groups working together,” says Kenyon Crowley, COEHITR’s associate director who helped coordinate the event.

Crowley says the University of Maryland is well-suited to lead such an effort, as its established centers are already conducting research in health-care quality, costs, patient safety and access as well as health literacy, health equity and health promotion.

Faculty researchers and administrators from business, public health, engineering, and the School of medicine as well as clinicians and faculty from the University of Maryland, Baltimore participated in the forum.