Clark Hall Groundbreaking Celebration Nov. 21

This fall, A. James Clark Hall, a custom–designed home for the Fischell Department of Bioengineering and the Robert E. Fischell Institute for Biomedical Devices, will break ground adjacent to the Jeong H. Kim Engineering Building in College Park, Md. When it opens to students in 2016–2017, the 184,000–square–foot building will signal a new era for the university and also for human health advancements in the region.

Clark Hall will accommodate the A. James Clark School of Engineering's rapidly growing programs while bringing together the many disciplines involved with human health innovation under one roof and encouraging interdisciplinary collaboration and growth, from electrical and mechanical engineering to biology and information technology. Some 7,332 square feet of classroom space and 11,402 square feet of class lab space will support instructional capabilities within the Fischell Department of Bioengineering, which currently relies on labs and classrooms intended for other departments. Full Story

2014 Fischell Festival Tackles Key Topics in Biomedical Emergency Response

On Oct. 16, 2014, the University of Maryland (UMD) Fischell Department of Bioengineering (BioE) held its eighth Fischell Festival, which this year kicked off the second annual A. James Clark School of Engineering Mpact Week event.

In support of this year’s Mpact Week theme of “Disaster Resilience,” the 2014 Fischell Festival centered on topics in Biomedical Emergency Response, including responses to Ebola and other public health threats, sample preparation for point–of–care infectious disease diagnostics, influenza pandemic preparedness, and synthetic vaccines to promote immunity or tolerance.

Rear Admiral Stephen Redd, Centers for Disease Control and Prevention Director of the Influenza Coordination Unit, served as this year’s keynote speaker. A medical
Stroka Awarded BMES 2014 Rita Schaffer Young Investigator Award

Newly appointed Fischell Department of Bioengineering Assistant Professor Kimberly Stroka (Ph.D., ’11) was named the recipient of the 2014 Biomedical Engineering Society (BMES) Rita Schaffer Young Investigator Award. Stroka, an alumna of the Fischell Department of Bioengineering, will officially begin her appointment as assistant professor at the University of Maryland in January 2015. Prior to receiving the BMES award, Stroka was named one of just 12 recipients of the Burroughs Wellcome Career Award at the Scientific Interface. » Read more

Scarcelli Named NIH K25, Human Frontier Science Program Grant Recipient

Fischell Department of Bioengineering Assistant Professor Giuliano Scarcelli recently received a National Institutes of Health K25–Mentored Quantitative Research Career Development Award for his proposal, “Imaging cellular biomechanics on–chip in 2–D and 3–D microenvironments.” The award value totals more than $710,000 over a five–year period. Additionally, Scarcelli was named a recipient of the highly competitive Human Frontier Science Program (HFSP) Young Investigator grant.

Scarcelli is also a new addition to the Fischell Department of Bioengineering, and his official start date is slated for January 2015. » Read more

UMD Researchers Bridge Gap between Microelectronics, Biological Systems

Recent research put forth by the Fischell Department of Bioengineering and published in Nature Nanotechnology this summer could further the utilization of biologically–inspired nanoscale processes by bridging the fabrication and communication gaps between microelectronics and biological systems.

Researchers often use microelectronic devices embedded with biological components to interrogate biology, but such devices can do much more—perhaps even control biology. As such, many in the field of bioengineering have looked to patterned assemblies of proteins and cells for in vitro metabolic engineering to characterize—and potentially control—cell metabolism on a chip.

New devices are envisioned to recreate animal and human physiological functions on a chip, and such capabilities could revolutionize drug development. With this end goal in mind, Fischell Department of Bioengineering and Robert E. Fischell Distinguished Professor William Bentley and fellow researchers have sought to develop new “biofabrication” methodologies that help connect microelectronics with biological systems and yield new approaches to device assembly and communication. » Read more

TERMIS–AM Conference comes to Washington D.C.—Fisher Co-Chair

Fischell Department of Bioengineering (BioE) Professor John Fisher is Chair of this year’s TERMIS–AM Annual Meeting, taking place Dec. 13–16 in Washington, D.C. Supporting the theme, “Restoring Lives Through Regenerative Medicine,” this year’s event reflects the increasing need to consider the societal impact of tissue engineering. Fisher leads the University of Maryland Tissue Engineering and Biomaterials Laboratory, which uses the principles of both engineering and life sciences to develop biomaterials that improve the quality of life of ill or injured patients. Areas of focus in the lab include the study of biomaterials for the delivery of therapeutics, scaffolds for orthopedic tissue engineering applications, and the interaction of biomaterials and tissues. » Read more

epidemiologist, Redd is responsible for managing and directing CDC’s efforts to prepare and respond to pandemic influenza; however, rising concerns about the potential spread of Ebola both abroad and within the United States have drawn attention to the value of Redd’s expertise in investigating outbreaks of diseases and devising diagnosis and treatment strategies. Full Story
Bracaglia, Melchiorri Awarded American Heart Association Predoctoral Fellowships

BioE graduate students Laura Bracaglia and Anthony Melchiorri were each awarded a two-year, $50,000 Predoctoral Fellowship from the American Heart Association (AHA). The fellowship is designed to help students initiate careers in cardiovascular and stroke research.

Bracaglia’s recent research has focused on the development of a novel hybrid material for use in cardiovascular applications. The goal of her work is to develop a renewable, living material, grown from an implantable prosthetic heart valve or vascular patch. Melchiorri’s recent research has focused on the development of a polymer–based material resin for 3D printing of medical implants and devices. » Read more

UMD, GBSI Partner to Advance Antibody Standards

The University of Maryland Fischell Department of Bioengineering and the Maryland Center for Excellence in Regulatory Science (M–CERSI) have partnered with the Global Biological Standards Institute (GBSI) to launch the Collaboration to Advance Antibody Standards. This collaboration between the Fischell Department of Bioengineering and GBSI will allow for assessment of the current antibody standards landscape and identify and characterize the need for additional standards as they apply to antibodies in research and diagnostics, and as therapeutic agents. » Read more

2014 BioE Capstone
New Projects Focus on Cardiological Health, Surgical Tools and More

Demonstrating firsthand bioengineering’s enormous potential to change lives, the Fischell Department of Bioengineering (BioE) 2014 Senior Capstone class exhibited a total of 16 novel concepts during the Capstone II finale on May 14, 2014. With projects ranging from a customizable 3D tissue–engineering scaffold and an intelligent drill for orthopedic applications, to a carbon monoxide sensor for cars and a smart phone display interference for the driver seat while a car is in motion, this year’s showcase demonstrated how

National Capital Consortium for Pediatric Device Innovation
Hope for Underrepresented Disease Group Populations

As the Ebola outbreak in West Africa has tragically demonstrated, funding and support for the treatment of rare diseases and medical conditions can be difficult to come by when there are relatively few advocates for the cause. Yet, researchers at the University of Maryland (UMD) and the National Capital Consortium for Pediatric Device Innovation (NCC-PDI) are working to attack many diseases which commonly lack representation and research support. » Read more
bioengineering impacts everyday life.
» Read more