



## ROBERT E. FISCHELL INSTITUTE FOR BIOMEDICAL DEVICES

### ABOUT THE INSTITUTE

The Robert E. Fischell Institute for Biomedical Devices will bring together skilled scientists, medical doctors, health practitioners, and bioengineers who will work to research, design, and build biomedical devices to benefit humanity, while simultaneously training the next generation of innovators.

### THE FUTURE OF MEDICAL DEVICE INNOVATION

A convergence of information technology, nanotechnology, and biotechnology is redefining medical care in the United States. Devices will be deployed that interrogate an individual's genetic background, sense pathogens, and detect maladies. They will wirelessly communicate with other devices and databases. When deployed, they will take action to alter the progression of disease while taking into account the patient's physiological state and genetic disposition. They will also inform the community—from first responders to city planners and policymakers. Devices will be low cost, biocompatible, and—depending on location—self-powered and networked.

The Robert E. Fischell Institute for Biomedical Devices will discover new paradigms for engineering better health. It will catalyze the transformation of basic research into clinical practice and commercial success. Device creation requires coordination, intellectual capital, resources, facilities, and creative individuals who have an intense desire to learn and succeed. The entrepreneurial environment must be embedded within its fabric. As such, the Institute is a conduit for innovation, and a melting pot of many disciplines and fields. It serves to embrace thought leaders not only in medical science and technology, but also in the practice of

health care. The Institute will work with experts in public health, health informatics, regulatory practice, intellectual property, and venture creation, in addition to health care practitioners, scientists and engineers who will be at the core of creating new innovations—carrying out cutting-edge research.

### A NEW HUB FOR HUMAN HEALTH RESEARCH

The state of Maryland is home to the Food and Drug Administration (FDA), Centers for Medicare and Medicaid Services (CMS), the National Institutes of Health (NIH), the National Institute of Standards and Technology (NIST), the U.S. Army Research Laboratory (ARL), NASA, the U.S. Environmental Protection Agency (EPA), and many other health and medical science-related institutions and agencies—forming a unique hub of health-related activity, one of the largest and most vibrant in the world. The state is also home to one of the nation's leading industry clusters in biotechnology, and a vast industry focused on system integration, defense, and information technology.

The Institute's home on the 5th floor of the University of Maryland's new A. James Clark Hall is central to its success as a focal point for innovating health-related technologies. The new campus Central Animal Facility will reside on the 6th floor of Clark Hall and the Fischell Department of Bioengineering will reside on the 3rd and 4th floors. Clark Hall will also be home to state-of-the-art core facilities on fabrication and 3D printing, confocal microscopy, small animal imaging, and many other analytical technologies.

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