Bio Engineering Facility

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MSU’s new $69.8 million facility will unlock the potential for scientific collaboration

While Michigan State University’s newly opened Bio Engineering Facility will bring together dozens of researchers from across the campus representing a wide range of disciplines, their mission will be the same: to conduct futuristic, cutting-edge research that will improve or even save the lives of millions of people around the globe.

Grand opening ceremonies for the 130,000-square-foot facility were held Thursday, Oct. 27, 2016, marking the start of a new era of scientific research at MSU.

“The Bio Engineering facility is more than just a building,” MSU President Lou Anna K. Simon said. “It represents the enormous opportunity for discovery and the vast potential for knowledge advancement that can be unlocked through scientific collaboration.”

Primary tenants of the building will be faculty scientists from the colleges of Engineering, Human Medicine, and Natural Science. The facility also will serve to facilitate collaboration among many other on-campus units, including nursing, osteopathic medicine, veterinary medicine and communication arts and sciences.

The building also will house the newly created Institute for Quantitative Health Science and Engineering, an interdisciplinary research center devoted to basic and applied research, bringing together the life sciences, engineering, information science and other physical and mathematical sciences, as well as the Department of Biomedical Engineering.

Christopher Contag, a pioneer in molecular imaging, has joined MSU as the inaugural director of the Institute for Quantitative Health Science and Engineering, and chairperson of the Department of Biomedical Engineering.
“The new Institute for Quantitative Health Science and Engineering, the new Bio Engineering Facility and the new Department of Biomedical Engineering will all attract world-class faculty, as well as provide current faculty and students with exciting new research opportunities,” said MSU Provost June Pierce Youatt. “All three represent critical investments in MSU’s research infrastructure and in the success of future generations of scholars and students.”
the research that will be conducted in the facility.

- The development of computational cardiovascular models that will help understand the mechanism behind heart diseases so that more effective treatments can be developed.

- Development and improvement of electrodes that are implanted in the brain, which will be used to better understand brain function and develop treatments for certain neurological disorders.

- Research related to human movement, particularly as it pertains to the mechanics of lower leg prosthetics, hand function and seating mechanics.

Stephen Hsu, MSU vice president for research and graduate studies, said the facility represents MSU’s commitment to research in the biomedical sciences and its impact on human health in areas such as nanotechnology, robotics, tissue engineering and imaging.

“This building, with its emphasis on bringing together engineers and basic science researchers with medical researchers, will provide us with remarkable opportunities for solving some of humanity’s biggest challenges,” he said. “It also will help us attract more competitive, nationally funded projects and recruit the best minds to work with us – both faculty and graduate students.”

The facility’s laboratory space is designed to integrate bench experiments and computational analysis to allow a systems approach to biomedical research, as well as space for an on-site imaging facility.

The laboratories have an open-floor design to enhance collaborative research. The modular construction of the labs will provide flexibility as the nature of research evolves over the years.

In addition, the building connects to both the Clinical Center and Life Sciences buildings, and is in proximity to the Radiology building, facilitating the sharing of core resources and establishing a biomedical research hub on campus.

Total cost of the project is $69.8 million. $30 million of that amount is covered by the state of Michigan.