Center for Surgical Innovation

Overview
The University of Cincinnati (UC) College of Medicine’s Center for Surgical Innovation (CSI) is expanding the frontiers of medicine through innovation.

A collaboration of the departments of surgery and biomedical engineering, CSI’s team of multidisciplinary experts in surgery, telemedicine and information technology are developing and disseminating technologies that make a tangible difference in surgical and medical care across the world as we move into an age of bio-intelligence. The CSI was founded in 2003.

By combining disciplines, the CSI has established a fertile platform where medical and engineering experts can partner with industry to develop promising new technologies, procedures, and processes that advance medicine.

Partnerships key to CSI’s forward-thinking research include the National Aeronautics and Space Administration (NASA), US Army’s Telemedicine and Advanced Technology Research Center (TATRC) and United States Air Force (USAF) Office of the Surgeon General. These relationships enable the CSI team to develop and validate new surgical tools, advanced training and practices.

Cutting-Edge Facilities
Located in UC’s Medical Sciences Building (MSB), the CSI is a 3,700-square-foot state-of-the-art research and teaching space.

Completed in June 2006, the space includes both a teaching laboratory and a sterile operating room equipped with the latest surgical technology, including an Intuitive Surgical’s da Vinci Surgical System for robot-assisted procedures.

Support from strategic partnerships with Ethicon Endo-Surgery, Stryker Communications, Cincinnati Bell and Trumpf have further extended CSI’s technical capabilities, which include:

- Global linkages through a robust telecommunications and information network
- Expertise in minimally-invasive surgical techniques
• World-class biomedical engineering capacities
• Telemedicine, telehealth, telesurgery, and medical informatics capabilities
• Processes for shepherding technology from the lab to commercial possibilities
• Strong industrial and research track record
• Experimental information technology
• Virtual reality simulator technology

CSI’s internationally known and respected faculty also develop and offer extensive continuing medical education opportunities.

Affiliations and Collaborations
CSI has research partnerships for the evaluation and validation of new medical technologies with many local, regional and national companies, including:

• Atricure
• Broadlane
• CardioEnergetics
• Cincinnati Bell
• Ethicon Endo-Surgery
• GI Dynamics
• Intuitive Surgical
• Johnson & Johnson
• Stryker Communications
• Trumpf
• Tyco US Surgical

Government

• National Aeronautics and Space Administration (NASA)
• National Science Foundation (NSF)
• US Army’s Telemedicine and Advanced Technology Research Center (TATRC)
• US Air Force

Centers

• Advanced Center for Telemedicine and Surgical Innovation (ACTSI)
• Atrial Fibrillation Center (Cleveland Clinic Foundation)

Academia

• UC Department of Surgery
• UC College of Engineering/Department of Biomedical Engineering
• UC Department of Emergency Medicine
• UC Department of Endocrinology
• UC Department of Mechanical Engineering
• UC Department of Internal Medicine
• UC Health/University of Cincinnati Medical Center
• Cincinnati Children’s Hospital Medical Center