



“Discovery in Translation: Near-infrared Imaging of the Lymphatics in Health and Disease”

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LECTURE: 9:00 AM - 10:00 AM

ENGINEERING CENTER

ROOM EC 1107

10555 WEST FLAGLER STREET

MIAMI, FL 33174

Abstract: In this presentation, I will describe the process by which we translated under FDA INDs, near-infrared fluorescence (NIRF) for interrogating functional lymphatics in human subjects to make unique and novel discoveries. Unlike the blood vasculature, the lymphatic vasculature is not well understood, but nonetheless plays critical roles for fat absorption, immune surveillance, fluid homeostasis, and wound healing. The lack of an understanding of the role of the lymphatics in health and disease arises primarily due to the lack of medical imaging for routine interrogation. An introduction to the lymphatic vasculature and the engineering of NIRF lymph imaging technology will be first discussed. Next, clinical images of the lymphatics in healthy and diseased subjects will be presented before showing how the investigational technology has been used to assist in health care decisions and make new discoveries on lymphatic disorders.

Biography Dr. Sevick received her Ph.D. from Carnegie Mellon University, was an NIH postdoctoral fellow at the University of Pennsylvania, and a faculty member in the Engineering departments of Vanderbilt, Purdue, and Texas A&M before moving to the Texas Medical Center in Houston Campus, where she translated her technology through 8 FDA approved clinical trials across seven institutions. She won numerous awards during her career, including the NSF Young Investigator Award, NIH Career Development Award, and the Texas Star Award. Dr. Sevick has held elected offices at the Society of Molecular Imaging, and Society of Nuclear Medicine and Molecular Imaging and has been appointed chair of NIH and DOD study panels. She has published over 160 peer-reviewed journal articles, supervised over 39 Ph.D. and MS trainees, and current directs a research center of 9 faculty members.

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