

Elizabeth M.C. Hillman, PhD.

Professor of Biomedical Engineering and Radiology at Columbia University and a member of the Columbia Zuckerman Mind Brain Behavior Institute, as well as the Kavli Institute for Brain Science.

Dr. Hillman's work focuses on the development of high-speed in-vivo optical imaging and microscopy techniques, and on the application of these techniques to study brain function, particularly the relationship between neuronal activity and blood flow in the brain. Her work on the role of endothelial signaling in neurovascular coupling provides new insights into how drugs and systemic diseases such as diabetes and cardiovascular disease could directly affect brain metabolism and function, pointing to endothelial health as a potentially valuable therapeutic target. Dr Hillman has also demonstrated important features of neurovascular coupling during early brain development, during the progression of brain cancer, and during the acute phases of stroke.

Speech Title: The Role of the Vascular Endothelium in Neurovascular Coupling