

# Distinguished Lecture Series in Physiology

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“Imaging the structure of the  
plasma membrane with  
correlative light and electron  
microscopy”

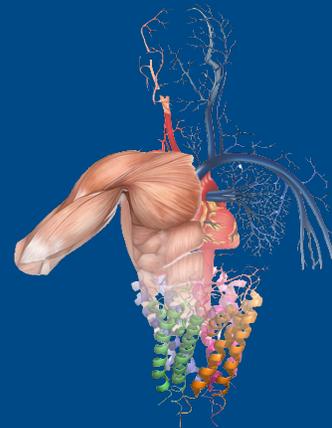
The plasma membrane separates the cell's interior from the outside world. The exchange of signals and materials across this barrier is regulated by a multitude of channels, transporters, receptors, and trafficking organelles. Mapping the molecular structure and dynamics of the plasma membrane and these organelles is key to understanding how human cells function in health and malfunction in disease. We develop and use super-resolution light, EM, correlative light and EM (CLEM), and cryo-electron tomography to image protein complexes within the dense native environment of the cell. These methods are uniquely suited to determine the nanometer-scale structure of the plasma membrane in human cells. With these new tools we have been investigating the nanoscale structure, mechanics, and signaling properties of clathrin-mediated endocytosis—the central mechanism human cells use to internalize receptors, nutrients, membrane, hormones, and other cargo.

Thursday, February 2, 2023  
GBSF & Zoom  
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February  
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