“Cancer Cell Biology: Below the Diffraction Limit”

The guiding premise of my research is that understanding underlying cell biology is key to delineating disease mechanisms. This is highlighted by the two proteins that have been the focus of my career: Caveolin-1 (Cav1), the caveolae coat protein; and Gp78, the endoplasmic reticulum (ER) E3 ubiquitin ligase and surface receptor for autocrine motility factor (AMF). Both have been ascribed tumor suppressor and promoter functions, and their mechanistic roles in cancer are diverse and complex. I will present our recent work and development of super-resolution microscopy (STED, SMLM) to the study of these proteins.