Biography

Michael (Mickey) Marks is a Professor at Children's Hospital of Philadelphia and the University of Pennsylvania Perelman School of Medicine. He received his Ph.D. in Microbiology/Immunology at Duke University in 1989, and completed two post-doctoral fellowships at the National Institutes of Health before joining Penn's faculty in 1995. He moved across the courtyard to the Penn-affiliated Children's Hospital of Philadelphia Research Institute in 2013. Mickey's lab studies the molecular mechanisms underlying the formation, maturation and functioning of cell type-specific lysosome-related organelles, including pigment cell melanosomes, platelet dense granules, and organelles in innate immune cells. His lab has largely focused on the functions of genes that are mutated in the genetic disease, Hermansky-Pudlak syndrome, and in various forms of oculocutaneous albinism. Mickey has been a co-editor of *Traffic* since 2012.

Abstract

"The dark side of organelle biogenesis enlightened by inherited human disease"

The endolysosomal system plays a critical role in intracellular signaling, nutritional uptake, metabolism, and immunity in all cells, but some cell types adapt endosomal processes to generate specific lysosome-related organelles (LROs) that fulfill specific physiological needs. Disruption of these processes, as occurs in the Hermansky-Pudlak syndromes (HPS), results in malformation of LRO subsets and consequent disease. We have used epidermal melanocytes as a model system to dissect the molecular mechanisms underlying endolysosomal adaptations towards the formation of melanosomes, the LROs responsible for pigment formation, and how the products of HPS genes effect these mechanisms. His presentation will summarize the work of his lab and his collaborators over many years, and focus on new unpublished studies on how several HPS gene products interact to effect the delivery of specific constituents from endosomal intermediates towards maturing melanosomes.