

Chen Institute Symposium 2021

Speaker: Diana Bautista

Title: Neuroimmune interactions in chronic itch and inflammation

Abstract: Humans rely on the sensations of itch, touch and pain for a broad range of essential behaviors. For example, acute pain acts as a warning signal that alerts us to noxious mechanical, chemical and thermal stimuli, which are potentially tissue damaging. Likewise, itch sensations trigger reflexes that may protect us from disease-carrying insects. In addition, during inflammation or injury, we experience a heightened sensitivity to touch that encourages us to protect the injured site. Despite these essential protective functions, itch and pain can outlast their usefulness and become chronic. Epithelial cells, immune cells and primary afferent neurons in the skin, airways and gut, all play important roles in the pathophysiology of chronic itch and inflammation. However, our understanding of the molecular and cellular interactions among these diverse cell types that drive the transition from homeostasis to a disease state is severely limited. I will discuss our recent work demonstrating that neuroimmune interactions in the periphery and spinal cord play key roles in chronic pain and itch, and other inflammatory disorders.