DEPARTMENTAL SEMINAR SERIES

Molecular Genetics
UNIVERSITY OF TORONTO

Temerty Medicine

Neuronal regulation of barrier immunity and host defense

Isaac Chiu, PhD
Associate Professor of Immunology,
Blavatnik Institute, Harvard Medical School

Neuroimmune interactions play a critical role in regulating homeostasis and host defense. Barrier tissue sites are densely innervated by sensory neurons that mediate pain and itch. We and others have found that these neurons directly sense microbial pathogens and their mediators including toxins and enzymes. They then release neuropeptides and other mediators that signal to immune cells to regulate their function. Microbes also in some instances hijack these neuroimmune interactions for their advantage. Therefore, understanding how neurons interact with microbes and immune cells can lead to novel understanding of host defense and barrier immunity.

Host: Dr. Julie Lefebvre

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