



Programme en maladies infectieuses et immunité en santé mondiale Infectious Diseases and Immunity in Global Health Program *La recherche pour le bénéfice de la santé mondiale Improving Global Health through Research*

Séminaire / Seminar



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Strike Home - Discovery and characterization of host pathways exploited by multiple intracellular pathogens

Microbial infections are still among the leading causes of death worldwide. Intracellular pathogens, such as *Mycobacterium tuberculosis* and SARS-CoV-2, utilize the host intracellular niches to replicate, spread, and evade the immune response and antimicrobials. Chemical genetics screening, i.e. functional assessment of small molecule inhibitors with characterized host targets, presents an unbiased and rapid top-down approach to uncovering host components required for sustaining intracellular infections. We discovered markedly distinct intracellular pathogens exploit the same host pathways during infection, with unique mechanisms of action. I will present our application of host-directed therapy screening, and how it allowed exposing and studying pathogen-utilized CHK2, GSK3, and V-ATPase host pathways during infection.







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