Welcome to the Jean Lab in the LSC

The Jean Lab
Discovering, developing, and validating novel strategic targets for antiviral therapeutic intervention
Department of Microbiology & Immunology, UBC, I3 Research Group
Dr. François Jean, Scientific Director – UBC Facility for Infectious Disease and Epidemic Program

Jean Lab Research

Dr. Jean is proposing to shift the current paradigm on global antiviral strategies – largely based on viral enzyme inhibition.

The Jean lab is exploring novel host-directed strategic targets to fight viral drug resistance and create a new class of therapeutic agents. Indirect-Acting Antiviral (IAA) agents.

Research Interests

Discovery of novel antiviral targets
• novel class of post-transcriptional regulators: miRNA mimics
• novel class of protease inhibitors

Human Enveloped Viruses Studied in the Jean Lab

☐ Hepatitis C virus/liver disease
☐ Influenza A virus/respiratory disease
☐ HIV/AIDS
☐ Dengue virus/dengue hemorrhagic fever

Selected Publications

☐ Loveday, E.K. et al. Jean FJ. (2022)
☐ Olmstead, A.D. et al. Jean FJ. (2021)

PRINCIPAL INVESTIGATOR: François Jean, Ph.D. [1]
DR. JEAN’S MAJOR RESEARCH GOAL

Since 1999, my lab has been leading a major research initiative funded by Canadian Institutes of Health Research (CIHR) to discover novel broad-spectrum antiviral agents directed at human enveloped viruses of great concern in Canada and worldwide, including hepatitis C virus, influenza A virus, and dengue virus.

DR. JEAN’S CURRENT PROJECTS [2]

-> Hijacking of host cell pathways by human enveloped viruses and discovery of novel indirect-acting antiviral agents (IAAs)

-> Discovery of novel direct-acting antiviral agents (DAAs) targeting virally encoded proteases

-> Exosomal MicroRNAs: Discovery of new master regulators of viral infection and blood-based diagnostic biomarkers of human viral diseases

-> Next generation molecular diagnostics for emerging viral diseases


With the recent establishment of FINDER at UBC, one of the most important facilities of its kind in the world, I have expanded my antiviral research program towards the discovery of broad-spectrum antivirals directed at emerging and re-emerging viruses of concern in Canada and around the world (e.g., West Nile virus, highly pathogenic H5/H7 influenza A viruses, and HIV-1). Funded by CFI and BCKDF infrastructure grants and under my directorship, FINDER is equipping Canadian and international research collaborators with state-of-the-art resources that allow them to apply the cutting-edge tools of genomics, proteomics, and imaging (i.e., infectomics) to the study of host-pathogen interactions and discovery of novel antimicrobial agents and biomarkers.

READ MORE ON FINDER UNDER DR. JEAN’S DIRECTORSHIP?

-> FINDER Web Page [3]
READ MORE ON DR. JEAN’S RESEARCH PROGRAMS: ARTICLE PUBLISHED IN SYNERGY: THE JOURNAL OF UBC SCIENCE


RESEARCH and DISCOVERY (2012-2013)

Dr. Jean’s Illustration – Interaction of HIV-1 virions with host cell during the HIV life cycle.
Clinical Chemistry (Volume 59, Number 8, August 2013)
EMPLOYMENT OPPORTUNITIES

Postdoctoral Fellow: If you are interested in working on our projects as a postdoctoral fellow, please send your CV and the names of three references to Dr. François Jean via email.

Graduate Student Program: Graduate students can enter the Jean Lab via the Dept. of Microbiology and Immunology Program.

Co-op Student Program: We usually have one or two Co-op students in the lab each year. If you are interested, contact Dr. François Jean via email.

Summer Research Opportunities: We usually have one or two summer students in the lab each year. If you are interested, contact Dr. François Jean via email.