2024

# Microbiology and Infectious Diseases

## Research Day

Presented by the Emerging and Pandemic Infections Consortium







June 10

Trainee Day (University College)



June 11

Main program (Medical Sciences Building)

In collaboration with the Division of Infectious Diseases, Department of Medicine, University of Toronto, the Division of Infectious Diseases at the Hospital for Sick Children, the Institute for Pandemics and U of T's postgraduate medical and clinical microbiology programs.

EPIC is a collaborative initiative between the University of Toronto and five hospital partners.











## Microbiology and Infectious Diseases Research Day

### TRAINEE DAY - JUNE 10, 2024 UNIVERSITY COLLEGE, ROOM 140

9:00 AM	Registration
9:20 AM	Welcome and opening remarks
	Scott Gray-Owen
9:30 AM	Characterizing human and viral proteins in the HIV-1 envelope using novel methods in flow virometry
	Jonathan Burnie (PI: Christina Guzzo)
9:55 AM	Characterizing vaccination gaps in older adults residing in a complex continuing care hospital
	Sharon Sukhdeo (Pl: Jennie Johnstone)
10:15 AM	Cracking open the genetic evolution of vaccine seed influenza viruses propagated in embryonated chicken eggs or mammalian cell culture
	Juliette Blais-Savoie (Pls: Samira Mubareka, Nicole Mideo)
10:35 AM	Coffee break
11:05 AM	Assessment of testes histomorphology, spermatogenesis, and Sertoli cell counts in mice exposed to protease inhibitor-based combination antiretroviral therapy in utero
	Spencer Brooks (PI: Lena Serghides)
11:20 AM	Using predicted viral epitopes to identify missing mpox-specific T cell responses in current vaccines
	Aideen Teeling (Pl: Mario Ostrowski)
11:40 AM	Topographical modification of medical gloves to reduce microbial transmission
	Desmond van den Berg (Pl: Benjamin Hatton)

### Microbiology and Infectious Diseases Research Day

12:10 PM	Lunch
1:10 PM	Pride in Microbiology Network
	Landon Getz
1:20 PM	Vaginal <i>Lactobacillus crispatus</i> persistence following application of a live biotherapeutic product: colonization phenotypes and genital immune impact
	Eric Armstrong (Pl: Bryan Coburn, Rupert Kaul)
1:45 PM	Impact of penile-vaginal sex on the microbiome and immunology of the penile urethra
	Marcio Gabriel Amancio de Carvalho (PI: Rupert Kaul)
2:05 PM	Profiling miRNA changes in Epstein-Barr virus lytic infection identifies a function for BZLF1 in upregulating miRNAs from the DLK1-DIO3 locus"
	Ashley Campbell (PI: Lori Frappier)
2:25 PM	Coffee break
2:55 PM	Uptake and effectiveness of human papillomavirus vaccine among gay, bisexual and other men who have sex with men
	Catherine Chambers (PI: Ann Burchell)
3:20 PM	Investigating the role of a bacterial heme acquisition system in macrophage persistence
	Mahrukh Fatima (Pl: Trevor Moraes)
3:40 PM	Leveraging MNK3 cells to study group 3 innate lymphoid cell responses to infectious challenges
	Siu Ling Tai (Pl: Arthur Mortha)

### Microbiology and Infectious Diseases Research Day

### MAIN PROGRAM - JUNE 11, 2024 MEDICAL SCIENCES BUILDING, ROOM 3153

8:00 AM	Registration and coffee
	David Naylor Student Commons, MSB
8:20 AM	Welcome and opening remarks
	Scott Gray-Owen
8:30 AM	Respiratory virus infection in patients with haematological malignancy
	Victoria Hall, University Health Network
9:00 AM	Leveraging AI and mathematical modelling for diseases outbreak support
	Jude Kong, Dalla Lana School of Public Health, U of T
9:30 AM	Bacterial populations through the single-cell lens
	Freeman Lan, Institute of Biomedical Engineering, U of T
10:00 AM	Coffee break
10:30 AM	Biology and control of H5N1 highly pathogenic avian influenza viruses
	Shayan Sharif, University of Guelph
11:30 AM	PRECISE: A platform to elevate Canada's ability to respond to emerging
	infectious diseases Jennie Johnstone, Sinai Health

### <u>Infectious Diseases and</u> <u>Microbiology Research Day</u>

11:45 AM	INSPIRE: Increasing resilience and capacity in Canada's pandemic response
	Mike McKay, University of Windsor
12:00 PM	BioHubNet: Transformative talent development for biomanufacturing
	Gilbert Walker, U of T
12:15 PM	PREPARED: Pandemic preparedness engaging primary care and emergency medicine
	Andrew Pinto, Unity Health Toronto
12:30 PM	Closing remarks Scott Gray-Owen
12:40 PM	Lunch
	David Naylor Student Commons, MSB
1:00 PM	Poster session A (Even numbers)
	David Naylor Student Commons, MSB
2:00 PM	Poster session B (Odd numbers)
	David Naylor Student Commons, MSB

### Thank you to our volunteers!

#### ORGANIZING COMMITTEE

Upton Allen (SickKids ID)

Natasha Christie-Holmes (EPIC)

Scott Gray-Owen (EPIC)

Jennie Johnstone (Division of ID, DoM)

Rasika Kulkarni (EPIC)

Nelson Lee (IfP)

Tony Mazzulli (Clinical/medical microbiology)
Pierre-Philippe Piche-Renaud (SickKids ID)

Jacqueline Watt (EPIC TAC)

Maria Anna Teza (EPIC)

Maxine Ty (EPIC TAC)

Betty Zou (EPIC)

#### TRAINEE ADVISORY COMMITTEE

Anna Waldmann
Duncan Carruthers-Lay

Jacqueline Watt Jiazhen Jin Kuganya Nirmalarajah Maxine Ty Natalie Au

Sophie Dyzenhaus Suji Udayakumar

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#### **ABSTRACT SELECTION COMMITTEE**

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Diana Yang Priyal Shah

Dixon Ng Saeedeh Moayedi nia

Duncan Carruthers-Lay Wale Ajiboye Edward B. James Wan Koh Guillaume Dugied Zi Yan Chen

#### TALK AND POSTER JUDGES

Arvin Persaud Joseph Vincent De Fazio Bradley J Laflamme Kuganya Nirmalarajah

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Gursonika Binepal Rachel Liu
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