

# UNIVERSITY OF TORONTO

## Microbiology & Infectious Diseases Research Days

Monday, June 3rd, 2019 – Trainee Day (Selected from Abstracts)

Tuesday, June 4th, 2019 – Invited Lectures & Poster Session

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**Talks in Medical Sciences Building, Room 2170**

**Posters & Lunch in Medical Sciences Building,  
Room 2171 (C. David Naylor Student Commons)**

**Website:** <http://microbeto.ca/mid-2019/>

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### Monday, June 3<sup>rd</sup>, 2019

#### **9:30 - 9:40 WELCOME ADDRESS**

##### **9:45 – 10:00: Avid Mohammadi**

Characterizing the impact of penile-vaginal sex on HIV-susceptible CD4<sup>+</sup> T cell subsets in the female genital tract

##### **10:05 - 10:20: Erin O. Y. Wong**

Developing defined microbiota to model inflammation in the mouse gut

##### **10:25 - 10:40: Nora Mellouk**

An ATG16L1-dependent pathway promotes plasma membrane repair and limits *Listeria monocytogenes* cell-to-cell spread

#### **10:45 - 11:15: COFFEE BREAK**

##### **11:20 - 11:35: Jean-Paul R. Soucy**

Joint modelling of resistance to six antimicrobials in urinary *Escherichia coli* isolates in Quebec, Canada

##### **11:40 – 11:55: Sarah Birstonas**

EHEC utilizes two-component systems to modulate expression of major flagellar subunit protein, FliC, in response to host intestinal cues

##### **12:00 - 12:15: Nathaniel Winsor**

NLRP6 regulates the colonic mucus layer during *Trichomonas* infection

#### **12:35 – 1:30: LUNCH**

##### **1:35 - 12:50: Samuel Salamun**

Epstein-Barr Virus Protein BMRF1 Modulates Cellular SUMO and DNA Damage Response Pathways by Binding the Cellular NuRD Complex

##### **1:55 - 2:10: Nicola Case**

Elucidating the mechanism of *Candida albicans* morphogenesis in response to phagocytosis by macrophages

##### **2:15 - 2:30: Sarah Kronheim**

A small molecule anti-phage defense mechanism in *Streptomyces*

#### **2.30 - 3:00: COFFEE BREAK**

##### **3:05 - 3:20: Alexandra Willis**

Understanding inherited immunity using a *C. elegans* model of microsporidia infection

##### **3:25 - 3:40: Genevieve Mailhot**

Differentiating between protective and pathogenic neutrophil responses during *Neisseria gonorrhoeae* infection

##### **3:45 – 4:00: Tiffany Fitzpatrick**

Successes of anti-RSV prophylaxis among infants in Ontario: results from a multi-decade, population-based controlled interrupted time series analysis using health administrative data

# Poster Presentations

77) Rifampin-Ofloxacin-Minocycline (ROM) for the Treatment of Paucibacillary Leprosy: A Systematic Review

Michael A. Klowak, Shareese Clarke, Shveta Bhasker, Olamide Egbewumi, Celine Lecce, Alexandra Stoianov, Samed Asmer, Sharmistha Mishra, Andrea K. Boggild

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Leprosy is a complex tropical infection from a diagnostic and management perspective, as patients with leprosy are at risk of numerous related complications from the disease itself and its treatment. Standard WHO multi-drug treatment (MDT) consists of medications that are potentially harmful and cause a range of adverse systemic effects. Monthly- or single dosing of ROM has emerged as a potential treatment option for leprosy, however, a synthesis of the evidence supporting ROM does not exist. Paucibacillary leprosy, characterized by limited skin lesions and a low bacillary load, may be most amenable to a fluoroquinolone-based treatment protocol. We performed a systematic review of relevant literature to evaluate the safety and efficacy of ROM-based treatment for paucibacillary leprosy. Various databases were searched from inception to March 2019, using a combination of search terms “leprosy”, “rifampin”, “ofloxacin”, “minocycline”, and “ROM”, while also accounting for alternative disease and chemical identifiers. The systematic review will focus on assessing and reporting on the efficacy, and safety of monthly ROM in the treatment of paucibacillary leprosy within a human population. 1139 records were retrieved for title and abstract screening, however, after a multi-step de-duplication pipeline, 568 articles remained. Subsequent title screening yielded 288 studies that were eligible for final inclusion. Main outcome measures to be assessed are lesion clearance, treatment failure, relapse, side effects and reversal reactions. A cursory review of relevant abstracts suggests that important determinants of health in the treatment of leprosy are: social environments, patient education, health services, gender and income. Synthesizing the current evidence discussing the efficacy of monthly ROM, will strengthen the current body of knowledge surrounding the treatment of paucibacillary leprosy, and may allow for the development of standardized fluoroquinolone-based treatment protocols.