

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

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/>

Monday, June 3rd, 2019

9:30 - 9:40 WELCOME ADDRESS

9:45 – 10:00: Avid Mohammadi

Characterizing the impact of penile-vaginal sex on HIV-susceptible CD4+ 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 *Tritrichomonas* 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

40) Management of Common Intestinal Parasites in Pregnancy: A Systematic Review of Maternal Outcomes

H. Raheel¹, R. Chris², M. Phuong³, R. Lau⁴, S. Kopalakrishnan⁵, C. Lecce², L. Makhani², K. Marks-Beaubrun², P. Dwek², A. K. Boggild²

¹Univ. of Toronto, Toronto, ON, Canada, ²Tropical Disease Unit, Toronto Gen. Hosp., Toronto, ON, Canada, ³Univ. of Ottawa, Toronto, ON, Canada, ⁴Publ. Hlth.Ontario, Toronto, ON, Canada, ⁵Queen's Univ., Toronto, ON, Canada

Parasitic infections in pregnancy necessitate consideration of numerous factors including the potential safety, efficacy, and tolerability of antiparasitic drugs for the mother and potential maternal-to-child parasite transmission risk during pregnancy and delivery. For these considerations, a substantial knowledge gap exists, with no definitive published and authoritative resource to guide clinical decision-making. We aim to map the available literature regarding the efficacy, safety, and tolerability of treatment of intestinal parasites in pregnancy, and synthesize the available literature on specific parasitic infections and anti-parasitic agents. Five electronic databases were searched (Medline, EMBASE, CINAHL, Cochrane Library of Systematic Reviews, and CENTRAL) and titles, abstracts, and full-texts of included studies and reviews were screened from database inception to July 2018, without language restriction. Two independent reviewers with a tertiary arbitrator screened all systematic reviews, randomized controlled trials, cohort studies, smaller observational studies, case-control studies, case series, and case reports assessing or reporting the efficacy, safety, or tolerability of anti-parasitic drugs used in management of parasitic infections during pregnancy. Two independent reviewers extracted the data and assessed trial quality using the GRADE approach. Data were summarized using qualitative and quantitative measures for specific parasitic infections as well as efficacy and safety of anti-parasitic agents. Risk of bias for each study was determined. Preliminary data showed Mebendazole decreased the prevalence of soil-transmitted helminth infection in pregnant mothers. With increased international travel and migration of migrant and vulnerable populations, it can be expected that health practitioners will be faced with managing parasitic infections in pregnant patients. Currently, quality evidence supporting specific management strategies is limited. Synthesizing the current literature on anti-parasitic agents and treating parasitic infections in pregnancy can translate into multidisciplinary clinical recommendations for improved pregnancy care.