

# 2026

## University of Toronto Microbiology & Infectious Disease Research Days

### AGENDA

## Main Programming Day, May 28

Room 3154, Medical Sciences  
Building, 1 King's College Circle

#### Presented by



UNIVERSITY OF  
TORONTO



**EPIC**

Emerging & Pandemic  
Infections Consortium

#### In collaboration with

U of T's Division of Infectious Diseases, Department of Medicine, and postgraduate medical and clinical microbiology program, the Division of Infectious Diseases at The Hospital for Sick Children and the Institute of Health Emergencies and Pandemics.

#### With support from



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



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## Abstract Booklet

May 27<sup>th</sup> - 28<sup>th</sup>, 2026

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EPIC is a collaborative initiative between the University of Toronto and five partner hospitals:

**SickKids**



Sinai  
Health

Lunenfeld-Tanenbaum  
Research Institute



**Sunnybrook**  
HEALTH SCIENCES CENTRE



UNITY HEALTH  
TORONTO



**UHN** Canada's  
Hospital

Supported by **bioMérieux Canada**



## The Influence of Host Nutriome on Immunological Control of Leishmania Infection

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**Background:** Immunologic control of parasitic infections arises from a combination of humoral and cellular mechanisms, both of which may be influenced by host nutritional status. Leishmaniasis is tissue-dwelling parasitic infection in which disease severity is determined by the host's immune system. Research suggests that acquired factors such as nutritional inadequacies play a significant role in immunosuppression and enhanced pathogenicity. **Objectives:** We aim to synthesize the knowledge surrounding the interplay between host micronutrient status and Leishmania infections. **Methods:** Five electronic databases were searched with combinations of search terms from database inception to March 2022. A total of 9,814 articles were retrieved with 7,828 remaining after deduplication. Screening was performed independently by two reviewers with discrepancies arbitrated by a tertiary reviewer. Currently, 206 articles have been full text screened leaving 12 eligible for final inclusion. Following screening, a comprehensive bias assessment will be carried out using the GRADE approach. **Results:** Interim findings suggest that malnourished individuals are at greater risk of acquiring a significant leishmanial infection. Deficiencies reported to impact the disease severity and parasitologic parameters include malnourishment in general, as well as deficiencies in vitamin A, zinc (n=3 each), iron (n=2), fiber, vitamin E, potassium, selenium, and copper (n=1 each). Disruptions to white blood cell count (n=3), and antibody levels (n=1) were also noted. **Conclusions:** The data will be summarized to systematically map published literature that will illuminate several ways in which nutrient deficiencies or abnormal micronutrient status alter and impair immune function in persons with leishmaniasis.