

SEMINAR - DRUG REPURPOSING STRATEGIES AND TOOLS FOR THE DEVELOPMENT OF NOVEL THERAPIES AGAINST NEGLECTED (TROPICAL) DISEASES, FROM THE BENCH TO THE CLINIC.

THE UNIVERSITY OF BRITISH COLUMBIA

Department of Microbiology and Immunology
presents a seminar by:

Santiago Ramón García

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entitled:

Seminar - Drug Repurposing Strategies And Tools For The Development Of Novel Therapies Against Neglected (Tropical) Diseases, From The Bench To The Clinic.



Sponsored by: **UBC Department of Microbiology and Immunology**

Abstract: Drug discovery and development for neglected tropical diseases (NTD) is not an attractive activity to the pharma industry due to low returns compared to pharmaceutical standards. As such, new cost-effective approaches need to be implemented in order to bring new therapeutic options. Repurposing clinically approved drugs in synergistic combinations might help to speed up the development of new treatments for NTDs.

In this talk, I will focus on two diseases: tuberculosis (TB, one of the top 10 causes of death worldwide) and Buruli ulcer (BU, a skin NTD caused by *Mycobacterium ulcerans* that affects mainly children under the age of 15 years).

First, I will describe how research in the field of TB seeded the ground to discoveries in the field of Buruli ulcer and the journey we took from bench discoveries to a pragmatic clinical trial in West Africa. For this, we are collaborating from the beginning with the Ministries of Health of Benin, Togo, Ghana and Côte d'Ivoire and the WHO with the end goal of country adoption of the new therapy (if proven successful).

In a second part, I will describe novel *in vitro* tools developed and implemented in our laboratory to assess the efficacy of drug combinations and inform future TB clinical trial: (1) **OPTIKA (Optimized Time Kill Assays)** allows for facile and dynamic interrogation of drug interactions in *M. tuberculosis* with a CFU-free methodology and dramatically increases traditional time-kill assay capacity and; (2) the **HFS-TB (Hollow Fiber System for Tuberculosis)** has been qualified by the European Medicines Agency as a methodology for use in support of selection and development of antituberculosis regimens thanks to its ability to perform *in vitro* PKPD studies, mimicking human-like drug exposures. Both technologies are integrated in our development pipeline of novel combinations.

This is a hybrid seminar which you can attend in person in LSC3 (Life Sciences Institute, UBC Vancouver Campus) or on Zoom. If you are joining on zoom, please use the meeting ID and passcode below:

Meeting ID: 91037 579420

Passcode: 579420

Monday, November 7, 2022 - 12:30pm to 1:30pm

Location:
Life Sciences Centre, LSC 3

2350 Health Sciences Mall

Hosted by
Dr. Lindsay Eltis



(<https://twitter.com/UBCMicroImm/mbim/>)