

Position: post-doctoral fellow
Faculty of Veterinary Medicine
University of Montreal (Campus St-Hyacinthe)

Requirement: Ph.D. in Biochemistry, Microbiology, Molecular Biology, Immunology and/or related areas (degree obtained 2019 or later).

Description: The candidate will be involved in multidisciplinary research projects of the **Canada Research Chair in Immunoglycobiology of infectious diseases** (held by Dr. Mariela Segura). Research work will be performed at the Faculty of Veterinary Medicine of the University of Montreal (St-Hyacinthe campus) under the supervision of Dr. Mariela Segura and the co-supervision of Dr. Marcelo Gottschalk.

Program description: Compulsory reduction in livestock antibiotic misuse and lack of vaccines have led to re-emergence of bacterial pathogens with high zoonotic potential. Similarly, antimicrobial therapy has failed to reduce the incidence of important human invasive infections. Amongst them, encapsulated bacteria are particularly formidable due to the camouflage conferred by their capsular polysaccharides. This Chair proposes an integrative approach combining advanced molecular and cellular immunological and bacteriological methods with innovative chemical synthesis and glycoengineering to generate new knowledge on the immunoglycobiology of these bacterial infections, which will translate into new-generation vaccines to reduce the burden of zoonotic and other diseases in Canada and globally.

The post-doctoral fellow (PDF) will be involved in aspects related to host-pathogen interactions, including understanding the role of bacterial capsular polysaccharides. The target pathogens are *Streptococcus suis* and Group B *Streptococcus*. Among several techniques or approaches, the applicant will perform protein cloning, expression and purification, ELISA, cell culture, bacterial mutagenesis, and/or biochemical characterization of capsular polysaccharides. We are thus searching candidates with previous experience in molecular biology and/or biochemistry. Expertise with mouse experimental infections or animal work will be a plus-value.

Supervisors:

Professor Mariela Segura - PhD, Immunologist, Canada Research Chair in Immunoglycobiology of infectious diseases and Director of the Swine and Poultry Infectious Diseases Research Center (CRIPA).

Professor Marcelo Gottschalk - PhD, DVM and Director of the International Reference Laboratory for *S. suis*.

Language skills: Excellent level of English (oral and written). French is a plus-value.

Salary: 50 000\$ to 55 000\$/year (depending on experience).

Duration: from April 2022 to September 2023 (18 months). The starting date can not be modified; therefore, the candidates must have already completed all required Canada immigration certificates, if applicable.

To submit your application: Please send your C.V., copies of grade transcripts, a presentation letter, and the names of two references to the following address: mariela.segura@umontreal.ca