

Postdoctoral Researcher Position in HPV & Genital Microbiome Research

We are seeking a postdoctoral researcher to work on a project studying vaginal and penile microbiomes of sex partners, how they influence each other, and how they may influence acquisition and clearance of infections with human papillomaviruses (HPV). The main aims of this project are to 1) characterize the composition and diversity of vaginal and penile microbiomes in young sexually active adults, 2) assess how the penile microbiome affects the vaginal microbiome and vice-versa in sexual partners, and 3) assess whether penile and vaginal microbiome diversity and composition are associated with transmission, incidence, clearance, and viral load of HPV infections. We expect this research to lead to novel biological insights into how vaginal and penile microbiomes interact to affect the risk of HPV in sex partners, which could eventually provide clinical insights into potential treatments for HPV infections.

The candidate will be based at the Division of Cancer Epidemiology in the Department of Oncology of McGill University (<https://www.mcgill.ca/cancerepi/>) and/or at St Mary's Research Centre (<https://www.ciusss-ouestmtl.gouv.qc.ca/en/facilities/research-centres/st-marys-research-centre/>); they will be supervised by Dr Talía Malagón. The candidate will lead data analyses using a combination of machine learning, biostatistics, and epidemiological research methods. They will work with research staff to prepare and document datasets and analytical files. They will draft manuscripts for publication in academic journals and be involved with knowledge dissemination efforts such as presenting at conferences. They will be involved in mentoring students working on related research projects. The candidate will collaborate with project co-investigators at the Canadian Center for Computational Genomics (C3G) and the University of Toronto.

This is a 2-year appointment with potential to be extended. The position will start as early as February 2024.

Main duties & Responsibilities:

- Lead research project related to HPV and genital microbiomes
- Perform data analyses of longitudinal repeated measures health data
- Collaborate with other epidemiologists and bioinformaticians to perform analyses and interpret data
- Attend regular team meetings and seminars
- Write manuscripts for publication
- Present results at meetings and conferences
- Be involved in preparation of grant proposals
- Assist with mentoring of graduate students and other trainees

Education: PhD in Epidemiology; alternatively, a PhD in a field related to the project (Bioinformatics, Microbiology) with experience in human observational research will also be considered.

Experience: This project will involve both epidemiological and machine learning analyses. Experience working with longitudinal repeated measures health data and with machine learning methods is desirable. Prior experience in the field of HPV, cancer epidemiology, sexually transmitted infections, and/or human microbiomes is an asset.

Other qualifying skills:

- Strong quantitative statistical analysis skills
- Proficiency using statistical software (ex. SAS, Stata, R)
- R programming skills
- Strong English science writing skills
- Strong oral communication skills
- Demonstrated scientific rigour
- Data management skills
- Autonomy and leadership
- Bioinformatics skills would be an asset
- Experience with multi-state Markov modeling would be an asset

Compensation: 50,000 CAD/year + benefits. Job benefits will be in accordance with the postdoctoral status of the applicant (<https://www.mcgill.ca/gps/postdocs/fellows>).

Application: Please send the following application package to Talía Malagón (talia.malagon@mcgill.ca): a cover letter describing your research experience and interests, a scholarly CV, and a list of references. Candidates whose applications fit the scope of this announcement will receive a reply.