PhD position
Lyme disease emergence in Quebec under climate and land-use change, and modeling the risk for workers.

1 PhD research position is available starting September 2021.

The project will be conducted jointly at McGill University and at the Centre d’enseignement et de recherche en foresterie (CERFO) and aims at improving our understanding of the current and future interactions between ecosystems and Lyme disease distribution, as well as modeling the risk for human populations. The 3-year position is funded by the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST); as such, an external scholarship is not required, but candidates are strongly encouraged to apply to such funding.

The selected candidate will develop machine learning approaches to derive the ecological drivers of the emergence and prevalence of Lyme disease in Quebec using fine scale satellite and climate observations. The model will then be used to forecast the future risk of Lyme disease under climate change scenarios and incorporate socio-economic and behavioural human data to improve the prediction of Lyme disease risk levels across Quebec, to identify populations most at risk. Our project funder will use the results of this research as a decision support tool to update their policy and advise on best practises for workers exposed in region with high risk for Lyme disease.

The candidate will have a MSc in Biology, Environmental Sciences, or Geography. The ideal candidate will have experience in modeling (e.g. species distribution modeling, machine learning), a strong background in spatial analyses and experience working with remote sensing data, as well as strong quantitative skills (e.g. coding in R or Python).

Interested applicants should submit by February 28, 2021, a curriculum vitae, transcript, a 1-2 page cover letter that describes their interest in the research, and contact information for two references, to:

Pr. Virginie Millien virginie.millien@mcgill.ca and
Dr. Bilel Chaghaf bilel.chalghaf@environnement.gouv.qc.ca

Note that the deadline to apply to a PhD in Biology at McGill is March 15th, 2021. More information about the application process is available here: https://www.mcgill.ca/gradapplicants/programs/biology