POSTDOCTORAL FELLOW POSITION IN PUBLIC HEALTH AND VACCINE RESEARCH

Faculty: Medicine and Dentistry
Department: Medicine
Division: Preventive Medicine
Position Title: Post-Doctoral Fellow

Position summary:

Applications are invited for a postdoctoral fellow position within the Division of Preventive Medicine at the Faculty of Medicine and Dentistry at the University of Alberta. Located in Edmonton, Alberta, Canada, the Faculty has been recognized as one of Canada's premier health-education institutions.

The successful candidate should have an expertise in applied public health and vaccinology as well as skills or strong interest in mathematical modeling to work on the project to evaluate public health interventions to control pertussis using agent-based modeling. This multi-provincial project is funded by the Canadian Institute of Health Research (CIHR) and Public Health Agency of Canada (PHAC) through Canadian Immunization Research Network (CIRN). The project is led by Dr. Alexander Doroshenko (postdoctoral fellow supervisor) at the University of Alberta, Prof. Nathaniel Osgood at the University of Saskatchewan and Prof. David Fisman at the University of Toronto. The group recently developed a comprehensive agent-based model on pertussis transmission incorporating natural history of disease and transmission patterns and created a stylized quasi-static network to depict contact rates and connection ranges between agents in a typical public health jurisdiction. This project will expand this recently developed model of pertussis to simulate effects of various public health interventions to control pertussis and to determine effectiveness of such interventions. The successful candidate will initiate and lead activities listed below and will consult with project leads as appropriate.

Duties will include

- Plan research activities and determine the appropriate research methodology
- Work with graduate student(s) in computer science and project leads to develop and test agent-based mathematical models using AnyLogic software. Over time a candidate will be expected to run experiments using developed models
- Identify and synthesize appropriate empirical data to be used in model parameterization, calibration and validation
- Work with a statistician to determine appropriate statistical tests and carry out statistical analyses using empirical data and data generated by the model
- Prepare ethics applications as required
- Conduct literature searches and summarize and present scientific evidence
- Prepare peer-reviewed scientific manuscripts for publication
- Develop presentations and reports based on research results
- Consult with faculty supervisors, project collaborators, public health stakeholders and students
- Organize research meetings

Preferred qualifications include

- The successful candidate will have or will soon receive a doctoral degree (or equivalent) in public health, quantitative methods, epidemiology, mathematical modeling or related discipline. Applicants with a medical degree and research experience may also apply
- Knowledge of vaccine-preventable diseases, specifically pertussis

- Understanding of immunization programs and policies in Canada
- Skills in using AnyLogic modeling software or strong interest to acquire such skills
- Experience using statistical software
- Excellent written and oral communication skills in English
- Good organizational and team building skills

This full-time position, contingent on satisfactory performance, is available for a period of 24 months, with the possibility of renewal (subject to securing funding). Annual salary is commensurate with qualifications and experience. Benefits information for this position can be found at the following link http://www.postdoc.ualberta.ca/healthcoverage.aspx. Additional funding may be available for attendance of relevant scientific meetings/conferences. There will be an opportunity for 4-6 months secondment to the University of Toronto to work with Prof. Fisman. Some travel between research sites may be required.

To apply
Interested applicant can enquire about this position and submit an electronic application consisting of a cover letter, curriculum vitae and contact information for two referees to

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Closing date

The review of candidates will begin immediately. The position will remain open until filled.

We thank all applicants for their interest; however, only those individuals selected for an interview will be contacted.

The University of Alberta offers appointments on the basis of merit. We are committed to the principle of equity in employment. We welcome diversity and encourage applications from all qualified women and men, including persons with disabilities, members of visible minorities and Aboriginal persons.