

University of Manitoba
Pediatric Infectious Diseases Research Fellowship
(Visa-sponsored applicants)

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Preamble

Pediatric Infectious Diseases is a subspecialty concerned with the prevention, investigation, diagnosis and management of illness in children caused by microorganisms. It is a rapidly developing field and infectious diseases remain the leading cause of morbidity and mortality throughout the world and are important contributors to illness and death in Canada. These illnesses span the usual boundaries of organs and systems and the specialist in Pediatric Infectious Diseases must be able to deal with illnesses that involve any region of the body. Also, children with complex multi-system diseases, including congenital and acquired immune deficiencies, are at high risk of serious infections, in addition to infectious diseases being a leading cause of ambulatory clinic visits by children and their caregivers. Furthermore, non-infectious illnesses may mimic the presentation of an infectious disease, and in children, who may not be able to communicate symptoms, can be a challenging diagnosis to make.

Over the past two decades, there have been significant changes and discoveries in infectious diseases involving the pediatric population including the emergence of new diseases (HIV/AIDS, pandemic H1N1 influenza, etc.) and developments in several relevant areas including but not limited to antimicrobial resistance, antibiotic drug and immunization development, infection control, diagnostics, and management of opportunistic infections in immunocompromised children. Obtaining additional skills in scholarly practice and research is a clear asset to academic subspecialists in the field of Pediatric Infectious Diseases. Indeed, new knowledge and discoveries can also be translated and applied to other related field included adult medici

Administrative Structure

There is an extensive, well-maintained level of administrative support for this research fellowship program. Fellows will transition from the 2 year Pediatric Infectious Diseases subspecialty training program at the University of Manitoba which has been a fully accredited training program by the Royal College of Physicians and Surgeons of Canada for many years, and produces high-quality graduates. The administrative structure already in place will be used to support a fellow completing research training. The program director for the Pediatric Infectious Diseases subspecialty training program will oversee the general administration of the research fellowship program. There is already an administrative assistant in place for Pediatric Infectious Diseases who can assist the program director. Any extra duties for the assistant, as a result of the research fellowship training program will be very minimal, and will not affect his/her other duties. In addition, the Research Coordinator already in place within the Pediatric Infectious Diseases training program will work with the program director, and assist with many of the frontline and day-to-day duties. Finally, the Pediatric Infectious Disease Residency Training Program Committee (RPC) will lend its support to the Program Director and Research Coordinator in the ongoing management of the research fellowship.

The Pediatric Infectious Diseases program will review the overall content, experience, evaluation process, and overall training of the fellowship program, in detail once every two years, or as needed. In addition, the Pediatric Infectious Diseases RPC will include the research fellowship program as a standing item on its meeting agenda, and fellows will be invited to regular RPC meetings.

Applicant Prerequisites

For entry into the University of Manitoba Pediatric Infectious Diseases Research Fellowship program, applicants will need to have successfully completed a subspecialty training program in Pediatric Infectious Diseases at an institution fully accredited by the Royal College of Physicians and Surgeons of Canada or equivalent.

The following documentation is required:

1. Updated CV
2. A minimum of two letters of reference (maximum of four) supporting why the applicant would benefit from additional research fellowship training
3. A personal statement or letter from the candidate outlining their reasons for application, and how fellowship training would help their career goals over the next 3-5 years (maximum 2 pages)
4. Documentation of financial support from their home sponsor

Documentation will be distributed to the members of the Pediatric Infectious Diseases RPC. Through consensus discussion, a decision to offer an interview will be made. Candidates must complete an on-site interview to be considered. After the interview the Pediatric Infectious Diseases program director, along with the RPC, through consensus, will decide if the candidate will be offered a fellowship position.

Objectives of the Program

The goal of the research experience is to develop an understanding and appreciation of how basic and clinical research is undertaken from the initial project conception and formulation of a hypothesis-driven project to the final analysis and submission of the manuscript. In the process, the fellow will obtain in-depth knowledge of a particular field of research and an introduction to institutional regulation and funding mechanisms. The program's goal is to attract and train leaders in the field of pediatric infectious diseases research (in conjunction with the University of Manitoba Pediatric Infectious Diseases Training Program). Academic clinicians with additional experience and training in research and scholarly work is a priority in

the field of pediatric medicine, especially in the field as rapidly evolving as pediatric infectious diseases.

By developing this research fellowship program, there will be benefits at several different levels. The Departments of Medical Microbiology as well as Pediatrics and Child Health will benefit by attracting high-quality trainee whose subsequent work and publications will raise the profile of both departments locally as well as nationally. Such research fellowship programs in pediatric infectious diseases are relatively unique within Canada (whereas dedicated research training is the norm in American pediatric infectious diseases training programs). Similarly, the University of Manitoba will benefit as whole by way of a raised research profile. Fellowship trainees will be working in an environment that already produces a large volume of high-quality research in the areas of microbiology, HIV, and infectious diseases that raises the profile of the University of Manitoba. Further availability of a research fellowship program in pediatric infectious would only build upon this, as well as attract future high caliber applicants. Obviously, there would be a benefit to those in the field and practice community of infectious diseases through knowledge translation generated from the work products put forth from fellows and their colleagues. An additional benefit of the training program would be for visa-sponsored trainees who complete their pediatric infectious diseases residency training at the University of Manitoba. These trainees, after completing a research fellowship, would bring these skills and experiences back to their home centres, and then possess a unique skill set that is not routinely available to the counterparts training at other centres in Canada. There would then be a benefit to pediatric patients served within their own local catchment areas.

As previously described there would be interactions between the research fellowship and pediatric infectious diseases training program at an administrative level, including fellows joining the RPC meetings. Research fellows will not attend outpatient pediatric infectious diseases clinics or the inpatient service, and therefore not interfere with the learning experiences of adult and pediatric infectious disease residents, general pediatric residents, or medical students. Research fellows may certainly serve as mentors and support infectious diseases resident learners, especially in the area of research. Research fellows, while not expected to attend academic half day (AHD), would certainly be welcome to, but would be expected to provide some formal teaching sessions to residents in the area of general research design, including their area of research focus.

These interactions would clearly strengthen not only the pediatric infectious diseases, but also the adult infectious diseases and medical microbiology training programs at the University of Manitoba from an academic, mentorship, and expertise perspective. In addition, by attracting high-quality applicants, graduates of the research fellowship, would help ensure a steady stream of future, additional top-notch applicants to the pediatric infectious diseases training

program. This would clearly hold true for visa-sponsored applicants, where the need for this type of additional fellowship training is great.

Funding Model

Given that this research fellowship will only be available to visa-sponsored applicants who have already completed a pediatric infectious diseases residency training program in Canada, and issues related to funding will be supported by the applicant's home sponsorship organization. This will include salary and other related costs, as well as support for the applicant to travel to and present their research at scientific meetings.

The fellow will work with their research supervisor in the application of funds for any required research operating funds.

Rotation Specific Goals and Objectives

The trainee will be provided with the rotation specific goals and objectives at the start of their fellowship training, as will the Pediatric Infectious Disease faculty, members of the Pediatric Infectious Diseases RPC, and the trainee's primary research supervisor.

The specific objectives of this fellowship are to meet the goals and objectives outlined below. This includes the acquisition of knowledge, skills, and attitudes necessary to function effectively as an academic pediatric infectious diseases subspecialist with a career focus on becoming a pediatric clinician scientist. The expectation will be that fellows are able to submit a minimum of two manuscripts for peer-review by the completion of their fellowship.

The fellowship specific objectives are based upon the CanMeds 2005 roles are summarized as follows:

Medical Expert

Specific Requirements: Research fellows are able to:

1. Critically appraise the background literature of the research project
2. Demonstrate an understanding of the basic principles of research design, methodology, biostatistics, and clinical epidemiology
3. Demonstrate in-depth knowledge of the research topic of interest

4. Complete the TCPS 2: Core review and certification (if not already done).

Communicator

Specific Requirements: Research fellows are able to:

1. Demonstrate skills in conveying and discussing scientific research on infectious diseases to scientific communities through posters, abstracts, teaching slides, manuscripts, grant applications, or other scientific communications.
2. Communicate and collaborate effectively with research team members and supervisors to conduct the research.
3. Understand and complete required application and approval forms in order to undertake a research or scholarly project. This includes but is not limited to research ethic board forms, HSC or other institutional research impact approval forms, forms to access secured data repositories (HIPIC, etc...).
4. Transmit research findings to colleagues, trainees, and the academic community at large.

Collaborator

Specific Requirements: Research fellows are able to:

1. Identify, consult and collaborate with appropriate experts to conduct the research.
2. When necessary, identify and collaborate with experts outside of the specific field of study related to the research topic.
3. Be able to work with non-physician colleagues as well as junior trainees during the research period.

Manager

Specific Requirements: Research fellows are able to:

1. Identify an area of research interest and a research mentor in order to engage in the scholarship of scientific inquiry and dissemination.
2. Independently utilize available resources and regularly meet with an identified research mentor.
3. Demonstrate effective time management in research setting.
4. Demonstrate leadership and administrative abilities, where appropriate, in leading a research team

Health Advocate

Specific Requirements: Research fellows are able to:

1. Recognize the contributions of scientific research in improving the health of patients and communities
2. Understands the importance of incorporating research ethics, especially as it relates to confidentiality, into the project design.

Scholar

Specific Requirements: Research fellows are able to:

1. Pose a research question(s) (clinical, basic or population health).
2. Develop a proposal to solve the research question:
 - o conduct an appropriate literature search based on the question
 - o propose a methodological approach to solve the question
3. Carry out the research outlined in the proposal.
4. Critically analyze and disseminate the results of the research.
5. Identify areas for further research.

Professional

Specific Requirements: Research fellows are able to:

1. Uphold ethical and professional expectations of research consistent with institutional review board guidelines, including maintenance of meticulous data and conduct of ethically sound human or animal subject research.
2. Demonstrate personal responsibility for setting research goals and working with mentors to set and achieve research timeline objectives.
3. Participate as possible in specialty organizations that promote scholarly activity and continuous professional development.
4. Publish accurate and reliable research results, with attention to appropriate authorship attribution criteria.
5. Disclose potential financial conflicts of interest (including speaker fees, consultative relationships, investments, etc.) as appropriate when engaging in and disseminating research results.

Program Structure

The program orientation will reflect the research focus of this fellowship. There will be no required clinical rotations for the fellow, as well as no on-call responsibilities. Academic activities and training responsibilities will focus on developing the required research aptitude and skills. The fellow will be required to attend the following mandatory activities and sessions:

1. Pediatric Grand Rounds; weekly on Thursday 0800-0900, September – June
2. Manitoba Institute of Child Health (MICH) Research Rounds; weekly on Thursday 1200-1300, Room 500 MICH
3. Canadian Child Health Clinician Scientist Program (CCHCSP) meetings; 2nd Tuesday of each month, 0800-0900, Room 500 MICH
4. Medical Microbiology Seminar Series presentations; weekly on Wednesday 1115-1215, September to June, Room 540 Basic Medical Sciences Building (BMSB).
5. Infectious Diseases Clinical Case Presentations; weekly, Friday 1045-noon, Link Room, 5th Floor BMSB.
6. Infectious Diseases Journal Club; monthly, final Friday immediately following ID Clinical Case Presentations.

When the Departments of Medical Microbiology or Pediatrics and Child Health present unique symposia, the research fellow is also expected to attend.

Other teaching activities which are optional, but encouraged include attendance at Pediatric Infectious Diseases Journal Watch sessions, Internal Medicine Grand Rounds (when topic is of relevance), Pediatric Infectious Diseases section meetings, infection control meetings, and antimicrobial stewardship meetings. Additional elective training may also be pursued as an observership in areas that are of targeted focus and relevant to the research fellow's area of study. These may be laboratory or subspecialty clinic based (e.g. special microbiology laboratory; immunocompromised pediatric infectious diseases).

As outlined previously, the research fellow will be expected to contribute some teaching as part of infectious diseases academic half day (Wednesday mornings), in the form of 2 sessions through the course of the year. These can be of research or clinical nature.

Regarding manuscripts and scholarly works, the research fellow is expected to be productive during the fellowship. As mentioned, this will include a minimum expectation of two manuscripts submitted for peer-review. In addition, the fellow will be highly encouraged to submit abstracts (poster or oral) for local and external symposia or conferences.

Resources

The main teaching site will be within the office space of the Section of Pediatric Infectious Diseases, University of Manitoba, located on the 5th floor, Basic Medical Sciences Building. The fellow will have access to the infectious diseases residents' room, equipped with desk space and internet access.

Evaluation of Performance

Evaluation of the trainee during the fellowship will be regular and ongoing through the fellowship year. Each block, the research supervisor(s) will complete an ITER for the fellow. The evaluators may also use commentary and feedback received from other attending physicians and colleagues. Any "below expectation" marks will be brought to the attention of the Pediatric Infectious Diseases program director immediately and addressed accordingly. The research fellow's progress will be discussed at the Pediatric Infectious Diseases RPC meetings as part of the usual confidential trainee discussions component. Completed ITERs will be signed off by the fellow and stored in a dedicated fellow binder in the Pediatric Infectious Diseases office. The fellow will complete a "Rotation Evaluation" form and a "Faculty Teaching" form (similar to those currently in use by the Pediatric Infectious Diseases training program) every 3 months.

The fellow will also meet with the Pediatric Infectious Diseases program director for a formal meeting at the start of fellowship, after six months, and at the conclusion. More urgent meetings will be arranged if necessary.