

Division of Pediatric Infectious Diseases

Montreal Children's Hospital of the McGill University Health Centre (MUHC)

1-year Fellowship: Infections in Immunocompromised Hosts

Name of Institution: Montreal Children's Hospital of the MUHC

Number of Positions: 1

Length of Program: 1 year

Name of Fellowship Co-Directors: Dr. Jane McDonald, and Dr. Jesse Papenburg(Research)

Name of Program Director: Dr. Earl Rubin

The Division of Pediatric Infectious Diseases offers a 1-year fellowship in Protocol/Guideline development and implementation of such protocols, as it pertains to Infectious Diseases. This program offers exposure to a tertiary care pediatric institution, in which all subspecialties are represented, and has a significant patient volume in a multitude of high risk patient populations. The goal of this fellowship is to ensure that clinical patient care is kept at the level expected for this type of institution.

This fellowship is directed at a trainee who has completed the three subspecialty trainings in Pediatrics, Pediatric Infectious Diseases as well as Medical Microbiology.

The primary focus of this 1 year fellowship is to focus on the patient population that receives therapies that may compromise their immune system, and therefore put them at increased risk of infection. In recent years, there is an ever evolving multitude of therapies that are being offered to patients, many of which put the patient at risk for the development of serious infectious diseases. However, there is an inconsistency in the management of these patients: in their evaluation before they receive such therapies; or ongoing monitoring; or in the treatment of infections should they arise. The inconsistencies are related to the fact that there are many Divisions that prescribe these therapies (example: Rheumatology, Neurology, Gastroenterology, Dermatology, Hematology/Oncology), without a consistent oversight. The goals of treatment and the diseases being treated vary considerably, but the risks of infection are common to all.

The secondary goals of this program are to enhance/review and optimize current guidelines/protocols that exist for the immunocompetent child, and to help other divisions in the creation of new ones that are lacking. The fellows will combine and enhance their previous clinical experiences in both pediatric infectious diseases along with medical microbiology through research in order to develop such protocols. This can be achieved by gaining further clinical experience, research, and reviewing current medical literature.

Fellows will expected to do their clinical work at the Montreal Children's Hospital. They will be under direct supervision of attending physicians of the division of infectious diseases. There are 7 attending physician in the division with different background expertise including medical microbiology, human immunodeficiency virus, infection control, allergy, and immunology.

Objectives:

To learn the principles and practice of Protocol and Guideline development

To learn to integrate background training in Infectious Diseases with that obtained in training in Medical Microbiology to optimize patient care and prevention of disease

The objectives also include the development of knowledge and expertise in diagnosing and managing infections in patients with immune compromising conditions such as hematological and solid organ malignancies, organ transplant, biologic modifying agent, and patients receiving other immunosuppressant medications.

Specific Objectives:

- a. Thorough review of existing guidelines for guidelines to be reviewed or updated
- b. Enrollment and successful completion of relevant Epidemiology courses in Faculty of Medicine: Epidemiology, Biostatistics and Occupational Health, to provide a solid foundation in the process of Guideline/Protocol development
 - EPIB 678 Knowledge translation, communications, and evidence-informed public health leadership –(NEW COURSE as of Winter 2018, and hopefully to be done Winter 2019)
 - EPIB 629 Knowledge Synthesis (course offered Fall 2017, and therefore to do in Fall 2018)
 - EPIB-619: Systematic Reviews and Meta-analyses (previous summer course in 2017, and hopefully offered summer 2018)
- c. Creation of Institution specific guidelines for the following:
 - Use of Biologic Response Modifiers
 - Pre/Peri/Post transplant for Bone Marrow transplant recipients
 - Pre/Peri/Post transplant for Solid organ transplant recipients
 - Empiric therapy for children with Febrile Neutropenia
 - Evaluation/Treatment/Monitoring for Invasive Fungal infection in the immunocompromised host
 - Review and update of current institution guidelines, examples include:
 - i. Urinary tract infection in children
 - ii. Complicated pneumonia
 - iii. Bone/Joint infections
 - iv. Therapeutic Drug Monitoring (TDM) for vancomycin, aminoglycosides, and triazoles
- d. Clinical exposure
 - To function at the level of a Junior staff on the Pediatric Infectious Diseases service for at least 25% of the year (expected case load 15-20 daily patients follow up with 15-20 new consults per week)
 - To be the primary consultant to the outpatient clinics that primarily serve varied immune compromised patients
 - To run the outpatient home IV antibiotic program (once weekly clinic visit with expected case load of 8 patients per week)
- e. Research
 - All fellows are expected to participate in at least one research project, with the goal of publishing in a major peer-reviewed journal. Fellows are also encouraged to take advantage of the many opportunities to contribute to multi-disciplinary research projects ongoing in other departments.

- Fellows are encouraged to attend and present in one of the major national or international infectious diseases conferences.
 - Given the nature of this fellowship, Fellows are encouraged get involved with the “Guidelines committee” of AMMI Canada (Association of Medical Microbiology and Infectious Diseases), either as a submitter to the committee of a unique guideline, or to volunteer as the Member in training member of this committee
- f. Teaching
- Fellows are expected to teach residents/students rotating through the ID service, when appropriate. This could include general teaching rounds with the housestaff on service, typically once every two weeks.
 - The fellow is expected to participate in the weekly academic half day (Thursday mornings) as the other residents in the ID/Med Micro programs.
 - Active participation with the teaching staff in clinical discussions of complex cases through our weekly ID case conference.
 - Fellows are encouraged to attend the department of pediatrics weekly grand rounds and evidence based rounds.
- g. On Call
- Fellows are on call via pager. When on clinical ID service, this call consists of being first call 9 days in a 28 day period, including two weekend call coverage. When not on clinical service, the call consists of being first call for one weekend in a 4 week period
- h. Support staff:
- Fellows will have access to support from the pediatric infectious diseases division secretary, infectious diseases program coordinator, and 2 infection control nurses.

Vacation/Conference:

- Rules stipulated in the resident collective agreement apply. Therefore the fellow is granted 4 weeks of vacation in addition to a week off at either the Christmas or New Year’s holiday. The fellow is also granted one week to attend a conference, and should the fellow be selected to present a National or International conference, the time of the conference is not counted against his or her conference leave.

Fellow evaluation:

- The primary person responsible for evaluations is the Fellowship director. The fellow will meet with the director at a minimum every 12 weeks to review the progress of the fellow and to document an evaluation following CanMED competencies, and will be uploaded in one45.
- Fellows will be asked to evaluate each rotation as well as to complete a written final evaluation at the completion of the fellowship.
- When the fellow does a clinical rotation on the ID service, then the attending supervising the resident will be responsible to evaluate the resident, including a midway evaluation (at the 2 week point), and at the rotation conclusion. This too will follow CanMED

competencies and will be uploaded onto one45.

- When the fellow does a non-clinical rotation (e.g. research), he will work closely with an supervising attending who will review the progress through out the rotation and provide midway and final evaluation which will follow the CanMED roles and be uploaded to One45.
- The fellows' research activity will be routinely evaluated by the Resident Research Committee, part of the Residency Training Committee

Fellowship evaluation:

- The Residency Training Committee will evaluate the fellowship and the program director annually with respect to teaching, scholarly research activity and feedback by current fellows
- Fellows must complete formal evaluation of the teaching faculty to keep in file and be available for review

Academic Facilities:

- The fellow will have a dedicated desk and computer in a multiperson resident office in the area of all ID and Med Microbiology faculty.
- The computer will allow library access, as well as multimedia learning materials available with a McGill user ID, including free on line journal access

The fellow's responsibilities are separate from those of other residents, whether they be Adult ID/Med Micro or Pediatric ID residents, as well as separate from the responsibilities of any other short cycle trainees on the ID service (Pediatric residents, Family Medicine residents or students). As such, there is no negative impact or any substantial detrimental effect of the fellowship on the training of other residents.