

Clinical Hepatopancreatobiliary Research Fellowship

Name of Institution: McGill University

Location: Royal Victoria Hospital and Research Institute

Type of Fellowship: Clinical Hepatopancreatobiliary Research Fellowship

Number of positions: 2

Length: 2 years

Program Information:

- **Number of fellowship positions requested** - 2
- **Academic affiliation** – Department of Surgery
- **Name of hospitals involved in training** –
The Fellowship will be carried out at the MUHC-RI, with teaching activity at Cedars Cancer Center.
 - **Percentage of time spent by the fellow in each institution** will be roughly 50%-50%

- **Purpose:**

The Hepatopancreatobiliary (HPB) Clinical Research Fellowship will provide the fellow with an advanced graduate or postdoctoral research training experience in an academic setting beyond that obtained in residency. It is intended for physicians wishing to pursue a career in clinical research (either in surgery or medical oncology). The fellow will have the opportunity to hone the skills required to carry out clinical research in a structured environment with support from the research supervisor and multi-disciplinary team.

- **Background**

The Hepatopancreatobiliary (HPB) Clinical Research Fellowship provides an in-depth experience in clinical research related to liver and biliary tract pathology while working directly with the research supervisor, members of the research lab, and clinicians of the multi-disciplinary team. The fellowship is two years in duration.

The first year will consist of 75% research with focus on translational research and 25% clinical work. The clinical work will consist primarily of assessing patients in HPB and/or HCC clinic, screening and recruiting patients for clinical trials, and ongoing monitoring of enrolled study patients.

The second year of the fellowship will be a continuation of the first year, allowing the fellow time for completion of the study, data analysis and manuscript preparation. The HPB Clinical Research Fellowship could lead to a Masters or PhD in Experimental Surgery, if the fellow chooses to pursue a degree.

The fellowship will provide the tools and experiences necessary to design, execute, and understand clinical research studies. The fellow will also develop the skills needed to write grant proposals and secure funding for the desired project.

At the end of this training the fellow should be competent in the following key competencies in accordance with CanMEDS scholar roles:

1. Engage in the continuous enhancement of their professional activities through ongoing learning
 - a. Develop, implement, monitor, and revise a personal learning plan to enhance professional practice
 - b. Identify opportunities for learning and improvement by regularly reflecting on and assessing their performance using various internal and external data sources

- c. Engage in collaborative learning to continuously improve personal practice and contribute to collective improvements in practice.
- 2. Teach students, residents, the public, and other health care professionals
 - a. Recognize the influence of role-modelling and impact of the formal, informal, and hidden curriculum on learners
 - b. Promote a safe learning environment
 - c. Ensure patient safety is maintained when learners are involved
 - d. Plan and deliver a learning activity
 - e. Provide feedback to enhance learning and performance
 - f. Assess and evaluate learners, teachers, and programs in an educationally appropriate manner
- 3. Integrate best available evidence into practice
 - a. Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that address them
 - b. Identify, select, and navigate pre-appraised resources
 - c. Critically evaluate the integrity, reliability, and applicability of health-related research and literature
 - d. Integrate evidence into decision-making in their practice
- 4. Contribute to the creation and dissemination of knowledge and practices applicable to health
 - a. Demonstrate an understanding of the scientific principles of research and scholarly inquiry and the role of research evidence in health care
 - b. Identify ethical principles for research and incorporate them into obtaining informed consent, considering potential harms and benefits, and considering vulnerable populations
 - c. Contribute to the work of a research program
 - d. Pose questions amenable to scholarly inquiry and select appropriate methods to address them
 - e. Summarize and communicate to professional and lay audiences, including patients and their families, the findings of relevant research and scholarly inquiry

In addition to the above CanMEDS key competencies, the fellow will be able to:

- 1. Develop skills required to plan, design, and conduct a clinical trial
- 2. Develop skills in data analysis and what it implies for changes in management of HPB pathology
- 3. Develop effective interpersonal and communication skills with study patients, members of the research team, and industry sponsors in a clinical research setting
- 4. Understand regulations that govern approaches and tools for conducting clinical trials

Research Activity:

The research activity conducted by the fellow will be primarily in designing, implementing, and conducting clinical trials. Additionally, the fellow will be involved in ongoing clinical research involving the discovery and development of early biomarkers and their prognostication.

Mission: The fellow will be expected to become proficient in the following by the end of the fellowship:

- 1. Formulate original research questions and design a project using appropriate methodology
- 2. Execute the research project, understand the data analysis and its implications
- 3. Methodically assess and review scientific literature
- 4. Independently write manuscripts for publication in scientific journals

Publications: The fellow is expected to submit a minimum of two publications by the end of the fellowship

Specific activities for each year of the Fellowship are as follows:

Year 1:

1. Develop and outline primary project with goals timeline
2. Write research proposal and obtain necessary IRB and ethics approval
3. Organize monthly HPB journal club from September to June
 - a. Select topic and presenter
4. Attend the following conferences
 - a. HPB tumor board
 - b. HPB journal club
 - c. Biliary rounds once per month
 - d. Weekly lab meetings
5. Attend HPB and/or HCC clinic weekly as this will serve as the primary point of contact to select, screen, and enroll study patients
 - a. Monitor the study patients at follow-up visits
 - b. Order the pertinent imaging studies and blood work involved in the clinical trial
 - c. Develop a schedule for the enrolled patients to ensure imaging studies and blood tests are obtained according to study protocol
6. Will have the option to spend time in the medical oncology clinics to help familiarize themselves with immunotherapy and chemotherapy options

Year 2:

The second year of the fellowship will mostly be a continuation of the first year in the sense that the fellow will continue working on their already approved projects, making necessary adjustments, and begin data analysis.

1. Submit work and present at the IHPBA and/or AHPBA
2. Attend service rounds with the house staff weekly
3. Assist in the peer reviewing of articles for publication
4. Organize monthly HPB journal club from September to June
 - a. Select topic and presenter
5. Attend the following conferences
 - a. HPB tumor board
 - b. HPB journal club
 - c. Biliary rounds once per month
 - d. Weekly lab meetings
6. Attend HPB and/or HCC clinic weekly as this will serve as the primary point of contact to select, screen, and enroll study patients
 - a. Monitor the study patients at follow-up visits
 - b. Order the pertinent imaging studies and blood work involved in the clinical trial
 - c. Develop a schedule for the enrolled patients to ensure imaging studies and blood tests are obtained according to study protocol
7. Will have the option to spend time in the medical oncology clinics to help familiarize themselves with immunotherapy and chemotherapy options

- **Outline how intended fellowship will enhance residency training**

The residents will be included in the monthly journal club meetings and have the opportunity to present if they desire.

The research fellow will teach the residents how to review a scientific paper for presentation.

Name of the Fellowship Program Director – Dr. Peter Metrakos

Names of the Teaching Faculty

Dr. Peter Metrakos, Professor of Surgery, McGill
 Dr. Prosanto Chaudhury, Associate Professor of Surgery, McGill
 Dr. George Zogopoulos, Associate Professor of Surgery, McGill
 Dr. Jeffery Barkun, Professor of Surgery, McGill
 Dr. Jamil Asselah, Associate Professor of Medicine, McGill
 Dr. Victoria Mandilaras, Assistant Professor of Medicine, McGill

- **Roles**

Provide direct supervision to the fellow and oversee the proposed project.

Provide guidance and direction to the fellow.

Provide access to resources to make the fellow's research feasible.

Provide feedback every three months at a minimum.

Summary of clinical practice:

The trainee will participate fully in all clinical activities of the service in HPB and HCC clinics. The clinical work will consist primarily of evaluating patients in HPB and/or HCC clinic, screening, recruiting, and enrolling patients for clinical trials, and ongoing monitoring of enrolled study patients. The fellow will also be responsible for monitoring the study patients at all follow-up visits, ordering pertinent imaging studies and blood tests involved in the clinical trial. Additionally, the fellow will be responsible for ensuring all tests for enrolled patients that are pertinent to the clinical trial are obtained according to study protocol. They will monitor and report any adverse events.

- **Major Strengths:**

The fellow will develop and perfect the research skills necessary to continue a future career in academic medicine or clinical research. The supportive environment will allow the fellow to develop the research idea with input from clinicians across several specialties. There are numerous opportunities for collaboration amongst different departments and labs, depending on the interests of the fellow.

The expectation to attend local, national, and international meetings will give the fellow the opportunity to network as well as showcase their own research.

Academic Facilities

- **Outline facilities for clinical and academic pursuit**

The fellow will have access to Dry Lab, Wet lab, Library, Administrative Support, Basic Science Research, Clinical Research, Simulation Lab

- **Library access, materials relevant to fellowship training** – The fellow will have access to a research library, and multiple medical journals and publications

- **Multimedia learning materials available**

- **Availability of a skills lab if applicable**

Fellow Duties and Responsibilities

- **Include whether the fellow is the senior supervisor of residents:** the HPB Clinical Research Fellow will not be the senior supervisor of the residents. The fellow will have the opportunity for resident teaching surrounding service rounds and HPB journal clubs.

- **Outline whether there are fixed rotations at various institutions:** the fellow will not have fixed rotations. They will spend half of their time at the MUHC-RI performing research responsibilities and half of their time at the MUHC Cedar Cancer Center/Glen to see patients in HCC/HPB clinic.

- **Outpatient clinic responsibilities need to be outlined**

The fellow will attend HPB and/or HCC clinic weekly as this will serve as the primary point of contact to select, screen, and enroll study patients

- Monitor the study patients at follow-up visits
- Order the pertinent imaging studies and blood work involved in the clinical trial
- Develop a schedule for the enrolled patients to ensure imaging studies and blood tests are obtained according to study protocol

- **Outline role of the fellow towards residents on service:** the fellow will have peripheral involvement with the residents on service. The primary interaction of the fellow and residents will be surrounding HPB journal club and HPB service rounds.
 - HPB journal club: the fellow will assist the resident in selecting appropriate articles for discussion and how to methodologically assess an article for presentation.
 - HPB service rounds: the fellow will attend and occasionally present case presentations for teaching at weekly service rounds.
- **Teaching responsibilities towards residents:** the fellow's involvement in teaching the residents on service is outlined above.
 - HPB journal club: the fellow will assist the resident in selecting appropriate articles for discussion and how to methodologically assess an article for presentation.
 - HPB service rounds: the fellow will attend and occasionally present case presentations for teaching at weekly service rounds.
- **Outline participation in academic activities involving the residents: seminars,**
The trainee will participate in outpatient activities in the HPB clinics, the multi-disciplinary HPB oncology clinic, Hepatocellular Carcinoma clinic, and in all weekly service meetings including HPB Tumour Board, Service rounds, and Biliary rounds (monthly).

Outcome assessment (morbidity and mortality rounds etc)

The fellow is expected to present at the weekly lab meeting at least once per month. The fellow will present their project, their ongoing progress, and their results. They will receive feedback from all members of the lab as well as from Dr. Metrakos, the supervisor.

- **Describe any support staff available to the fellow: program coordinator, nurse clinician, secretarial**
 - HPB/Transplant Surgery faculty
 - Medical oncology faculty
 - Radiology faculty
 - Pathology faculty
 - Other members of the research lab
 - Lab research coordinator
 - Statistician
- **Proposed meetings to be attended by the fellow -**
 - HPB tumor board
 - HPB journal club
 - Biliary rounds once per month
 - Weekly lab meetings
- **Research productivity and publications expected by the Fellow**
 - The fellow is expected to publish a minimum of 2 manuscripts by the end of the fellowship
 - The fellow is expected to submit their work and present at a minimum of two meetings per year