

# FELLOWSHIP PROGRAM ON THE PRINCIPLES AND PRACTICE OF POSITRON EMISSION TOMOGRAPHY (PET) IN ONCOLOGY

Program: Nuclear Medicine

Fellowship program director: Dr. Shawn Karls

Number of positions: 1

## Description:

The fellowship program is based at the Glen Campus of the MUHC. There are two modern PET/CT scanners at the MUHC, including a brand new 5 ring GE Discovery MI digital PET/CT currently being installed, functional by June 2022. Whole body PET/CT imaging will be used for the investigation of tumors as an integral part of oncology protocols, both for patient management and research, with a very wide range of pathology referrals from the five MUHC institutions and also the McGill RUIS. Additionally there will be opportunity to interpret PET/CT scans investigating for infection/inflammation, cardiac viability, and dementia/neurologic disease. McGill University, the MUHC, and also the MNI, provide the infrastructure for the program which is to focus on:

- 1) Production of radionuclides for PET
- 2) Chemistry and Radiochemistry of Positron emitting radiopharmaceuticals.
- 3) Instrumentation
- 4) Data Analysis and Imaging Processing
- 5) Clinical Applications in Oncology
- 6) Research Applications in Oncology

The responsibilities of the fellow include:

- 1) Triaging PET requisitions.
- 2) The screening and interview of the patients.
- 3) The monitoring of studies.
- 4) Interpretation and review of cases.
- 5) Consultation with review of cases.
- 6) Participation at Surgical and Oncology rounds.
- 7) Participation in research protocols.
- 8) Contributions to teaching file.
- 9) Opportunity to teach residents.

Coverage responsibilities includes weekday coverage at the Montreal General Hospital or Royal Victoria Hospital. There is no weekend coverage or evening call.

Approximately 10% of the Fellow's time can be dedicated to research (one academic half day per week), assuming that a detailed research project outline has been presented and approved by an attending nuclear medicine physician as the project mentor. The research goal is publishing at least one study in a peer reviewed journal and/or presenting at a research conference. Research milestone schedules will be clearly articulated and research progress will be closely monitored. Research time is to begin one month after the start of the fellowship, and contingent on clinical coverage.

A four week block of the fellowship is designated elective time. Elective time may be spent on approved research projects, or in general nuclear medicine.

Fellows will receive continuous on-site training, teaching, and feedback, and will meet with the fellowship director every three months for formal feedback as per PGME guidelines.

At the end of this fellowship, the fellow is expected to:

- 1) Interpret a high volume of PET studies in oncology for both initial staging and assessing for treatment response.
- 2) Interpret PET studies for infection/inflammation, neurological disorders, and myocardial viability.
- 3) Understand which pathologies and indications are appropriate for the different PET tracers in order to protocol and prioritize PET studies.
- 4) Understand the physics of a PET scanner as well as the quality control, in order to identify potential artifacts or pitfalls.
- 5) Understand the physics of positron decay, as well as a basic understanding of radiochemistry of the commonly used PET radiotracers.

The training fellowship is for 1 year and is open to residents in Nuclear Medicine who have completed their training and have been successful in their qualification examinations in the province of Quebec, Canada or the United States. It is also open to international graduates with appropriate qualifications.

*The fellow's responsibilities are separate from those of the residents, and the fellows positively impact residency training. There is no negative impact of the fellowship on residency training.*

## Faculty:

A. Ciarallo, MD, Division chief  
M. Hickeson MD, Residency program director  
S. Karls, MD, Fellowship program director  
J. Novales-Diaz, MD  
V. Derbekyan, MD  
G. Chausse, MD  
JP. Soucy MD

## Applicants:

Please submit your online applications according to the instructions found here: <https://www.mcgill.ca/pgme/admissions/prospective-fellows>.

Please also send the following to [shawn.karls@mail.mcgill.ca](mailto:shawn.karls@mail.mcgill.ca):

- 1) Personal Statement

2) C.V.

3) 3 Letters of Reference

**Mailing address:**

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