PET/MRI Postdoctoral Research Fellowship
Icahn School of Medicine at Mount Sinai, New York

The Translational and Molecular Imaging Institute at the Icahn School of Medicine of Mount Sinai, New York, is seeking a highly motivated postdoctoral research fellow in PET/MR imaging. The successful candidate will design, optimize, and validate simultaneous MRI and list-mode PET data acquisition protocols, PET/MR image reconstruction algorithms and advanced post processing methods to address current clinical research challenges. The initial appointment is for 2 years.

The primary goal is the development of novel multi-modality molecular imaging methods and algorithms for motion, attenuation and partial volume correction and 3D/4D reconstruction of PET data in the context of simultaneous PET/MR imaging and their application in clinical research studies.

In addition, the following job responsibilities are expected:
- Performance of validation and verification analysis on the PET/MRI scanner and offline workstations using commercial and open-source application tools
- Co-supervision of other PhD students
- Writing of scientific publications and research grants
- Assistance in the acquisition of data for research grants

The targeted research projects are funded by a series of NIH and other institution grants and will involve pre-clinical and clinical PET-MR applications in cardiovascular, oncology and neurological diseases. A strong emphasis is on data-driven cardio-respiratory motion correction as well as partial volume and attenuation correction methods for clinical PET data utilizing available information from both the PET and MR modalities. The successful applicant will have direct access to state-of-the-art PET/CT (Biograph mCT) and PET/MR (Biograph mMR) clinical scanners, a PET/CT preclinical scanner. Furthermore, he/she will work within a stimulating multidisciplinary team including MR Physicists and Scientists, Nuclear Medicine Physicians, Radiologists, Cardiologists, Chemists and pre-doctoral and post-doctoral graduate students. The selected candidate will be directly mentored by Prof. Zahi A. Fayad, Director of TMII, and collaborate with leading international investigators currently conducting front-end PET/MR research.

**Job Qualifications**

PhD degree in a field related to MR, PET, and/or PET-MRI

Experience with the Siemens mMR and/or mCT data processing is preferred

Experience in usage & development of reconstruction and simulation tools is a plus

Experience with scientific programming languages such as C/C++, Matlab

Track record of published peer-reviewed journal articles in the field

Ability to work as an independent researcher in a multidisciplinary environment

Interest in clinical translation and clinical research experience is a plus

Hand-on experience in preparing radioactive physical phantoms and conducting PET/MR experiments is a plus.

Please send a cover letter, a research statement (2-page limit), your CV and a name list of 3 references to Prof. Zahi A. Fayad at the following address: zahi.fayad@mssm.edu