



The Russell H. Morgan Department of Radiology and Radiological Science

Post-doctoral position in radiopharmaceutical therapy of cancer

Radiopharmaceutical therapy (RPT) is a novel approach to treating metastatic cancer. It involves delivery of cancer cell targeting agents that are tagged with a radioactive atom. In this way, highly potent (e.g., alpha-particle) radiation may be delivered directly to disseminated tumor cells with minimal normal tissue side effects.

A 3-year post-doctoral position for a PhD scientist with experience in nuclear medicine imaging and therapy, including, radionuclide conjugation of antibodies, peptides or small molecules, and with a background in medical physics and radiobiology is available in the Sgouros Radiopharmaceutical Therapy and Dosimetry laboratory in the Radiological Physics Division, Department of Radiology at The Johns Hopkins University, School of Medicine. The main focus of the project is on the development and application of in vitro and in vivo models for investigating and optimizing novel strategies for the clinical implementation of targeted alpha-particle emitter therapy of cancer. The work will be performed in close collaboration with the Radiation Oncology Department and will involve the collection of tumor and normal organ dose-response data on a small animal irradiator (SARRP) with corresponding dose-response data from radiopharmaceutical therapy (RPT) using targeted alpha-emitters (α RPT). The objective of the work is to rigorously define RBE values and alpha-particle induced DNA damage repair, *in vivo*, for normal tissue and selected tumor types. Although this would be the primary focus of the candidate, the Sgouros lab provides a wide-range of research activities, including microscale imaging studies using an alpha camera, patient-specific dosimetry studies using Monte Carlo methods, cell and molecular biology methods to delineate DNA repair pathways, pharmacokinetics and pre-clinical dosimetry studies of novel radiolabeled therapeutic agents, and alpha-emitter labeled therapy of canine osteosarcoma in collaboration with a veterinary group in Radiology. Johns Hopkins University, School of Medicine and affiliated institutions include a nanobiotechnology institute, an NCI-designated cancer center, advanced pre-clinical and clinical imaging facilities and an academic environment that fosters interdisciplinary research. The Sgouros Lab also has ongoing collaborations with faculty in the Whiting School of Engineering. Apply by sending a cover letter and your CV to George Sgouros, at gsgouros@jhmi.edu.

more information on RPT



Sgouros lab web page

