Postdoctoral Position(s)

We are seeking one or two motivated Postdoctoral Research Fellow(s) for our MR research laboratory at Memorial Sloan Kettering Cancer Ctr, New York City.

The MR Research Laboratory performs preclinical (cells and small animals) studies of tumor metabolism, treatment response and drug pharmacokinetics using multinuclear MRI and MRS. Our current research concentrates on in vivo MRI/MRSI of the tumor microenvironment (macrophage infiltration, hypoxia, pH, vascular changes) and metabolism in response to treatment. The laboratory studies in vivo tumor metabolism and the effects of novel drugs under development for future clinical translation, and in vitro, live cells in our MR-compatible cell perfusion system. We also study in vitro cell metabolism responses to exposure in micro-environmental stress conditions and/or treatment. Multidisciplinary projects are performed in collaboration with experts in radiobiology and nuclear medicine programs and include multimodality imaging applications beyond MR.

Our facility is equipped with a 7.0T 30 cm horizontal Bruker MR spectrometer with a PET insert, an 11.7T vertical MR system, and will take delivery of a 9.4T/20 cm horizontal bore system within a year. The MR laboratory has a well-equipped electronics workshop, computer network, and chemical and cell culture laboratory. Adjacent facilities for small animal imaging studies include bioluminescence imaging, microCT, microPET, microSPECT, ultrasound, and a micro-irradiator. Collaborations with other imaging laboratories at MSKCC are ongoing.

The successful candidate(s) would apply live-cell MR perfusion studies and/or molecular imaging of small animals to elucidate cancer biology, physiology, metabolism, and/or treatment response. His/her primary project would focus on studying a metabolic inhibitor in current clinical use in non-oncologic diseases that we found to have vitro and in vivo anti-neoplastic activity. We anticipate studying (breast and prostate) tumor and immune cell metabolism, in addition to imaging macrophage infiltration by MR. The research requires a strong background in MR physics and sound computer skills. Matlab or IDL programming skills and experience in building MR coils are desirable. The successful candidate should be comfortable working with, or learning how to work with, perfused cells and/or small animals, have a strong interest in cancer biology and therapy, and enjoy interacting with other scientists and clinicians. A doctoral degree in physics, biomedical engineering, biochemistry, biology, or closely-related field is required. Salary is commensurate with experience.

Qualified candidates should submit their CV and three references to: Dr. J. A. Koutcher (koutchej@mskcc.org) or Dr. E. Ackerstaff (ackerste@mskcc.org), Memorial Sloan Kettering Cancer Center; Dept. of Medical Physics 1275 York Avenue; New York, NY 10065