Postdoctoral Position in Cancer MRI Research

POSITION DESCRIPTION
Applications are invited for a full-time postdoctoral fellow/research associate to pursue research in the area of quantitative MR oncologic imaging in the laboratory of Dr. Aradhana Venkatesan, Director of Translational Research in the Section of Abdominal Imaging at The University of Texas MD Anderson Cancer Center. The goals of Dr. Venkatesan’s research program are to develop predictive functional and metabolic imaging biomarkers that may be used for risk stratification, adaptive therapy planning, and surrogate endpoint use in cancer clinical trials, specifically those representative of clinically significant post-treatment changes in tumor biology and/or physiology. The candidate’s project will involve interrogating functional and metabolic MRI biomarkers of treatment response in small animal models of cancer. Areas of study include image reconstruction, data acquisition and processing, data fitting, motion correction techniques and some pulse sequence design/optimization. The position will be funded by the University of Texas MD Anderson Cancer Center and focuses on the coordinated use of MD Anderson’s Small Animal Imaging Facility (SAIF) and South Campus Research Building (SCRB3). The project will involve the use of a 7 Tesla MRI, collaboration with other postdoctoral students evaluating MRI biomarkers in small animal models, collaboration with laboratory staff responsible for creating the tumor model and employing immunofluorescence imaging to measure tumor growth in vivo in mice. Candidate strengths in MR imaging data analysis and database management will be necessary to successfully integrate MR imaging and histopathologic data for intended imaging-to-histopathologic correlative studies. The candidate will be expected to execute experiments and participate in the drafting of scientific publications and funding proposals. Some small animal handling and small animal tumor specimen handling and processing is anticipated. There is also the possibility for involvement in clinical oncology imaging research projects, which will involve CT and MR clinical image processing, imaging data analysis and database management.

Facilities:
Imaging studies will be conducted primarily at the South Campus Research Facility (SCRB3), a state-of-the-art imaging research and translational patient-care facility with its own cyclotron, vivarium, clinical treatment areas, and biomedical research laboratories. On-site imaging equipment includes a Bruker 7.0T MRI, and Oxford Instruments Hypersense Dynamic Nuclear Polarizer, which will be utilized for this work.

MD Anderson, ranked in the top two cancer hospitals for the past 25 years by U.S. News & World Report, is the world’s largest treatment facility for oncologic diseases. Located within the Texas Medical Center campus in Houston, our location provides access to a world renowned medical community and the splendid cultural and recreational diversity of a sophisticated, metropolitan area that is the country’s fourth largest city.

Qualifications: The successful candidate should have a background in MRI and demonstrated an understanding of basic MR physics and signal processing, as evidenced by prior peer-reviewed publications. A PhD in Physics, Biomedical Engineering or Computer Science/Engineering is desired. Applicants with a background in pulse sequence design and data processing and analysis of medical imaging data with Matlab are encouraged to apply.

Additional requirements include the following:
- Excellent written and oral communication skills
• Ability to perform as a team member with good interpersonal skills
• Strong analytical and organizational skills; excellent attention to detail
• Ability to work independently and effectively, with a proven track record of problem solving

Experience in animal models of cancer would be advantageous for this multidisciplinary position. This is a one-year position but has the potential of being extended.

**Salary and Benefits:**
Please email your cover letter, curriculum vitae and the names and contact information of 3 references to Jimeka Pierson via email: JMarshall@mdanderson.org.