Postdoctoral Fellow Position in Physiological Systems Modeling, Medical College of Wisconsin, Milwaukee, WI, USA

Job Description:

Applications are invited for a postdoctoral fellow position in the Physiological Systems Modeling Laboratory of Dr. Ranjan Dash starting immediately within the Departments of Biomedical Engineering and Physiology at the Medical College of Wisconsin. The fellow will work on an integrated research project built-on combining computational modeling and experimental measurements of cardiac mitochondrial and cellular functions (e.g. electrophysiology, bioenergetics, cation and reactive oxygen species homeostasis) with an overall goal of quantifying the biophysical and biochemical mechanisms associated with mitochondrial and cellular dysfunctions in cardiac ischemic-reperfusion (IR) injury and other pathologies. This research will help identifying key mitochondrial and cellular targets in developing effective cardioprotective strategies against IR injury and other pathologies. Funding for this research will be through a NIH-funded Program Project Grant, which involves close collaborations with various faculties within the Departments of Biomedical Engineering, Physiology, and Anesthesiology. The fellow will have the opportunity to participate in wetlab experiments (e.g. isolated mitochondria, isolated cardiomyocytes, and ex-vivo and in-vivo hearts) in addition to the computational modeling. The research will provide a significant training and exposure in the mechanistic computational modeling of biological mass transport and exchange processes in the integrated physiological systems. The fellow will also gain significant training and experience to become an independent researcher in the larger field of research.

Qualifications:

The minimum criteria for the position are enumerated below:
(1) A Ph.D. degree in bioengineering, biomedical engineering, biochemical engineering, applied mathematics, or a related scientific field. Completion of the Ph.D. dissertation within the last two years will be highly desirable.
(2) A strong background in cellular metabolism and cardiovascular physiology, mathematical modeling of physiological and metabolic systems, experimental data analyses, computational methods, and scientific and technical computing skills using MATLAB. Experience in computer programming using other languages, such as FORTRAN, C, C++ will be an added advantage.
(3) Excellent communication skills (written/spoken English) and a demonstrable leadership in publishing in peer-reviewed journals and receiving academic excellence.
(4) Lastly, the applicant should have a keen desire and initiative to learn, and the ability to function as part of a collaborative team.

Application Process:

Interested applicants should submit a single pdf file with (1) letter of intent outlining their qualifications and career objectives, (2) Curriculum vitae and a list of publications, and (3) contact information for three references who may be contacted. Application package and reprints of three representative publications should be sent electronically to Dr. Dash (rdash@mcw.edu). Salary will be based on NIH scale that commensurate with background and experience.

DEPARTMENT OF BIOMEDICAL ENGINEERING

MARQUETTE UNIVERSITY

MEDICAL COLLEGE OF WISCONSIN