MRC-funded IMPACT (Integrated Midlands Partnership for Biomedical Training) Doctoral Training Partnership 3.5 Year PhD Studentship available for September 2019

Departments:
1. Department of Cardiovascular Sciences, British Heart Foundation Cardiovascular Research Centre, University of Leicester
2. Institute of Cardiovascular Sciences, University of Birmingham

Supervisors: Professor Andre Ng, Dr Melanie Madhani and Professor Warwick Dunn

Eligibility: UK/EU applicants only

Applicants must hold or expect to obtain UK Bachelor Degree 2:1 or better degree in Cardiovascular Sciences or Biomedical Sciences related degree. Previous experience in theoretical and practical experience in cardiovascular biology is highly desirable. Experience in biochemistry, molecular biology, data analysis and presentation skills would be an advantage.

Project Title: Identifying novel therapies to prevent myocardial injury in type-2-diabetes

Project Description:

Type-2-diabetes (T2D) is a global epidemic associated with a major risk factor for coronary artery disease. Patients with T2D undergoing coronary artery bypass grafting (CABG) surgery have increased morbidity and mortality following cardiac surgery when compared to non-diabetic CABG patients. There are numerous risk factors that may influence myocardial injury following cardiac surgery. These include inability to precondition, increased redox oxygen species (ROS), altered glucose transport and/or metabolism. In addition, autonomic function is abnormal in T2D with additional interaction in the genesis of potentially lethal arrhythmia. As such, this may contribute to higher incidence of peri-operative myocardial infarction and arrhythmias. Thus, there is a clear need to improve myocardial protection in T2D-patients.

This project will investigate novel therapies against diabetic myocardial injury and will utilise a number of sophisticated new techniques developed by the supervisors. The successful candidate will gain a good training platform in cardiac biochemistry, pharmacology and physiology. In particular, the Langendorff model, whole heart electrophysiology, cardiac metabolomics, and redox metabolome. The candidate will be based at Professor Ng (Leicester BHF Cardiovascular Research Centre), Dr Madhani (Institute of Cardiovascular Sciences, Birmingham) and Professor Dunn (Phenome Centre Birmingham) labs. They will also link with the Midlands Cardiovascular Research Network activities.
Interviews will be held on 17th May 2019.

References:


Funding details: MRC IMPACT DTP

Entry requirements:

Applicants are required to hold/or expect to obtain a UK Bachelor Degree 2:1 or better in a relevant subject. The University of Leicester English language requirements apply where applicable.

How to apply:

Please apply via: https://more.bham.ac.uk/mrc-impact/phd-opportunities/

Project / Funding Enquiries:

[Professor Andre Ng, andre.ng@leicester.ac.uk, Dr Melanie Madhani, m.madhani@bham.ac.uk, for informal enquiries]

Application enquiries to mrc-impact@contacts.bham.ac.uk

Closing date for applications midday 6th May 2019