

HULL AND EAST YORKSHIRE HOSPITALS NHS TRUST

2-YEAR ACADEMIC FOUNDATION PROGRAMMES

GRADE

Academic F2 Post in Cardiothoracic Surgery

PLACEMENT

A four month placement with the academic Cardiothoracic group based at Castle Hill Hospital.

THE DEPARTMENT

Academic Cardiothoracic Surgery is based at Castle Hill Hospital, with basic laboratory research facilities on site. The department has a rich clinical and basic science history going back two decades. Historical clinical trials have involved studies on anaesthetic agents used during cardiac surgery and hyperbaric oxygen therapy. Current basic science research interests are pulmonary hypertension, airway pathophysiology, cardiopulmonary bypass physiology and cardiac muscle and fat metabolism. The department also produces high quality peer-reviewed publications from its detailed cardiothoracic surgery database of over 14,000 patients since 1999. The centre currently recruits and has principal investigators for numerous national multi-centre trials.

The Academic F2 will join a team of professionals working in Cardiothoracic Surgery:



Professor Mahmoud Loubani
Consultant Cardiothoracic Surgeon



Mr Priyadharshanan Ariyaratnam
NIHR Clinical Lecturer & Speciality Trainee in Cardiothoracic Surgery

Professor Loubani is the Training Programme Director for Cardiothoracic Surgery in the Yorkshire and the Humber and he is also the NIHR Clinical Research Network Lead in surgery for Yorkshire. Professor Loubani is a co-applicant on numerous pharmaceutical and University grants and Principal Investigator (PI) in trials currently recruiting and a number which have fully recruited.

Current Grants:

- The Hull and East Riding Cardiac Trust Fund awarded a grant on 15 May 2018 of £24,268.18 for Reduced expression of the predominate cardiac sodium channel is compensated by non-cardiac sodium channels in human right atria tissue from elderly patients for a joint application with Dr Sandra Jones.

- Yorkshire Cancer Research funded PEOPLE-HULL: Primary care and community Engagement to Optimise time to Presentation with Lung cancer symptoms in HULL for £712,501 awarded December 2016. Co applicant with Una Macleode, D Mitchell, Sara Macdonald, Victoria Allgar, J Dyson, Tim Fielding, Trish Green; C Jayawardhena, K Whitaker, Gavin Anderson, Matthew Callister, Vincent Rawcliffe.
- Grant awarded by ACTELION for the purpose of determining "an in vitro investigation of the mode of action of selexipag and its active metabolite (ACT-333679) on small human pulmonary artery" in Collaboration with Azar Hussain, Rob Bennett and Alyn Morice Awarded in November 2016.
- The Hull and East Riding Cardiac Trust Fund, £52,000 awarded January 2016 for joint application with Dr Sandra Jones. Novel usage of microfluidics to investigate modulation of JNK as a preventative intervention against AF in the human heart: A step in the translation of animal studies to clinical use.

Clinical Studies in recruitment

- HARP2: Prevention of cardiac and respiratory complications in patients undergoing oesophagectomy/lobectomy/pneumonectomy by pretreatment with simvastatin – UK multicentre trial
- The VIOLET study: Video assisted thoracoscopic lobectomy versus conventional open lobectomy for lung cancer
- Ischaemia Trial: International Study of Comparative Health Effectiveness with Medical and Invasive Approaches.
- HYBRID AF: Hybrid Atrial Fibrillation Ablation National UK Registry

Completed Clinical studies

- Victory Study: Prospective, randomised, controlled investigation comparing the safety and performance of Vasobond Haemostat with FLOSEAL® Hemostatic Matrix as an adjunctive haemostat in cardiac surgery and thoracic aortic surgery
- EVARREST Study: A Single-blinded, Randomized, Controlled, Comparative Phase III Study
- Evaluating the Safety and Effectiveness of EVARREST™ Fibrin Sealant Patch as an Adjunct to Hemostasis During Cardiovascular Surgery.
- CAVIAR: The Cardiac and Vascular surgery Interventional Anaemia Response study

Basic Science Studies

- Inflamm: Inflammatory, metabolic, endocrine and immunological pathways in arteries and veins used in heart bypass surgery.
- Age AF: Novel usage of microfluidics to investigate modulation of JNK as a preventative intervention against AF in the human heart: A step in the translation of animal studies to clinical use.

Clinical Research Staff

NIHR Clinical Lecturers

Mr Priyad Ariyaratnam is currently an ST5 in Cardiothoracic Surgery and was awarded an NIHR Clinical Lecturer post in December 2016. Prior to this, he completed his MD with Professor Loubani and Professor Alyn Morice in Pulmonary Hypertension for which he was awarded 2 European Young Investigator Awards. Mr Azar Hussain will also commence as a second NIHR Clinical Lecturer from October 2018.

Clinical Research Fellows completing MD with University of Hull

Mr Zaheer Taheer
Mr Nabil Husaain
Dr Emmanuel Issac

Consultant surgeons with a special interest in research

Mr Mubarak Chaudhry, Consultant Cardiothoracic Surgeon
Mr Suhail Qadri, Consultant Thoracic Surgeon

Other University Staff:

Dr. James P Hobkirk | Lecturer in Human Physiology | Honorary Medical Scientist
School of Life Sciences | Faculty of Health Sciences | University of Hull

Dr Robert Bennett: Clinical Perfusion Scientist and Honorary Research Fellow, HYMS

Research Collaborations

We have strong academic collaborations with the Academic Respiratory Department under Professor Alyn Morice and Dr Simon Hart as well as the academic and interventional cardiology departments with whom we share access to research nurses who are invaluable with the day-to-day running of the clinical trials.

10 Selected recent publications:

- (1) Ariyaratnam P, Bennett RT, Loubani M, Morice A. Isolated Human Perfused Lung Models to Study Ex Vivo Lung Optimization. *Transplantation*. 2016 Aug;100(8):e41-2.
- (2) Ariyaratnam P, Vijayan A, Cale AR, Cowen ME, Haqzad Y, Balasubramanian S, Loubani M. Long-term prognosis and a prediction model for acute bowel ischaemia following cardiac surgery. *Interact Cardiovasc Thorac Surg*. 2015 Sep;21(3):336-41.
- (3) Hussain A, Bennett R, Haqzad Y, Qadri S, Chaudhry M, Cowen M, Loubani M, Morice A. The differential effects of systemic vasoconstrictors on human pulmonary artery tension. *Eur J Cardiothorac Surg*. 2017 May 1;51(5):880-886
- (4) Ariyaratnam P, Biddulph J, Loubani M, Howarth M, Chaudhry M, Hong V, Ananthasayanam A. Validation of the Intensive Care National Audit and Research Centre (ICNARC) scoring system in a UK adult cardiac surgery population. *J Cardiothorac Vasc Anesth*. 2015 Jun;29(3):565-9.

- (5) Ariyaratnam P, Loubani M, Griffin SC, Cowen ME, Vijayan A, Jarvis MA, Cale RJ Complex aortic surgery in a regional UK centre. Should the UK now adopt a USA-style super centre model? *J Thorac Cardiovasc Surg.* 2014 Oct;148(4):1428-1434.
- (6) Ariyaratnam P, Loubani M, Cale RJ, Chaudhry MA, Cowen ME, Jarvis MA, Griffin SC, Morice AH. The effect of deep hypothermia on the human pulmonary circulation. *Journal of Thermal Biology* Volume 40, February 2014, Pages 20–24.
- (7) Ariyaratnam P, Loubani M, Morice AH. Hydrogen sulphide vasodilates human pulmonary arteries: a possible role in pulmonary hypertension? *Microvasc Res.* 2013 Nov;90:135-7.
- (8) Morice AH, Bennett RT, Chaudhry MA, Cowen ME, Griffin SC, Loubani M. Effect of bitter tastants on human bronchi. *Nat Med.* 2011 Jul 7;17(7):775.
- (9) Ariyaratnam P, Bennett RT, McLean LA, Jagannadham KK, Turner E, Griffin S, Chaudhry MA, Loubani M. Antegrade rapid prime displacement in elective coronary artery surgery is associated with lower perioperative blood transfusions and a shorter hospital stay. *Interact Cardiovasc Thorac Surg.* 2013 Sep;17(3):485-91.
- (10) Ariyaratnam P, Bland M, Loubani M. Risk factors and mortality associated with deep sternal wound infections following coronary bypass surgery with or without concomitant procedures in a UK population: a basis for a new risk model? *Interact Cardiovasc Thorac Surg.* 2010 Nov;11(5):543-6. doi: 10.1510/icvts.2010.237883. Epub 2010 Aug 25.

Hull and East Yorkshire NHS Trust staff: Consultants in Cardiothoracic Surgery: Professor Mahmoud Loubani (Academic lead), Mr Alexander Cale, Mr Mubarak Chaudhry, Mr Martin Jarvis (Clinical Lead), Mr Dunbor Ngaage, Mr Michael Cowen Mr Suhail Qadri and Mr Vasileios Tentzeris. There are six consultant cardiothoracic anaesthetists. There are 4 Surgical Care Practitioners. There are 6 Clinical Perfusion Scientists. There are 4 Clinical Fellows, 2 Research Fellow and 3 National Numbered Trainees in Cardiothoracic Surgery. There are 3 FY2 trainees and 2 Advanced Care Nurse Practitioners managing the wards.

The type of work to expect and learning opportunities

This post will be of interest to those considering a career in academic surgery.

The clinical and/or basic science research project will be planned in discussion with the trainee and the supervisors. The academic faculty can guide the trainee in project topics but would also welcome ideas from the trainee on projects they would like to pursue.

The post will provide exposure to both clinical and translational research which it is expected will lead to a communication (case report, abstract and presentation at a scientific meeting or similar).

Where the placement is based

Foundation Year 1	Foundation Year 2
General Medicine/General Surgery/A&E	Academic – Cardiothoracic Surgery, University of Hull, Castle Hill Hospital

Typical working pattern in this placement

During the 4 month academic placement there will be full time commitment to the cardiothoracic research project during the working week. There are no fixed clinical commitments in cardiothoracic surgery.

Employer information

Academic supervision will be by Professor Mahmoud Loubani and Mr Priyad Ariyaratnam.

Further information

To visit / chat please contact

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