Job Description

Job Title: Clinical Research Fellow in Cardiology
Faculty/Department: Hull York Medical School, Centre for Cardiovascular and Metabolic Research in the Academic Cardiology Unit
Reporting to: Professor Andrew L Clark, Head of Academic Cardiology, HYMS
Duration: Continuing
Job Family: Clinical Academic
DBS Disclosure requirement: Enhanced
Vacancy Reference: HY0044

Details Specific to the Post

Background and Context
The post is within the Centre for Cardiovascular & Metabolic Research, headed by Professor Alyn Morice. The post holder will hold an honorary NHS contract, the details of which will be subject to negotiation depending upon the appointee’s clinical interests. The post is NOT linked to a national training number.

Specific Duties and Responsibilities of the post
The Clinical Research Fellow is expected to work with the Consultant Cardiologists, Specialist Registrars, Research Nurses and Research Fellows based in Hull.

The post holder will undertake projects into heart failure leading to peer-reviewed publications in leading medical journals and possibly a higher degree. Currently there are about 3,000 heart failure admissions in the NHS Trust each year. A large heart failure programme has been running for 10 years that has acquired data on over 10,000 local patients.

The academic unit provides heart failure services to the NHS trust. The fellow will have 2 clinical sessions per week for the ‘one-stop’ diagnosis (Quick and Early Diagnosis, QED) and follow-up of patients with suspected heart failure. In addition, the fellow will do one general cardiology clinic per week. Training may be available in cardiac catheterization and pacemaker implantation.

The unit is involved in several clinical trials of heart failure. The fellow will become involved and assist and support the research nurse team in this endeavour. The fellow assist in the management of ward patients with heart failure together with the SHOs and SpRs attached to the unit.

An impressive array of research tools is available including advanced ultrasound equipment (VIVID-E9 system), non-invasive haemodynamic monitoring and neuro-endocrine tests, cardiopulmonary exercise testing. the post holder will become proficient in echocardiography.

Currently, comprehensive cardiology services are provided on both the Hull Royal Infirmary and Castle Hill Hospital sites.
The post holder will participate in research, teaching and the provision of clinical services at Hull Royal Infirmary and Castle Hill Hospital

Specifically, the University expects that the appointee will:

1. Conduct high quality research in the field of Cardiology, working collaboratively with colleagues in relevant specialties both within and outside the Centre for Cardiovascular and Metabolic Research.
2. Publish in high impact professional journals and scientific journals and apply for research grants from funding organisations.
3. Participate in the delivery of specialised clinical services for people with cardiac disorders.

Together with Professor Clark the post holder will agree a shared job plan comprising a total of 3 clinical sessions per week. Together with consultant colleagues the post holder will be expected to share administrative and audit activities. Below is a draft job plan for the Heart Failure Clinical Research Fellow in Cardiology.

**Provisional Timetable**

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<tr>
<td>Monday</td>
<td>Ward Support / Research</td>
<td>General Cardiology Clinic</td>
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<td>Tuesday</td>
<td>Research</td>
<td>Heart Care Clinic/Echo (4-6 return patients)</td>
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<td>Wednesday</td>
<td>Research</td>
<td>Research</td>
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<tr>
<td>Thursday</td>
<td>Ward Support / Research</td>
<td>Heart Care Clinic/Echo (4-6 return patients)</td>
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<td>Friday</td>
<td>Research</td>
<td>CME</td>
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This plan represents the 'typical' workload that the Clinical Research Fellow would be expected to undertake. The job plan will be finalised with the post holder following negotiation with Professor Clark and NHS colleagues.

**Teaching**

There is a good medical library at the Hull Royal Infirmary and an active Postgraduate Centre. Involvement in undergraduate and postgraduate teaching and research will be expected. A weekly general cardiology CME session is provided at which Clinical Research Fellows are expected to present the results of their research.

**Academic Location**

The Academic Cardiology Department is based at Castle Hill Hospital but also has a presence at the Hull Royal Infirmary site. The Clinical Research Fellow will be based at Castle Hill Hospital.

Office accommodation and secretarial support will be provided.
The Clinical Research Fellow shall be expected to cover on call for the occasional brief absence of colleagues as far as is practicable. Sick colleagues will normally be covered only for short periods of absence.

In addition, practitioners should be prepared to perform duties in occasional emergencies and unforeseen circumstances without additional remuneration but may be granted time off in lieu at the discretion of the employing authority. Commitments arising in such circumstances are, however, exceptional and practitioners should not be required to undertake work of this kind for prolonged periods or on a regular basis.

**Terms of Engagement**

The post holder will hold an honorary Trust contract with the Hull and East Yorkshire NHS Trust, and will be required to participate in clinical governance and continuing professional development. Supervision and training of junior clinical staff will be encouraged.
GENERIC JOB DESCRIPTION

The job duties and responsibilities listed below are intended to describe the general nature of the role. The duties and responsibilities and the balance between the elements in the role may change or vary over time depending on the specific needs at a specific point in time or due to changing needs in the department. Candidates should note that there may not be an immediate requirement to carry out all the activities listed below.

Main Work Activities

Research
- Develop research objectives, projects and proposals.
- Conduct individual or collaborative research projects.
- Identify sources of funding and contribute to the process of securing funds.
- Write or contribute to publications or disseminate research findings using other appropriate media.
- Make presentations at conferences or exhibit work at other appropriate events.

Relationships and Team working
- Develop and build internal and external contacts which may include:
  - identifying sources of funding
  - contributing to student recruitment
  - securing student placements
  - marketing the institution
  - facilitating outreach work
  - generating income
  - obtaining consultancy projects
- Advise and support colleagues with less experience and advise on personal development.
- May be expected to supervise the work of others, for example, research teams or projects.
- Act as a responsible team member and develop productive working relationships with other members of the team.
- Collaborate with colleagues to identify and respond to students’ needs.
- Act as programme leader/course leader/module leader.

Additionally the post holder will be required to:
- Fulfil the employees’ duties described in the University’s health and safety policies and co-operate with the health and safety arrangements in place within the department. May be required to undertake specific health and safety roles on request e.g. Display screen equipment assessor, departmental safety officer, fire warden etc.
- Show a commitment to diversity, equal opportunities and anti-discriminatory practices this includes undertaking mandatory equality and diversity training.
- Comply with University regulations, policies and procedures.
## PERSON SPECIFICATION – Clinical Research Fellow

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<tr>
<th>Specification</th>
<th>Essential</th>
<th>Desirable</th>
<th>Examples Measured by</th>
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<tbody>
<tr>
<td><strong>Education and Training</strong></td>
<td>• MRCP (UK) or equivalent</td>
<td>• PhD or MD</td>
<td>Application Interview Other</td>
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<td></td>
<td>• Registered with or qualified to register with the General Medical Council</td>
<td>• Good Clinical Practice training</td>
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<td>• Suitable post registration experience</td>
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<td><strong>Work Experience</strong></td>
<td>• Suitable experience in Cardiology</td>
<td>• Previous Clinical Trial/Research experience</td>
<td>Application Interview Other</td>
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<td>• Previous publications in peer reviewed journals</td>
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<td>• Experience of working with patients with heart failure</td>
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<td>• Experience in echocardiography</td>
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<td><strong>Skills and Knowledge</strong></td>
<td>• Demonstrate use of evidence-based practice</td>
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<td>Application Interview Other</td>
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<td>• Appreciation of the research process including Clinical Governance</td>
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<td>• Outpatient clinics experience and a sound knowledge and understanding of Good Clinical Practice</td>
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<td>• Understanding of clinical risk management</td>
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<td></td>
<td>• Competent to work without direct supervision where appropriate</td>
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<td><strong>Personal Qualities</strong></td>
<td>• Ability to work in a multidisciplinary team</td>
<td>• Ability to travel</td>
<td>Application Interview Other</td>
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<td></td>
<td>• Excellent planning, organisational and problem solving skills</td>
<td>• Flexibility</td>
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<td>• Ability to work with meticulous attention to detail</td>
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<td>• Computer literacy</td>
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<td>• Communication &amp; language skills (the ability to communicate with clarity and intelligibility in</td>
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**Clinical Research Fellow Band 8**  
**Version 1**  
**June 2013**
additional information as stated in the job description documentation.

- written and spoken English; ability to build rapport, listen, persuade, negotiate)
- Decisiveness/accountability (ability to take responsibility, show leadership, make decisions, exert appropriate authority)
- Interpersonal skills (see patients as people, empathise, work co-operatively with others, open and non-defensive, sense of humour)
- Uses a non-judgmental approach to patients and colleagues regardless of their sexuality, ethnicity, disability, religious beliefs or financial status
Associated organisations

1. The University of Hull.

The University of Hull believes in the notion that “knowledge has no boundaries” and this applies not only to the global nature of knowledge domains and international engagement but also to the discovery and development of emerging fields of academic enquiry and to the boundaries and interfaces of established disciplines. The University’s strategic plan 2011-2015 (http://www2.hull.ac.uk/hideplan/strategic_plan.aspx) outlines how the University intends to grow its research capacity, intensity, performance and reputation, deliver an outstanding student experience, develop and promote interdisciplinarity to advance education and scholarship as an engaged university with a secure, sustainable future and able to influence broader social outcomes.

2. Hull York Medical School (HYMS).

Founded in 2003, Hull York Medical School has just celebrated its 10th anniversary. The first doctors to complete the HYMS MB BS programme graduated in 2008. With a distinctive and innovate approach to training doctors for the health services of the 21st century, HYMS aims to influence positively the recruitment and retention of doctors in the region and the quality of local health services. HYMS is a partnership between the Universities of Hull and York and the NHS in North and East Yorkshire, and Northern Lincolnshire (NEYNL). This section should be read in conjunction with the HYMS website: http://www.hyms.ac.uk/

The geographical area covered by HYMS encompasses both rural and urban populations including areas of considerable deprivation. Heart disease, cancer and teenage pregnancy rates are severe problems in Hull. Measures of overall health in North Lincolnshire are poorer than the country as a whole.

HYMS has university campus bases in Hull and York, as well as in a range of NHS sites across the region. In Hull, HYMS occupies two adjacent refurbished and extended buildings, as well as biomedical laboratories on the campus, including the state-of-the-art Allam Building Laboratories, completed in 2012. Planning is underway to develop, within the next 2-3 years, a £20m ‘health hub’ at the University of Hull, including a new iconic building for the medical school. The health hub will house a clinical trial unit.

We also offer a variety of joint postgraduate awards and short courses with a clinical focus. A successful Postgraduate Certificate in Medical Education recruits strongly and is being extended to diploma and masters levels and also offers a range of professional short courses for surgeons and general practitioners.

Research at HYMS

The academic structure of HYMS consists of a number of academic centres which contain its academic staff. Some of these are internal to HYMS, or are joint ventures with other academic departments at the Universities of Hull and/or York, and they all
involves NHS and other external partners as appropriate. The academic centres are accountable for undergraduate, postgraduate, research and other academic and outreach activities, through their Heads, to the Dean and the HYMS Management Board.

There are six research centres within HYMS:

The Centre for Cardiovascular and Metabolic Research includes Academic Cardiology and brings together colleagues from a host of disciplines whose key focus is understanding the development and molecular causes of cardiovascular, metabolic and respiratory diseases in order to identify therapeutic strategies. Areas of research expertise include clinical and molecular cardiology, diabetes and metabolic health, haemostasis & thrombosis, molecular & vascular biology, respiratory medicine.

The Centre for Health and Population Studies is a partnership between HYMS and the Department of Health Sciences at the University of York. It studies large-scale patterns of risk for various diseases and health conditions, the effectiveness of medical interventions, and how best to put medical research into practice. Areas of research expertise include Health Services research, primary care, clinical trials, public health & epidemiology, mental health, sociology and social policy.

The Cancer Centre is an emerging (virtual) Centre in collaboration with School of Biological, Biomedical & Environmental Sciences in Hull, but also encompassing (and open to) relevant staff from other departments. The joint centre will concentrate on imaging, tumour microenvironment, novel technologies and clinical studies.

The Centre for Immunology and Infection is a partnership between HYMS and the Department of Biology at the University of York. Its research ranges from fundamental studies on the pathogenesis of infectious disease through to first-in-man clinical research.

The Centre for Anatomical and Human Sciences brings together research and teaching in anatomical and human sciences. Research interests include musculoskeletal biomechanics (with the Centre for Medical Engineering Technology, University of Hull) and the evolution of humans.

The Centre for Neuroscience works closely with colleagues in the Departments of Chemistry and Psychology at the University of York, and with the Department of Psychology at the University of Hull.

Translational health research is one of the University of Hull’s four strategic areas for promotion and investment. The university and local medical charities have made substantial capital investments to develop state-of-the-art cell and molecular biomedical research and specialist facilities. Biomedical science research is based primarily at the University of Hull Campus in both the refurbished Wolfson Laboratories and the newly constructed Allam Building. Key facilities include flow cytometry, proteomics, microscopy (confocal, intravital and electron), PET-CET and animal unit.

3. The Centre for Cardiovascular and Metabolic Research.
Academic cardiology is part of CCMR. The Centre provides a vibrant, dynamic and supportive environment for research in both basic and clinical sciences for
academics and students. CCMR has a number of internationally competitive research programmes that range from the study of basic mechanisms of cardiovascular function through to clinical practice. Work is organised around key research themes and research programmes/projects currently include:

- **Cardiac vascular and medicine** - understanding the pathophysiology of the damaged and failing heart:
  - Renin-angiotensin system and natriuretic peptide
  - Cytoskeletal proteins in cell-to-cell and cell-substrate interactions
  - Acute coronary syndromes
  - Metabolic Remodelling in Heart Failure
  - Pathophysiology of store operated calcium channels

- **Diabetes, endocrinology and metabolism** - insulin resistance and its relationship to the metabolic syndrome and cardiovascular risk:
  - functional foods in health and in disease modification
  - Endocrine disruptor molecules and their effect on obesity
  - Risk indices in polycystic ovary syndrome and in type 2 diabetes
  - Bioenergetics of human stem cells

- **Thrombosis and Haematosis** – identifying novel mechanisms for the control of the platelet function and arterial thrombosis:
  - Cyclic nucleotide signaling in platelet function
  - Nuclear receptors in platelet function
  - Platelet & endothelial function in pulmonary fibrosis

- **Respiratory Biology and Medicine** – understanding
  - the pathophysiology of cough,
  - interstitial lung disease,
  - chronic obstructive respiratory disease.
  - There is a pulmonary vascular clinic with strong ties to cardiology and in vitro and in vivo research into pulmonary hypertension

- **Vascular Surgery / Peripheral, arterial and venous disease** – examining the molecular biology of aneurysmal disease, ischemia reperfusion and therapies for intermittent claudication:
  - the use of new and emerging applications of technology in the management of superficial venous insufficiency.
  - dissecting the mechanisms by which supervised or supported exercise programmes improves outcome in patients with peripheral arterial disease
  - Surgical wound healing by secondary intention (SWHSI)

The CCMR is funded from a number of sources including: the NIHR, BBSRC – bioscience for the future, Foods Standards Agency, Higher Education Innovation Fund, NHS, EU FP7, British Heart Foundation, Heart Research UK and various commercial sources.

4. **The Daisy Building.**
The academic cardiology unit is housed in the Daisy Building which also houses a ground floor day surgery unit (funded and run by the NHS), HYMS teaching accommodation, scientific laboratories, and office and conference facilities. The laboratories host translational research co-located with specialist clinical services in cardiovascular disease and cancer.
The Daisy facilities are currently being extended and will house a stand-alone PET-CT facility, complete with its own table-top cyclotron on the Castle Hill Hospital site. HEY is keen to develop cardiac and neurological PET at Castle Hill and have already engaged a number of clinicians (academic and non-academic) to develop such a programme.

The Daisy research and development facility provide an excellent basis for an individual with vision and the desire to build multi-disciplinary collaborations across Hull, York and the NHS and beyond.

5. NHS cardiology services in Hull.
The appointee will hold a clinical academic contract through the University of Hull on behalf of both the University of Hull and the University of York, and an Honorary Contract with the NHS, the details of which will be subject to negotiation depending upon the appointee’s clinical interests.

The Hull and East Yorkshire Hospitals NHS Trust has an annual budget of c. £481 million, employs over 7,000 staff and serves an extended population of 1.2 million. Clinical services are split between two sites - Hull Royal Infirmary and the Castle Hill Hospital.

Cardiology is based in a purpose-built, modern cardiothoracic building on the Castle Hill Hospital site. The unit is shared with the cardiothoracic surgeons. It is equipped with a 10-bedded cardiac monitoring unit, and 40 cardiology in-patient beds. There is a 15-bedded cardiology day unit servicing 4 cardiac catheterisation laboratories. The Consultant staff consists of 7 interventional cardiologists including one senior lecturer, 2 electrophysiologists, 1 associate specialist in devices, 2 specialists in heart failure and 2 specialists in cardiac imaging. There are plans to appoint a specialist in heart failure and devices in the next few months to meet the increasing demand.

The cardiology department caters for 7000 new out patient referrals each year.
- Coronary Intervention and structural heart intervention. We have the full range of equipment, including IVUS, rotablation, flow and pressure wires to assess and deal with complex coronary interventions. The hospital undertakes 1600 PCIs a year including 600 PPCI. The department has one of the few renal denervation programmes in the UK.

Dr Hoye, Senior Lecturer, leads an active programme in interventional research.
- Interventional Electrophysiology and Pacing. Castle Hill Hospital is the regional centre for all complex device implantations and AF ablation. Last year 330 RF ablations were undertaken including 70 AF ablations and over 500 devices are implanted per year including 200 complex devices (ICD and CRT).
- Non-Invasive cardiac imaging – Nuclear cardiology, advanced echocardiography,
cardiovascular MRI and cardiovascular CT are all undertaken on-site. Within the 12 months this centre will have a fixed PET-CT unit with cardiac PET.