

THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF BIOLOGY, MEDICINE & HEALTH

SCHOOL OF MEDICAL SCIENCES

DIVISION OF CANCER SCIENCES

RESEARCH ASSOCIATE IN EARLY PHASE TRIALS

VACANCY REF: BM&H-016734

Salary: Grade 6 £32,816 to £40,322 per annum

Hours: Full Time

Duration: Fixed term Until July 2024

Location: Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews: Name : Gerben Borst Email : <u>gerben.borst@nhs.net</u> Name : Lauren Hewitt Email: <u>lauren.hewitt@manchester.ac.uk</u>

JOB DESCRIPTION

We are seeking an enthusiastic Post-Doctoral Research Associate to support Radiotherapy Related Research (RRR) in the Division of Cancer Sciences. In particular, the post holder will play a key role in supporting Dr Gerben Borst within the Biomarker and Early Phase Trial Hub of the RadNet programme of radiotherapy research.

The post holder will undertake research and experiments utilising a broad range of techniques facilitating the translational aspect of preclinical research and early phase clinical trials in the field of neuro-oncology. A background in oncology research methodology, preferably in the field of neuro-oncology and radiobiology, is essential. The successful candidate will be part of a dynamic new team within the RadNet programme. They will be expected to liaise with clinicians, academic and industry partners, supporting and driving national and international collaborations. They will prepare deliverables, present the progress of work in technical meetings and participate in the supervision of PhD and MSc students, contribute to the preparation of funding applications, participate in international scientific conferences and prepare high quality scientific publications.



This position offers an ideal opportunity for a highly motivated scientist to gain experience of early phase clinical trials, pre-clinical *in-vivo* and *in-vitro* models and translational research.

Key Responsibilities, Accountabilities or Duties:

- To take initiatives in the planning of research.
- Contribute to the running of the projects, ensuring that milestones and deadlines are achieved and that work is completed on time.
- To identify and develop suitable techniques for the collection and analysis of data, conducting data analysis and ensuring the validity and reliability of data at all times.
- To maintain accurate and complete records of all findings.
- To write regular internal reports (as agreed).
- To write reports for submission to research sponsors.
- To prepare material for presentation in oral and poster formats and present findings to colleagues and at conferences.
- To draft publications and prepare them for submission to refereed journals.
- To submit publications to refereed journals.
- To provide guidance to staff and students.
- To undertake instruction of postgraduate/undergraduate students as agreed.
- To supervise practical work and advise students on techniques.
- To take responsibility for organising resources and effective decision making in support of research.
- To attend relevant workshops and conferences as necessary.
- To be an active team-member and set positive examples by showing a commitment to achieving results, encouraging and supporting junior members of the team and raising suggestions for continuous improvement.
- To work alongside the PI and other colleagues in a collegiate manner and build rapport within the team and the wider Faculty.
- To develop contacts and research collaborations within the Faculty and the wider community.
- To promote the reputation of the laboratory, Faculty and wider University.

Other Duties

- To undertake appropriate administration tasks.
- To attend relevant meetings.
- To undertake any necessary training and/or development.
- Actively read the scientific literature relating to (and around) the project.
- To maintain safe workplace practice and procedures in accordance with the requirements of Health and Safety legislation.
- To maintain an up-to-date knowledge of relevant statutory Health and Safety legislation and recommendations and attend safety training as required.
- Any other duties commensurate with the grade of the post as directed by PI / supervisor.

PERSON SPECIFICATION

Essential Skills, Knowledge and Experience:

- Hold a PhD in cell and molecular biology/medicine
- Hold a good undergraduate degree in biological or medical sciences or related subject.



- Substantive and up-to-date theoretical and practical knowledge in oncology with a strong publication record in peer-reviewed high impact journals.
- Substantial post-doctoral experience in delivering robust high quality data.
- Extensive IT skills with knowledge of the appropriate software packages, high level of numeracy and excellent analytical skills required for data-handling
- Proven ability to use initiative to efficiently plan, optimise and progress project and communicate findings.
- Excellent interpersonal and communication skills and ability to work with colleagues at all levels and as part of a multi-disciplinary team involving scientists and clinicians.
- Good written and spoken English.
- Demonstrable ability to work under pressure and maintain a high degree of accuracy.
- Ability to use own initiative where appropriate and be proactive in approach to work.
- A willingness to contribute to the work of others by offering practical and intellectual help.
- Attention to detail and methodological approach to experimental planning and execution.

Desirable:

- Excellent technical skills in pre-clinical models and human tissue analysis.
- Experience in contributing to successful grant applications
- Experience in supervision of Masters of PhD students

The successful applicant will participate in a research programme that supports the aims of RadNet.

The CRUK RadNet Manchester Unit was one of only three major units awarded builds on the 10year history of an external collaborating "One Manchester" approach to cancer team science in radiotherapy-related research (RRR). This has been achieved by our multi-disciplinary expertise in biology, clinical oncology, physics, software development, engineering and imaging. Manchester is recognised nationally as a Clinical and Translational Radiotherapy Research Working Group (CTRad) Centre of Excellence in Radiotherapy Research and the only centre in the UK with strength across all disciplines (biology, clinical, physics, technology).

The CRUK RadNet Manchester Unit Vision statement: "As an integrated world-leading translational radiation oncology programme, we address the challenges of diverse patient characteristics to achieve individualised physical and biological targeting based on real-time outcomes and a deep mechanistic understanding of immune response, comorbidity and genomics." This Vision aligns with CRUK's research strategy through Collaborative Hubs and new science.

RadNet and RRR together house an exemplar world-leading technologically advanced centre and the only one in the UK with access to all three state-of-the-art technologies: protons, Stereotactic Ablative Radiotherapy (SABR) and Magnetic Resonance Linear Accelerator (MR-linac). Manchester also has the UK's largest Clinical Oncology and Medical Physics departments and is based within the UK-Europe's largest single-site cancer centre: The Christie NHS Foundation Trust. The ambition of the Unit aligns well to the aspiration of The Christie to be a Top 5 Translational Comprehensive Cancer Centre by 2025. However, it is also to be an effective collaborator and partner with the other successful UK RadNet members.



Research in these sites will be supported by new research "HUBs" and projects relating to crosscutting themes of advanced technology and models (e.g. protons and hypoxia imaging in syngeneic and *ex vivo* models), biomarker development and clinical trials (e.g. hypoxia, toxicity, circulating tumour DNA (ctDNA)] and circulating tumour cells (CTCs) in collaboration with the CRUKMI biomarker expertise) and biology-associated deep clinical bioinformatic data mining. These aims are all associated with trans- and multi-disciplinary teams and training of PhDs and Post Doctoral Research Associates (PDRAs) showing our commitment to building national excellence of research expertise, including training future Radiotherapy Related Research (RRR) leaders.

The University of Manchester

The University of Manchester is Britain's largest and most popular university, with a distinguished history of academic achievement and an ambitious agenda for the future. The University, with income in excess of £780 million, has four Nobel Prize winners amongst its current academic staff, and has embarked on an exciting and bold course that aims to make us one of the top 25 universities in the world, as set out in the University's strategic vision for 2020: Strategic Vision 2020.

The University of Manchester was established in 1824; in 2004, The Victoria University of Manchester and the University of Manchester Institute of Science and Technology (UMIST) were reunited to form The University of Manchester (UoM). The UoM has an excellent track record in research, as demonstrated by a research power exceeded only by Oxford and Cambridge in the Research Assessment Exercise 2008 and specifically by the award of two Nobel prizes in physics in 2010. The University's research strategy can be found via the following link: UoM Research Strategy.

Working for the University of Manchester

To achieve our ambitious goals we aim to attract and retain the very best people to work across a range of academic disciplines and support functions.

Our diverse job opportunities include an attractive <u>benefits package</u> with family-friendly policies that provide for flexible working. We care deeply about career and personal development, offering a structured induction programme for new staff, an annual performance and development review, staff training for all career stages and mentoring opportunities to support your career development.

We have a genuine commitment to <u>equality of opportunity</u> for our staff and students, and are proud to employ a workforce that reflects the diverse community we serve.

As a global institution, situated at the heart of a lively, <u>culturally diverse city</u>, we welcome applicants of all nationalities. To help international job applicants plan for life in the UK, we have put together some useful <u>information on passports and visas</u>, travel to the UK, accommodation and a number of other practical considerations.

Faculty of Biology, Medicine & Health

The Faculty of Biology, Medicine and Health was created on 1 August 2016 when the Faculty of Life Sciences and the Faculty of Medical and Human Sciences were brought together in a new,



integrated structure to deliver a truly translational approach to the life sciences, ensuring smooth research pathways - from pure discovery science through to clinical application and patient care.

With a total annual income of over £300 million, and over 3,000 members of staff, the new Faculty will be comparable in size to a medium-sized UK university. Thirty undergraduate and 90 postgraduate programmes offer our 11,000 students opportunities to develop the skills and knowledge they need for a successful career.

The Faculty's matrix structure facilitates interdisciplinary working and enable us to learn from each other and share best practice; and our eight, strategic Research Domains help to articulate our research strengths, drive large-scale, collaborative research activities and strengthen relationships with our research and healthcare partners.

The integration of discovery biology, clinical application and patient care within a single Faculty, particularly in a region with notable health inequality, provides us with a real opportunity to have a very significant and positive impact on people's lives.

Division of Cancer Sciences

The Division of Cancer Sciences is one of six divisions within the School of Medical Sciences. It is largely based on the same site as the Cancer Research UK Manchester Institute and The Christie Hospital, which provides a focus for cancer research activity that combines an international reputation for cancer research with the largest scale cancer clinical service in the UK. Other activity in the Division is based either on the University's Oxford Road site or in key Manchester Academic Health Science Centre (MAHSC) partner sites at Manchester University NHS Foundation Trust and Salford Royal NHS Foundation Trust. The large patient base found in Greater Manchester and linked to the research network provides major opportunities for the growth of clinical and translational research, a key objective of the Trusts and the University. The Division plays a key role in taking advantage of this opportunity to seamlessly link basic and clinical science.

Cancer Research UK Manchester Institute and Major Centre

www.cruk.manchester.ac.uk

The Cancer Research UK Manchester Institute is a leading cancer research institute funded by Cancer Research UK (CRUK), the largest independent cancer research organisation in the world. Research spans the whole spectrum of cancer research, from programmes investigating the molecular and cellular basis of cancer, to those focused on translational research and the development of novel therapeutic approaches and experimental pharmacology.

Currently the Institute contains multiple Cancer Research UK-funded basic science and translational science research groups. The programmes span from basic science mechanisms of cell proliferation through to the identification of new biomarkers for novel treatments. The Institute has excellent laboratory facilities and outstanding core services, including microarrays, confocal microscopy, bioinformatics, histology, and access to mass-spectrometry based proteomics. There is also a biological resource unit with expertise in generating transgenic mice as well as tumour implantation studies.

In April 2017 the Paterson Building, which housed the majority of the CRUK Manchester Institute, suffered a major fire resulting in significant structural damage. While the research facilities are reestablished, the Institute has relocated to Alderley Park in Cheshire, one of the largest life science



communities in Europe. During this period, exciting new opportunities are being exploited, whilst retaining close links to The Christie NHS Foundation Trust as these are critical to the aims of improving the outcomes for cancer patients through research.

The Cancer Research UK Manchester Centre is one of only three major centres in the UK and functions as a federation with research positions remaining within the relevant University Faculties/Institutes and NHS Trusts. Its vision is to transform the clinical care of cancer patients by developing and implementing an integrated personalised medicine approach. Key stakeholders from across the partner organisations are involved in the governance of the Centre and in strategic decision-making. The Major Centre's strategic themes recognise the existing strength and depth of cancer research in Manchester, and our world-leading expertise in particular areas:

- **Experimental Cancer Medicine**: scientifically driven and biomarker supported trials of novel therapeutics
- **Biomarker discovery:** validation and clinical qualification: liquid biopsy approaches to inform on prognosis, patient stratification, response to treatment and understanding resistance
- **Radiotherapy related research:** the only UK centre with stereotactic ablative radiotherapy, MRI-guided radiotherapy and proton therapy
- **Molecular Pathology and Tissue Acquisition:** providing biopsies and biobanking for reverse translation in a rapid, flexible and bespoke manner
- **Prevention** and **Early Detection:** harnessing strength and expertise in biomarkers and inflammation to target high-risk patients.

Research within the Centre is focused within six tumour-specific disease areas: breast, haematological, lung, melanoma, ovarian, prostate cancer and now an increased focus on brain tumours. This work also benefits from the wider resources within the <u>Manchester Cancer</u> <u>Research Centre (MCRC) partnership</u> and is pump-primed through the MCRC's strategic funding model, where high-risk, high-reward projects are identified in multidisciplinary 'Town Hall' meetings.

Manchester Academic Health Science Centre

https://healthinnovationmanchester.com/partnerships/manchester-academic-health-science-centre/

Working alongside six local NHS Trusts, the Faculty is a key member of the Manchester Academic Health Science Centre (MAHSC) - a federation of equal partners that unites leading healthcare providers with world-class academics and researchers. It aims to be a global centre for the delivery of applied health research and education and provide leadership for our local and regional health systems.

The Faculty also play a leading role in Health Innovation Manchester (HInM), which was launched in September 2015, as part of the UK Government's decision to devolve health and social care responsibilities to Greater Manchester. HInM offers a unique opportunity to bring together health and social care, academic and life science related business resources across the region to deliver an innovative health ecosystem that can help accelerate innovation into our local health and social care

Manchester Cancer Research Centre

www.mcrc.manchester.ac.uk



The Manchester Cancer Research Centre (MCRC) is a unique collaboration that brings together the expertise, vision and resources of our partner organisations, each of which have outstanding individual reputations in cancer research.

The Centre was formed in 2006 by The University of Manchester, Cancer Research UK and The Christie NHS Foundation Trust and has since been established as the cancer research arm of the Manchester Academic Health Science Centre (MAHSC). It has been designated as a Cancer Research UK Major Centre, one of only three in the UK under the joint Directorship of Professors Rob Bristow and Richard Marais.

The MCRC vision is to transform the care of cancer patients, by the application of personalised medicine throughout an individual patient's diagnostic and treatment journey. Recent advances have meant that this vision is within reach for some, but more research is needed to make it a reality for all cancer patients.

The MCRC has enjoyed considerable successes over the last year, with the creation of a CRUK funded RadNet Radiation Research Unit, membership of the International Alliance for Cancer Early Detection (ACED) and the renewal of a Movember Prostate Cancer Centre of Excellence (with Queen's University Belfast).

Bringing together basic, translational and clinical research on a single site, the MCRC partnership provides the integrated approach essential to turn research findings in the laboratory into better, more effective treatments for cancer patients. Few other places in the UK have the breadth and depth of expertise, the buy-in from all partners, the investment, the infrastructure, and the access to such a large and diverse patient population, to achieve this.