

Job
description

Post-Doctoral Training Fellow: Pre-Clinical MRI Candidate Information

FEBRUARY 2025

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| Department / division: | Division of Radiotherapy & Imaging |
| Pay grade / staff group: | Post-Doctoral Training Fellow |
| Hours / duration: | Full time (35 hours per week), Monday to Friday. 3 years in first instance. |
| Reports to: | Prof. Simon Robinson, Group Leader |

Context

The pre-clinical MRI group led by Prof. Simon Robinson is focused on the application of both established and innovative, quantitative functional MRI techniques to identify case-specific imaging biomarkers in pre-clinical models of cancer *in vivo*, thereby establishing their utility to correctly inform on i) the pathology and processes relevant to a particular cancer type, and ii) response/resistance to treatment against these processes. There is a strong emphasis on the development of quantitative MRI biomarkers that can be realistically translated and prove informative in aligned imaging investigations of cancer patients.

Through programme grant funding from Cancer Research UK, a post-doctoral position is available for a pre-clinical MRI scientist, preferably with experience of working with animal models of cancer. We are looking for a highly motivated and creative individual to develop and apply multiparametric MRI to characterise the tumour microenvironment and its response to treatment *in vivo*. An interest in exploiting MRI for adaptive radiotherapy would be advantageous.

The position will be based within the Centre for Cancer Imaging (CCI), which provides an integrated environment for multi-modality pre-clinical imaging, co-locating 7T and 1T MRI systems, a PET/SPECT/CT system, multispectral optoacoustic and ultrasound imaging platforms, bioluminescence imaging systems and micro-CT. The position will provide excellent opportunities to interact within a multidisciplinary environment of staff within imaging, radiotherapy, drug development and molecular pathology, and explore new avenues of research.

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Main purpose of the job

To apply multiparametric MRI techniques on our Bruker 7T horizontal bore system, and associated image analysis methodology/software, for comprehensive investigations of tumour pathophysiology in pre-clinical models of cancer *in vivo*. Perform MRI-embedded investigations of tumour response to radiotherapy/immunotherapy drug combinations, using the small animal radiation research platform.

Further information

You may contact Prof. Robinson for further information by emailing Simon.Robinson@icr.ac.uk. This job description is a reflection of the current position and is subject to review and alteration in detail and emphasis in the light of future changes or development.

Duties and responsibilities

Key duties

Work closely and effectively with other group members, and key external collaborators, providing strong scientific input to projects within the current programme of research.

Share responsibility for the effective running and maintenance of MRI research equipment (including regular data QC), associated laboratory space and shared facilities.

Maintain proper safety procedures and practices in respect of this work and comply with local safety rules.

Participate in the supervising and training of other staff and student members associated with projects within the group.

Contribute to joint team discussions, seminars and journal clubs. Attend, report to and, when appropriate, organize meetings for external collaborative projects.

Report research results in the scientific literature and at meetings/conferences. Keep abreast of developments in the field, and relevant scientific literature.

Manage existing and develop new research projects, and contribute towards grant application proposals under the general direction of the Group Leader.

Prepare papers, reports, and undertaking such administrative duties as directed by the Group Leader.

Post-Doctoral Training Fellow: Pre-Clinical MRI Candidate Information

Workforce Agreement for Postdoctoral Training Fellows

The ICR has a workforce agreement stating that Postdoctoral Training Fellows can only be employed for up to 6 years as a PTDF at the ICR (this includes experience gained at PDTF level prior to joining the ICR).

Post-Doctoral Training Fellow: Pre-Clinical MRI Candidate Information

General

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| All staff must ensure that they familiarise themselves with and adhere to any ICR policies that are relevant to their work and that all personal and sensitive personal data is treated with the utmost confidentiality and in line with the General Data Protection Regulations. |
| Any other duties that are consistent with the nature and grade of the post that may be required. |
| To work in accordance with the ICR's Values. |
| To promote a safe, healthy and fair environment for people to work, where bullying and harassment will not be tolerated. |

Person specification

Education and Knowledge

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| PhD (or supervisor's preapproval hereof) in Physical or Biomedical Science | Essential |
| Imaging applications in pathophysiology | Essential |
| Sound knowledge of spin physics, computing, MRI pulse sequence programming, image analysis | Desirable |

Skills

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| Ability to co-ordinate, plan and execute research to a high standard | Essential |
| Ability to assimilate relevant information and initiate new areas of research | Essential |
| Proven good interpersonal skills with the ability to establish effective working relationships | Essential |
| Ability to work effectively & efficiently, both independently & as part of a group | Essential |
| Proven ability to organise and prioritise workload whilst multi-tasking under pressure to meet specific timelines | Essential |
| Ability to demonstrate initiative, meet deadlines, prepare reports and handle data appropriately | Essential |
| Proven excellent verbal and written communication skills | Essential |
| Track record of completing projects and preparing reports | Essential |

Experience

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| Application of imaging techniques for the investigation of cancer | Essential |
| Development & application of MRI protocols, ideally in a pre-clinical setting | Desirable |
| MRI image acquisition and associated software programming for data analysis | Desirable |

Post-Doctoral Training Fellow: Pre-Clinical MRI Candidate Information

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| Proven track record of research, as evidenced by publications/presentations | Desirable |
| Working with animal models / UK Home Office licencee or equivalent | Desirable |

General

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| Committed, enthusiastic and highly self-motivated with a keen desire to achieve research excellence | Essential |
| Willingness to learning new techniques/approaches | Essential |



About our organisation

The Institute of Cancer Research, London, is one of the world's most influential cancer research institutions with an outstanding track record of achievement dating back more than 100 years. Our mission is to make the discoveries that defeat cancer.

As well as being one of the UK's leading higher education institutions in research quality and impact, the ICR is consistently ranked as one of the world's most successful for industry collaboration. As a member institution of the University of London, we also provide postgraduate higher education of international distinction.

We are also a charity and rely on the support of partner organisations, funders, donors and the general public.

[Read more](#) to find out about our history, culture, and achievements, and how our funders, supporters and partnerships help drive our work.

Our values

The ICR has a highly skilled and committed workforce, with a wide variety of roles, each requiring different skills. But whether you work as a researcher, or work as part of our corporate team, your work and behaviour is underpinned by these six [values](#). They are what bring us together as one team - as 'One ICR'.



Our values set out how each of us at the ICR, works together to meet our mission – to make the discoveries that defeat cancer. They summarise our desired behaviours, attitudes and culture – how we value one another and how we take pride in the work we do, to deliver impact for people with cancer and their loved ones.

Professor Kristian Helin
Chief Executive

