

Postdoctoral Training Fellow in diffusion-weighted MRI for MR-guided radiotherapy

Closing Date	04/06/2021, 23:55 (UTC/GMT+1 – London)
Location	Sutton (London), UK
Division	Radiotherapy and Imaging
Length of Contract	36 months
Hours per Week	35 (full time)
Salary Range	£32,844 - £38,607 per annum

[The Institute of Cancer Research](#), London, is one of the world's most influential cancer research institutes, with an outstanding record of achievement dating back more than 100 years. We provided the first convincing evidence that DNA damage is the basic cause of cancer, laying the foundation for the now universally accepted idea that cancer is a genetic disease. Today, The Institute of Cancer Research (ICR) leads the world at isolating cancer-related genes and discovering new targeted drugs for personalised cancer treatment.

Under the leadership of our Chief Executive, Professor Paul Workman FRS, the ICR is ranked as the UK's leading academic research centre. Together with our partner The Royal Marsden, we are rated in the top five cancer centres globally.

The ICR is committed to attracting, developing and retaining the best minds in the world to join us in our mission – to make the discoveries that defeat cancer.

The Division of Radiotherapy and Imaging is investigating new imaging methods to diagnose cancer, and ways in which advances in technology and molecular biology can improve radiation treatment.

Within the CRUK programme grant “Adaptive Data-driven Radiation Oncology” the successful candidate will work on functional imaging for MR-guided Radiotherapy with particular focus on the Unity MR-Linac system. Both apparent diffusion coefficient (ADC) and parameters derived from intravoxel incoherent motion imaging (IVIM) have shown potential for assessing and predicting radiotherapy treatment response. To enable dose-painting guided by functional imaging, the successful applicant will further work on reducing the geometric distortions in diffusion-weighted MRI on the MR-Linac. This will involve MR pulse programming within the Philips PARADISE (C++) framework and image reconstruction using the ICR's high-performance computing architecture. Supported by the Magnetic Resonance

Imaging in Radiotherapy team's experience in biophysical modelling of IVIM, the post holder will also have the opportunity to design and implement tailored diffusion-weighting gradients to resolve changes in microvasculature beyond the ADC.

Appointment will be on a Fixed Term Contract for up to 36 months in the first instance. The starting salary is expected to be £32,844* - £38,607 p.a. inclusive (*starting salary for pre-viva candidates until PhD award). The starting salary will be based on previous postdoctoral experience and future progression is based on annual performance review. The full range for the grade is £32,844 - £45,224.

To apply please submit an application online on the ICR Careers site, attaching your CV with the supporting statement (addressing with specific examples where you meet the person specification, a brief description of your relevant experience and incl. the names and addresses of at least two referees).

Application Link:

<https://icr.tal.net/vx/lang-en-GB/mobile-0/appcentre-1/brand-4/xf-4bc813f985a0/candidate/so/pm/1/pl/1/opp/1274-Postdoctoral-Training-Fellow-in-diffusion-weighted-MRI-for-MR-guided-radiotherapy/en-GB>

We consider all applications on merit and have a strong commitment to enhancing the diversity of our staff.

The ICR is the leading academic research centre in the UK. Effective industry collaboration and innovation in new medicines and technologies are at the heart of our approach to drive benefits for patients. The ICR is ranked:

- first for the quality and impact of our research*
- second worldwide for the number of our publications cited in patents**
- fourth worldwide for the citation rate of scientific research published across all fields**
- fourth worldwide for top-cited research publications**
- in the top five higher education institutions worldwide for academic influence and commercial impact**

*2014 Research Excellence Framework

** U-Multirank, 2020