Bioinformatician
Candidate Information

March 2025

The Institute of Cancer Research

About our organisation

We are one of the world's most influential cancer research institutes with an outstanding record of achievement dating back more than 100 years. We are world leaders in identifying cancer genes, discovering cancer drugs and developing precision radiotherapy. Together with our hospital partner The Royal Marsden, we are rated in the top four centres for cancer research and treatment worldwide. As well as being a world-class institute, we are a college of the University of London.

We came second in the league table of university research quality compiled from the Research Excellence Framework (REF 2021). We have charitable status and rely on support from partner organisations, charities, donors and the general public. We have more than 1000 staff and postgraduate students across three sites – in Chelsea and Sutton.

The Centre for Immunotherapy of Cancer (CIC) aims to increase communication between clinicians and scientists with an interest in translational immunotherapy. We are a virtual centre, bringing together staff and students from the ICR and our partner hospital, The Royal Marsden.

Data Science and AI

With the increasing size and complexity of genomic, transcriptomic and proteomic data sets generated from patient samples and pre-clinical models, bioinformatic tools have become increasingly important for data analysis and deconvolution. Bioinformatic methods of network modelling and integrative data analysis work towards finding molecular patterns that describe active signalling pathways and identifying antigenic determinants that drive tumour immunogenicity, all of which aid in the design of personalized treatments.

Our mission is to make the discoveries that defeat cancer.

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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'.

Pursuing excellence

We aspire to excellence in everything we do, and aim to be leaders in our field.

Acting with Integrity

We promote an open and honest environment that gives credit and acknowledges mistakes, so that our actions stand up to scrutiny.

Valuing all our people

We value the contribution of all our people, help them reach their full potential, and treat everyone with kindness and respect.

Working together

We collaborate with colleagues and partners to bring together different skills, resources and perspectives.

Leading innovation

We do things differently in ways that no one else has done before, and share the expertise and learning we gain.

Making a difference

We all play our part, doing a little bit more, a little bit better, to help improve the lives of people with cancer.

"

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

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Job description

Department / division:	Molecular Pathology
Pay grade / staff group:	Scientific Professional 6 (Analytical Scientist 1)
Hours / duration:	Full time (35hours per week), Monday to Friday. Fixed term contract for 2 years
Reports to:	Anguraj Sadanandam
Accountable to:	
Main purpose of the job:	Development and application of state of the art bioinformatics analyses

Duties and responsibilities:

Objectives of the post

The role focuses on the development and application of state of the art bioinformatics analyses for a diverse range of CIC projects to support cancer research.
The post holder will work with multidisciplinary teams and contribute to implementing and performing relevant analyses, interpreting the results in context of the project, and presenting the results to project teams as well as internal and external collaborators.
The post holder will be expected to demonstrate proactivity and initiative to identify the most appropriate and effective computational tools and methods to answer the scientific question in each project.

Day to day duties and responsibilities

Provide bioinformatics analysis, support, and interpretation for a variety of research projects within the CIC
Work closely with members of the Data Science and AI team and project teams to deliver the scientific outputs to the projects
Stay up to date with progress in the field, state of the art tools and technologies that apply to the area of research
Develop innovative pipelines for data analysis
Report the results of bioinformatics analyses to research teams in the CIC and across the ICR
Contribute to publications and project reports
Work and communicate with a diverse set of scientific teams relating to individual projects
Deliver high quality work against clear deadlines

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General

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.
This job description is a reflection of the present position and is subject to review and alteration in detail and emphasis in the light of future changes or development.

Workforce Agreement

The ICR has a workforce agreement stating that Postdoctoral Training Fellows can only be employed for up to 7 years as PDTF at the ICR, providing total postdoctoral experience (including previous employment at this level elsewhere).

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Person specification

Education and Knowledge

Master's degree in Computational Biology, Bioinformatics, Computer Science, or related subject	Essential
Postgraduate experience working in bioinformatics or computational biology in cancer genomics, immunotherapy or related field	Desirable
Proven experience of bioinformatics analyses and interpretation in one or more of the following key areas: • Immunotherapy, neoantigen prediction, or personalised vaccine targets • NGS analysis of WES/RNAseq/TCRseq using standard practice pipelines • Machine learning/AI models for survival and stratification of patients	Essential
Proven experience in the development of software pipelines to implement analysis workflows	Essential
Proven experience in use of High Performance Computing platforms and unix-like operating systems	Essential
Proven experience of writing and maintaining Python, R and Bash code using Git	Essential

Skills

Ability to process the analysis and interpret the results of neoantigen prediction pipelines	Essential
Ability to implement analysis pipelines using appropriate and relevant languages such as Nextflow/Snakemake/WDL	Essential
Ability to effectively work with HPC systems and familiarity with several different programming languages, including R, Python, and Bash	Essential
Ability to write reports and presentations that clearly convey information to other scientists	Essential
Good Interpersonal skills	Essential
Good communication/presentation skills	Essential
Ability to master new concepts quickly	Essential
A flexible style to meet the varying demands of the post	Essential
A proactive style, comfortable to work in a consultative and supportive mode as well as service delivery mode	Essential
Ability to plan, organise, prioritise, and execute work in an effective manner	Essential

Benefits

We offer a fantastic working environment, great opportunities for career development and the chance to make a real difference to defeat cancer. We aim to recruit and develop the best – the most outstanding scientists and clinicians, and the most talented professional and administrative staff.

The annual leave entitlement for full time employees is 28 days per annum on joining. This will increase by a further day after 2 years' and 5 years' service.

Staff membership to the Universities Superannuation Scheme (USS) is available. The USS is a defined benefit scheme and provides a highly competitive pension scheme with robust benefits. The rate of contributions is determined by USS and details of the costs and benefits of this scheme can be found on their website. If staff are transferring from the NHS, they can opt to remain members of the NHS Pension Scheme.

We offer a range of family friendly benefits such as flexible working, a parents' group, and a maternity mentoring scheme. Other great benefits include interest free loans for discounted season tickets for travel and bicycle purchases, access to the NHS discounts website, a free and confidential Employee Assistance Programme which offers a range of well-being, financial and legal advice services, two staff restaurants, and access to a gym and sporting facilities at our Sutton site.

Further information

You may contact Adrian Larkeryd for further information by emailing adrian.larkeryd@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.