ICR The Institute of Cancer Research

Higher Scientific Officer
Integrated Pathology Unit
Candidate Information

July 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.

Integrated Pathology Unit, Cancer Biology Division

The Integrated Pathology Unit (IPU) is a joint venture between The Institute of Cancer Research (ICR) and the Royal Marsden Hospital (RMH), running an advanced translational tissue hybridization and digital pathology operation, with strong collaborative research and engagement with industry at its core.

Headed by Prof Manuel Salto-Tellez, and led by Dr Tom Lund, the IPU is a tissue-based laboratory with the mission to develop complex and highly quantitative approaches to tissue analysis (wet lab and in-silico) in the space of translational and clinical research, thus applicable in the context of clinical trials and adoption into diagnostic applications.

The IPU uses state-of-the-art tissue-based profiling such as single-plex immunohistochemistry (IHC), RNA *in situ* hybridization (ISH) and IHC/immunofluorescence multiplexing (mIF), together with multi-scan imaging and digital pathology/artificial intelligence biomarker quantitation.

This approach is applied to well-curated cancer sample cohorts (from routine diagnostics or from clinical trials) to a) explore the clinical relevance of biomarkers and pathways; and b) identify the best quantitative delivery of biomarker analysis. The IPU works in a coordinated manner with other programmes in ICR and RMH carrying out tissue-based analysis, and it is expected to serve as a go-between for academia, healthcare, and industry. The work specifically involves identification of biomarkers of clinical relevance; clinical validation of molecular pathways; key technical capacity to work with large clinical and clinical-trial cohorts, including tissue microarray construction, as well as IHC/RNA-ISH/mIF testing. This is complemented with experience in open source and off-the-shelf use of tools for computational pathology analysis. The Integrated Pathology Unit is mainly based in the Centre for Molecular Pathology (CMP) on the Sutton site of The Royal Marsden NHS Foundation Trust.

About the Higher Scientific Officer position

We are seeking to recruit a Higher Scientific Officer (HSO) to be in charge of the development of high-throughput spatial biology technologies recently acquired by the IPU, namely the Leica CellDIVE and CosMx. The duties also include the running of experiments/projects on these machines, establishment and maintenance of relevant SOPs, coordination of provision of relevant reagents through centralised ordering systems, as well as analysis, quality control and quality assurance of scientific data produced via the CellDIVE and CosMx. In addition, the HSO is expected to support all aspects of histopathology related to a range of research projects in our established, advanced translational research laboratory in the field of complex (IHC/RNA-ISH/mIF) tissue hybridisation technologies using Leica Bond and Ventana Discovery automated stainers. The post holder will work alongside a team of Biomedical Scientists, other three Research Scientists/HSOs and a Senior Scientific Officer (SSO). The right candidate is expected to perform a variety of tasks that may include, but are not restricted to: a) Staining of pathology slides using manual and automated methodology; b) Scanning of pathology slides stained using a variety of methods e.g. HE, IHC, mIF; c) Annotation of pathology images, including QA/QC of image quality; d) General data analysis.

The role offers the opportunity to work within a multidisciplinary group, including clinical, scientific, and computational staff whose combined remit is to offer advanced pathology solutions to clinical research. This is an exciting opening in a recently established group at the forefront of clinical and academic research located in the world-renown ICR & RMH.

The right candidate will be passionate about improving outcomes for patients with cancer and an experienced researcher in the key techniques we employ, with an ability to learn and implement new technologies and approaches as they develop. He/she will be independent, capable of

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working in a laboratory with a consistent high standard and be able to ensure the scientific quality of the data produced by the IPU. The appointee will be keen to contribute his/her own ideas to the direction of research in the group and play a role in maintaining a supportive and collegiate team environment, as well as potential contributions to research papers and grant proposals.

Applicants will hold an MSc in Biological Sciences, Cancer Biology, Molecular Biology, Molecular Pathology, or a similar discipline. A PhD in the above fields would be highly desirable, together with up-to-date knowledge of the current literature in cancer immunology, cancer therapies and the tumour microenvironment. Please note, the position could be renewed and become a Postdoctoral Training Fellow post, upon discussion and agreement with the line manager.

Applicants must have good laboratory skills, with experience in working in a collaborative environment. Experience in tissue handling and processing, histological techniques, immunohistochemistry, microscopy and digital image capturing is essential, as is the experience of using and maintaining SOPs based on these techniques. Experience with training other members of staff is also required. Hands-on experience with using the CellDIVE and CosMx or any other automated tissue-based staining platform would be desirable.

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:	Integrated Pathology Unit, Cancer Biology Division
Pay grade / staff group:	Higher Scientific Officer
Hours / duration:	Full time (35 hours per week), Monday to Friday. Fixed term contract until 31st March 2027, with the possibility of an extension.
Reports to:	Dr Tom Lund
Main purpose of the job:	Higher Scientific Officer in the IPU tissue interrogation laboratory. In charge of development of new high-throughput spatial biology technologies, Leica CellDIVE and CosMx. The duties also include the establishment and maintenance of SOPs for these equipment, coordination of provision of relevant reagents through centralised ordering systems, as well as analysis, quality control and quality assurance of scientific data produced via the CellDIVE and CosMx.

Duties and responsibilities:

Key Roles and Responsibilities

Oversee development and running of Leica CellDIVE and CosMx projects
Establish and maintain Standard Operating Procedures, whenever necessary, and ensure that work is carried out in line with these
Coordinate the provisions of relevant reagents, maintain reagent stocks and maintain Health and Safety standards in the laboratory, including oversite of COSHH and waste management processes in line with Trust/ICR and national regulations
Analysis, quality control and quality assurance of scientific data produced via the CellDIVE and CosMx
Support projects by facilitating tissue-based techniques using Leica Bond and Discovery Ventana automated stainers
Maintain instrumentation and equipment in good working order
Work with image analysis software
Collaborate and communicate effectively with other laboratories in the institute as well as clinical colleagues
Support and oversee production of work suitable for high-quality, high-impact publications

Take an interest in the relevant literature and assess and implement developments in molecular methods and immunohistochemical procedures, as appropriate

General

Work in a flexible, but organised manner
Work under the supervision of the line manager and consult where appropriate
Meet objectives within predetermined timescales
Communicate effectively with other members of the Centre of Molecular Pathology, the BRC and other staff at the ICR and Royal Marsden Trust
Work in accordance with the ICR and RM's Values
Promote a safe, healthy and fair environment for people to work, where bullying and harassment will not be tolerated
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
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

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Person specification

Education and Knowledge	
MSc Biological Sciences/Cancer Biology/ Molecular Biology/Molecular Pathology or related subject	Essential
PhD Biological Sciences/Cancer Biology/ Molecular Biology/Molecular Pathology or related subject	Desirable
Understanding of need for service quality & compliance with SOP's and relevant standards	Essential
Knowledge of cancer, spatial and molecular biology	Essential
Knowledge of histopathology, immunohistochemistry and multiplex immunofluorescence staining techniques	Essential
Knowledge of spatial biology analysis	Desirable

Skills	
Ability to work in line with tight deadlines, as necessary, and prioritise workload effectively	Essential
Ability to conduct work independently according to a protocol	Essential
Demonstrable ability to design and implement SOPs	Essential
Ability to plan ahead and schedule experiments in a timely manner and coordinate independently with collaborators when necessary	Essential
Detail-oriented and ability to troubleshoot daily problems.	Essential
Good knowledge and practical application of Microsoft Office and ability to use in house IT systems.	Essential
Ability to perform complex scientific calculations and data analysis	Essential
Ability to use Statistical analysis software	Desirable

Experience	
Experience of working in all areas of relevant routine or research laboratory, following SOPs and health & safety policies, and ability to train others on these	Essential
Experience of working with microscopy, digital image capturing, immunohistochemistry and molecular pathology methods	Essential
Understanding & experience of handling sensitive information	Essential

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Experience of tissue handling and processing	Essential
Experience with IHC/IF and data analysis	Essential
Experience with image analysis	Desirable

General	
Possess a flexible, responsible and enthusiastic attitude to work	Essential
Ability to work as part of a team and contribute to laboratory meetings	Essential
Punctuality and adherence to agreed working hours	Essential
Self-motivated and able to work unsupervised as well as take initiative	Essential
Willing to undergo relevant training as well as keep up with professional development & innovations.	Essential
Displays excellent written and oral communications skills.	Essential
Proven ability to work effectively under pressure whilst maintaining accuracy	Essential

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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 Dr Tom Lund for further information by emailing tom.lund@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.