
Higher Scientific Officer Target Validation & DNA Damage team Candidate Information



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August 2022

The Institute of Cancer Research

About the team

The Breast Cancer Now Toby Robins Research Centre at the ICR is the first centre in the UK entirely devoted to breast cancer research. Our goal is to advance research into the causes, diagnosis and treatment of breast cancer. It is located in state-of-the-art laboratory space, with excellent core facilities and is funded through a long term renewable programme grant from Breast Cancer Now. The Centre is directed by Clinician Scientist Professor Andrew Tutt. Professor Chris Lord is Deputy Director of the Centre. Our Breast Cancer Research Centre was recently awarded the 2022 AACR Team Science award with our breast cancer clinical research partners in the ICR's CTSU clinical trial unit and Royal Marsden Hospital.

The Target Validation and DNA Damage Response team is Andrew Tutt's own laboratory group with the Centre and works on the discovery of novel therapies and biomarkers in BRCA1/BRCA2-associated cancers and ER/HER2-negative/basal-like breast cancers – including the identification of new drug targets and therapy combination strategies (Braso-Maristany et al *Nature Med* 2016, Patel et al *Nature Comm* 2018). The group works at the interface between the laboratory and the clinic in order to translate the most relevant laboratory findings about the vulnerabilities in these forms of breast cancer to patients (“forward translation”). We also take the “reverse translation” approach where possible novel mechanisms of sensitivity or resistance to drugs, such as PARP inhibitors, used in patients identified and then investigated in the lab and validated using appropriate patient derived models. Through Prof. Tutt's clinical studies and practice-changing trial leadership (TNT, Tutt *et al. Nature Med.* 2018; OlympiA, Tutt *et al. NEJM* 2021), we are able to conduct exploratory analysis of clinical studies of targeted therapies in breast cancer (including PARPi, ATRi, platinum therapy and mitotic kinase inhibitors). This includes

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longitudinal ctDNA, tumour biopsy samples and patient derived organoid and PDX models, providing rich opportunities for research into the causes of sensitivity and resistance to current targeted therapies in breast cancer and the development of new therapies in collaboration with drug discovery and development partners.

About the role

A main focus of this role will be to expand on work that previously identified candidate TNBC targets (Patel *et. al.*, Nature Communications, 2018). In particular the role will investigate the potential of targeting the ubiquitin ligase DTL and to explore novel approaches to targeting the mitotic kinesin HSET. The successful candidate will carry out a variety of cell biology, cell culture and target validation assays. Experience of target validation and strong cell culture skills would be an advantage. The successful candidate will also contribute to other projects within the team and to the smooth running and organisation of the laboratory

This position is offered on a fixed term contract till 31 July 2025 in the first instance. The salary range is between £32,000 - £44,400 per annum taking into account skills and expertise.

In addition to annual performance related pay awards, the salary scales are reviewed annually to consider cost of living increases.

Annual leave entitlement is 28 days per annum. There is an additional entitlement to 8 bank/public holidays and 3 ICR-set privilege days.

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.

Our mission
is to make the
discoveries that
defeat cancer.

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The Institute of Cancer Research, London, is one of the world's most influential cancer research institutes 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 institutes in research quality and impact, the ICR is consistently ranked as one of the world's most successful higher education institutions for industry collaboration. We are also a charity and rely on the support of partner organisations, funders, donors and the general public.

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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:	Breast Cancer Research
Pay grade / staff group:	Higher Scientific Officer
Hours / duration:	Full time 35 hours per week, Monday to Friday. Fixed term till 31 July 2025 in the first instance.
Reports to:	Dr Stephen Pettitt
Accountable to:	Professor Andrew Tutt
Main purpose of the job:	The post-holder will provide high-level technical support for projects running in the laboratory. The majority of these projects focus on identifying and validating biomarkers and relevant therapy targets in breast cancer and studying the underlying biology of the disease.

Responsibilities/duties:

To support projects in the Tutt laboratory (Tutt Validation and DNA Damage Response), by performing molecular and cell biology techniques such as:
<ul style="list-style-type: none">• Cell culture, including high-throughput genetic and drug screening approaches• Growth and genetic manipulation of patient derived organoid cultures• RNAi and CRISPR/Cas9 genetic manipulation of cancer models• Analysis of drug responses using dose-response curves and synergy assays• Molecular biology assays to profile DNA, RNA and protein cell line and patient samples
Take an organised approach to managing stocks of reagents and tracking samples
To work under the supervision of the line manager and to consult where appropriate
To take an interest in the relevant scientific literature
To produce work suitable for high-quality, high-impact publications
To work on occasions at the ICR Sutton site and at the Tutt laboratory based at King's College London, London Bridge/Guy's Hospital campus

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Any other duties that are consistent with the nature and grade of the post that may be required.

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

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.

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Person specification

Education and Knowledge

B.S.c in molecular or cellular biology (or equivalent qualification)	Essential
Knowledge of cancer biology	Essential
Knowledge of drug discovery	Desirable

Experience

Considerable experience in cell and molecular biology	Essential
Considerable experience in tissue culture	Essential
Experience in target identification and validation	Essential
Experience in RNAi and CRISPR/Cas9 gene editing methodology	Essential
Experience in high-throughput cell based drug and/or genetic screens	Desirable
Experience in 3D cell culture, including patient derived cultures	Desirable

Skills

Proven ability to work to deadlines	Essential
Demonstrable ability to design and implement experiments	Essential
Demonstrable ability to independently carry out experiments	Essential
High degree of technical expertise	Essential
Good organisational skills	Essential
Ability to write reports and scientific manuscripts	Essential
Good interpersonal skills with the ability to interact effectively with collaborators	Essential

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Flexibility to work independently or as part of a team	Essential
Computer literate	Essential
Proven ability to work with limited supervision	Essential
Demonstrate interest in the relevant scientific literature	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 Stephen Pettitt for further information by emailing stephen.pettitt@icr.ac.uk Please note, this address is for enquiries only and you should not send your application to this address.

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.