ICR The Institute of Cancer Research

Postdoctoral Training Fellow – Improving CAR-T Cell Therapy For Breast Cancer Using Radiotherapy and Oncolytic Viruses

Candidate Information

May 2025

The Institute of Cancer Research

About the team

The Breast Cancer Immunology team is led by Alan Melcher and looks at ways to activate the immune system to attack breast cancer using therapeutic oncolytic viruses, vaccines, radiotherapy, targeted drugs and combination strategies. The agents we prioritise are already in clinical use and offer major potential benefits to further improve the promising field of immunotherapy. We use a range of mouse and human preclinical assays to test the immune response following our interventions.

About the role

We are seeking a creative and motivated Postdoctoral Training Fellow to study ways to improve CAR-T cell therapy for breast cancer. We will use i) radiotherapy to enhance CAR-T cell access to solid breast tumour models in vivo and ii) oncolytic viruses (OV) to improve anti-tumour functionality, including via the generation of 'dual-specific CAR-T', which target both the tumour-associated antigen, through their CAR, and the OV (eg reovirus, herpes simplex virus), through their own, endogenous TCR. This work will expand on previous work within the group, and others within the BCN Centre, on CAR-T combination approaches for other tumours, developing more potent therapeutic strategies against these targets. This project will also link closely to other team members looking at alternative immunotherapy strategies, including the use of mRNA vaccines. This post will be strategically linked to Breast Cancer Now-funded research in immunology and immunotherapy at KCL, with which there will be close interaction.

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This position is offered on a fixed term contract for 3 years. Starting salary is in the range of £45,600 - £51,450 p.a. inclusive based on previous postdoctoral experience.

In addition to annual performance related pay awards, the salary scales are reviewed annually to consider cost of living increases. The position is based at the ICR site in Chelsea.

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

The ICR has a workforce agreement stating that there is a maximum duration of employment of 7 years including pre-ICR PDTF experience.

About the Division of Breast Cancer Research

The Breast Cancer Immunology team is part of the Breast Cancer Now Toby Robins Research Centre, within the Division of Breast Cancer Research at the ICR. The Centre 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, and also received recognition in an award to the ICR for the 2023 Queen's Anniversary Prize for transforming lives through world-leading breast 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.

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As well as being a world-class institute, we are a college of the University of London. We came top in the league table of university research quality compiled from the Research Excellence Framework (REF 2014).

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.

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."*
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> **Professor Kristian Helin**
> **Chief Executive**

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Job description

Department / division:	Breast Cancer Immunology / Division of Breast Cancer Research
Pay grade / staff group:	Postdoctoral Training Fellow
Hours / duration:	Full time (35 hours per week), Monday to Friday. Fixed term contract for 3 years.
Reports to:	Professor Alan Melcher
Main purpose of the job:	We are seeking a highly motivated post doctoral training fellow to work in murine and human immunology/immunotherapy research, focusing on studying how to improve CAR-T cell based immunotherapies for breast cancer.

Duties and responsibilities:

Specific duties:

- To develop and deliver pre-clinical laboratory research projects, focussing on immunotherapy for breast cancer, together with other team members
- To organise and assist other team members in the general running of the laboratory maintenance and regulatory requirements
- To work effectively with internal and external collaborators
- To accurately record, analyse and interpret data, in collaboration with the group leader
- To have a good understanding of the relevant literature
- To give presentations at laboratory and institute meetings as required
- To work in a flexible but organised manner
- To meet objectives within pre-determined timescales
- To be familiar with The Institute's approach towards risk management including its policies and procedures, which require all staff to play an active part in identifying and managing risk

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Workforce Agreement for Postdoctoral Training Fellows

The ICR has a workforce agreement stating that there is a maximum duration of employment of 7 years including pre-ICR PDTF Experience

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.

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Person specification

Education and Knowledge

PhD* in a biological science	Essential
Knowledge of cancer biology	Essential
Knowledge of cancer immunology	Essential
Strong record in biomedical research e.g. as demonstrated by high-impact, first author publications in relevant areas	Essential
Knowledge of immune assays, such as neoantigen and functional T cell responses	Desirable
Understanding of the clinical management of cancers	Desirable

**** as a minimum requirement, candidates must have submitted their thesis by the start date of their employment and awarded their PhD within the six month probationary period.***

Experience

Experience in cell culture techniques	Essential
Experience in pre-clinical immunology in-vivo models	Essential
Experience in flow cytometry	Desirable
Experience with assays for T cell priming, culture and function	Desirable
Experience in immunotherapies, such as cancer vaccines, cell therapies	Desirable
Eperience in statistics and bioinformatics	Desirable

Skills

Proven ability to design and implement experiments	Essential
High degree of technical expertise	Essential
Good organisational skills	Essential
Basic computer skills	Essential
Attention to detail	Essential
Effective communication skills	Essential
Ability to work flexibly and as part of a team	Essential

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Willingness to learn new skills	Essential
Proven ability to work to deadlines	Essential

General

Flexibility to work as an individual or as a member of a team	Essential
Computer literate	Essential
Proven ability to work with limited supervision	Essential
To take an interest in relevant scientific literature	Essential
To work well 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 Professor Alan Melcher for further information by emailing angela.arora@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.