

Job  
description

# Postdoctoral Training Fellow: Tumour Immunology

## Candidate Information

November 2024

<b>Department / division:</b>	Division Breast Cancer Research
<b>Pay grade / staff group:</b>	Postdoctoral Training Fellow
<b>Hours / duration:</b>	Full time (35 hours per week), Monday to Friday. Fixed term contract for 24 months (potential to extend)
<b>Reports to:</b>	Dr Esther Arwert

### About the team

The Functional Tumour Immunology laboratory, led by Dr Esther Arwert, is a dynamic research group within the Breast Cancer Now Toby Robins Research Centre at the ICR Chelsea campus. Our mission is to develop innovative immunotherapy strategies for breast cancer by exploring the complex interactions between cancer cells and their microenvironment. We focus on uncovering tumour microenvironmental mechanisms that drive immune escape and therapy resistance, particularly in aggressive cancers like triple negative breast cancer.

Using cutting-edge technology and sophisticated mouse models, we investigate how the tumour microenvironment modulates antigen-specific T cell responses. Our translational research aims to identify novel targets and treatments that can improve existing immunotherapy options for breast cancer patients. Our expertise in cancer cell biology and immunology combines insights from molecular biology, drug discovery, and translational medicine.

As part of the ICR's Centre for Translational Immunotherapy Initiative, we collaborate across disciplines to accelerate the development of more effective, targeted therapies for breast cancer.

We are currently seeking a **Postdoctoral Training Fellow** to join our team and contribute to this exciting research, utilizing state-of-the-art technology to investigate how the tumour microenvironment modulates antigen-specific T cell responses.

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The Breast Cancer Now Toby Robins Research Centre at the ICR is the first centre in the UK entirely devoted to breast cancer research. It is located in the state-of-the-art laboratory space, with excellent core facilities and is funded through a long term renewable programme grant from Breast Cancer Now.

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Our mission  
is to make the  
discoveries that  
defeat cancer.

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## Main purpose of the job

The design and execution of a broad range of functional *in vivo* and cellular assays geared towards the uncovering of tumour microenvironmental mechanisms that drive immune escape and therapy resistance.

## Further information

You may contact Esther Arwert for further information by emailing [esther.arwert@icr.ac.uk](mailto:esther.arwert@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.

## Duties and responsibilities

### Key duties

Work with immunocompetent syngeneic mouse tumour models & GEMMs to determine changes in tumour-localized tumour microenvironment as well as systemic immune effects following chemotherapy and immunotherapy

Design and perform *in vivo* and *ex vivo* functional immune assays

Undertake mammalian tissue culture, including culture of immune cells

Perform multi-colour flow cytometry to interrogate the immune-spectrum within the tumour microenvironment

Work in a flexible but organised manner to meet objectives/deadlines and able to sequentially work on different projects

Maintain accurate and detailed records of all experiment procedures in lab notebooks and electronically

Generate solid reproducible data and develop robust methods for analysis and statistical testing of the data

Critically analyse data and write up findings for publication in recognised peer-reviewed journals

Participate in and contribute to regular group meetings

Prepare and present results at internal or external meetings

Familiarise yourself with the ICR's approach towards risk management including its policies and procedures, which require all staff to play an active part in identifying and managing risk

Any other duties, which may be required, which are consistent with the nature and grade of the post

## Workforce Agreement for Postdoctoral Training Fellows

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) does not exceed 10 years.

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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.

## Person specification

### Education and Knowledge

PhD in biochemistry, cell biology, molecular biology or similar.	Essential
Knowledge of Tumour Immunology	Essential
Knowledge of Cancer Biology	Essential
Knowledge of Tumour or Immune Evolution	Desirable
Holder of UK personal Home Office license (PIL)	Desirable

## Skills

Ability to work independently and meet deadlines	Essential
Ability to critically analyse data	Essential
Ability to design experiments and execute them reproducibly	Essential
Ability to produce scientific reports and manuscripts	Essential
Effective collaboration skills and ability to work productively with others	Essential
Enthusiastic and self-motivated with a strong desire to achieve scientific excellence	Essential
Excellent record keeping in notebooks, files and computers, in line with ICR laboratory policy	Essential

## Experience

Mammalian cell culture (passaging, transfection, stable line generation)	Essential
Multi-colour flow cytometry/FACS analysis of (tumour) tissue	Essential

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Mouse models of cancer ( <i>in vivo</i> work)	Essential
Organoid cell culture and maintenance	Desirable
Genomic approaches (e.g. scRNAseq, TCRseq, WES/WGS or spatial approaches)	Desirable
Immunohistochemistry/immunofluorescence	Desirable
Image analysis	Desirable



## About our organisation

The Institute of Cancer Research, London, is one of the world's most influential cancer research institutions 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 institutions in research quality and impact, the ICR is consistently ranked as one of the world's most successful for industry collaboration. As a member institution of the University of London, we also provide postgraduate higher education of international distinction.

We are also a charity and rely on the support of partner organisations, funders, donors and the general public.

[Read more](#) to find out about our history, culture, and achievements, and how our funders, supporters and partnerships help drive our work.

## 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'.



***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

