

**MANCHESTER
CANCER
RESEARCH
CENTRE**

Training in **Manchester**

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www.mcrc.manchester.ac.uk



Welcome

Manchester Cancer Research Centre (MCRC) is a partnership between The University of Manchester, The Christie NHS Foundation Trust and Cancer Research UK.

Multiple outstanding Training and Development opportunities are available in Manchester across all of our partner organisations.

The following guide will walk you through our partners and the training offerings available, so you can join us for the next stage of your career.



The University of Manchester

MANCHESTER
1824

The University of Manchester

www.manchester.ac.uk

The University of Manchester is the UK's largest single-site university and one of its most successful research-focused institutions.

At The University of Manchester, research takes place across and between Faculties and Schools, allowing for a blend of specialised approaches and interdisciplinary innovation.

Cancer is one of five 'research beacons' called out by the University as an area that features a unique concentration of high-quality research activity.

The Faculty of Biology, Medicine and Health

The Faculty of Biology, Medicine and Health was created on 1 August 2016 when the Faculty of Life Sciences and the Faculty of Medical and Human Sciences were brought together in a new, integrated structure to deliver a

truly translational approach to the life sciences, ensuring smooth research pathways – from pure discovery science through to clinical application and patient care.

This integration within a single faculty, particularly in a region with notable health inequality, provides us with the opportunity to have a very significant and positive impact on people's lives.





The Christie NHS Foundation Trust

The Christie is the largest single-site cancer centre in Europe and is world renowned for exceptional care, treatment and research of cancer.

Rated 'outstanding' by the CQC, The Christie serves a population of 3.2 million across Greater Manchester and receives a quarter of its referrals from outside the city region.

The Christie has been delivering world-first breakthroughs for more than a century and has one of the biggest clinical trials units in Europe. It has been

named by the National Institute for Health Research (NIHR) as one of the best hospitals for providing patients with opportunities to take part in clinical research studies: one in seven Christie patients receives therapies through participation in research.

The Christie is home to the NIHR Manchester Clinical Research Facility which develops the infrastructure for specialised early-phase cancer experimental research. A recent £3m investment allowed the unit to expand its treatment facilities and improve patient experience, and will help the city to build on its reputation as the leading experimental cancer medicine centre in the UK.

In addition, The Christie is also a partner in the NIHR Manchester Biomedical Research Centre which provides £12m funding for the discovery and translation of lab-based science into treatments.

The Christie is now home to one of only two high-energy NHS proton beam therapy (PBT) centres in the UK – the other is being built at University College London Hospitals NHS Foundation Trust (UCLH).

The Christie's location across the road from the MCRC building allows clinicians and scientists to work together to produce the best translational science, which can inform best practice and care for our patients.

Cancer Research UK



www.cancerresearchuk.org

Cancer Research UK (CRUK) is the world's largest charitable funder of cancer research. Its work into the prevention, diagnosis and treatment of cancer has been at the heart of the progress that has already seen survival rates in the UK double in the last forty years.

Cancer Research UK supports research into all aspects of cancer through the work of more than 4,000 scientists, doctors and nurses nationwide. Together with its partners and supporters, Cancer Research UK's vision is to beat cancer sooner.



Richard Marais
CRUK MI Director
CRUK Manchester
Centre Co-Director



Rob Bristow
MCRC Director
CRUK Manchester
Centre Co-Director

Cancer Research UK created the Cancer Research UK Manchester Centre in 2015 following the award of Major Centre status. We are currently the longest running major centre in the UK.

The establishment of the Cancer Research UK Manchester Centre recognises the strength of the partnership in Manchester and the potential to dramatically improve treatment for cancer patients.

Centre funding supports ground-breaking translational research across five key themes: biomarkers, molecular pathology, radiotherapy, experimental cancer medicine, and prevention and early detection.



The CRUK Manchester Institute

The CRUK Manchester Institute (CRUK MI) is a leading cancer research institute within The University of Manchester, covering the whole spectrum of cancer research – from investigating the molecular and cellular basis of cancer, to translational research and the development of therapeutics.

The Institute supports a number of investigative programmes, spanning both basic and translational cancer research. It has excellent laboratory facilities and outstanding core services, including genomic sequencing, high-resolution microscopy, bioinformatics, histology, and access to mass-spectrometry based proteomics.

The Institute has over 400 Postdoctoral Scientists, Clinical Fellows, Scientific Officers, Operational and Technical staff, Postgraduate Research Students and Visiting Fellows.

www.cruk.manchester.ac.uk

Research Centres of Excellence

Undertaking training at Manchester allows you to enter a top quality environment.

We are part of a rich environment with expertise across several cancer areas.



Training at Manchester cornerstones

Manchester offers a flexible and diverse array of training, all with top quality standards across the following areas.

Environment

- Access to world leading laboratories and clinics
- Embedded Team Science in NHS Trusts and the Greater Manchester Cancer Plan
- Direct line of sight to clinical impact and practice for all
- Co-location of the Manchester Cancer Research Centre on the same site as The Christie NHS Foundation Trust

Support

- Dedicated training offices at The University of Manchester, The Christie and CRUKMI and CRUK Centre
- Access to workshops, seminars and coaching
- Advice on your next step and follow on funding opportunities

Networking and Engagement

- Manchester has excellent links and international programmes across leading global cancer centres
- All trainee cohorts are linked and have access to multiple institutions and resources
- Exposure across campus and into NHS trusts for shared learning

Mentorship

- Exemplary supervision for academic research projects and hospital-based fellowships
- Career mentoring throughout your programme from global experts and peers
- Access to clinical and scientific experts throughout your pathway

Our PhD opportunities

Manchester has a huge range of funded PhD opportunities available across various cancer disciplines. Here we will showcase some of our core schemes and pathways.

All of our funded opportunities are available to browse via: www.bmh.manchester.ac.uk/study/research/funded-programmes

Cancer based PhD opportunities in Manchester can also be searched for via www.findaphd.com



CRUK Manchester Centre PhD Training



Our PhD Programme is highly competitive. We seek ambitious, motivated students and fellows who aim to launch and develop a career in world leading cancer research.

All projects within the scheme fit within our overall strategy to translate research into patient benefit in order to drive the adoption of more personalised treatment approaches.

Students and Training Fellows will benefit from:

- New facilities providing state-of-the-art technologies for cancer researchers and clinical trials support staff close to existing resources. This will facilitate collaborations and provide a seamless link between basic, translational and clinical research to take findings from the laboratory to the clinic.
- Generous stipends / salaries (role specific), University tuition fees and running expenses.
- An intellectually challenging, innovative and supportive environment.
- A diverse and in depth training and development programme in transferable skills leading to excellent career opportunities.

For more information and the latest projects please visit www.crukcentre.manchester.ac.uk/PhD-Training-Scheme

Clinical Research Training Fellowships



Our Clinical Research Training Fellowships are open to clinicians who wish to undertake a period of full-time training in a cancer relevant field, leading to the completion of a PhD.

All applicants should be post-registration clinicians and ideally have a specialist training post.

The Fellowships are usually tenable for three years. We will provide running expenses, an appropriate salary in line with the applicant's current salary and grade and full coverage of University PhD fees for UK/EU candidates.

Candidates whose nationality is outside the UK/EU will be awarded a contribution towards their fees equivalent to the amount awarded to home/EU students.

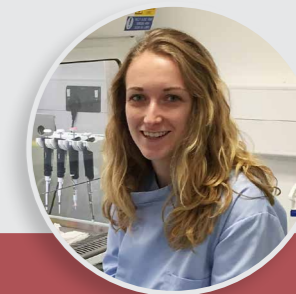
“ The field of radiobiology is one of the cornerstones of radiation oncology and underpins how we treat solid tumours with radiation. Unfortunately, there is very little work done in this field in Australia and the opportunity to undertake similar research projects in radiobiology towards a higher research degree is limited. This was my motivation for taking on a research fellowship in the UK, with the idea that the skills and knowledge that I gained would benefit patients and improve the profile of clinician scientists in Radiation Oncology in Australia and establish lifelong research collaboration.

One of the advantages of doing a translational research project as a clinical fellow is the opportunity to collaborate with expert clinicians and clinician scientist in this field. I have presented my work at local, national and international conferences all in the first year of my PhD.

Dr Niluja Thiru is a clinical fellow from Australia, currently supervised by Professors Catharine West, Ananya Choudhury and Robert Bristow.



Non-clinical studentships



Our Non-clinical Studentships are suitable for those with degrees in a wide range of scientific disciplines. We invite applications from recent graduates or final year undergraduates who have, or expect to obtain, a first or upper second class honours degree, or the overseas equivalent, in a relevant subject. A related Master's degree would be an advantage.

The Studentships are four years in duration. The standard entry requirement for PhD study is a first or upper second class honours degree, or the overseas equivalent, in a relevant subject.

“ Before I started my PhD I studied Biochemistry at the University of Bristol followed by a research Master's degree looking at differentiating blood stem cells into neutrophils. Although my masters wasn't to do with cancer, it really made me realise that I wanted to continue in research and that I was particularly interested in stem cells.

On a day to day basis I spend about 50% of my time in the lab, with most of this in the tissue culture lab working with various breast cancer cell lines. The University also organises events with opportunities to present and network with other scientists, both within my field and in other fields of research. I also spend some of my time helping in undergraduate practical lab sessions which is really good teaching experience.

Megan Thompson is a second year non-clinical PhD student supervised by Dr Rob Clarke and Dr Martin Baron



CRUK Manchester Institute PhD Training

The CRUK Manchester Institute [CRUK MI] considers education of research students and clinical research fellows to be a major investment in training the future generation of cancer-related scientists and clinical scientists. The Institute considers education of research and clinical scientists to be a major investment in the future generation of cancer researchers, and has an excellent track record of launching careers in basic, translational and clinical research.

The CRUK MI has an excellent track record of launching scientific careers in basic, translational and clinical research. As part of this commitment, we have an active postgraduate programme that provides first class students and clinical research fellows the opportunity to study for a cancer-related PhD degree. This is

achieved through a training programme that aims to improve effectiveness in research, provide professional and management skills and enhance career development. Our PhD students have exceptional employment prospects following graduation with over 95% of students continuing in academia, industry or healthcare, securing positions in destinations across the UK, Europe and the USA.

A PhD should be an exciting and stimulating time. We are looking for talented and motivated graduates with backgrounds in biological sciences, mathematics, computer science and/or chemistry interested in pursuing scientific research careers. As well as benefitting from a dynamic and interactive research environment, PhD students will have access to state of the

art laboratories and facilities from which they can draw on the wider expertise of our scientists and clinicians.

Our CRUK core funded PhD studentships are of four years in duration, and consist of an approved research degree project in one of our core funded research groups. Some students will have joint supervision within different groups, fostering important collaborations and providing exposure to different disciplines. CRUK core funded studentships are advertised in October annually, with interviews typically conducted in January. However, additional vacancies may be advertised throughout the year and enquiries are welcome. The CRUK Manchester Institute is affiliated with The University of Manchester.

For more information and to see the latest projects, please visit: www.cruk.manchester.ac.uk/Education/PhD-Studentships

International PhD students

The University of Manchester has an international reputation for research excellence in the biological, medical and health sciences, making Manchester the best place to start or continue your career in cancer research.

The University operates an orientation programme over four days in the week ahead of registration.

We will meet with all new international students during your induction activities. You will be invited to a special event to welcome you, hosted by the Lead for International Postgraduate Students.

The Faculty Postgraduate Society organises social and academic events throughout the year. The Society makes sure that events are suitable for our international students, and has a dedicated International Representative serving on Postgraduate Committees.

The University also has a wide range of activities organised by the International Society, which has over 3,000 members from over 150 countries worldwide.



Researcher Development

Doctoral Academy

The University of Manchester has a worldwide reputation based on high quality teaching and research. A research degree from Manchester will provide a solid foundation for your future career success.

The goal of the Doctoral Academy is to create an environment that allows you to excel and reach your full potential – as such we provide access to a wide range of programmes, and comprehensive support from our central office. As a research student in the Doctoral Academy you are expected to take responsibility for your programme, within a supportive environment that fosters your development and helps prepare you for your future career.

CARD

CARD is The University of Manchester's Centre for Academic and Researcher Development. CARD provide development opportunities for academic and research staff, postgraduate researchers and other professionals across higher education and the NHS in partnership with Health Innovation Manchester (HiM). Their goal is to create a training environment that supports you through every stage of your career, allowing you to excel and reach your full potential.

STAY (Science Takeaway)

STAY is a society run by and for PhD students undertaking research at the CRUK Manchester Institute and CRUK Manchester Centre. They host



a wide range of events and socials throughout the year and all cancer PhD students and post-docs are invited to attend. The opportunity to join their organising committee is open to all those studying here.

FBMH Fellowship Academy

The Faculty of Biology, Medicine and Health's Fellowship Academy aims to help bright researchers gain externally-funded fellowships, from doctoral studies to senior levels. They have a dedicated academy manager, and offer 'clinic' appointments to discuss these opportunities. As well as the chance to practice interview skills, pick up tips for grant writing and advice on application timelines.

Early Career Development Scheme

The MCRC offers follow on funding via its Early Career Development Scheme. Individuals on this scheme will have completed a successful PhD and a short period of post-doctoral training. Both clinical and non-clinical applications are accepted and the expectation is that candidates will demonstrate clear potential to become research leaders of the future. The scheme provides support for up to three years of focused research to further strengthen

scientific credibility in preparation for an application for independent funding. Our dedicated mentoring system will ensure applications reach their full potential with support from a range of senior leaders in Manchester.

For more information, email: MCRCtraining@manchester.ac.uk



“Lung cancer is the leading cause of cancer death. There is an urgent need to improve lung cancer outcomes. Manchester houses many state-of-the-art radiotherapy solutions, including proton radiotherapy (an advanced form of radiotherapy which is useful in hard to treat tumours). My research focuses on developing biomarkers (tests) to select patients who will benefit from these advanced radiotherapy techniques, aiming to improve lung cancer outcomes. In addition to unparalleled access to research infrastructure, the MCRC early careers programme has enabled me to tap into world leading experts in basic, translational and clinical disciplines paving the way for me to establish an independent research career.”

Ahmed Salem, Senior Clinical Lecturer in Lung Cancer and Honorary Consultant

Our Clinical Fellow Opportunities

The Christie International Fellowship Scheme

Our prestigious multidisciplinary International Fellowship Programme allows exceptional candidates from every discipline to work within a disease-related group at the world renowned Christie NHS Foundation Trust.

There are a variety of funded fellowships available, supported by an educational programme that includes specialist training underpinned by a unique and innovative clinical experience.

Fellows will work at the forefront of cutting edge research alongside global leaders in oncology.

For more information, email: fellowships@christie.nhs.uk

These positions are suitable for enthusiastic and research-motivated applicants with a Medical degree and Membership of the professional Royal College or equivalent, who are pursuing a career in Oncology and have an interest in gaining further research and clinical trial experience.

Candidates must hold full General Medical Council (GMC) registration and have International English Language Testing System (IELTS) proficiency at the time of post commencement.



Our Postgraduate Taught Opportunities

Master's programmes

The University of Manchester offers a range of Master's courses in Oncology.

All details and more information can be found on the Faculty of Biology, Medicine and Health website:.

www.bmh.manchester.ac.uk

MSc Cancer Biology and Radiotherapy Physics

This course develops the skills you need to become a multidisciplinary scientist within the field of radiotherapy. You will gain a sound knowledge of cancer biology and radiotherapy physics and have access to MR-linac and proton therapy facilities at The Christie NHS Foundation Trust.

MSc Cancer Research and Molecular Biomedicine

This MSc prepares you for a career in the biosciences industry or academic research. You will gain significant laboratory experience through placements with leading cancer and molecular biomedicine researchers and transferable skills in experimental design, statistics and science communication.

MRes Experimental Medicine (Cancer)

Designed to give teach the required skills to work in early phase trials, you will spend a year with the Experimental Cancer Medicine Team at The Christie while also taking four taught units – learning the details of designing and delivering phase I clinical trials, and understanding the pre-clinical data and clinical evidence required to progress a promising drug.

MRes Oncology

The MRes Oncology equips you with the specialist knowledge and hands-on experience to pursue a research career in medical and clinical oncology. You will gain an understanding of the scientific basis of cancer and its treatments, and undertake laboratory or clinical-based research projects.

MSc Specialist Practice (Cancer)

This MSc is aimed at nurses and other allied health professionals who want to develop their skills and clinical practice within oncology. You will gain an expert knowledge base, higher decision-making skills and professional competencies to deliver care within the integrated multi-professional teams that form modern delivery of healthcare for people with cancer.

10 Facts about Manchester

1. The University boasts 25 Nobel prize winners amongst former and current staff and students – the third highest after Oxford and Cambridge – and is part of the prestigious Russell Group.

2. We are the most linguistically diverse city in Western Europe. With a population of 2.5 million people, 200 languages are spoken in Manchester, reinforcing us as a truly international city.

3. 62 Nelson Street, Manchester was the birthplace of the Suffragette movement and Emmeline Pankhurst, who worked with the Manchester Women's Suffrage Committee and founded the Women's Social and Political Union, was instrumental in winning the right for women to vote.

4. Many of the UK's best musicians and bands have originated from Manchester including Oasis, The Smiths, Joy Division, The Stone Roses and The 1975.

5. The first computer was built here, known as the "Baby", was designed and built at The University of Manchester in 1948. Created by Professor Tom Kilburn and Professor Sir Freddie Williams

6. It has the largest student population of any city in Europe. Over 100,000 students study in Manchester, many of which attend the University of Manchester.

7. The Football League was created here.

8. The NHS was born here on July 5 1948 out of a long-held ideal that good healthcare should be available to all, regardless of wealth.

9. Manchester now hosts the only NHS high-energy proton beam centre in the UK that opened in 2018.

10. Ernest Rutherford changed the world when he split the atom at The University of Manchester – a breakthrough that resulted in the development of cancer-fighting radiotherapy.

Join us

Please contact us to find out more about any of the training opportunities listed here. We are always keen to hear from you:

MCRCtraining@manchester.ac.uk

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