

# **ACF Platform Science and Bioinformatics Programme Details in conjunction with the University of Manchester**

**Recruitment to posts starting in August 2022**

## **Post availability**

There is one post available in either Clinical Genetics OR Clinical Oncology.

- Clinical Genetics – You can apply at ST3 level in this round of recruitment.
- Clinical Oncology – You can apply at ST3 level in this round of recruitment.

## **Overview**

You can find generic information about Academic Clinical Fellowships in the North West plus links to the National Institute for Health Research's guidance via <https://www.nwpgmd.nhs.uk/nih-academic-clinical-fellowships-glance>

Clinical training in Clinical Genetics will cover common genetic disorders, cancer genomics, developmental disorders, congenital malformations, fetal genomics, neurogenetics, cardiac genetics, inborn errors of metabolism and predictive genetic testing. Most training takes place on a single site, either in Manchester or in Liverpool, but trainees should be expected to spend some time at both sites. National virtual induction and local induction are both provided, including an introductory observation period for trainees new to Clinical Genetics.

## **Academic Training**

[The Centre has a weekly seminar program and a monthly trainees journal club. Additionally, a regional teaching is provided monthly along with time to attend national virtual teaching fortnightly. Trainees are encouraged to identify their academic training requirements specific to their research interests. Opportunity to attend relevant national or international training courses and conferences exist.

## **Research Areas / Research Environment**

The Manchester Centre for Genomic Medicine (MCGM) is internationally renowned for clinical genomic research. Several PIs are integral to a number of research themes of the NIHR Manchester BRC. The Clinical Genetics training program benefits from a vibrant research environment spread across the breadth of human genomics. The key areas of current research are (a) discovery of novel

disease-genes, variants and diseases through next generation sequencing studies and big data approaches (b) functional characterisation of variant/disease-genes and uncovering of disease mechanisms using omic approaches; (c) generation and integration of genetic data into polygenic risk scores; (d) platform science and bioinformatic based disease prevention (e.g. though pharmacogenomics); and (e) developing novel therapies for genetic disorders. Over last 5 years their grant income has been >£20M with >850 peer reviewed publication that have so far attracted >15,000 citations. More than 20 successful PhD completions over last 5 years.

## **Research Facilities**

Multi-omic approaches such as WGS, RNASeq, Chip-Seq, ATAC-Seq, Hi-C, whole-genome DNA methylation analysis, proteomics and ultra-rapid point-of-care variant identification) are available. These are supported by advanced bioinformatic and statistical analysis (e.g. application of AI in genomic data interpretation, analysis of effect of non-coding variants, generating polygenic risk scores). We also have a suite of dedicated core facilities including advanced bioimaging, molecular imaging, mass spectrometry, genome editing unit, histology and animal husbandry. Seamless links with fundamental biologists are in place that enables a range of functional characterization for genomic variants. There is access to high-quality, deep phenotyping clinical expertise and a dedicated Clinical Research Facility. The centre has close links with Health Innovation Manchester, Manchester Academic Health Sciences centre, Stoller Biomarker Discovery Centre (for advanced proteomics centre for clinical research), Health eResearch Centre and the Manchester Molecular Pathology Innovation Centre, the Pankhurst institute and the Manchester Rare Conditions Centre.

## **Clinical Training**

You can find out more about the clinical training programmes in the North West via the following link - <https://www.nwpgmd.nhs.uk/specialty-schools>

Clinical person specifications can be found via the following link - <https://specialtytraining.hee.nhs.uk/Recruitment/Person-specifications>.

## **Useful Links**

<https://www.oriel.nhs.uk/Web/Vacancies>

<https://www.nwpgmd.nhs.uk/nhr-academic-clinical-fellowships-glance>

<https://specialtytraining.hee.nhs.uk/Recruitment/Person-specifications>

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**Last reviewed: 11/10/21**