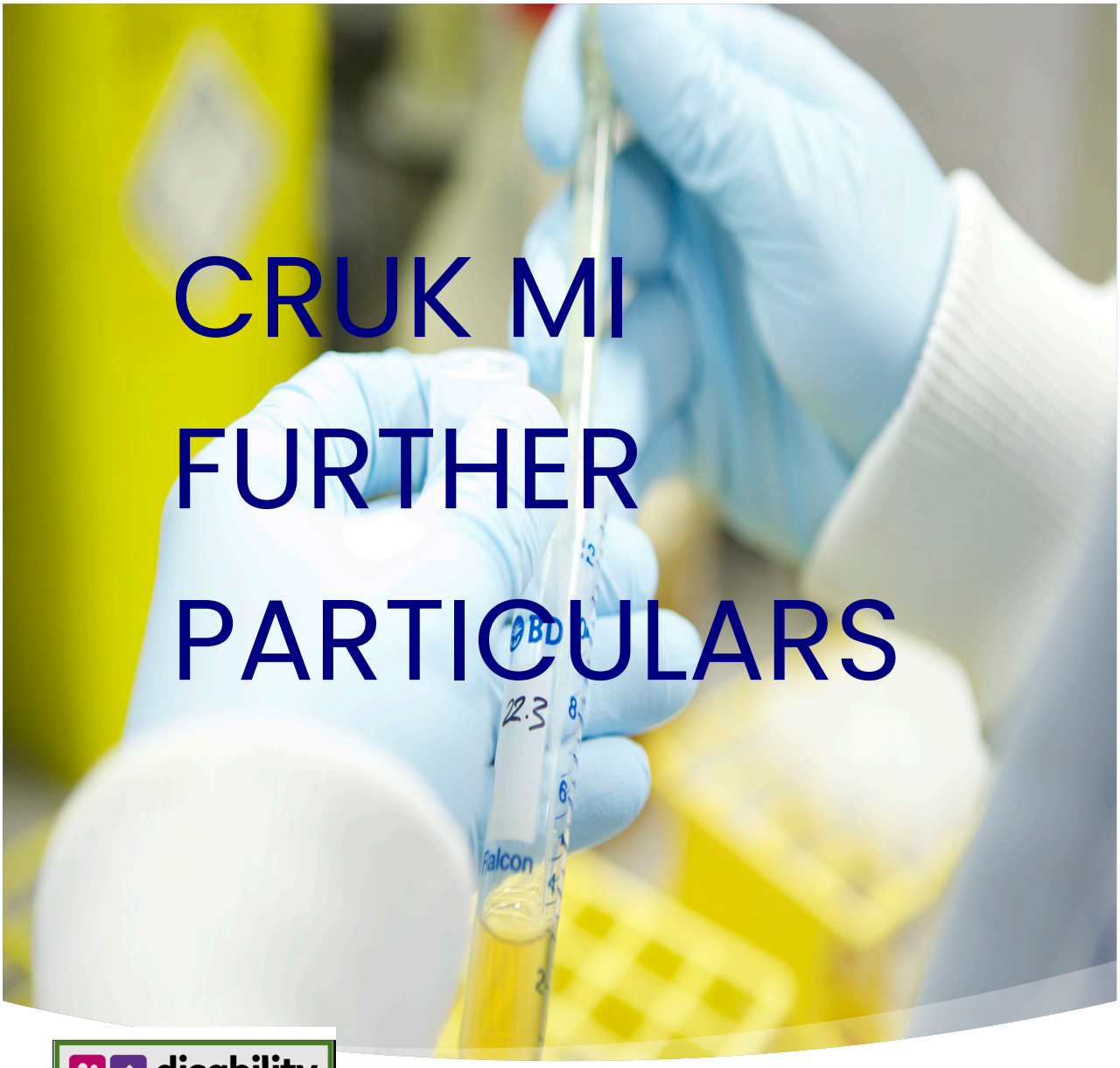
Job Reference Number:	MI/26/05
Position:	Computational Biologist
Group/Department:	Computational Biology Support
Salary:	£35,000 - £50,000 dependent upon experience.
Duration:	non-time limited role



CRUK MI FURTHER PARTICULARS

Cancer Research UK Manchester Institute is a Research Institute within The University of Manchester and is core funded by Cancer Research UK

PARTICULARS OF APPOINTMENT

Ref: **M1/26/05**

Job Title: **Computational Biologist**

1. The Institute invites applications for the above post.

2. Salary will be within the range of £35,000 - £50,000 per annum, dependent upon experience.

3. Applications should be submitted via JobMarker, the online recruitment system by the closing date as stipulated in the advert.

4. For applicants who require assistance with their application please contact the HR Department for further information on:
   Tel: +44 (0)161 306 3183
   Email: ***jobs@cruk.manchester.ac.uk***

5. Informal enquiries can be made to Sudhakar Sahoo, email: sudhakar.sahoo@cruk.manchester.ac.uk

6. Applicants are advised that if the Institute receives a high level of applications, we reserve the right to close the vacancy earlier than advertised.

7. The Institute will endeavour to contact shortlisted candidates promptly. However, there may be occasions where a high volume of applications are received, therefore an applicant's patience is appreciated.

8. As an equal opportunity employer, we welcome applicants from all sections of the community regardless of age, sex, gender (or gender identity), ethnicity, disability, nationality, religion or belief, sexual orientation, marital or transgender status. All appointments are made on merit.

9. As our Computational Biologist you will be a visible presence within the Institute, providing professional and timely services.

COPY OF THE ADVERTISEMENT

The Institute will actively foster a culture of inclusion and diversity and will seek to achieve true equality of opportunity for all members of its community.

Computational Biologist

- Starting salary in the range: £35,000 - £50,000 (dependent upon experience) per annum.
- Job Ref: MI/26/05
- Duration – non-time limited role

About the role:

We are currently looking for a passionate and motivated Computational Biologist to work collaboratively within the Computational Biology Support Team. The Computational Biology Support Team is closely linked to the core facilities within the CRUK Manchester Institute, which operate a wide range of advanced genomics technologies, including Illumina deep sequencing data, mass spectrometry, and advanced imaging. The team is responsible for the experimental design, validation, pre-processing, analysis and interpretation of datasets generated by these core facilities and, most importantly, provides analysis services to the research groups within the Institute. The team work collaboratively to provide high-quality computational biology to support different groups' research programmes and make use of a dedicated on-site High Performance Computing Facility managed by a separate Scientific Computing Team.

About you:

You will have a degree in Computational Biology/Bioinformatics/Applied Mathematics/ Statistics/Computer Science /Physics (or related discipline) along with relevant experience in analysing high-throughput multi-omics data sets OR a relevant postgraduate degree in Computational Biology/ Bioinformatics/Applied Mathematics /Statistics/Computer Science/Physics (or related discipline). A PhD in Computational Biology is desirable. You will have excellent interpersonal skills with ability to establish effective working relationships and build networks. You will have high levels of organisational and time management skills and the ability to prioritise and handle competing demands and work to deadlines with limited supervision.

Why choose Cancer Research UK Manchester Institute

The Cancer Research UK Manchester Institute (www.cruk.manchester.ac.uk), an Institute of The University of Manchester (www.manchester.ac.uk), is a world-leading centre for excellence in cancer research. The Institute is core funded by Cancer Research UK (www.cancerresearchuk.org), the largest independent cancer research organisation in the world. In spring 2023, the Institute moved into a £150 million flagship purpose-built biomedical research centre directly attached to The Christie NHS Foundation Trust (www.christie.nhs.uk), in Withington, South Manchester.

We are partnered with The Christie NHS Foundation Trust (adjacent to The Paterson Building) one of the largest cancer treatment centres in Europe. These factors combine to provide an exceptional environment in which to pursue basic, translational and clinical research programmes.

Our aim is to understand the fundamental basis of cancer and apply that knowledge to developing new treatment strategies for cancer patients. Our advanced research programmes span a spectrum of cancer research, from the molecular and cellular basis of cancer through to drug discovery, translational research and clinical trials.

The Institute has access to outstanding laboratory facilities and exceptional core services, including next generation sequencing, microarrays, confocal microscopy, bioinformatics, histology and mass-spectrometry.

About the Computational Biology Support Facility

Please visit our website to view information about Computational Biology Support Facility

Computational Biology Support | Cancer Research UK Manchester Institute

How to apply?

To apply for this position please complete the online application via 'Apply Now'. Please ensure you detail the names of two referees and ensure you submit your application before the closing date specified.

Please note this vacancy will close for applications at 18:00 hours on the closing date specified.

Job Description

After the closing date this job description will be removed from our website. Should you wish to refer to this information at a later date, please ensure that you save a copy of this document.

Disabilities and alternative formats

The University of Manchester is a disability confident Leader and is committed to supporting disabled people in recruitment, employment, and career development. We will make reasonable adjustments to enable applicants to compete to the best of their ability wherever it is reasonable to do so. Therefore, if you have any additional support needs throughout the recruitment process or require documentation in alternative formats, please do not hesitate to contact the HR Department, for further information, on:

Tel: +44 (0)161 306 3183

Email: ***jobs@cruk.manchester.ac.uk***

The Disability Confident scheme, accredited by the Department for Work and Pensions (DWP), helps employers recruit, retain and train great people. Disability Confident organisations play a leading role in changing attitudes about, and increasing understanding of, disability. There are three levels of the scheme with Leader being the highest.

CANCER RESEARCH UK MANCHESTER INSTITUTE
JOB DESCRIPTION

JOB DETAILS

Job Title:	Computational Biologist	
Grade:	MI3/MI4	
Department:	Computational Biology Support	
Division:	Cancer Research UK Manchester Institute	(CRUK MI)

ORGANISATIONAL ARRANGEMENTS

Accountable to	1.	Head of Computational Biology Support

JOB PURPOSE

To contribute to the success of multiple research programmes by undertaking specific computational analyses on behalf of and guided by the Team Leader and relevant Group Leaders.

The post holder will be expected to plan their own work to achieve scientific objectives and operate with minimal supervision. The post holder will keep abreast of current developments in computational biology and technology and implement new technologies or techniques as and when necessary.

A key part of this role involves applying suitable statistical methods, including bioinformatics techniques, to various omics data sets produced by our in-house sequencing, imaging, and proteomics facilities, as well as publicly available data.

BACKGROUND

The Computational Biology Support Team is closely linked to the core facilities within the CRUK MI, which operate a wide range of advanced genomics technologies, including Illumina deep sequencing data, mass spectrometry, and advanced imaging. The team is responsible for the experimental design, validation, pre-processing, analysis and interpretation of datasets generated by these core facilities and, most importantly, provides analysis services to the research groups within the Institute. They work collaboratively to provide high-quality computational biology to support different groups' research programmes and make use of a dedicated on-site High Performance Computing Facility managed by a separate Scientific Computing Team.

The post holder will work collaboratively, for extended periods, with different research groups within the Institute to support the analysis of their multimodal datasets. This will mainly include a combination of omics datasets (Bulk, Single-Cell, and Spatial) along with proteomics data, but it may also incorporate data from Imaging and other platforms as needed.

DUTIES AND RESPONSIBILITIES

- To work with minimal supervision under the direction of the Computational Biology Support Team Leader
- Perform high-quality, state-of-the-artanalyses in Python, R/Bioconductor, and with reference to other software tools, as required.
- To work independently and to be responsible for defined areas of a project and consult with others where appropriate.
- Keep comprehensive and up-to-date records of projects and report to the Team Leader.
- Present data to senior academics and other colleagues.
- Write up data and code for publication in high-impact journals.
- Pursue a program of work agreed with the Team Leader.

- Ensure the successful completion of the projects and maximise publication output.
- Prepare manuscripts for publication and address referees' comments.
- Prepare modules for data analysis training and provide training if and when required
- Keep up with the scientific literature.
- Present work at the Institute, and at domestic and international meetings.
- Attend the Institute retreat and internal seminars.
- Interact with collaborators.
- Perform other functions, in accordance with the position, nature of the post, and as determined by the head of the Team Leader.
- Manage time efficiently to bring multiple concurrent projects to completion within a range of deadlines
- Oversee the day-to-day activities of the team as determined by the Head of the team

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STANDARDS OF PERFORMANCE

- Work efficiently, cost-effectively and in a flexible manner
- To meet objectives within pre-determined timescales
- Effective communications must be maintained with staff at all levels
- Strict adherence to protocols, Institute policies
- To comply with Health & Safety requirements, including having an awareness of personal responsibilities to maintain a safe working environment
- To contribute to an environment that is conducive to mental health and wellbeing
- Familiarise themselves with the University's Equality and Diversity policies and actively support these wherever possible.
- To maintain the confidentiality of information in line with data protection requirements and University policy

- To contribute to the University's agenda for social responsibility, including sustainability.
- Be a team player.
- To strive to accomplish high quality of work.

PERSON SPECIFICTION

The person specification should set out the qualifications, experience, skills, knowledge, personal attributes, interests, other requirements which the post holder requires to perform the job to a satisfactory level

Job Title: **Computational Biologist (MI3/4)**

	ESSENTIAL The qualities without which a post holder could not be appointed	***DESIRABLE*** Extra qualities which can be used to choose between candidates who meet all the essential criteria
QUALIFICATIONS	• A degree in Computational Biology/Bioinformatics/Applied Mathematics/ Statistics/Computer Science /Physics (or related discipline) PLUS SIGNIFICANT relevant experience in analysing high-throughput multi-omics data sets OR A relevant postgraduate degree in Computational Biology/Bioinformatics/ Applied Mathematics /Statistics/Computer Science/Physics (or related discipline),	• A relevant postgraduate degree in Computational Biology/Bioinformatics/Applied Mathematics /Statistics/Computer Science/Physics (or related discipline), plus SIGNIFICANT relevant experience in analysing high-throughput multi-omics data sets OR PhD in Computational Biology/Bioinformatics/Applied Mathematics/Statistics/Compute r Science/Physics (or related discipline)
EXPERIENCE	• Demonstrable experience in analyzing multi-omics data sets • Relevant experience in analysing high-throughput multi-omics data sets • Significant experience writing/modifying complex bodies of code • Experience with applying appropriate bioinformatics and	• Relevant experience in analysing high-throughput multi-omics data sets • Experience in Machine Learning/Deep Learning or Mathematical/Statistical modelling • Experience in single cell and spatial -omics data sets • Relevant experience in analysing

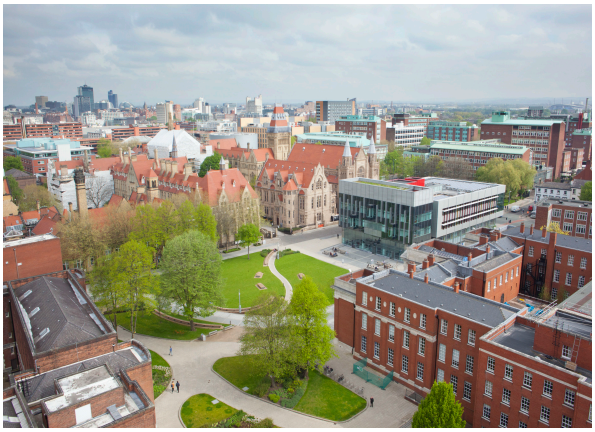
	statistical approaches to the analysis of omics data sets to draw	high-throughput multi-omics data sets
EXPERIENCE contd ...	• Demonstrable experience in analyzing multi-omics data sets • Relevant experience in analysing high-throughput multi-omics data sets • Significant experience writing/modifying complex bodies of code • Experience with applying appropriate bioinformatics and statistical approaches to the analysis of omics data sets to draw meaningful conclusions • Demonstratable experience in defining and solving research questions in relation to project	• Experience in Machine Learning/Deep Learning or Mathematical/Statistical modelling • Experience in single cell and spatial -omics data sets • Familiarity with image analysis • Familiarity with analysis of proteomics data sets • Development of NGS analysis pipelines for variety of omics analysis and integration • Experience working on multiple concurrent projects
SKILLS	• R/Bioconductor/python for omics data analysis • Substantial experience writing complex code in many of the following: R, Python, MATLAB, C++, Java • Substantial experience troubleshooting and debugging software • Strong mathematical skills, including applied multivariate analysis to omics datasets • Attention to detail with coding and annotation • Accurate comprehensive record-keeping and attention to detail • Effective organisational skills and ability to multi-task	• Comfortable in the use of high-performance computing clusters • Ability to organise workload within and supervise tasks within the team • Ability to inspire and motivate colleagues • Demonstrated ability to generate top quality publication(s)

SKILLS contd ..	• Excellent time management skills • Ability to be flexible around supervisors with clinical commitments • Demonstrable ability to design and plan experiments and interpret results • Proven problem-solving capabilities • Excellent communication skills, written and verbal, including the ability to explain complex statistical/computational issues to a non-statistical/computational audience. • Ability to establish effective working relationships, build networks and manage expectations. • Ability to work with minimal supervision	
KNOWLEDGE	• Knowledge in the field of bioinformatics and computational biology as applied to cancer studies • In depth understanding of current statistical and bioinformatics techniques as applied to deep sequencing or Imaging data analysis	• Knowledge of the essentials of biochemistry, molecular biology, genetics or Cancer cell biology • A general knowledge of cancer

OTHER	• Self-motivated • Meticulous • Interactive • Organised • Ability to work to strict deadlines • Ability to work well within a team framework as well as on an individual project • Technically focused • Willingness to learn new experimental techniques • To seek new knowledge and share ideas • To show commitment to equality and fairness and integrity in dealing with others • Ability to work independently and to show initiative within a team • Responsive to feedback • To be open and responsive to change and innovation Willingness to travel	

THE CITY OF MANCHESTER AND THE REGION

Manchester is one of the great European cities and the Cancer Research UK Manchester Institute is located a short distance from the city centre and is serviced by regular public transport to the city centre. The city's architecture represents one of the high points of Victorian achievement. The modern city is a major centre of banking, commerce and manufacturing.



It is consistently ranked as the best liveable city in the UK by the Economist Intelligence Unit. In 2021, Manchester was ranked in the top 3 of the TimeOut World's Best Cities list with the comment, "the friendliest city with the best community spirit and top-notch nightlife including its Gay Village and Northern Quarter in the heart of the city." It has a highly cosmopolitan atmosphere, and its cultural life is internationally renowned.

Manchester offers extensive provision for research. Library facilities include the John Rylands University Library (the major library in the North West and the third largest in the country) and the Manchester Central Reference Library.

Housing is varied, plentiful and the price ranges can start moderately priced and are as varied as the requirements. Schooling ranges from world-famous private schools to excellent sixth-form colleges and comprehensives.

Manchester is well served by a major international airport, with direct scheduled flights to many destinations in Europe as well as North America and Asia. Some of the most beautiful countryside in Europe is just short of an hour's drive from the Institute in the Peak District National Park, while the Lake District and Snowdonia in Wales are also within easy reach.

Cancer Research UK Manchester Institute is a Research Institute within
The University of Manchester and is core funded by Cancer Research UK

Manchester Piccadilly railway station has been refurbished and is served by inter-city and other train services – with a direct link to Manchester Airport. The network of Metrolink tram services offers an alternative mode of public transport from certain parts of the conurbation and includes connections near to the Institute.

There are three outstanding professional theatre companies, the halls of the Hallé and BBC Philharmonic orchestras, the Cornerhouse as well as other cinemas, and Europe's fastest-growing Chinatown.

Amongst the developments enriching the area's cultural life have been the opening of the Lowry Centre and Media City at Salford Quays; the opening of the Bridgewater Concert Hall; the refurbishment of the City Art Gallery; the opening of Urbis in the centre of Manchester and of the Imperial War Museum North, designed by Daniel Libeskind, in Trafford.

Trafford, specifically Old Trafford, is known internationally for sport, it is a venue for Test cricket and the home of Manchester United FC. The Commonwealth Games were held in Manchester in 2002 and were highly acclaimed. The Commonwealth Stadium became the home of Manchester City FC in 2003.

OUR BENEFITS PACKAGE

Facilities and General Discounts

We have a wide range of fantastic facilities for you including coffee shops, cafes, and restaurants in various buildings on Oxford Road, library, museum, art gallery, theatre (providing music and drama) and the world-famous radio telescope at Jodrell Bank. You can attend a varied programme of events at these, many of which are free to staff. Staff also have a plethora of discounts available to them on fitness, entertainment, restaurants, hotels, supermarkets, and online retailers.

Health and Fitness

We have a fantastic range of sports and fitness programmes across three of the best sports facilities in the city of Manchester. Each of our facilities provides something for everyone and are in convenient locations across Oxford Road, Fallowfield and all the way into the City Centre. Staff have a discounted membership to these facilities.

Wellbeing

The Institute is committed to supporting staff wellbeing and have a range of resources available. This includes a free 24/7 helpline through our Employee Assistance Programme which allows staff to talk in confidence to trained counsellors and advisers on areas like emotional, physical, and mental health.

The University's counselling service offers confidential help with any personal issues affecting work, self-esteem, relationships, sexuality, mental health and general well-being. It is accessible to all staff and is part of a wider network of help and support; and can advise on where else to seek help and make referrals to NHS mental health services.

The University's Occupational Health service provides confidential services to protect the health of staff and ensures that all health issues are effectively managed. Additionally, the Institute has wellbeing working groups and employee champions to support staff.

We offer a generous annual leave allowance of 32 days per year, (pro rata for part time staff) plus bank holidays for England. The Institute gifts an additional day's leave on Christmas Eve.

Travel

The Institute is committed to reducing its environmental impact and actively supports and promotes travel by sustainable means. We work closely with The Christie NHS Foundation Hospital to have a green travel plan that aims to provide a package of measures that increase the travel options available to staff. These options include as a Cycle to Work Scheme and annual interest-free travel loans with Northern Rail, Stagecoach and Metrolink.

Family Friendly Support

If you have childcare responsibilities the Institute can provide you with a range of support to assist you in balancing your work and home life commitments. Information is available on the government's Tax Free Childcare Scheme and The University's Workplace Nursery Scheme. We also have a range of family friendly policies and staff have the right to request to work flexibly.

Equality, Diversity, and Inclusion (EDI)

The Institute is committed to creating an environment where diversity is celebrated and everyone is treated fairly, regardless of gender, gender identity, disability, ethnicity, religion or belief, sexual orientation, marital or transgender status, age, or nationality. The Institute has an EDI committee which provides leadership, drive and strategic direction on equality, diversity, and inclusion across all parts of the Institute. The committee will seek to promote cultural change and ensure that the EDI action plan is embedded across all functions of the Institute.

Personal Development

Whether you are a research scientist, technical or operational staff, you will receive excellent on the job training and an opportunity to share skills experience and expertise in a collaborative environment. The Institute has a range of training available for support and professional development.

Disability

The Institute is committed to providing a positive working environment free from discrimination, harassment, or victimisation due to a disability where all staff are treated with respect and dignity. The Institute has access to a Disability Advisory and Support Service (DASS) which has a dedicated disability adviser for staff to provide advice, guidance and support about a range of practical adjustments in the workplace.

Pension

We have two generous pension schemes to provide benefits for you and your family. For more details, please contact the HR department.

ADDITIONAL RECRUITMENT AND SELECTION PARTICULARS

Shortlisted Candidates:

1. We will reimburse reasonable travel expenses. You need to retain all your receipts, as you will need to submit these with your expense claim form. This form will be given to you when you attend your interview.

2. If candidates require accommodation the Institute can arrange this for you. Please notify the HR Department as soon as possible so that this can be arranged on:
   Tel: +44 (0)161 306 3183 or
   Email: ***jobs@cruk.manchester.ac.uk***.

   *Please note that reimbursement for accommodation may **not** apply.*

3. If candidates have any additional support needs to enable them to attend an interview, they will be able to request/discuss this with the HR department when arranging the interview.

4. Shortlisted candidates may be expected to complete a presentation as part of the selection process. Information regarding the duration and title of the presentation will be provided in the invitation to interview correspondence. We supply both laptop and projector for presentations.

5. All dates and times stated in correspondence from the Institute refer to UK GMT (Greenwich Mean Time)

6. Candidates need to bring along their passport to interview, a copy of which will be taken for our records, when you visit the Institute. If candidates have difficulty in producing their passport, please contact the HR Department prior to the interview on:
   Tel: +44 (0)161 306 3183 or
   Email: ***jobs@cruk.manchester.ac.uk***

7. **MS Teams interview with or without presentation:**
   Instances may arise where we propose to hold an online interview as a (first stage) selection process. If this is the preferred method of interview, this will be

stated on your invite to interview email. You will be provided with a link and password to attend the interview at a specified time on a specified date. This link will redirect you to your MS Teams/Zoom interview. 24 hours prior to interview we will require:

- A contact telephone number emailed to ***jobs@cruk.manchester.ac.uk*** along with a scanned copy of passport for ID purposes
- Where applicable, a copy of your presentation emailed to: ***jobs@cruk.manchester.ac.uk***.

***Please note*:**
You do not have to have a Zoom account to attend a Zoom interview. You will be prompted to download the software, once you have clicked on the link that you have been provided. You do, however, need to have a working microphone and camera connected to your electronic device, for this interview to go ahead.

The criteria will be consistent with all other candidates.

STANDARD CRUK MANCHESTER INSTITUTE TERMS AND CONDITIONS

The following is a basic summary of the standard terms and conditions applicable to the post you have applied for:

- The post, Computational Biologist, is on a Cancer Research UK salary. It's an MI3/MI4 grade. Salary in the range of £35,000 - £50,000 per annum (dependent upon experience).

- Your employment will be with The University of Manchester appointed under the Cancer Research UK Manchester Institute terms and conditions.

- Salary is paid monthly on the penultimate last working day of the month.

- There are 32 days holiday per year plus Bank Holidays for England.

- Duration of contract: non-time limited role

- Working hours are 35 hours per week.

- There is a probationary period attached to this post of 6 months. It's standard for many organisations now and consists of two 3-monthly reviews with your line manager.

- USS (https://www.uss.co.uk/) pension scheme.

- You may be eligible to claim relocation expenses in accordance with the criteria listed in the Institute's Relocation Policy.

- Any offer made by the Cancer Research UK Manchester Institute would require the successful candidate to undergo a medical clearance. This is arranged with Occupational Health department at The University of Manchester prior to starting employment and consists of a basic medical. This is to address and gain clearance for any potential hazards identified for the role on offer.

- Offer is subject to receipt of satisfactory references and proof of your highest qualification.

- Offer is subject to documented evidence of your right to work in the UK under the Home Office UK Border Agency Regulations.

- Standard Occupation Classification (SOC) for this role is: 2433

- The successful candidate is required to complete a Rehabilitation of Offenders/Criminal Records declaration form at the offer stage of the process. *Please note a criminal record will not necessarily be a bar to obtaining a position.*

- The Institute is promoting a green travel plan and there are staff benefits promoting this including a cycle to work scheme and the use of public transport. There are strong links to bus routes and trains to all CRUK Manchester Institute locations. More information about this can be found on our 'Our Benefits Package' page or by contacting the HR Department.

  Please note there are car parking restrictions imposed around these sites.

DON'T FORGET TO FOLLOW US ON SOCIAL MEDIA

#LifeAtCRUKMI

CANCER RESEARCH UK | Manchester Institute

THANK YOU!

Cancer Research UK Manchester Institute is a Research Institute within The University of Manchester and is core funded by Cancer Research UK