Job Title: Research Associate

Department/Division/Faculty: Medicine, Clinical Translation

Campus location: Hammersmith

Job Family/Level: Research, Research Associate

Salary Range: £37,486 - £46,499 per annum

Candidates who have not yet been officially awarded their PhD will be appointed as a Research Assistant within the salary range £34,397 - £37,486 per annum.

Responsible to: Professor Michael Johnson

Key Working Relationships (internal): Professor Michael Johnson, Dr Prashant Srivastava

Key Working Relationships (external): Dr Stefanie Dedeurwaerdere, UCB

Contract type: Fixed-term for 2 years

Research Programme

This research programme led by Professor Michael Johnson focuses on the application of gene regulatory networks in single-cell transcriptomics for novel drug target discovery.

Purpose of the Post

The post is funded by a research grant from UCB Pharma entitled An integrated systems-level framework for cell-type specific disease modifying drug target discovery in epilepsy (“EpiNET3”).

We are looking for motivated and resourceful scientists to join our team to help us to deliver our exciting program. We place a strong emphasis on supporting career development and developing careers.

Key Responsibilities

Research Duties

- You will play a key part in driving the analysis of unique single-cell RNA-sequencing datasets in human and mouse brain to novel drug discovery.
- You will use your expertise to apply state-of-the-art statistical genetics and computational methods that integrate single-cell RNA-seq with genetic risk and gene-regulatory networks.
- You will define the scientific and technical challenges in delivering translational insights from your analyses and work with cross-functional teams to develop new solutions.
- You will work as a member of a cross-functional team comprising specialists in statistical genetics, computational biology, AI, medicine and drug discovery.
- You will be part of collaborative teams with external partners and build new relationships.

Other Duties

- To take initiatives in the planning of research
- To conduct data analysis
- To ensure the validity and reliability of data at all times
- To maintain accurate and complete records of all findings
Job Description

- To write reports for submission to research sponsors
- To present findings to colleagues and at conferences
- To submit publications to refereed journals
- To provide guidance to staff and students
- To attend relevant workshops and conferences as necessary
- To develop contacts and research collaborations within the College and the wider community
- To promote the reputation of the Group, the Department and the College
- To provide guidance to PhD Students
- Contribute to future bids for research grants
- To conduct and plan own scientific work with appropriate supervision.
- To maintain highly organised and accurate record of experimental work.
- To actively participate in the research programme of the Group and Unit
- To publish in high quality journals and to present data at national and international meetings.
- To participate in Group/Unit research meetings and internal seminars.
- To collaborate with other allied scientists within Imperial College and elsewhere in London and abroad, as appropriate.
- To contribute to the smooth running of the Group’s/Unit’s laboratories and, facilities with other scientists, clinicians, technicians and students within the laboratories.
- Assist in the supervision of undergraduate and postgraduate research students and research assistants as required.
- To comply with the College, Division, and Unit safety practices and to attend courses on safety when appropriate.
- Any other duties as may be deemed reasonable by Head of group as well as Head of Division/Department/Section.
- To undertake appropriate administration tasks
- [For members of staff who have responsibility for collecting, inputting and maintaining data] To be responsible for ensuring that data is accurate, up-to-date and complete.
- To attend relevant lab meetings
- To undertake any necessary training and/or development
- Any other duties commensurate with the grade of the post as directed by line manager / supervisor
# Job Description

## Person Specification

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Essential (E)</th>
<th>Desirable (D)</th>
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<tbody>
<tr>
<td><strong>Candidates/post holders will be expected to demonstrate the following:</strong></td>
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### Education

- **At Research Assistant level:** Master’s in statistical genetics, bioinformatics, or computational biology, or a closely related discipline, or equivalent research, industrial or commercial experience  
  - **Essential (E)**

- **At Research Associate level:** PhD in statistical genetics, bioinformatics, or computational biology, or a closely related discipline, or equivalent research, industrial or commercial experience  
  - **Essential (E)**

### Knowledge & Experience

- Proven experience in the statistical analysis of genetic and gene expression datasets.  
  - **Essential (E)**

- Knowledge of data manipulation in a UNIX/Linux environment (e.g., R)  
  - **Essential (E)**

- Proficiency in high level programming languages such as Perl, Python, or C++.  
  - **Desirable (D)**

- Knowledge of statistical analysis techniques used in genetics, bioinformatics and functional genomics.  
  - **Desirable (D)**

- Analyses include single-cell RNA-seq, scATAC-seq, single-cell eQTL mapping, integrative analyses with whole-exome and GWAS datasets.  
  - **Desirable (D)**

- Knowledge of research methods and statistical procedures  
  - **Essential (E)**

- Practical experience within a research environment and / or publication in relevant and refereed journals, with at least one first authored publication in a relevant discipline.  
  - **Essential (E)**

- Experience of dealing with specific groups of people, e.g. sponsors, patients  
  - **Desirable (D)**

### Skills & Abilities

- Ability to conduct a detailed review of recent literature  
  - **Essential (E)**

- Ability to develop and apply new concepts  
  - **Essential (E)**

- Creative approach to problem-solving  
  - **Essential (E)**

- Excellent verbal communication skills and the ability to deal with a wide range of people  
  - **Essential (E)**

- Excellent written communication skills and the ability to write clearly and succinctly for publication  
  - **Essential (E)**

- Ability to direct the work of a small research team and motivate others to produce a high standard of work  
  - **Essential (E)**

- Ability to organise own work with minimal supervision  
  - **Essential (E)**

- Ability to prioritise own work in response to deadlines  
  - **Essential (E)**

### Personal Attributes

- Willingness to work as part of a team and to be open-minded and cooperative  
  - **Essential (E)**

- Flexible attitude towards work  
  - **Essential (E)**

- Discipline and regard for confidentiality and security at all times  
  - **Essential (E)**

- Willingness to work out of normal working hours (including weekends) if the requirements of the project demand  
  - **Essential (E)**

- Willingness to undertake any necessary training for the role  
  - **Essential (E)**

- Willingness to travel both within the United Kingdom and abroad to conduct research and attend conferences  
  - **Essential (E)**

Please note that job descriptions cannot be exhaustive and the post-holder may be required to undertake other duties, which are broadly in line with the above key responsibilities.

Imperial College is committed to equality of opportunity and to eliminating discrimination. All employees are expected to follow the [7 Imperial Expectations](#) detailed below:

1) Champion a positive approach to change and opportunity

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Career pathways/JD Template SR#1
Job Description

2) Communicate regularly and effectively within and across teams
3) Consider the thoughts and expectations of others
4) Deliver positive outcomes
5) Encourage inclusive participation and eliminate discrimination
6) Support and develop staff to optimise talent
7) Work in a planned and managed way

Employees are also required to comply with all College policies and regulations paying special attention to:
- Confidentiality
- Conflict of Interest
- Data Protection
- Equal Opportunities
- Financial Regulations
- Health and Safety
- Information Technology
- Smoking
- Private Engagements and Register of Interests
- Financial Regulations
- Health and Safety
- Information Technology
- Smoking
- Private Engagements and Register of Interests
- Financial Regulations
- Health and Safety
- Information Technology
- Smoking
- Private Engagements and Register of Interests

They must also undertake specific training and assume responsibility for safety relevant to specific roles, as set out on the College Website Health and Safety Structure and Responsibilities page.

The College is a proud signatory to the San-Francisco Declaration on Research Assessment (DORA), which means that in hiring and promotion decisions, we evaluate applicants on the quality of their work, not the journal impact factor where it is published. For more information, see https://www.imperial.ac.uk/research-and-innovation/about-imperial-research/research-evaluation/

The College believes that the use of animals in research is vital to improve human and animal health and welfare. Animals may only be used in research programmes where their use is shown to be necessary for developing new treatments and making medical advances. Imperial is committed to ensuring that, in cases where this research is deemed essential, all animals in the College’s care are treated with full respect, and that all staff involved with this work show due consideration at every level. http://www.imperial.ac.uk/research-and-innovation/about-imperial-research/research-integrity/animal-research/

Committed to equality and valuing diversity, we are an Athena SWAN Silver Award winner, a Stonewall Diversity Champion, a Disability Confident Employer and work in partnership with GIRES to promote respect for trans people.