

Candidate Information

Position: Postdoctoral Research Fellow in Molecular Biology
School/Department: Wellcome-Wolfson Inst for Experimental Medicine
Reference: 22/110206
Closing Date: Monday 3 October 2022
Salary: £35,333 - £38,592 per annum
Anticipated Interview Date: Thursday 13 October 2022
Duration: 12 months, with the possibility of extension

JOB PURPOSE:

The Tiwari Lab (www.tiwarilab.com) is looking for a Postdoctoral Research Fellow in Molecular Biology. Our team works on employing functional genomics approaches to decode gene regulatory networks underlying brain development and function as well as understand how these are disrupted in disorders.

Epilepsy is a common and serious brain disease characterized by recurrent seizures. The recruited postdoc will derive and analyse state of the art genomics data derived from patients to reveal what happens to transcriptome in the intact human brain during epileptiform activity and how this is regulated via epigenetic states. This innovative, ground-breaking research study brings together world-leading experts to generate a deeper understanding of the relationship between epileptiform activity and the molecular landscape in the human brain. This will improve understanding of the mechanistic basis of these biomarkers and help design novel transcript- and epigenome-targeting therapeutics in the future. Depending on the interest, it is also possible to be involved in the bioinformatics analysis.

MAJOR DUTIES:

1. Develop, plan and deliver an area of personal research and expertise, and/or undertake research under supervision within a research programme aimed at understanding gene regulatory networks underlying epilepsy and other brain disorders. Experimental and computational workflows will include derivation and analysis of genomics and epigenomics datasets for solving complex biological questions as well as implementation of novel analytical tools for improved data analysis. The following publications from Tiwari lab can be referred to for learning about the ongoing research program and assess a fit:
 • Nature Cell Biology, 2022, Aug 24, 1265–1277; Nature Communications. 2022 Jul 27;13(1):4320; Genes & Development, 2020, Sep; 34(17-18):1190-1209; Nature, 2019, Mar; 567(7746):113-117; Cell Stem Cell, 2018, Oct 4; 23(4):557; Nature Communications, 2017 Nov 15;8(1):1523; The EMBO Journal, 2016 Jan 4;35(1):24-45; J Cell Science, 2015 Dec 1;128(23):4380-94; The EMBO Journal, 2015 Aug 13;34(16):2162-81; Genome Research, 2015 Sep;25(9):1309-24; Nature Communications, 2013, Sep 27; 4:2478; Cancer Cell, 2013, 23, 768-783; PNAS, 2012 Apr 17;109(16): E934-43; Nature Genetics, 2012 Jan; 18;44(1):94-100; Nature, 2011 Dec 14;480(7378):490-5.
2. Develop and implement, with support, a highly ambitious personal career development plan in the course of the post.
3. Maintain up-to-date knowledge of the field of interest at the cutting edge and communicate same to the group.
4. Carry out analyses, critical evaluations and interpretations of experimental data and the literature using methodologies and other techniques appropriate to area of research.
5. Present regular progress reports on research to members of the research group, other groups within the Institute/University, to external audiences nationally and internationally to disseminate and publicise research findings.
6. Prepare, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
7. Assist grant holder in the preparation of funding proposals and applications as well as project progress reports to external bodies.
8. Prepare competitive applications for own funding such as travel grants, project grants and fellowship applications.

9. Carry out routine administrative tasks associated with the research projects/group to ensure that projects are completed on time and within budget and that the group functions efficiently. These might include organisation of project/group meetings and documentation, financial control, stock management/procurement, risk assessment of research activities and development of SOPs. Carry out routine administrative tasks associated with the day-to-day running of the research group in a communal lab setting.
10. Carry out school/undergraduate/post-graduate student and visiting researcher training and supervision, demonstrating, tutoring or lecturing duties within the post holder's area of expertise and under the guidance of a member of academic staff.
11. Participate, and in some cases lead outreach activities on behalf of the group/Institute.
12. Participate in local research-related activities such as journal clubs, training sessions, seminar series etc.
13. Assist in assessment of research communications and data, particularly within the group.
14. Additional research and/or laboratory related duties including outreach activities, within the general range of the post and competence of post holder.

ESSENTIAL CRITERIA:

1. Have or about to obtain a PhD in Molecular Biology or Biochemistry or Epigenetics or Neurobiology or Genetics or related areas.
2. 3 years recent relevant work experience (includes PhD) to include:
 - Gene regulation
 - Cell culture
 - Basic molecular biology assays such as RNA extraction, qPCR, Immunoblot analysis, IP assays.
3. At least one recent high-quality, first author, original research publication in a reputable peer-reviewed journal, commensurate with career stage.
4. Methodical approach to project management and meticulous in regards to experimental procedures and record keeping.
5. Highly ambitious, motivated, efficient, organised and show a commitment to, and interest in, research topic.
6. Competent in maintaining knowledge of cutting-edge of field of expertise.
7. Competent in giving effective and informative oral and poster presentations.
8. Competent in communicating stipulated research skills essential to the post in CV/job application.
9. Strong ability to work from own initiative.
10. Excellent team working skills in multiple internal and external team settings.
11. Leadership qualities.
12. Excellent problem-solving skills.
13. Irregular hours including evening, weekend and other out-of-hours working will be a component of the research at times.
14. Must be willing to travel to national and international meetings and collaborative laboratories.

DESIRABLE CRITERIA:

1. Research project management.
2. Up-to-date knowledge in the field of gene regulatory mechanisms underlying cell-fate decisions.
3. Experience working in outreach settings.