Candidate Information

Position:	Research Fellows in Bioinformatics
School/Department:	The Wellcome-Wolfson Institute for Experimental Medicine
Reference:	19/107957
Closing Date:	Wednesday 11 December 2019
Salary:	£33,797 to £36,914 per annum.
Anticipated Interview Date:	Monday, 13 January 2020
Duration:	36 months

JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of the Gene Regulation Group led by Dr. Vijay Tiwari in the Wellcome-Wolfson Institute for Experimental Medicine. The position will contribute to internationally competitive research on the epigenomics of cell-fate specification during development and disease. The group employs high-throughput epigenomics assays such as Single Cell genomics, ChIP-seq and RNA-seq in defined models of development and disease. The resulting datasets are analysed using computational and systems biology approaches to generate comprehensive models of gene regulatory mechanisms underlying cell-fate changes in these contexts. The successful applicant will have responsibilities in independent research, supervision, planning, day-to-day lab management, collaborations and outreach. The post is suited to a highly ambitious individual and is available for 2 years with the possibility of extension.

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 cancer metastasis and brain development. Computational workflows will include analysis of genomics and epigenomics datasets for solving complex biological questions as well as develop 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:
   iScience 2019, S2589-0042(19)30436-5; Cell Stem Cell 2018, 23(4):557; Nature Communications 2017; 15;8(1):1523; The EMBO Journal, 2016,35(1):24-45; Genome Research, 2015;25(9):1309-24; The EMBO Journal 2015, 13;34(16):2162-81; Nature Communications 2013, 4:2478; Cancer Cell 2013, 23, 768-783; PNAS 2012, 17;109(16):E934-43; Nature Genetics, 2012, 18;44(1):94-100; Nature, 2011, 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.

Planning and Organising:

1. Plan for specific aspects of research programme. Timescales range from 1-18 months in advance and may contribute to overall research group planning.
2. Plan for access to, and use of, research resources, laboratories and workshops where appropriate.
3. Plan own day-to-day activity within framework of the agreed research programme as well as communal activities (e.g. meetings) were appropriate.
4. Coordinate and liaise with other members of the research group and collaborative research groups regarding work progress and stock management.
5. Assist in training other group members on effective planning and organisation.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner including liaising with vendors and collaborators.
2. Provide guidance as required to support staff and any post-graduate/under-graduate students and visiting researchers who may be assisting with work of the group.

Internal and External Relationships:

1. Liaise on a regular basis with supervisor, colleagues, students and collaborators.
2. Communicate appropriately and effectively with lab colleagues topics such as latest research findings/results within the group and field.
3. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
4. Travel to, and present at scientific meetings and work in collaborative laboratories when necessary.
5. Join external networks to share information and ideas and help develop and maintain external collaborations, as appropriate.
6. Contribute to the School/Institute outreach programme.

ESSENTIAL CRITERIA:

1. Have or about to obtain a PhD in Bioinformatics or Computational Biology or Systems Biology or related areas.
2. 3 years recent relevant work experience to include:
   Programming skills in one of the following languages: Perl, Python, C/C++, SBML, Fortran or Shell scripting; Experience in analyzing high throughput genomics datasets such as ChIP-seq and RNA-seq.
3. At least one recent high-quality 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. Experience with analytic tools such as R, SAS, SPLUS Matlab, Cytoscape and Copasi.
2. Research project management.

3. Up-to-date knowledge in the field of gene regulatory mechanisms underlying cell-fate decisions.
4. Experience working in outreach settings.