

Job Title: Postdoctoral Research Associate

Grade: 7

Salary: £34,804 per annum due to funding restrictions

Department: Molecular and Cell Biology

Hours/Contract: Full-time fixed term contract until 31 July 2021 with possible extension

Reference: 1829

Role Purpose

The BBSRC is funding a research program led by Dr Thomas Schalch. It aims at identifying new genomic structures and relate them to how genomes work in different organisms and in different physiological states. For this purpose, the program plans to develop a novel technology based on targeted yeast mutations and genome sequencing to decipher the fine details of the three-dimensional structure of eukaryotic genomes. This program is part of a collaboration with the laboratory of Oliver Rando at the University of Massachusetts Medical School in the USA. The named candidate will carry forward the work started for this project by Dr. Manuela Moraru.

Main Duties and Responsibilities

- Establish site-specific cross-linking technology for histone proteins. The primary model organism will be fission yeast with later transfer of the technology to budding yeast and model animals like *Drosophila*, or mammalian cells
- Develop ChIP-seq and micro-C protocols in collaboration with the laboratory of Oliver Rando to prepare samples for next-generation sequencing
- Develop antibodies for purification of crosslinked nucleosomes in order to establish a protocol with superior resolution than micro-C
- Apply the technology to biological questions of chromatin structure with respect to the cell cycle, different organisms and to environmental changes
- Specific research activities:
 - Liaise with collaborators in the University of Leicester, the laboratory of Oliver Rando and other research centres to ensure the smooth progression of applied and methodological research projects (including taking a lead role in liaising with one or more collaborators where agreed with line manager)
 - Prioritise tasks within agreed work schedules
 - Plan for specific aspects of research: if given a particular hypothesis to examine, plan for own contribution up to three months ahead, incorporating issues such as resource availability, deadlines, project milestones and overall research aims
 - Adapt daily and weekly plans to accommodate new developments (recognising that research is not always predictable)
 - Be flexible to the changing priorities of the research program
 - Take responsibility for organisation of research resources



- Plan several months ahead to meet deadlines for journal publications and to prepare abstracts and presentations for conferences
 - Organise data and results so that they are easily accessible to colleagues
 - Carefully monitor and check results
 - Write up research findings for publication and dissemination: this will include taking primary responsibility for drafting some research papers, and contributing as a junior partner to the authorship of other research papers
 - Write grant applications with assistance and advice (where agreed with line manager) and to make specific contributions to the writing of grant applications
 - Advise other staff and students
 - Attend and present at relevant scientific meetings, including group meetings, departmental seminars and international conferences.
- Participate in general laboratory activities to ensure the efficient functioning of the lab including adherence to health and safety procedures affecting self and others at all times
 - Undertake direct supervision of PhD students, where agreed with the line manager
 - Engage in relevant professional activities and in continuous professional development

Internal and External Relationships

Internal:

- Supervise under-graduate and post-graduate research students.
- Coordinate with academic group leader regarding progress of the project weekly
- Interact with academics, post docs, post grads, and technicians within the laboratory to liaise on a daily basis regarding availability of equipment and materials, exchange of information and discussion of research and ideas
- Engage with other members of the department for critical discussion of the research and exchange of new ideas and approaches that might benefit the research
- Liaise with collaborators within the University of Leicester

External:

- Liaise with collaborators in Oliver Rand's laboratory.
- Coordinate with research service providers for sequencing, peptide synthesis etc.
- Engage with colleagues in the field at national and international conferences.

Planning and Organising

The post holder will be required to effectively manage their time to deliver on the priorities of the project.





Qualifications, Knowledge and Experience

Essential

- First degree and PhD in genetics, biochemistry, molecular biology, structural biology or related discipline*
- Experience of experimental design and data analysis*
- Evidence of coherent research activity (such as involvement in successful grant applications and publications)*
- Experience in a discipline of molecular biology*.
- Experience in CHIP-seq, Hi-seq or related genomic sequencing and analysis*

Desirable

- A working knowledge of UNIX as well as Windows operating systems
- A track record of collaboration in biological research
- Familiarity with next-generation sequencing and software pipelines to analyse the sequencing data*

Skills, Abilities and Competencies

Essential

- Sound molecular biology skills*
- Excellent written communication skills*
- Excellent verbal communication skills
- Well-developed understanding of Health and Safety regulations and procedures
- Proven analytical and technical/scientific problem solving capability
- Ability to work independently and also as part of a research team

****Criteria to be used in shortlisting candidates for interview***

Reason for Fixed Term Contract

The reason for the fixed term contract is stated in section 1.9 in the summary of contractual terms in your contract of employment.

Criminal Declaration

If you become an employee, you must inform your manager immediately, in writing, if you are the subject of any current or future police investigations/legal proceedings, which could result in a criminal offence, conviction, caution, bind-over or charges, or warnings.

VITAL

The University encourages all staff to live our [VITAL values](#) which are:





Valuing People, Innovators, Together, Accountable, Leaders.

Equality and Diversity

We believe that equality, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.

