Job Description

Research Associate

Salary:	Grade 7
Contract:	Full time, fixed term
School/Department:	School of Biosciences
Location:	Canterbury Campus
Responsible to:	Mohinder Pal

Job purpose

Dr Mohinder Pal's laboratory at the University of Kent is looking for an enthusiastic individual who is interested in biochemistry and structural biology, especially single-particle cryo-electron microscopy and X-ray crystallography techniques. The post is for three years and is funded by Action for A-T and BrAshAT Ataxia Telangiectasia to investigate the regulation of DNA repair enzymes.

The successful candidate will work on a cutting-edge experimental research project in the structure-function analysis and regulation of DNA repair enzymes. The project involves a combination of biochemistry, biophysics, and structural biology work. The structural part of the project will involve single-particle cryo-electron microscopy (cryo-EM) and X-ray crystallography. The role will also involve developing research objectives, conducting research, writing research work for publication, and liaising with national and international collaborators.

Our lab, which is newly established in Kent, is growing fast. We are very well-equipped with a 120Kev electron microscope dedicated to single-particle work and have access to eBIC, Oxford, for high-end data collection. In addition, the School of Biosciences at Kent houses numerous shared facilities, from NMR and Mass Spectrometry to cell biology and super-resolution imaging.

Key accountabilities

- Undertake research at an internationally competitive level.
- Contribute to the development of the research project, specifically
- Disseminate research results through peer-reviewed publications and conference presentations.

Key duties

The following are the main duties for the job. Other duties, commensurate with the grading of the job, may also be assigned from time to time.

- Carry out the research program described in the grant application
- Monitor and study literature related to the project
- Work closely with the supervisor and, as necessary, with collaborative partners
- Design and execute the necessary experiments, maintaining an up-to-date log of theresearch

activity undertaken and of the obtained results

- Carefully plan the research activity, making sure the milestones of the project areachieved within the expected timeframe
- Regularly update the supervisors on the progress of the research
- Write up the research outcomes for publication in high-quality peer-reviewed journals.
- Attend and present research findings at relevant national and internationalconferences
- Disseminate findings to a wider audience, including non-scientists
- Contribute to further applications for funding an extension of this project or related work
- Assist in the supervision of undergraduates and postgraduate student researchprojects
- Be committed to your own personal career development, including continually updating knowledge and understanding in fields related to this research project.

Internal & external relationships

Internal: Dr Mohinder Pal is the project supervisor; the post is situated within the Pal group, part of the School of Biosciences, which encourages interactions in a dynamic interdisciplinary research environment.

External: Progressing relevant research work by working in collaborations with external collaborators both in the UK andoverseas.Health, safety & wellbeing considerations

This job involves undertaking duties which include the following health, safety and wellbeing considerations:

- Regular use of Screen Display Equipment
- Working with chemicals (inc. requirement to wear latex gloves and inc. work with CO2 or N2 gasses)
- Working with x-ray radiation
- Working with low-temperature apparatus, including liquid nitrogen and liquid ethane

Person specification

The person specification details the necessary skills, qualifications, experience or other attributes needed to carry out the job. Applications will be measured against the criteria published below.

Selection panels will be looking for clear evidence and examples in an application, or cover letter (where applicable), which back-up any assertions made in relation to each criterion.

Essential Criteria:

- PhD in Biochemistry, structural biology or related relevant discipline or equivalent (or to be in the final stages of obtaining such a qualification and able to evidence that the PhD viva will be held by August 31, 2024) (A,I)
- Experience in molecular biology, protein expression in insect cells and, mammalian culture (A,I)
- Experience in Biochemistry, especially protein expression, purification (A,I)
- Experience in X-ray crystallography (A,I)
- Experience in cryo-EM or negative staining data analysis (A,I)
- A track record of publications as first author in high quality peer review journals (A)
- Ability to carry out research independently (I)
- Proven research skills in protein expression, purification using AKTA machines. (A,I)

- Protein crystallisation trials (A,I)
- Negative staining as well as cryo-grid preparation (A,I)
- Good written and oral communication skills (I)
- Good team working skills (I)
- Ability to meet deadlines (A,I)
- Good skills with computers for instrument control anddata analysis (A,I)
- Firm commitment to achieving the University's vision and values, with a passion for a transformative student experience and multidisciplinary, impactful research (I)
- Commitment to deliver and promote equality, diversity and inclusivity in the day to day work of the role (I)

Desirable Criteria:

- A track record of presentations at national andinternational conferences (A,I)
- Experience in supervision or management of researchprojects (A,I)
- Experience in writing research proposals (A,I)
- Ability to run programs using command line (A,I)
- Ability to generate new research ideas (I)
- A commitment to your own continuous professionaldevelopment. (I)

Assessment stage: A - Application; I - Interview; T - Test/presentation at interview stage