

Job Description

Research Associate

Salary:	Grade 7
Contract:	Full time, fixed term (12 months)
School/Department:	Biosciences (School of Natural Sciences)
Location:	Canterbury Campus
Responsible to:	Neil Kad

Job purpose

Professor Neil Kad's lab at the University of Kent is looking for a bright and enthusiastic individual who is interested in using state-of-the-art single molecule imaging techniques to understand how muscle is activated. This fundamental understanding will be generated using a unique combination of approaches and is hugely relevant to normal and diseased muscle function. During this project you will use a variety of techniques from protein biochemistry to single molecule biochemistry.

Working with partners in the UK and overseas (University of Washington and University of Kentucky), this BBSRC-funded interdisciplinary project will utilize cutting-edge imaging to study how the thick and thin filaments activate and relax. This will involve generation and isolation of recombinant proteins, tissue derived proteins and imaging their interactions in vitro and also in ex vivo tissue samples from a number of sources. In addition, you will be involved with developing new techniques to provide three-dimensional super-resolution images. Overall, this requires a rounded candidate with experience in protein biochemistry, who has an aptitude for quantitative approaches and who is willing to learn the aspects they are not immediately familiar with, for which training and support will be given throughout.

Our lab is very well-equipped with microscopes dedicated to single molecule fluorescence imaging. 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 and duties

- Contribute to the design and execution of the research project, ensuring alignment with institutional and departmental goals.
- Develop research proposals and objectives, collaborating with colleagues to enhance project outcomes.
- Conduct individual and collaborative research, gathering and analysing data to derive meaningful conclusions.
- Organise, store and write up results and report regularly to the research group, partners and other stakeholders.
- Publish research findings in high quality peer reviewed journals and support in presenting results at conferences to share insights with the academic community.
- Carefully plan the research activity making sure the milestones of the project are achieved within the expected timeframe.
- Communicate research findings and complex information effectively to diverse audiences, both in writing and orally.
- Build and maintain professional relationships with colleagues, students, and external partners to foster collaboration and networking.

- Assist students with research skills, assess knowledge and supervise student projects.
- Manage research-related administrative tasks, ensuring compliance with ethical and regulatory standards.
- Participate in team meetings and contribute to discussions on research direction and strategy.
- Engage in continuous professional development to enhance research skills and knowledge in relevant areas, integrating new information into research activities where feasible.

Internal & external relationships

Internal: Prof Kad's research group, members of the MaDCaP Group and all researchers based in Biosciences, academic staff, postgraduate students

External: External researchers/collaborators, funding bodies, project participants, external institutions/organisations where necessary

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)
- Biological Agents/Scientific Hazards (experiments/lasers etc, and waste/sewage)
- Working in isolation
- Contact with Human fluids (blood, saliva etc)
- Pressure to meet important deadlines such as might be inherent in high profile projects
- There may be a requirement to work evenings and weekends
- Overseas travel is a requirement of the role

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:

- A PhD degree in relevant scientific discipline (or to be in the final stages of obtaining such a qualification) (A)
- Proven experience in conducting research projects, including data collection and analysis (A,I,T)
- Familiarity with relevant research methodologies and tools specific to the field (A,I,T)
 - microscopy/high resolution imaging
 - developing assay systems
 - molecular biology & protein purification
- Demonstrated ability to summarise and present results/write and publish research findings in peer-reviewed journals (A,I)
- Experience working collaboratively in a research or academic setting, contributing to joint projects and initiatives (A,I,T)
- Ability to set up experiments with due care and attention, following protocols (I)
- Good IT skills and competency with numerical data and data processing (I,T)
- Strong verbal and written communication skills, with the ability to convey complex information clearly to diverse audiences (I,T)
- Excellent organizational skills with the ability to manage multiple tasks and meet deadlines (I,T)
- Commitment to continually update knowledge and understanding in field or specialism (I)

- A firm commitment to fostering a working and learning environment that is respectful, inclusive and values diversity, including diversity of thought, and which enables staff and students from a wide range of backgrounds to thrive (I)

Desirable Criteria:

- Familiarity with more specialized or advanced research methods (single molecule techniques, muscle biology, software development/programming) (A,I)

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