

Candidate Information

Position:	Research Fellow
School/Department:	School of Chemistry and Chemical Engineering
Reference:	18/106921
Closing Date:	Tuesday 13 November 2018
Salary:	£33,199 - £39,610 per annum (potential to progress to £43,266 per annum through sustained exceptional contribution)

JOB PURPOSE:

To be an active member of the research team, assisting in the development of chemical probes to study bacterial lipid-processing enzymes. This is a highly interdisciplinary project that will involve the isolation of natural products, multi-step chemical synthesis of complex lipids and their characterization through a variety of analytical approaches, expression and purification of bacterial lipid-processing enzymes, in vitro enzymatic assays and molecular modelling. The post holder will be responsible for the planning and delivery of research activity within the project so that the overall research objectives of the project are met. The post is funded for 24 months by the EPSRC and is available from 7th January 2019 or as soon as possible thereafter.

MAJOR DUTIES:

1. To undertake research under supervision within the research project and as a member of the research team.
2. Design and implement synthetic laboratory-scale approaches towards chemically labelled bacterial lipids.
3. Use microbiological techniques to express and purify bacterial lipid-processing enzymes and use synthetic compounds to study their substrate specificity and mechanism.
4. Carry out analyses, critical evaluations, and interpretations using methodologies and other techniques appropriate to area of research.
5. Present regular progress reports on research to members of the research group or to external audiences to disseminate and publicise research findings.
6. Prepare in consultation with supervisor, material for publication in peer-reviewed journals and presentations at international conferences.
7. Assist grant holder in the preparation of funding proposals and applications to external bodies.
8. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project meetings and documentation, financial control, risk assessment of research activities.
9. To carry out occasional supervision of more junior colleagues and students in laboratory matters and in the preparation of written reports, theses, and journal manuscripts.
10. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines.

Planning and Organising:

1. Plan for the use of research resources, laboratories and workshops where appropriate.
2. Plan own day-to day activity within framework of the agreed research programme.
3. Plan in advance to meet deadlines for journal publications and to prepare presentations and papers for conferences.
4. Coordinate and liaise with other members of the research group over work progress.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner.
2. To exercise diligence and care when using laboratory equipment.
3. Provide guidance as required to support staff and any students who may be assisting with research.

Internal and External Relationships:

1. Liaise on a regular basis with the PI and fellow researchers regarding the progress of the project.
2. Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
3. Maintain and develop external networks to ensure successful dissemination of the project findings.

ESSENTIAL CRITERIA:

1. Minimum 2.1 degree in Chemistry or Medicinal Chemistry.
2. PhD in organic chemistry.
3. Minimum 3 years research experience in synthetic organic chemistry.
4. 3 years research experience in the expression, purification and assay of enzymes.
5. Author on publications in peer-reviewed journals, commensurate with career.
6. Ability to supervise more junior colleagues/students in laboratory matters (safety, experimental design, methods), and in the preparation of theses, presentations, reports etc.
7. Ability to contribute to broader management and administrative processes.
8. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
9. Ability to communicate complex information clearly verbally, through presentation, and in writing.
10. Demonstrable intellectual ability.
11. Ability to assess and organise resources.
12. Ability to take a leading role within the research group.

DESIRABLE CRITERIA:

1. 1st class degree in Chemistry or Medicinal Chemistry.
2. At least 4 years research experience in synthetic organic chemistry
3. At least 4 years research experience in the expression, purification and assay of enzymes.
4. Experience using AutoDock Vina or AutoDock 4.2.
5. Experience in the synthesis of lipids.
6. Experience in performing SAR studies on enzymes.
7. Experience in using LCMS to monitor enzymatic reactions.
8. Ability to build contacts and participate in internal and external networks.