

THE UNIVERSITY OF MANCHESTER

PARTICULARS OF APPOINTMENT

FACULTY OF SCIENCE AND ENGINEERING SCHOOL OF CHEMISTRY

SCHOOL OF CHEMISTRY

RESEARCH ASSOCIATE

REF: S&E- 020555

Salary: £34,308 - £42,155 per annum depending on experience

Hours: Full Time

Duration: 36 months

Location: Oxford Road, Manchester

Enquiries about the vacancy, shortlisting and interviews:

Manager : Professor David Leys Email: David.leys@manchester.ac.uk

BACKGROUND

A three year post-doctoral position funded by a BBSRC IPA grant is available to study the biochemistry, structure and biotechnological application of the prFMN dependent enzyme phenolphosphate carboxylase (PPC). The research is carried out in the Manchester Institute for Biotechnology (MIB). The goal of the project is to understand how this prFMN-dependent enzyme achieves irreversible carboxylation, using structural biology, kinetic and computational approaches. In recent years, the Leys group has been at the forefront of the discovery and fundamental understanding of these ubiquitous bacterial enzymes. Recent advances in the evolution and application of these enzymes have been made by the group, leading to a comprehensive insight into the (de)carboxylases. Our focus is now on those prFMN enzymes that function as obligate carboxylases as well as the development of novel prFMN-dependent systems.

Overall Purpose of the Job

The post-doctoral fellow will study the prFMN dependent PPC that function as carboxylases under physiological conditions, with the ultimate aim to capture CO_2 as a building block. The fellow will take advantage of a wealth of preliminary data already gathered on these systems by our group, enabling them to make rapid progress with validating our present hypothesis. The fellow will take part in preparing the manuscripts describing these results for publication and will work collaboratively with the wider biocatalysis groups at the MIB.



The University of Manchester

Key Responsibilities, Accountabilities or Duties

The range of duties will include:

- Be involved in the assessment of student knowledge and supervision of projects.
- Conduct individual and collaborative research projects.
- Write up research work for publication.
- Continually update knowledge and understanding in field or specialism.
- Translate knowledge of advances in the subject area into research activity.
- Deal with routine communication using a range of media.
- Communicate complex information, orally, in writing and electronically.
- Communicate material of a specialist or highly technical nature.
- Liaise with colleagues and students.
- Manage own research and administrative activities, with guidance if required.
- Work with colleagues on joint projects, as required
- Attend and contribute to relevant meetings.
- Use new research techniques and methods.
- Use creativity to analyse and interpret research data and draw conclusions on the outcomes.
- Contribute to collaborative decision making with colleagues in areas of research.
- Use research resources, laboratories and workshops as appropriate.
- Plan and manage own research activity in collaboration with others.
- Balance with help the competing pressures of research and administrative demands and deadlines.
- Be aware of the risks in the work environment and their potential impact on their own work and that of others.

PERSON SPECIFICATION

Essential;

- Have, or be about to obtain, a relevant PhD (or equivalent)
- Experience in research methods and techniques to work within established research programmes. This should include protein biochemistry.
- Excellent communication and interpersonal skills
- Excellent time management and organisational skills
- Ability to work independently and as part of a team
- Ability to liaise confidently and effectively with a range of individuals
- Flexible approach to dealing with research problems as they arise
- Willingness to learn and develop
- Ability to present in both written and oral publications
- Ability to meet deadlines
- Strong journal publication record.
- The ability to evaluate complex data
- Ability to contribute to broader management and administrative processes.
- Ability to assess and organise resources
- Understand equal opportunity issues as they may impact on areas of research content.