

**Faculty of Science**

**School of Biological Sciences**

**RESEARCH FELLOW**

**ZZ003585**

**Information for Candidates**

**THE POST**

Please see the attached job description and person specification.

**TERMS OF APPOINTMENT**

Salary is in the range from £33,574 to £36,672 per annum and progress to the top of the scale is by annual increments payable on 1 September each year. Salary is paid into a bank or building society monthly in arrears.

Working hours are 37 per week and are usually worked between 8.30 am and 5.15 pm Monday to Thursday and between 8.30 am and 4.15 pm on Friday with one hour and ten minutes for lunch. As this post is research based, working hours will vary depending on the needs of the project so a flexible approach is required. Specific working hours will be agreed once an appointment has been made. Overtime is not normally payable but time off in lieu may be given.

Annual leave entitlement is 35 working days in a full leave year. The leave year commences on 1 August and staff starting and leaving during that period accrue leave on a pro-rata basis. In addition, the University is normally closed from Christmas Eve until New Years Day inclusive and there are a further five bank holidays.

The Appointee will be entitled to join the Local Government Pension Scheme. The scheme's provisions include a final salary based, index-linked pension with an option to exchange some pension for a lump sum on retirement together with dependants’ benefits. Contributions by the employee are subject to tax relief.

There is a probationary period of six months during which new staff are expected to demonstrate their suitability for the post.

It is a condition of the appointment for the proper performance of the duties of the post that the appointee will take up residence at a location such that they are able to fulfil the full range of their contractual duties. This residential requirement will be expected to be fulfilled within twelve months of taking up the appointment. The University has a scheme of financial assistance towards the cost of relocation, details of which can be found on the University website:

<http://www.port.ac.uk/departments/services/humanresources/recruitmentandselection/informationforapplicants/removalandseparationguidelines>

There is a comprehensive sickness and maternity benefits scheme.

**All interview applicants will be required to bring their passport or full birth certificate and any other 'Right to Work' information to interview where it will be copied and verified.** The successful applicant will not be able to start work until their right to work documentation has been verified.

Under the University’s Insurance Policy we will take up references for candidates called for interview. Your current employer reference must be your current line manager. It is also a requirement of this policy that we take up references to cover the previous three years of your employment or study.

The successful candidate will need to bring documentary evidence of their qualifications to Human Resources on taking up their appointment.

To comply with UKVI legislation, non-EEA candidates are only eligible to apply for this post if it has been advertised for a total of 28 days.

If the position has a requirement for Disclosure and Barring Service check (DBS), this will be stated in the advert. The DBS Application Form will be provided once the selection process has been completed.

All applications must be submitted by Midnight (GMT) on the closing date published.

 **UNIVERSITY OF PORTSMOUTH – RECRUITMENT PAPERWORK**

1. **JOB DESCRIPTION**

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| **Job Title:** | Research Fellow  |
| **Grade:** | 7 |
| **Faculty/Centre:** | Faculty of Science |
| **Department/Service:****Location:** | School of Biological SciencesInstitute of Biomedical and Biomolecular Science |
| **Position Reference No:** | ZZ003585 |
| **Cost Centre:** | 10214 |
| **Responsible to:** | Professor John McGeehan |
| **Responsible for:** | PhD Students |
| **Effective date of job description:** | September 2016 |

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| **Purpose of Job:** |
| OverviewTo successfully manage a research project and related activities of their own or on behalf of the research leader. Liaising and networking with funding bodies (BBSRC and NSF) and other relevant professionals, developing, analysing, interpreting research data. Writing papers for research journals and material for publications contributing to the growing research culture in the School of Biological Sciences and the Institute of Biomedical and Biomolecular Science (IBBS).Team and EnvironmentThis post is funded for three years as part of a joint scientific venture between the BBSRC in the UK and the NSF in the US. We work in parallel with an international team of scientists on the characterisation of novel enzymes for the sustainable conversion of biomass into fuels and fine chemicals. The team is made up of several research groups led by:- Prof. John McGeehan, University of Portsmouth (Structural biology and biochemistry)- Prof. Ellen Neidle, University of Georgia (Synthetic biology and microbiology)- Prof. Linda Broadbelt, Northwestern University (Pathway design and modelling)- Prof. Keith Tyo, Northwestern University (Metabolomics)- Prof. Gregg Beckham, NREL (Host institute / National facility for biofuels research)The McGeehan laboratory currently hosts a research fellow, three PhD students, a technician and a laboratory manager (to be appointed). The Fellow’s practical work will be conducted in the state-of-the-art Molecular Biophysics Laboratories, one of the four research divisions within the Institute of Biomedical and Biomolecular Sciences at the University of Portsmouth. We have a range of in-house facilities including dedicated laboratories for protein expression and purification, biophysical characterisation (SEC-MALLS, AUC, ITC) and X-ray crystallography and NMR. It is envisaged that the Fellow will spend some time working at national research facilities such as the Diamond Light Source UK (conveniently located 1 hour from Portsmouth), and with our US collaborators at the National Renewable Energy Laboratory (NREL) in Colorado.Project and RoleThe project combines structural biology and protein engineering with a novel synthetic biology approach that will enable the creation of new industrially relevant enzymes to convert heterogeneous lignin-derived aromatics into chemicals with significant economic value. The main role of the Research Fellow will be to carry out protein purification, biophysical and structural characterization of a range of novel enzymes. They will engage in a range of techniques depending on their experience, but the Fellow’s skills will be developed through training. The Fellow will be expected to acquire data sets for our project, to participate in drafting of manuscripts, and to present findings at workshops and conferences. International travel to the USA will form an integral part of this post, and as such will provide excellent opportunities for personal and career development.The Research Fellow will play a key part in executing the work plan for the University of Portsmouth component of this international project. The Fellow will undertake a substantial experimental programme drawing upon their existing skills and upon skills that the Fellow will be expected to develop during the programme. The Fellow will operate with a substantial degree of autonomy and will help to direct and support postgraduate research students in the group (MRes and PhD).References* Kern M, McGeehan JE, Streeter SD, Martin RN, Besser K, Elias L, Eborall W, Malyon GP, Payne CM, Himmel ME, Schnorr K, Beckham GT, Cragg SM, Bruce NC, McQueen-Mason SJ. (2013) Structural characterization of a unique marine animal family 7 cellobiohydrolase suggests a mechanism of cellulase salt tolerance. *PNAS* 18;110(25):10189-94
* Linger JG, Vardon DR, Guarnieri MT, Karp EM, Hunsinger GB, Franden MA, Johnson CW, Chupka G, Strathmann TJ, Pienkos PT, Beckham GT. (2014) Lignin valorization through integrated biological funneling and chemical catalysis. *PNAS* 111(33):12013-8.
* Ragauskas AJ, Beckham GT, Biddy MJ, Chandra R, Chen F, Davis MF, Davison BH, Dixon RA, Gilna P, Keller M, Langan P, Naskar AK, Saddler JN, Tschaplinski TJ, Tuskan GA, Wyman CE. (2014) Lignin valorization: improving lignin processing in the biorefinery. *Science* 344(6185):1246843.
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| **Key Responsibilities:**  |
| 1. To manage and be responsible for the completion of the research project (either own or on behalf of the Principal Investigator), ensuring that the aims and objectives are met.
2. To present research project findings to a variety of stakeholders and to write papers for research journals and materials for publication.

**Management Responsibilities**1. Co-management responsibility with the Principal Investigator and Co-investigator of a Research Technician and MRes/PhD students in the Project Team.
2. Assignment of tasks to best deliver the project in a timely fashion.
3. To liaise with the Principal Investigator to ensure the efficient operation of the Biofuels Research Group.
4. Contribute to the operational planning and development of the department, including project work.
5. Investigate performance, disciplinary and grievance matters when necessary following University procedures.
6. Conduct induction and training of staff and students.
7. Deputise for the Principal Investigator where appropriate.
8. Represent the School of Biological Sciences and the Biofuels Research Group at meetings where appropriate.

Additional expectations of the role holder1. To communicate with team members and liaise and network with relevant other professional bodies, to influence events.
2. To lead team meetings when required providing relevant and timely information, in order to aid decision making.
3. To solve problems that occur during the length of the research project applying knowledge of subject area.
4. Can deliver short one-off training sessions or lectures such as explaining how to conduct literature or database searches.
5. To analyse research data and develop new evaluation methods, select existing methodologies determining when they should be applied.
6. To comply with the University's Health and Safety Policy and pay due care to own safety and the safety of others. Report all accidents, near misses and unsafe circumstances to line management.
7. Any other duties as required by the Principal Investigator/Head of Department.
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| **Working Relationships:**  |
| 1. Managed by the Principal Investigator (Prof. John McGeehan).
2. Working with other researchers in the Biofuels Research team within the School of Biological Sciences and with research collaborators in the US groups named above.
3. Liaising with research and academic colleagues and support/technical staff on day-to-day issues.
4. Helping to manage research students operating in the same laboratory.
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1. **PERSON SPECIFICATION**

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| **No** | **Attributes** | **Rating** | **Source** |
| **1.** | **Specific Knowledge & Experience** |  |  |
|  | Ongoing research experience in protein structural biology and/or protein biochemistry | E | AF, S |
|  | Practical knowledge of X-ray crystallography and/or biophysical methods | E | AF, S |
|  | Research experience of collecting qualitative data | E | AF, S |
|  | Ongoing research experience in a related field | E | AF, S |
|  | Previous experience of successfully managing a research project through to completion | D | AF, S |
|  | Previous experience of managing staff and students | D | AF, S |
|  | Practical knowledge of cloning, protein expression and purification, site-directed mutagenesis and related techniques | D | AF, S |
|  | Practical knowledge of enzyme assays | D | AF, S |
|  | Experience of writing research funding applications | D | AF, S |
| **2.** | **Skills & Abilities** |  |  |
|  | Ability to predict and solve problems when they occur | E | AF, S |
|  | Ability to plan, organise and prioritise workloads | E | AF, S |
|  | Good communication and interpersonal skills | E | AF, S |
|  | Good report writing skills | E | AF, S |
|  | Data analysis skills | E | AF, S |
|  | Excellent oral presentation skills | E | AF, S |
|  | Ability to communicate fluently in English to a scientific standard | E | AF, S |
|  | Project Management skills | D | AF, S |
| **3.**  | **Qualifications, Education & Training** |  |  |
|  | Completed PhD in relevant subject or equivalent professional experience | E | AF, S |
|  | Training in data collection at synchrotron facilities | D | AF, S |
|  | Relevant publications in leading peer-reviewed journals | D | AF, S |
| **4.** | **Other Requirements** |  |  |
|  | Ability to motivate and engage others in research | E | AF, S |
|  | Ability to work on own initiative and as part of a team | E | AF, S |
|  | Ability to work to tight deadlines | E | AF, S |

**Legend**

Rating of attribute: E = essential; D = desirable

Source of evidence: AF = Application Form; S = Selection Programme (including Interview, Test, Presentation, References)

**JOB HAZARD IDENTIFICATION FORM**

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| **Please tick box(s) if any of the below are likely to be encountered in this role. This is in order to identify potential job related hazards and minimise associated health effects as far as possible. Please use the** [**Job Hazard Information**](http://www.port.ac.uk/departments/services/humanresources/recruitmentandselection/informationforrecruiters/essentialinformationandformsforrecruiters/) **document in order to do this.**  |
| 1. International travel/Fieldwork
 | X | 13. Substances to which COSHH regulations apply (including microorganisms, animal allergens, wood dust, chemicals, skin sensitizers and irritants)  | X |
| 1. Manual Handling (of loads/people)
 |  | 14. Working at height |  |
| 1. Human tissue/body fluids (e.g. Healthcare workers, First Aiders, Nursery workers, Laboratory workers)
 |  | 15. Working with sewage, drains, river or canal water  |  |
| 1. Genetically modified Organisms
 | X | 16. Confined spaces |  |
| 1. Noise > 80 DbA
 |  | 17. Vibrating tools  |  |
| 1. Night Working

 (between 2200 hrs and 0600 hrs) | X | 18. Diving |  |
| 1. Display screen equipment (including lone working)
 | X | 19. Compressed gases | X |
| 1. Repetitive tasks (e.g. pipette use, book sensitization etc)
 | X | 20. Small print/colour coding |  |
| 1. Ionising radiation/ non-ionising radiation/lasers/UV radiation

X | 21. Contaminated soil/bioaerosols |  |
| 10. Asbestos and lead  | 22. Nanomaterials  |
| 11. Driving on University business (mini-bus, van, bus, forklift truck etc)  | 23. Stress X |
| 12. Food handling  | 24. Other (please specify)  |

**Completed by Line Manager/Supervisor:**

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| **Name (block capitals)** | Prof. John McGeehan |
| **Date** | 26/7/2016 |
| **Extension number** | 2042 |

Managers should use this form and the information contained in it during induction of new staff to identify any training needs or requirement for referral to Occupational Health (OH).

Should any of this associated information be unavailable please contact OH (Tel: 023 9284 3187) so that appropriate advice can be given.