



**Faculty of Science**

**School of Biological Sciences**

**Research Fellow**

**ZZ003736**

**THE POST**

Please see the attached job description and person specification.

**TERMS OF APPOINTMENT**

Salary is in the range from £17,260 - £18,853 (£34,520 - £37,706 x 0.50 FTE) 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 October 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 Year’s Day inclusive and on 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.

Please note if you are the successful candidate once the verbal offer of employment has been made and accepted, references will be immediately requested. It is the University’s policy that all employment covering the past three years is referenced. A minimum of two references is required to cover this three year period of employment or study (where there has been no employment). One of your referees mustbeyour current or most recent employer.

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 Sciences  Institute of Biological and Biomedical Sciences |
| **Position Reference No:** | ZZ003736 |
| **Cost Centre:** | 44052 |
| **Responsible to:** | Professor John McGeehan |
| **Responsible for:** | N/A |
| **Effective date of job description:** | August 2017 |

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| **Purpose of Job:** |
| **Overview**  To successfully manage a defined research project and related activities of their own on behalf of the research leaders and liaise with other research fellows and relevant professionals. There is a focus on collecting, collating, analysing and interpreting scientific research data and contributing to the writing of papers for research journals. Such material for publications will contribute to the growing collaborative research culture within the Institute of Biological and Biomedical and Sciences (IBBS) and bridge the research areas of Structural Biology in the School of Biological Sciences with Brain Tumour Mitochondria and Metabolism in the School of Pharmacy and Biomedical Sciences.  **Team and Environment**  This post is funded for 18 months as part of a long-term joint scientific venture between Prof. John McGeehan and Dr Rhiannon McGeehan. The research team is made up of two research groups within IBBS:  - Molecular Biophysics Group, with protein structural aspects led by Prof. John McGeehan. This is one of the main divisions within IBBS and has a focus on structural and biochemical studies.  - Brain Tumour Research Mitochondria and Metabolism Group led by Dr Rhiannon McGeehan. This is one of 5 groups within the wider Brain Tumour Research core-funded Centre of Excellence, led by Prof. Geoff Pilkington.  The McGeehan laboratory currently hosts two research fellows, two PhD students, with technical support. The Pilkington laboratory, currently hosts one Reader, four senior research fellows (including the current Mitochondria and Metabolism Sub-theme leader), five research fellows, and four PhD students, with technical support.  **Project and Role**  This research project focuses on investigating the role of mitochondrial DNA mutations in human brain tumours. It capitalises on an existing pipeline that we have established between the two Schools, which (i) identifies and predicts the function of mitochondrial DNA mutations in brain tumours using next generation sequencing and 3D protein mapping and analysis, respectively, and (ii) explores these predictions using *in vitro* functional assays using early passage brain tumour-patient derived cell cultures.  Collectively, these studies have yielded insights into their role in GBM cell behaviours, including drug sensitivity and contributed to generating the following outputs so far:   * Rhiannon E. McGeehan, Lewis A. Cockram, Littlewood, D.T.J., Diana M. Eccles and Qian An (2017) Deep sequencing reveals the landscape of mitochondrial DNA protein-coding variations in breast-to-brain metastasis blood samples (accepted July 2017) * Song, Z., Laleve, A, Vallières, C., McGeehan, J.E., Lloyd, R., Meunier, B. Human mitochondrial cytochrome b variants studied in yeast: not all are silent polymorphisms. 2016. Human Mutation 37(9):933-41. * Lloyd, R.E., Keatley, K., Littlewood, D.T.J., Meunier, B., Holt, W.V., Higgins, S.C., An, Q., Fillmore, H.L., Ashkan, K., Pilkington, G.J, McGeehan, J.E. Identification and Functional Mitochondrial Mutations in Glioblastoma. 2015. Neuro-Oncology 17(7), 942–952. (Cover) * Lloyd, Rhiannon, E. and McGeehan. John, E. Structural Modelling of Mitochondrial Mutations Reveals a Role for Bigenomic Protein Interactions in Human Disease, 2013. PLOS ONE 9;8(7):e69003   The Fellow’s research work will be divided as follows:   * Main role, Dry work: (i) identification of mitochondrial genome mutations from the next generation sequencing data using an established bioinformatics pipeline, and (ii) identification of functional targets using 3D protein mapping and analysis. As the database of mitochondrial genome mutations grows, additional links are available with our bioinformatics group for more complex genetic analyses. * Additional role, Wet work: (i) mitochondrial genome preparation for next generation sequencing from brain tumour-patient derived samples, and (ii) *in vitro* functional assays using early passage brain tumour-patient derived cell cultures.   Training will be provided where necessary.  Following on from several initial publications (above), we are in the position to complete further manuscripts. Thus, the Fellow will be expected to collate and analyse our existing mitochondrial genome data, as well as acquire any additional data required for ongoing and new publications, to participate in drafting of manuscripts, and to present findings at workshops and conferences.  The Fellow will undertake a substantial experimental programme drawing upon their existing skills and upon new skills that the Fellow will be expected to develop during the programme. The Fellow will work closely with the Mitochondria and Metabolism Senior Research Fellow and will help to direct and support postgraduate research students in the group (MRes and PhD). |

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| **Key Responsibilities:** |
| 1. To manage and be responsible for the completion of the research project on behalf of the Principal Investigators, 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   **Line Management Responsibilities**   1. Assignment of tasks to best deliver the project in a timely fashion 2. To liaise with the Principal Investigators to ensure the efficient operation project and associated laboratories 3. Contribute to the operational planning and development of the School of Biological Science, including project work 4. Deputise for the Principal Investigators where appropriate 5. Represent the School of Biological Sciences and the Institute of Biological and Biomedical Sciences at meetings where appropriate   **Additional expectations of the role holder**   1. In line with the research project aims and objectives, the role holder is required to plan, prioritise and organise their own workload 2. To communicate with team members and liaise and network with relevant other professional bodies, to influence events 3. To lead team meetings when required providing relevant and timely information, in order to aid decision making 4. To solve problems that occur during the length of the research project applying knowledge of subject area 5. Can deliver short one-off training sessions or lectures such as explaining how to conduct literature or database searches, and laboratory techniques 6. To analyse research data and develop new evaluation methods, select existing methodologies determining when they should be applied 7. 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 8. Any other duties as required by the Principal Investigators/Head of Department |

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| **Working Relationships:** |
| 1. Managed by the Principal Investigator (Prof. John McGeehan) and Co-investigator (Dr Rhiannon McGeehan and employment cover post) within the School of Biological Sciences and Pharmacy and Biomedical Sciences, respectively 2. Working with other researchers in the Molecular Biophysics and Brain Tumour Research teams (in particular the Mitochondria and Metabolism Sub-group Senior Research Fellow) within the School of Biological Sciences & School of Pharmacy and Biomedical Sciences and with other external research collaborators where appropriate 3. Liaising with research and academic colleagues and support/technical staff on day-to-day issues 4. Helping to manage project-specific research students operating in the same laboratory |

1. **PERSON SPECIFICATION**

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| **No** | **Attributes** | **Rating** | **Source** |
| **1.** | **Specific Knowledge & Experience** |  |  |
| 1.1 | Ongoing research experience in related field of molecular and cell biology | E | AF, S |
| 1.2 | Research experience in nucleotide extraction, PCR, cell culture, *in vitro* functional assays and related techniques | E | AF, S |
| 1.3 | Research experience of collecting descriptive and quantitative data | E | AF, S |
| 1.4 | Practical knowledge of protein structural biology | E | AF, S |
| 1.5 | Knowledge of mitochondrial genetics and biology | E | AF, S |
| 1.6 | Evidence of contribution to manuscript preparation and publishing in leading peer-reviewed journals | E |  |
| 1.6 | Practical knowledge of next generation sequence analysis | D | AF, S |
| 1.7 | Practical knowledge of neuro-oncology | D | AF, S |
| 1.9 | Experience of writing research funding applications | D | AF, S |
| 1.10 | Previous experience of successfully managing a research project through to completion | D | AF, S |
| 1.11 | Previous experience of managing staff and students | D | AF, S |
| **2.** | **Skills & Abilities** |  |  |
| 2.1 | Ability to predict and solve problems when they occur | E | AF, S |
| 2.2 | Ability to plan, organise and prioritise workloads | E | AF, S |
| 2.3 | Good communication and interpersonal skills | E | AF, S |
| 2.4 | Good report writing skills | E | AF, S |
| 2.5 | Data analysis skills | E | AF, S |
| 2.6 | Excellent oral presentation skills | D | AF, S |
| 2.7 | Project Management skills | D | C |
| 2.8 | Ability to communicate fluently in English to a scientific standard | E | AF, S |
| **3.** | **Qualifications, Education & Training** |  |  |
| 3.1 | Completed PhD in relevant subject or equivalent professional experience | E | AF, S |
| **4.** | **Other Requirements** |  |  |
| 4.1 | Ability to motivate and engage others in research | E | AF, S |
| 4.2 | Ability to work on own initiative and as part of a team | E | AF, S |
| 4.3 | 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 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) | X | 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 | |
| 12. Food handling | | 24. Other (please specify) | |

**Completed by Line Manager/Supervisor:**

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| **Name (block capitals)** | Prof. John McGeehan |
| **Date** | 21/8/2016 |
| **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.