**Job Description: Research Assistant**

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| **Faculty:** | ***Science & Engineering*** |
| **Department/Subject:** | ***Biosciences*** |
| **Salary:** | *Grade 7: £33,882-£37,99 per annum pro rata* |
| **Hours of work:** | ***35hrs/week*** |
| **Number of positions:** | ***1*** |
| **Contract:** | **This is a fixed term position until 30/09/2028** |
| **Location:** | **This position will be based at the Singleton campus** |

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| **Main Purpose of Post** | The **Natural Products BioHUB Centre (NPB-Centre)**, a transdisciplinary hub centred in the Biosciences Department at Swansea University (SU), is one of the UKRI Accelerating the Green Economies Centres. Our mission is to harness the industrial potential of eukaryotic microbes fostering interdisciplinary collaboration. The Centre addresses the rapidly growing market for microbial natural products, which includes antimicrobials, organic acids, and agricultural applications.    The NPB-Centre utilizes existing research capabilities and innovative business models to streamline the journey from discovery to commercialization. This includes focusing on developing algal biotechnological application and natural product discovery. The goal is to research natural products, develop innovative processes, overcome regulatory challenges and facilitate the commercial viability of new products, driving green technology innovation and supporting global sustainability. The NPB Centre will leverage the interdisciplinary expertise of SU, the Centre for Agriculture and Biosciences International (CABI) and the Scottish Association for Marine Science (SAMS), along with established industrial collaborations. The NPB Centre is supported by UK Research and Innovation (UKRI) Building a Green Future strategic theme grant number UKRI239.    Operational strategies of the NPB-Centre include collaborative outreach, organism exploitation, research and development of organisms and processes, and advanced testing, analytical and screening platforms. These efforts are supported by significant infrastructure to promote sustainable economic development. The Centre aims to attract private investment, enhance local capabilities, and foster the widespread adoption of green economy solutions. By excelling in green biotechnology R&D, the NPB-Centre is committed to delivering substantial economic and environmental benefits, creating green jobs, and ensuring regional prosperity.  **The fungal biocontrol Research Assistant position** will join an existing research team with particular focus on leading R&D activities for the development of fungal biocontrol agents. The post holder will be supporting research activities on promising fungal strains to assess their efficacy against target insect pests, understanding virulence mechanisms including molecular and biochemical markers, formulation technologies and application strategies. The post holder will work closely with research technicians to conduct efficacy studies and the rest of the team in translating innovative research to commercial outputs such as new products, services, IP and spinouts.  **Role Overview**: The Research Assistant will support R&D activities focused on developing fungal biocontrol agents and biostimulants, either as whole organisms or by identifying compounds to replace synthetic chemicals. The position requires expertise in assessing the efficacy of fungal strains and/or derived compounds against target insect pests, understanding virulence mechanisms, and developing formulation technologies and application strategies. This role also includes conducting risk assessments such as toxicity assays to determine the safety of organisms or their products for humans, animals, and the environment.  **Key Responsibilities**:   * Support research activities on the development of fungal biocontrol agents and biostimulants. * Conduct efficacy assessments of promising fungal strains or derived compounds against various insect pests, vector of human diseases. * Conduct efficacy assessment of promising fungal strains or derived compounds as biostimulants or biofertilisers. * Investigate virulence mechanisms using molecular and biochemical markers. * Develop and optimize formulation technologies and application strategies. * Evaluate the potential use of microbial blends as novel products for crop production and protection. * Perform risk assessments, including toxicity testing using relevant animal or human cell lines models to evaluate the safety of biocontrol agents. * Collaborate with interdisciplinary research groups to identify, screen, extract and mass produce either whole organisms or their metabolites for commercial applications. * Collaborate with research technicians to design and execute efficacy studies. * Liaise with industry partners to develop collaborative R&D studies and projects. * Work with the research team to translate innovative research into commercial outputs, including new products, services, intellectual property (IP), and spinouts. * Engage in interdisciplinary collaboration to promote sustainable economic development and green technology innovation. * Liaise with CABI to identify promising strains for development as fungal biocontrol agents. |
|  | 1. Pro-actively contribute to and conduct research, including gather, prepare and analyse data, generate original ideas and present results. 2. Prepare reports, draft patents and papers describing the results of the research, both confidential and for publication. 3. Be self-motivated, apply and use their initiative, aiming to determine suitable ways to tackle challenges and seeking guidance when needed. 4. Interact positively and professionally with other collaborators and partners within the Faculty and elsewhere in the University and beyond as appropriate such as in industry/commerce, public organisations, hospitals and academia. 5. Contribute to Faculty organisational matters in order to help it run smoothly and to help raise its external research profile. 6. Keep informed of developments in the field in technical, specific and general terms and their wider implication for the discipline area, commercial applications and the knowledge economy. 7. When requested act as a representative or member of committees, using the opportunity to extend their own professional experience. 8. Demonstrate and evidence own professional development, identifying development needs with reference to the Vitae Researcher Development Framework, particularly with regard to probation, PDR and participation in training events. 9. Maintain and enhance links with the professional institutions and other related bodies. 10. Observe best-practice protocols in maintenance and retention of research records as indicated by HEI and Research Councils records management guidance.  This includes ensuring project log-book records are deposited with the University/Principal Investigator on completion of the work. |
| **General Duties** | 1. To promote equality and diversity in working practices and maintain positive working relationships. 2. To conduct the job role and all activities in accordance with safety, health and sustainability policies and management systems, in order to reduce risks and impacts arising from the work activity. 3. To ensure that risk management is an integral part of any decision making process, by ensuring compliance with the University’s Risk Management Policy. 4. Any other duties as agreed by the Faculty / Directorate / Service Area. |
| **Person Specification** | **Essential criteria:**   1. A Degree in fungal biocontrol or related discipline 2. Evidence of the ability to actively engage in and contribute to writing and publishing research papers, particularly for refereed journals. 3. A demonstrable ability to conduct research in line with the objectives of the project. 4. Evidence of planning skills to contribute to the research project. 5. Experience of research on fungi in an applied setting 6. Experience conducting trials, preferably in a field setting 7. A commitment to continuous professional development   **Desirable Criteria**   1. Masters Degree in an area related to fungal biocontrol 2. Knowledge of chemical analysis of organic compounds 3. Experience using biocontrol fungi to control invertebrate pests 4. Experience maintaining invertebrate stock collections 5. Evidence of ability to work with industrial partners 6. Evidence of writing research funding proposals |
| **Welsh Language Level** | Level 1 – ‘a little’ - pronounce Welsh words. Able to answer the phone in Welsh (good morning / afternoon). Able to use very basic every-day words and phrases (thank you, please etc.). Level 1 can be reached by completing a one-hour training course.  For more information about the Welsh Language Levels please refer to the Welsh Language Skills Assessment web page, which is available [here](https://www.swansea.ac.uk/welsh-language-standards/compliance/recruitment/). |
| **Additional Information** | Informal Enquiries: Prof. Dan Eastwood, Dr Anke Heuberger |

  