UNIVERSITY OF WARWICK

Job Description

Job Title	Senior Research Technician
Department	School of Life Sciences
Grade	5

Job Description	
Job purpose (a brief summary of the role)	Our group investigates phage-bacteria interactions and seeks to discover novel anti-biofilm proteins that could address the growing challenge of antimicrobial resistance. Through functional metagenomics, we aim to identify hypothetical phage proteins with therapeutic potential. The ideal candidate would be enthusiastic about microbiology in general and phage biology research in particular and getting involved in various aspects of our research as well as supporting colleagues and students.
Duties and responsibilities	**1.** Planning and undertaking experiments as scheduled in the project proposal. **2.** Responsibility for routine growth and maintenance of bacterial cultures (P. aeruginosa strains including biofilm-deficient mutants) for experimentation, including modifying experimental conditions as necessary. **3.** Construction of viral metagenomic libraries from environmental samples (wastewater, marine, soil) and clinical samples, including DNA extraction, fragmentation, and cloning into expression vectors. **4.** Undertaking molecular biology techniques including DNA/RNA extractions, PCR, gel electrophoresis, transformation, and plasmid preparations. **5.** Carrying out basic bioinformatic analysis using software packages for sequence analysis and data visualization. **6.** Managing the project on a day-to-day basis including managing equipment, purchasing consumables, making recommendations for purchase of new equipment and maintenance issues, and monitoring progress while advising the PI of any issues likely to lead to delays. **7.** Keeping detailed records of laboratory work, experimental results, and storing electronic data. **8.** Communications including attending weekly research group meetings and sharing/contributing ideas, communication with other research groups both inside and outside of the Department (exchanging information, seeking and advising on techniques). **9.** Drafting results of analysis for input into scientific publications. The duties and responsibilities outlined are not intended to be an exhaustive list but provide guidance on the main aspects of the job. The postholder will be required to be flexible in their duties.

Person Specification

The Person Specification focuses on the essential and desirable knowledge, skills, experience and qualifications required to undertake the role effectively. This is measured by (a) Application Form, (b) Test/Exercise, (c) Interview, (d) Presentation.

Essential Criterion No.	Essential Criterion Description	Measured by
E1	Voactional Qualification at NVQ Level 4, or HNC/HND or education to 'A' level standard or equivalent in Mathematics and/or a relevant first degree in molecular biology, microbiology, or a closely related field with significant laboratory experience subject, or relevant experience at a high level in a similar work environment.	A & C
E2	Experience in molecular cloning techniques (DNA extraction, restriction digestion, ligation, transformation) or willingness to learn.	A & C
E3	Experience in microbiological lab techniques, including cultivation and maintenance of bacterial culture, work in aseptic conditions, etc.	A & C
E4	Experience in planning and undertaking experiments, including assessing the conditions needed and using appropriate techniques.	A & C
E5	Experience of working with the PI to analyse the requirements of a project, including setting project milestones.	A & C
E6	Experience of supervising less experienced technical staff and PhD and undergraduate students.	A & C
E7	Ability to take an active role in laboratory and project meetings, including giving presentations on your own work and communicating progress or problems to PI.	A & C
E8	Ability to run a project on a day-to-day basis and draft project results for input into scientific publications.	A & C

Desirable Criterion No.	Desirable Criterion Description	*Measured by*
D1	A PhD degree in microbiology, molecular biology, life sciences, biochemistry, or related fields.	A & C
D2	Prior experience in common laboratory management tasks (e.g., equipment maintenance, procurement of consumables, maintaining laboratory inventories and strain collections, preparing standard reagents, and working in accordance with BSL-2 biosafety and health and safety regulations).	A & C
D3	Experience of working in a Biosafety Level 2 (BSL-2) laboratory environment or willingness to undertake BSL-2 training and comply with biosafety protocols.	A & C
D4	Experience with *Pseudomonas aeruginosa* or other opportunistic pathogens.	A & C
D5	Experience with biofilm assays or high-throughput screening methods.	A & C