

Job Title: Research Technician
Grade: 4
Salary: £18,777 to £21,585 per annum
Department: Genetics and Genome Biology
Contract: Full-time, fixed term contract for two years
Job Reference: 540

Role Purpose

Salmonella spp. is a leading cause of food poisoning worldwide, where it is largely associated with the consumption of eggs, chicken and pork meat in high income countries. To determine the risk posed to UK consumers by Salmonella which may enter the food chain via contaminated poultry and swine products from both the UK and Thailand, we will collect up to 300 Salmonella isolates from each country from swine and poultry. We will ensure that the Salmonella isolates are representative of the top 5 serovars from each country, from poultry and pigs, and if possible, have been isolated at different times. Whole genome sequencing (WGS) will be performed on all isolates, and phylogenetic reconstruction performed to examine Thai and UK lineages.

By characterising a diverse set of Salmonella isolates from both countries we will ensure the most suitable Salmonella isolates are selected for downstream work, which is a major component of this project, which includes the development of phage therapy as an alternative to antimicrobials.

The post-holder will be based at the Animal and Plant Health Agency, in Weybridge on a full-time basis.

Principal Responsibilities	% Time
<ul style="list-style-type: none"> With supervision, culture and extract DNA from Salmonella strains for whole genome sequencing (WGS). 	25
<ul style="list-style-type: none"> Perform basic data analysis under guidance, using the APHA SeqFinder bioinformatics pipeline for antimicrobial resistance (AMR) genes. 	15
<ul style="list-style-type: none"> With supervision, perform phylogenetic reconstruction of the UK and Thai isolates by: 1) calculating the core genome; 2) producing a core genome single nucleotide polymorphism alignment against a reference strain; 3) build a phylogenetic tree. 	20
<ul style="list-style-type: none"> Monitor AMR gene database and update with new genes as appropriate. 	10
<ul style="list-style-type: none"> To accurately record, present and discuss experimental data with the PI. 	5
<ul style="list-style-type: none"> To assist with preparation of data that may be subsequently used for publication in scientific papers, grant submissions and presentations at local, national and international conferences. 	5
<ul style="list-style-type: none"> To help produce and standardise protocols and assist with the development and validation new web-based techniques to support the research work, under the guidance of the PI. 	10





Job Summary

<ul style="list-style-type: none"> To ensure the lab and subsequent lab work is in adherence to Health and Safety regulations 	5
<ul style="list-style-type: none"> Assist with any other lab duties as and when required 	5
Internal and External Relationships	
<p>Daily contact with staff at all levels about the execution of duties</p> <p>Contact with members of the team based at Leicester University for services, advice and collaboration</p> <p>Regular contact with supervisor to review and plan research activity</p>	
Planning and Organising	
<p>Plan and prioritise own workload under the direction of the PI to meet deadlines.</p> <p>Ordering supplies and equipment to meet the requirements of the research to ensure stock levels are available.</p>	
Qualifications, Knowledge and Experience	
<p>Essential</p> <ul style="list-style-type: none"> Technical or Scientific education to ONC/BTEC/NVQ3 level* Previous laboratory-based experience in a similar field* Knowledge of good lab practice and Health and Safety issues* Experience in working with genomic data and use of basic Bioinformatic tools* <p>Desirable</p> <ul style="list-style-type: none"> Experience or understanding of molecular techniques 	
Skills, Abilities and Competencies	
<p>Essential</p> <ul style="list-style-type: none"> Good IT skills to include experience in the use of Microsoft software* Good laboratory and microbiological skills Ability to work flexibly and organise and prioritise own work to agreed deadlines Excellent written* and oral skills Understanding of Health and Safety regulations in a laboratory setting* <p>*Criteria to be used in shortlisting candidates for interview</p>	
VITAL	



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Valuing People, Innovators, Together, Accountable, Leaders.

Equality and Diversity

We believe that equality, diversity and inclusion is integral to a successful modern workplace. By developing and implementing policies and systems that challenge stereotypes across all aspects of our work, we have a culture that recognises and values the diverse contributions of our staff which benefits everyone. Our strong values of inclusivity and equality support our efforts to attract a diverse range of high quality staff and students, and identify our University as a progressive and innovative workplace that mainstreams equality, diversity and inclusion.

