Candidate Information

Position:	Research Fellow
School/Department:	School of Biological Sciences
Reference:	26/113570
Closing Date:	Monday 24 August 2026
Salary:	£42,972 per annum
Anticipated Interview Date:	Thursday 10 September 2026
Duration:	Available for 24 months or until 31 August 2028 whichever is soonest

JOB PURPOSE:

The School of Biological Sciences and Institute for Global Food Security at Queen's University Belfast is currently seeking to appoint an exceptional candidate to the post of Research Fellow. The appointee will join the AMR & One Health Lab and the Huws Group, two interdisciplinary groups working in the disciplines of Microbiology, Antimicrobial Chemotherapy and Translational Veterinary Therapeutics. Animal Science, and Bioinformatics.

The successful candidate will primarily work within a multidisciplinary team undertaking research focused on combatting antimicrobial resistance in bovine mastitis through alternative non-antibiotic strategies, as part of a BBSRC Follow on Fund project, PUREMILK. The post holder will work with project partners at the Moredun Research Institute and with our industrial Partner RAFT Solutions to evaluate efficacy of novel Antimicrobial Peptides (AMPs) in the treatment of bovine mastitis and evaluate their mode of action in chronic mastitis studies using dairy cattle. In general, the postholder will be an active member of the research project/team assisting in the planning and delivery of research activity within a BBSRC Funded Follow on fund, with organization and excellent communication skills being essential. Priority will be given to candidates with research interests and expertise in microbiology with bioinformatic experience in terms of metataxonomic analysis. Concomitant to these scientific requirements the applicant must help contribute to commercial milestones including 1) raise the profile of our research through, for example, discussions with farmers and fellow scientists, 2) Checks on freedom to operate, 3) Prepare data for patent filing, submission to the Veterinary Medicine directorate and 4) aid initial discussions with companies regarding potential licensing. This applicant will be crucial to the team and underpin research translation with aids the sustainability of the dairy industry under the BBSRC strategic priority of ensuring healthy animals and humans underpinning sustainable agriculture and food systems.

MAJOR DUTIES:

1. To undertake research under the line management of the principal investigator and co investigators within the specific research project.
2. To support the development and translational evaluation of antimicrobial peptide candidates for bovine mastitis therapeutics.
3. To contribute to the planning, coordination and delivery of microbiology focused aspects of pre clinical and clinical mastitis studies with project partners.
4. To support evaluation of intramammary antimicrobial peptide efficacy in bovine mastitis studies, including interpretation of microbiological, clinical and molecular data.
5. To process, culture and analyse relevant biological samples generated through project partner studies, where appropriate.
6. To carry out antimicrobial efficacy testing, microbial enumeration, bacterial identification, molecular microbiology and related laboratory methods relevant to the project.
7. To support DNA extraction, sequencing preparation, metataxonomic analysis and interpretation of microbiome data generated through mastitis studies.
8. To analyse and integrate microbiological, molecular, metataxonomic and animal study data to assess therapeutic responses and support project conclusions.
9. To design, develop and refine experimental methodologies in order to obtain reliable and reproducible data.

10. To carry out statistical analyses, critical evaluations and interpretations using methodologies and software appropriate to the area of research.
11. To maintain accurate laboratory records, sample records, data files, risk assessments, standard operating procedures and project documentation.
12. To communicate effectively with the line manager, wider project team and external partners regarding project progress, sample transfer, data generation, troubleshooting and delivery timelines.
13. To liaise with project partners to support timely delivery of experimental milestones and data outputs.
14. To present regular progress reports on research to members of the research group, project team, project partners and external audiences.
15. To prepare, in consultation with supervisors, material for publication in national and international journals and presentations at conferences.
16. To contribute to preparation of project outputs for patent filing, Veterinary Medicines Directorate submission, commercial development, licensing discussions and future funding applications.
17. To carry out routine administrative tasks associated with the research project to ensure that the project is completed on time and within budget. These may include organisation of project meetings, documentation, financial monitoring, ordering, risk assessment and reporting of research activities.
18. To assist the grant holders in the preparation of funding proposals, technical reports and applications to external bodies.
19. To carry out occasional undergraduate supervision, demonstrating or teaching related duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
20. To read academic papers, journals and technical guidance to keep abreast of developments in antimicrobial peptides, mastitis therapeutics, veterinary microbiology, microbiome science and related disciplines.

ESSENTIAL CRITERIA:

1. Hold or is about to be awarded a PhD in a relevant area (preferably microbiology or at minimum have strong aspects of microbiology within).
2. At least 3 years research experience to include:
   - Experience of antimicrobial development and efficacy testing.
   - Demonstrable laboratory experience relevant to microbiology, and computational biology, specifically 16S rDNA microbiome analysis, metataxonomic and transcriptomic analysis
   - Experience of using computational biology, bioinformatics/programming skills in appropriate languages and software e.g. R.
3. Experience of designing, developing or refining experimental methodologies to generate reliable and reproducible data.
4. Ability to analyse, critically evaluate and interpret microbiological, molecular or bioinformatic data using appropriate methods.
5. Ability to maintain detailed and accurate laboratory records, formulation records and experimental documentation and ability to assess and organise resources.
6. Some experience of peer-reviewed publication in a relevant area of research.
7. Some experience of supervising undergraduates and/or postgraduate students.
8. Ability to contribute to broader management and administrative processes.
9. Methodical approach to project management and meticulous in regard to experimental procedures and record keeping.
10. Experience of presenting to the scientific community i.e. conference talks.
11. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within established research programmes.
12. Ability to communicate complex information clearly.
13. Demonstrable intellectual ability.
14. Ability to assess and organise resources.
15. Experience of working in a team.
16. Irregular hours including evening, weekend and other out-of-hours work may be a component of the research at times.
17. Must be willing to travel to national and international meetings and collaborative laboratories as required on an ad-hoc basis.

DESIRABLE CRITERIA:

1. Experience of pre-clinical development and optimisation of antimicrobials including antimicrobial peptide formulations.
2. Experience in veterinary microbiology, mastitis research, livestock health research or dairy cattle studies.
3. Experience in in vivo animal trials especially in dairy cattle.
4. Experience in the use of HPLC and immunological assay techniques and analysis of data obtained.
5. Experience in the analysis of high-throughput Metagenomic DNA sequencing data analysis.

6. Experience preparing materials for pre-clinical studies, partner transfer, regulatory documentation or commercial development.
7. Peer reviewed publications or preprints in the area of AMR or livestock microbiome research.
8. Evidence of having presented at conferences (poster and/or oral presentations).

ADDITIONAL INFORMATION:

The post holder is expected to contribute to effective team working within the AMR & One Health Lab, the Huws Group and the wider project consortium.