

Candidate Information

Position:	Research Fellow
School/Department:	School of Biological Sciences
Reference:	19/107148
Closing Date:	Wednesday 6 March 2019
Salary:	£33,199 - £39,610 per annum (potential to progress to £43,266 per annum through sustained exceptional contribution)
Anticipated Interview Date:	Monday 18 March 2019
Duration:	Available 24 months, starting 1st May 2019.

JOB PURPOSE:

To be an innovative, highly productive, ambitious and collaborative member of a new research group led by Prof Eric Morgan in the School of Biological Sciences. The position will involve working as part of a research programme that is investigating the epidemiology of parasite infections in animals under climate change.

The purpose of the project is primarily to adapt, develop further and validate existing epidemiological simulation models to consider the impact of targeted selective treatment (TST) of gastrointestinal nematodes in cattle, on both parasite population dynamics and herd performance. These models will be used to inform TST trials on selected farms in Northern Ireland, to provide proof of principle and underpin wider uptake. A parallel work programme will refine empirical understanding of climatic drivers of infective nematode larval availability and distribution, to feed into model structure and parameter estimation. Simulations using the model will assess the sustainability of TST approaches under climate and farm management change. Outputs will be high quality peer reviewed publications, strategic recommendations to the UK cattle farming industry and a toolkit for computer simulation of parasites on cattle farms.

The successful applicant will be seeking to lead this ambitious cutting edge research project and will be involved in supervision, planning, day-to-day lab management, collaborations (including with project partners at Newcastle University) and outreach.

This is a 30-month post funded by the UK Biotechnology and Biological Sciences Research Council, ending on 31 April 2021.

Further information:

[https://pure.qub.ac.uk/portal/en/persons/eric-morgan\(9458ab09-2e4d-45f6-8a8f-980ea98d423f\).html](https://pure.qub.ac.uk/portal/en/persons/eric-morgan(9458ab09-2e4d-45f6-8a8f-980ea98d423f).html)

MAJOR DUTIES:

1. Develop, plan and deliver an area of personal research and expertise, and undertake research under supervision within a research project aimed at evaluating targeted selective treatment (TST) of gastrointestinal nematodes in cattle, using simulation models and supporting biological experiments and field data.
2. Maintain up-to-date knowledge of the field of interest at the cutting edge (e.g. modelling methods including climate simulation, new information on parasite epidemiology and control) and communicate the same to the collaborating team.
3. Adapt, develop and refine simulation models, and design and interpret field research or experiments in order to obtain reliable and reproducible data.
4. Carry out analyses, critical evaluations and interpretations of experimental and field data and the literature using methodologies and other techniques appropriate to area of research.
5. Present regular progress reports on research to members of the collaborative team, other groups within the Centre/University, and to external audiences nationally and internationally to disseminate and publicise research findings.
6. Prepare, in consultation with Principal Investigator and other team members, material for publication in national and international journals and presentations at national and international conferences.

7. Assist Principal Investigator in the preparation of funding proposals and applications as well as project progress reports to external bodies.
8. Actively drive own career development, e.g. through Postdoctoral Development Committee activities, fellowship applications etc.
9. Carry out routine administrative tasks associated with the research project/s to ensure that the project is completed on time and within budget.
10. Carry out routine administrative tasks associated with the day-to-day running of the research group in a communal lab setting.
11. Carry out undergraduate/post-graduate student, research technician and visiting researcher training and supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of a member of academic staff.
12. Co-produce field data collection and field TST trials with participating farmers, and feed results back to the industry through demonstration farm events and discussion groups.
13. Liaise with project partners at Newcastle University and external experts on the Project Steering Group on model development and scientific and industry-facing outputs.

Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-12 months in advance and contribute to research group planning.
2. Plan for the use of research resources, laboratories and workshops where appropriate.
3. Plan own day-to-day activity within framework of the agreed research programme.
4. Plan up to a year in advance to meet deadlines for grant applications, journal publications and to prepare presentations and papers for conferences and meetings.
5. Coordinate and liaise with other members of the research group and collaborative research groups over work progress.
6. Assist in training other group members on effective planning and organisation.

Resource Management Responsibilities:

1. Ensure research resources are used in an effective and efficient manner including liaising with vendors and collaborators.
2. Provide guidance as required to support staff and any post-graduate/under-graduate students and visiting researcher who may be assisting with research.

Internal and External Relationships:

1. Liaise on a regular basis with Principal Investigator, members of the collaborative team, colleagues, students, other collaborators and participating farmers.
2. Communicate appropriately and effectively with group colleagues on topics such as latest research findings/results within the group and field.
3. Build internal contacts and participate in internal networks for the exchange of information and form relationships for future collaboration.
4. Travel to, and present at scientific meetings and collaborative laboratories when necessary.
5. Join external networks to share information and ideas and help develop external collaborations, as appropriate.
6. Contribute to the School's outreach programme by establishing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

1. Have or be about to obtain a relevant PhD in veterinary parasitology or a closely related research area.
2. At least 3 years' recent relevant research experience to include:

Experience in quantitative methods such as mathematical modelling, computer simulation, and/or advanced statistical analysis of biological data, to include computer programming experience using R, Matlab, Python, or other language relevant to the project.

3. Ability to lead practical research on the epidemiology, diagnosis or control of parasites of veterinary importance, towards specified project aims, with the support of other team members.
4. Ability to lead practical research on the epidemiology, diagnosis or control of parasites of veterinary importance, towards specified project aims, with the support of other team members.
5. Ability to contribute to the School's outreach programme, for example by involving farmers in the research and dissemination of outputs.
6. Sufficient breadth and depth of specialist knowledge in the discipline and of research methods and techniques to work within the established research programme.

7. Competent in maintaining and communicating knowledge of cutting-edge of field of expertise.
8. Show a commitment to, and an interest in the research topic.
9. Ability to communicate complex information clearly, including excellent written and verbal communication skills.
10. Ability to build contacts and participate in internal and external networks.
11. Strong ability to work from own initiative and to work independently.

DESIRABLE CRITERIA:

1. Hold a UK Home Office personal animal licence.
2. Veterinary degree and registered as a Member of the Royal College of Veterinary Surgeons.
3. Experience in animal handling, in particular faecal and blood sampling of cattle.
4. Recent research experience in parasite transmission dynamics and control in a farm setting or in a complex ecological system.
5. Recent experience of on-farm sampling of parasite infection and/or design and analysis of experiments on free-living parasite life stages.
6. Recent high quality original research publications in reputable peer-reviewed journals, commensurate with career stage.
7. Able to articulate and discuss major current challenges around parasite control on farms, potential solutions, and key gaps in scientific knowledge and understanding.
8. Ability to supervise postgraduate/undergraduate students and visiting researchers in the laboratory.
9. Experience of broader management and administrative procedures within research projects, including financial control and reporting, health and safety, laboratory SOPs, and preparation and communication of project reports.
10. Highly ambitious, motivated, efficient, and organised.
11. Able to work as part of a team and manage external relationships with collaborators and participating farmers in support of project aims.
12. Evidence of having presented at national and international conferences.
13. Excellent team working skills in multiple internal and external team settings, including leadership qualities.
14. Evidence of problem-solving skills and ability to use own initiative.
15. Current UK driving licence.
16. Able and willing to support laboratory and farm-based work as part of a team, including occasional work outside of normal working hours when necessary.
17. Willing to travel to national and international meetings and collaborating laboratories.