JOB DESCRIPTION

Job title:	Research Scientist 2

Pay Band	6

Department:	Vaccines and Diagnostics

Reporting Structure:

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│   Head of Department     │
│ Vaccines and Diagnostics │
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            ▼
┌─────────────────────────┐
│   Principal Research     │
│    Scientist (Band F)    │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│       Postholder         │
│   Research Scientist 2   │
│       (Grade 6)          │
└─────────────────────────┘
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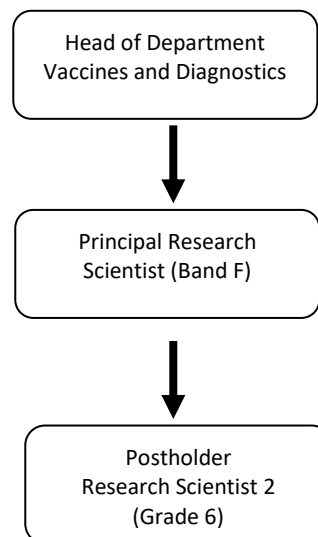
Staff reporting to postholder:

None

Main purpose of job:

This position is part of a 3-year BBSRC-funded project between the Moredun Research Institute and Nottingham University aimed at developing a genetic selection control programme for maedi visna, an intractable infectious viral disease of sheep that is a serious animal welfare issue and causes significant economic losses for sheep farmers. This position will be based in Penicuik, Edinburgh at The Moredun Research Institute.

The project will focus on the role of the sheep TMEM154 gene in susceptibility to maedi visna virus (also known as ovine lentivirus). This position, based at Moredun Research Institute, will focus on the cellular function of the TMEM154 protein and its ability to influence maedi-visna virus replication. We will work

with collaborators in Nottingham who will study the prevalence of different alleles of TMEM154 in UK sheep. Collectively, the project will provide scientific knowledge to support a genetic screening programme to control maedi visna infection in farmed sheep.

Specific scientific goals are:

1. To determine the cellular function of TMEME154. Currently there is no information available regarding the function of this protein and we will employ a variety of molecular biology and proteomic approaches to identify cellular factors that bind TMEM154 towards understanding its function.
2. To determine the role of TMEM154 on replication of ovine lentiviruses. This will require use of a variety of molecular and cellular approaches to evaluate the effect of TMEM154 on lentivirus replication in cell lines and primary macrophage cultures.

Main duties of postholder:	- Perform cell culture and related experiments as required to determine the function of the ovine TMEM154 protein. This will include a variety of experimental techniques including immunofluorescence microscopy, cell fractionation, protein-protein interaction studies, RNA-Seq, RT-qPCR, gene knockdown/knockout (shRNA/CRISPR), and others. - Ensure appropriate data management, security and analysis in accordance with the aims of the project - To prepare work for peer-reviewed publications - Attend UK stakeholder and scientific events as required, including regular progress meetings with collaborators at University of Nottingham - To operate as an effective team player within the collaborative group and to be accountable to the line manager on the progress and daily running of the project. - Undertake administrative and any other relevant tasks as reasonably requested by the line manager. To update professional skills as appropriate.

PERSON SPECIFICATION

	Essential	**Desirable**
Attainments:	Hold a science or veterinary degree and a PhD in Cell Biology, Virology, or other appropriate area of science.	
Experience:	Demonstrable experience of working in a relevant research area	
	Experience with studying protein:protein interactions, including pull-down assays, co-immunoprecipitation assays, virotrap or similar methods	Experience in proximity ligation assays
	Tissue culture – proven experience maintaining and working with cell lines and/or primary cell cultures	Molecular biology skills, in particular, experience in methods for gene knockout or gene knockdown, e.g., CRISPR, shRNA; RT-qPCR
	Fluorescent microscopy: preparation of samples and imaging	Experience in RNA-seq, including sample preparation and data analysis
		Experience in culturing viruses, in particular lentiviruses
Skills:	**Communication** - excellent interpersonal and communication skills when dealing with a wide range of managers and staff	
	Managing relationships – ability to deal with a wide range of people with tact and diplomacy Able to build and maintain effective working relationships with a range of people.	
	Team working - ability to work flexibly and effectively as part of the team.	

	Resilience - strong ability to work with ambiguity and constantly changing set of circumstances and issues.	

	Essential	**Desirable**
Skills:	**Planning and organisation** - able to prioritise and plan activities taking into account deadlines and resources.	
	Decision making – able to take independent action where necessary in line with policies and procedures	Ability to quickly assimilate complex information and take effective decisions when required
	Flexibility – ability to adapt and work effectively with a variety of situations, individuals or groups. Able to understand and appreciate different and opposing perspectives on an issue and to adapt an approach as the situation changes	
Other skills (please specify)	Experience in data analysis, secure data management and report preparation.	
Other requirements (please specify)		