



Job title	Research Associate/Fellow	Job family and level	Research and Teaching Level 4 (Appointment will be Level 4 Career training grade where an appointment is made before PhD has been completed)
School/ Department	Biosciences/Animal Sciences	Location	Sutton Bonington Campus

Purpose of role

To become a member of a collaborative team of scientists, based at the Universities of Nottingham and Leeds in the UK, who are investigating the effects of heat stress in a porcine model of endometrial function and early embryo development at stages up to and including gastrulation in both F1 and F2 generations. Physiological measures of cardiometabolic health and renal function will also be undertaken in adult F1 offspring. The role will focus primarily on embryonic stages. It will be based at the University of Nottingham, but will involve travel to Leeds for meetings and to participate in some experimental work.

The role holder will lead on two objectives that will assess chromatin modifications and undertake lineage mapping at different stages of F1 and F2 embryo development, up to and including gastrulation, using single-cell ATACseq and single-cell RNAseq. The epigenome of primordial germs cells will also be examined for histone modifications following isolation. The role will involve analysing large datasets (i.e., epigenomics, transcriptomics) generated from these studies. The role also involves contributing to project planning and discussions, laboratory and data analyses, scientific writing and publishing.

	Main responsibilities	% time per year
1	<p>Research:</p> <ul style="list-style-type: none"> • Plan and conduct research related to: <ul style="list-style-type: none"> ○ scRNAseq and scATACseq analyses of embryos ○ Associated bioinformatic analyses of datasets arising from these analyses • Assisting team members (Nottingham and Leeds) with sample collection <ul style="list-style-type: none"> ○ Tissue processing and cell isolation ○ Assist with RNA/DNA extractions and library preparation for sequencing ○ Assist with physiological studies in F1 adult offspring (i.e., sample collections, processing and lab-based assays) • Keep up to date with the relevant literature, evaluate and criticize internal reports and published scientific materials. 	70%

	<ul style="list-style-type: none"> • Keep meticulous experimental records, analyze and interpret data, and bring new insights to the research area. • Communicate with collaborators and attend project management meetings as required, building contacts to develop knowledge and understanding. • Contribute ideas and be involved with the longer-term planning of the project in consultation with consortium members. • Work safely and responsibly with regard to University rules. • Share expertise and guidance with more junior members of the laboratory (e.g., research students, technicians, etc.) as required. 	
2	Write up and present results internally (i.e., lab meetings) and externally (i.e., international conferences and peer reviewed journals) as appropriate, under the overall supervision of Line Managers.	10%
3	Assist with supervision of post-graduate students working alongside this project.	10%
4	General lab/office duties (e.g., purchasing, health & safety, etc.) and other duties as required which are appropriate to the grade and role of the post holder.	5%
5	Participate in out-reach activities by communicating knowledge to government bodies, industry and other stake holders	5%

Person specification

	Essential	Desirable
Skills	<p>Evidence of sufficient breadth or depth of research methodologies and techniques to work in the required research area.</p> <p>Evidence of use of state-of-the-art molecular (e.g., epigenomics, RNAseq) techniques and associated bioinformatics.</p> <p>Ability to contribute to method development/improvement.</p> <p>Excellent oral and written communication skills, including the ability to communicate with clarity on complex information.</p> <p>Ability to build relationships and collaborate with others, internally and externally.</p>	<p>High analytical ability to analyse and interpret data, evaluate and criticise texts, bring new insights.</p> <p>Analytical ability to facilitate conceptual thinking, innovation and creativity.</p>
Knowledge and experience	<p>Ability to design, conduct, analyse and write up experimental work independently.</p> <p>Willingness to learn, establish and troubleshoot new experimental/ analytical techniques.</p> <p>Good time management skills, ability to prioritise and meet deadlines.</p>	<p>Understanding of epigenetics and environmental regulation.</p> <p>Knowledge of mammalian embryology and developmental biology.</p> <p>Willingness to travel within the UK with collaborators in Leeds and overseas to attend meetings and international conferences.</p>
Qualifications, certification and training (relevant to role)	<p>PhD (or close to completion) in Mammalian embryology, Reproductive or Developmental Biology/Genetics/ or Bioinformatics, or a closely related subject.</p>	



The University strongly endorses Athena SWAN principles, with commitment from all levels of the organisation in furthering women's careers. It is our mission to ensure equal opportunity, best working practices and fair policies for all.

Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is always equitable and fair and works with integrity. Proactively looks for ways to develop the team and is comfortable providing clarity by explaining the rationale behind decisions.
- Taking ownership** Is highly self-aware, looking for ways to improve, both taking on board and offering constructive feedback. Inspires others to take accountability for their own areas.
- Forward thinking** Driven to question the status quo and explore new ideas, supporting the team to "lead the way" in terms of know-how and learning.
- Professional pride** Sets the bar high with quality systems and control measures in place. Demands high standards of others identifying and addressing any gaps to enhance the overall performance.
- Always inclusive** Ensures accessibility to the wider community, actively encouraging inclusion and seeking to involve others. Ensures others always consider the wider context when sharing information making full use of networks and connections.

Key relationships with others

