



Job title	Research Assistant	Job family and level	Research and Teaching Level 4a
School/ Department	Biosciences/Animal Sciences	Location	Sutton Bonington Campus

Purpose of role

The role holder will be a member of a multi-national team of scientists from the UK and USA who are investigating the trans-generational consequences (both epigenetic and physiological) of in utero exposure to environmental chemicals (ECs) on metabolic health and reproductive function of offspring. The role holder will be based at the University of Nottingham (UK), but will collaborate with colleagues at the Universities of Glasgow (UK) and Michigan (USA).

The project utilises an established sheep model and addresses three specific aims. These are the effects of EC exposure on (i) metabolic health, (ii) reproductive function and (iii) epigenetic mechanisms underpinning transgenerational modifications to metabolic health and reproductive function. The role holder will work on Specific Aim III (i.e., epigenetic mechanisms, bioinformatics). The role will involve the analyses of large datasets (i.e., epigenomics, transcriptomics) generated from these studies. They will contribute to project planning and discussions, data and laboratory analyses, scientific writing and publishing.

	Main responsibilities	% time per year
1	<p>Research:</p> <ul style="list-style-type: none"> • Conduct research related to: <ul style="list-style-type: none"> ○ DNA methylation analyses in isolated hepatocytes, sperm and embryos, and RNAseq analyses in sperm and seminal plasma. ○ Associated bioinformatic analyses of datasets arising from these analyses • Assisting team members in Glasgow and Michigan with sample collection <ul style="list-style-type: none"> ○ Tissue processing and cell isolation ○ Assist with RNA/DNA extractions and library preparation ahead of sequencing • Keep up to date with the relevant literature, evaluate and criticize internal reports and published scientific materials. • Keep meticulous experimental records, analyze and interpret data, and bring new insights to the research area. 	75%

	<ul style="list-style-type: none"> • 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	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%
4	Assist with supervision of post-graduate students working alongside this project.	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>Analyses of large data sets (e.g., epigenetic, RNAseq data) using contemporary bioinformatic techniques.</p> <p>Ability to contribute to analytical method development/improvement.</p> <p>Analytical ability to facilitate conceptual thinking, innovation and creativity.</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>
Knowledge and experience	<p>Ability to conduct, analyse and write up experimental work independently.</p> <p>Ability to analyse large datasets (e.g., RNAseq, epigenomics, metabolomics).</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 Glasgow and to our partner institute in Michigan USA.</p>
Qualifications, certification and training (relevant to role)	<p>Degree in Bioinformatics or a related discipline, Cell and Developmental or Reproductive Biology/Genetics</p>	<p>MSc in Bioinformatics or a related discipline, Cell and Developmental or Reproductive Biology/Genetics</p>



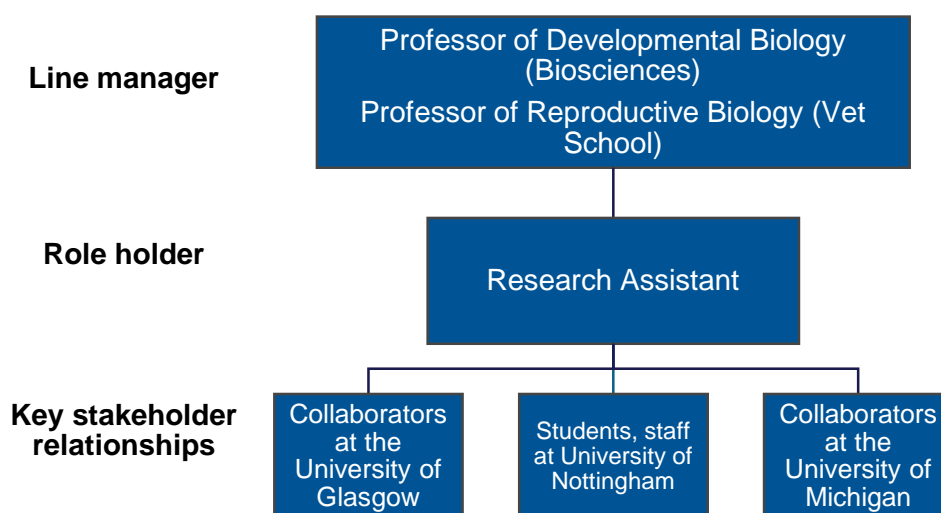
The University strongly endorses Athena SWAN principles, with commitment from all levels of the organisation in furthering women's careers. It is our mission to ensure equal opportunity, best working practices and fair policies for all.

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 friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
- Taking ownership** Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
- Forward thinking** Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
- Professional pride** Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
- Always inclusive** Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

Key relationships with others





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

The role holder will be a member of a multi-national team of scientists from the UK and USA who are investigating the trans-generational consequences (both epigenetic and physiological) of in utero exposure to environmental chemicals (ECs) on metabolic health and reproductive function of offspring. The role holder will be based at the University of Nottingham (UK), but will collaborate with colleagues at the Universities of Glasgow (UK) and Michigan (USA).

The project utilises an established sheep model and addresses three specific aims. These are the effects of EC exposure on (i) metabolic health, (ii) reproductive function and (iii) epigenetic mechanisms underpinning transgenerational modifications to metabolic health and reproductive function. The role holder will lead on Specific Aim III (i.e., epigenetic mechanisms, bioinformatics). The role will involve the analyses of large datasets (i.e., epigenomics, transcriptomics) generated from these studies. They will contribute 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"> ○ DNA methylation analyses in isolated hepatocytes, sperm and embryos, and RNAseq analyses in sperm and seminal plasma. ○ Associated bioinformatic analyses of datasets arising from these analyses • Assisting team members in Glasgow and Michigan with sample collection <ul style="list-style-type: none"> ○ Tissue processing and cell isolation ○ Assist with RNA/DNA extractions and library preparation ahead of sequencing • Keep up to date with the relevant literature, evaluate and criticize internal reports and published scientific materials. • Keep meticulous experimental records, analyze and interpret data, and bring new insights to the research area. 	70%

	<ul style="list-style-type: none"> • 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	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%
4	Supervision of post-graduate students working alongside this project.	10%
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>Analyses of large data sets (e.g., epigenetic, RNAseq data) using contemporary bioinformatic techniques.</p> <p>Ability to contribute to method development/improvement.</p> <p>Analytical ability to facilitate conceptual thinking, innovation and creativity.</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>
Knowledge and experience	<p>Ability to design, conduct, analyse and write up experimental work independently.</p> <p>Ability to analyse large datasets (e.g., RNAseq, epigenomics, metabolomics).</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 Glasgow and to our partner institute in Michigan USA.</p>
Qualifications, certification and training (relevant to role)	<p>PhD (or close to completion) in Bioinformatics or a related discipline, Cell and Developmental or Reproductive Biology/Genetics</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

