

## Candidate Information

<b>Position:</b>	Research Fellow
<b>School/Department:</b>	Centre for Experimental Medicine
<b>Reference:</b>	18/107074
<b>Closing Date:</b>	Wednesday 13 February 2019
<b>Salary:</b>	£33,199 - £39,610 per annum (potential to progress to £43,266 per annum through sustained exceptional contribution)
<b>Duration:</b>	12 months

### JOB PURPOSE:

A skilled and motivated postdoctoral scientist with a background in molecular pathogen detection in a clinical diagnostic setting is required to work on research, development and validation aspects of a project to develop a rapid and accurate near patient molecular test to detect pathogenic E. coli in the female genitourinary tract in pregnancy and labour.

The longer-term objectives of the project include: understanding acquisition and antenatal / intrapartum carriage of pathogenic E. coli and other bacterial pathogens; identifying risk factors for transmission of these pathogens during labour, leading to colonization and possible infection of neonates; and developing intrapartum testing strategies to detect these pathogens during labour, allowing use of appropriate and targeted antibiotic prophylaxis.

### MAJOR DUTIES:

1. Plan, deliver and undertake research within a research project to develop a rapid and accurate near patient molecular test for detection of pathogenic E. coli in the female genitourinary tract in pregnancy and labour.
2. Design, develop and refine experiments in order to obtain reliable and reproducible data.
3. Maintain detailed records of all experimental work and ensure documentation relating to experiments is carefully collated.
4. Carry out analyses, critical evaluations and interpretations of experimental data and the literature using methodologies and other techniques appropriate to area of research.
5. Maintain up-to-date knowledge of the field of interest at the cutting edge (e.g. isothermal molecular amplification methods) and communicate the same to the group.
6. Present regular progress reports on research to members of the research group, other groups within the Centre/University, to external audiences nationally and internationally to disseminate and publicise research findings.
7. Prepare, in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
8. Assist grant holder in the preparation of funding proposals and applications as well as project progress reports to external bodies.
9. Carry out routine administrative tasks associated with the research project/s to ensure that project/s are completed on time and within budget. These might include organisation of project/group meetings and documentation, financial control, risk assessment of research activities and development of SOPs. Carry out routine administrative tasks associated with the day-to-day running of the research group in a communal lab setting.
10. Carry out undergraduate/post-graduate student and visiting researcher training and supervision, demonstrating or lecturing duties within the post holder's area of expertise and under the direct guidance of the supervisor.

### Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-6 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 journal publications and to prepare presentations and papers for conferences.
5. Coordinate and liaise with other members of the research group over work progress.

**Resource Management Responsibilities:**

1. Ensure research resources are used in an effective and efficient manner.
2. Provide guidance as required to support staff and any students who may be assisting with research.

**Internal and External Relationships:**

1. Liaise on a regular basis with supervisors, colleagues, students and other collaborators.
2. Communicate appropriately and effectively with lab colleagues 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 to form relationships for future collaboration.
4. Travel to, and present at scientific meetings and collaborating 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. Hold a PhD in Biomedical Sciences or other life-science discipline.
2. A minimum of three years recent and relevant research experience to include 12 months experience in a microbiology or virology clinical diagnostic laboratory.
3. Experience of quantitative real-time PCR methods.
4. Experience of isothermal molecular amplification methods.
5. Experience of molecular diagnostic assay development and/or validation.
6. Experience of nucleic acid extraction/purification from human clinical specimens.
7. Willingness to supervise undergraduate and postgraduate students and visiting researchers in the laboratory
8. Methodical in project management and meticulous in record keeping.
9. Competent in maintaining and communicating knowledge of cutting-edge molecular amplification methods.
10. Must be motivated, efficient, organised and collaborative.
11. Good oral and written communication skills, with ability to communicate complex information clearly.
12. Competent in giving effective and informative oral and poster presentations
13. Demonstrable intellectual ability.
14. Ability to assess and organise resources.
15. Must be willing to travel to national and international meetings and collaborating laboratories.

**DESIRABLE CRITERIA:**

1. Experience working with molecular assays to detect human pathogens.
2. Experience of working within an accredited (Eg. UKAS / ISO 15189) laboratory setting.
3. Experience of in vitro cell culture, antibody methods and fluorescence microscopy.
4. Ability to analyse and interpret clinical assay data (Eg. diagnostic accuracy & ROC calculations).
5. Knowledge of statistical analysis methods.
6. Knowledge of bioinformatics and DNA sequence analysis methods.
7. Evidence of having presented at national and international conferences

**ADDITIONAL INFORMATION:**

Applications are invited from enthusiastic, motivated, efficient and organised individuals with a strong commitment to a career in laboratory science and research.

The successful applicant must possess a PhD in a relevant scientific area and at least 1 years recent relevant clinical laboratory experience. They must have a strong academic track record will be seeking to lead a cutting-edge research project in a well-supported environment.

Candidates must be able to work within a highly collaborative team to support/train other team members as appropriate but also be able to demonstrate initiative and independence.