

Candidate Information

Position:	Research Fellow
School/Department:	Centre for Experimental Medicine
Reference:	19/107597
Closing Date:	Wednesday 31 July 2019
Salary:	£33,199 to £36,261 per annum
Duration:	12 months

JOB PURPOSE:

To be a highly productive, ambitious, creative and collaborative member of the research team led by Dr Karim Dib in the Centre for Experimental Medicine (CEM). The position will involve working as part of a Northern Ireland Chest Heart and Stroke grant that seeks to characterise the role of histamine and the histamine four receptor (H4R) of neutrophils in the development of severe forms of asthma. The project is aimed at investigating a link between viral lung infection, production of histamine and defective neutrophil antimicrobial functions in severe asthmatics. We aim at investigating histamine concentrations as well as neutrophil H4R levels in sputum and blood samples of mild and severe asthmatics. To this end, we will utilise ELISA (for histamine concentrations), quantitative real-time PCR (for histidine decarboxylase and H4R levels), flow cytometry and immunohistochemistry (H4R levels). We will also investigate a possible impaired phagocytosis function in neutrophils of severe asthmatics. The described work will be carried out in collaboration with the group of Prof Liam Heaney (CEM, Severe Asthma Clinic Belfast City Hospital). Successful applicants will have responsibilities in independent research, supervision, planning, day-to-day lab management, collaborations and outreach. The post is suited to a highly ambitious individual, and is available initially for 12 months. The post is due to start on December 1st 2019.

MAJOR DUTIES:

1. Undertake research under supervision within a research programme aimed at exploring a novel hypothesis regarding the development of severe forms of asthma. Develop, plan and deliver an area of personal research and expertise to further extend this area of research. Techniques include isolation of DNA from blood and sputum samples, and reverse transcription followed by real-time PCR (Molecular Biology), ELISA, isolation of human neutrophils, in vitro phagocytosis assays, flow cytometry and immunohistochemistry.
2. Develop and implement, with support, a highly ambitious personal career development plan in the course of the post.
3. Maintain up-to-date knowledge of the field of interest at the cutting edge and communicate same to the group.
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. 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.
6. Prepare, in consultation with supervisors, material for publication in peer-reviewed journals and presentations at national and overseas conferences.
7. Assist the grant holder in the preparation of funding proposals by generating preliminary data and applications as well as project progress reports to external bodies.
8. Carry out routine administrative tasks associated with the research projects/group to ensure that projects are completed on time and within budget and that the group functions efficiently. These might include organisation of project/group meetings and documentation, financial control, stock management/procurement, 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.
9. Carry out school/undergraduate/post-graduate student and visiting researcher training and supervision, demonstrating, tutoring or lecturing duties within the post holder's area of expertise and under the guidance of a member of academic staff.
10. Participate, and in some cases lead outreach activities on behalf of the group/Centre.
11. Participate in local research-related activities such as journal clubs, training sessions, seminar series etc.

12. Assist in assessment of research communications and data, particularly within the group.

Planning and Organising:

1. Plan for specific aspects of research programme. Timescales range from 1-3 months in advance and may contribute to overall research group planning.
2. Plan for access to, and use of, research resources, laboratories and workshops where appropriate.
3. Plan own day-to-day activity within framework of the agreed research programme as well as communal activities (e.g. meetings) where appropriate.
4. Plan up to 3 months in advance to meet deadlines for grant applications, journal publications and to prepare presentations and papers for conference and meetings.
5. Coordinate and liaise with other members of the research group and collaborative research groups regarding work progress and stock management.
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 researchers who may be assisting with work of the group.

Internal and External Relationships:

1. Liaise on a regular basis with supervisor, colleagues, students and 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 work in collaborative laboratories when necessary.
5. Join external networks to share information and ideas and help develop and maintain external collaborations, as appropriate.
6. Contribute to the School's outreach programme by developing links with local community groups, industries etc.

ESSENTIAL CRITERIA:

1. Have a PhD in Immunology, or a closely related area.
2. At least 3 years recent research experience in Immunology or Molecular/Cellular Microbiology.
3. Recent extensive hands-on experience in at least two of the following:

1. Molecular Biology
2. Handling clinical samples and working with clinical staff
3. Isolation of blood and sputum neutrophils

AND

Recent high-quality original research publications in reputable peer-reviewed journals, commensurate with career stage

4. Experience in teaching/supervising/mentoring/postgraduate/undergraduate students and visiting researchers in the laboratory
5. Methodical approach to project management and meticulous in regards to experimental procedures and record keeping.
6. Highly ambitious, motivated, efficient, organised and show a commitment to, and interest in, research topic.
7. Competent in maintaining knowledge of cutting-edge of field of expertise
8. Competent in giving effective and informative oral and poster presentations
9. Competent in communicating stipulated research skills essential to the post in CV/job application
10. Strong ability to work from own initiative.
11. Excellent team working skills in multiple internal and external team settings
12. Leadership qualities
13. Excellent problem-solving skills
14. Irregular hours including evening, weekend and other out-of-hours working will be a component of the research at times.
15. Must be willing to travel to national and overseas meetings and collaborative laboratories.

DESIRABLE CRITERIA:

1. Knowledge of respiratory diseases.
2. Experience in handling clinical samples, Molecular Biology including quantitative real-time PCR, general communal lab management, Molecular Microbiology, Flow cytometry and immunohistochemistry.
3. Experience in writing high quality grant proposals, manuscripts, Ethics, technical reports and abstracts
4. Publication record commensurate with career stage
5. Experience teaching lab members as well as undergraduate lectures/tutorials/practical classes
6. Classroom-based teaching such as lecturing, tutorials.
7. Research project management.
8. Up-to-date knowledge of fields of neutrophil biology and/or Cellular Microbiology.
9. Experience working in outreach settings.