

Candidate Information

Position:	Research Fellow
School/Department:	Centre for Experimental Medicine
Reference:	19/107133
Closing Date:	Wednesday 27 February 2019
Salary:	£33,199 - £39,610 per annum (potential to progress to £43,266 per annum through sustained exceptional contribution)
Anticipated Interview Date:	Wednesday 20 March 2019
Duration:	until 31 March 2022

JOB PURPOSE:

To be a highly productive, ambitious and collaborative member of research group led by Dr Anna D Krasnodembskaya in the Centre for Experimental Medicine. The position will involve working as part of a research programme that is investigating therapeutic potential of Mesenchymal Stromal Cells (MSC) based therapies for treatment of Acute Respiratory Distress Syndrome (ARDS). The purpose of this project is to assess the functional role of miRNAs secreted in MSC extracellular vesicles in the in vivo and in vitro models of ARDS with specific focus on the role of secreted miRNAs on modulation of macrophage phenotype and function. The successful applicants will be seeking to lead this ambitious cutting edge research project and will be involved with supervision, planning, day-to-day lab management, collaborations and outreach.

This is a 3-year position funded by UK Medical Research Council.

Further information:

[https://pure.qub.ac.uk/portal/en/persons/anna-krasnodembskaya\(96497a43-4100-4999-8e0c-4d01217b83fc\).html](https://pure.qub.ac.uk/portal/en/persons/anna-krasnodembskaya(96497a43-4100-4999-8e0c-4d01217b83fc).html)

MAJOR DUTIES:

1. Develop, plan and deliver an area of personal research and expertise, and undertake research under supervision within a research project aimed at investigation of functional role of individual miRNAs secreted in MSC extracellular vesicles for therapeutic efficacy of MSCs in ARDS, using a range of experimental in vivo and in vitro models.
2. Maintain up-to-date knowledge of the field of interest at the cutting edge (e.g. recent advances in MSC therapy development, immunomodulation, lung regeneration, new models and techniques) and communicate the same to the group.
3. Design, develop and refine experimental apparatus, models, field research or experiments in order to obtain reliable and reproducible data.
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, often in consultation with supervisor, material for publication in national and international journals and presentations at international conferences.
7. Assist grant holder in the preparation of funding proposals and applications as well as project progress reports to external bodies.
8. Actively drive own career development, e.g. through Postdoctoral Development Committee activities, fellowship applications etc.
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 a member of academic staff.
11. Read academic papers, journals and textbooks to keep abreast of developments in own specialism and related disciplines and engage in technical training as needed.

Planning and Organising:

1. Plan for specific aspects of research programmes. Timescales range from 1-12 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 grant applications, journal publications and to prepare presentations and papers for conferences and meetings.
5. Coordinate and liaise with other members of the research group and collaborative research groups over work progress.
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 researcher who may be assisting with research.

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 collaborative 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. Have a relevant PhD in a biomedical field of laboratory-based research.
2. 3 years recent relevant research experience to include experience in MSC research, circulating microRNA research, pre-clinical models of ARDS, primary human monocyte derived macrophages culture.
3. Extensive previous hands-on experience with modern cellular and molecular biology methods: New Generation Sequencing, mammalian cell transfection, real time qPCR, Western blotting, multi-colour flow cytometry/cell sorting, immunohistochemistry, bioimaging (fluorescent, confocal/electron microscopy)
4. Be proficient in animal handling, in particular in the intravenous injections.
5. Recent high quality original publications in reputable peer-reviewed journals (original research papers) commensurate with stage of career.
6. Willingness to supervise postgraduate/undergraduate students and visiting researchers in the laboratory
7. Must be methodical in project management and meticulous in terms of experimental procedures and record keeping.
8. Must be highly ambitious, motivated, efficient, organised and show a commitment to, and an interest in research topic (Research Topic is defined as ARDS and MSC fields, and evidence is required for the development of new therapy for a clinical trial stage).
9. Competent in maintaining and communicating knowledge of cutting-edge of field of expertise
10. Good oral and written communication skills
11. Competent in giving effective and informative oral and poster presentations
12. Evidence of having presented at national and international conferences (poster and oral)
13. Strong ability to work from own initiative and to work independently.
14. Must demonstrate good team working skills in multiple team settings as well as leadership qualities.
15. Must demonstrate excellent problem-solving skills and able to use own initiative.
16. Irregular hours including weekend working will be a component of the research at times
17. Must be willing to travel to national and international meetings and collaborative laboratories.

DESIRABLE CRITERIA:

1. Hold a personal UK Home Office animal license
2. At least 1 year of postdoctoral research experience with track record of publications coming from postdoctoral studies.
3. Experience with MSC based therapies for lung diseases is a plus
4. Experience with animal models of ARDS
5. Experience with isolation of MSC-derived extracellular vesicles
6. Grant, fellowship, manuscript and abstract writing experience
7. Research project management