|  |  |
| --- | --- |
| Last updated: | 28/Apr/2023 |

**JOB DESCRIPTION**

|  |  |
| --- | --- |
| Post title: | **Research Fellow** |
| Standard Occupation Code: (UKVI SOC CODE) | 2119 - Natural and social science professionals |
| School/Department: | Clinical & Experimental Sciences |
| Faculty: | Medicine |
| Career Pathway: | Education, Research and Enterprise (ERE) | Level: | 4 |
| \*ERE category: | Research pathway |
| Posts responsible to: | Principle investigators |
| Posts responsible for: | Technician |
| Post base: | Non-Office-based (see job hazard analysis) |

|  |
| --- |
| Job purpose |
| To undertake research in accordance with the specified research project as part of a **Medical Research Council – Developmental Pathway Funding Scheme (MRC-DPFS) grant 2023** for research into asthma with the title: “***Preclinical efficacy and safety studies of ADAM33 oligonucleotides as new disease-modifying asthma therapy.***” under the supervision of the award holders and principle investigators Dr Hans Michael Haitchi (University of Southampton (UoS)) & Professor Jonathan K. Watts (Institute for RNA Therapeutics, University of Massachusetts (UMass), USA) for at least 2 years. **To make a significant research contribution at a very exciting time of our project as we hope to move a compound forward toward Investigational New Drug (IND)-enabling studies and clinical development for severe asthma.**The aim of this project is to carry out pre-clinical proof-of-concept (POC) studies of dose-finding, duration of effect and therapeutic efficacy plus/minus allergen challenges and PK/PD of our anti-ADAM33 oligonucleotides in mice and human lung tissue.To study lung function (Flexivent system), airway inflammatory and remodelling mediators in lung tissue, bronchoalveolar lavage fluid and blood by RTqPCR, Western blotting, ELISA, Luminex multiplex assays, FRET assays, Immunohistochemistry, RNA-Scope and image analysis RNA-Seq & bioinformatic analysis,To undertake leadership in the mouse and human studies by planning all mouse experiments and appropriately expanding the mouse colonies and planning all human lung tissue studies and collection and processing of the human lung samples. Management of the laboratory work and bioinformatic analysis as part of the project, and engagement in activities with the public, media, grant giving bodies, charities and collaborators. Being part of this MRC-DPFS project specific larger research team of three postdoctoral researchers (one at UMass, and two at UoS), one technician (UoS) and one project manager (UoS) together with the two PIs (HMH at UoS & JKW at UMass).  |

| Key accountabilities/primary responsibilities | % Time |
| --- | --- |
|  | To develop and carry out an area of personal research.  | 60 % |
|  | Regularly disseminate findings by taking the lead in preparing publication materials for referred journals, presenting results at conferences, or exhibiting work at other appropriate events. | 5% |
|  | Contribute to the writing of bids for research funding. | 5 % |
|  | Investigate models and approaches to test and develop this thesis along with future projects. | 5% |
|  | Collaborate/work on original research tasks with colleagues in other institutions. | 5% |
|  | Carry out administrative tasks associated with specified research funding, for example risk assessment of research activities, organisation of project meetings and documentation. Implementation of procedures required to ensure accurate and timely formal reporting and financial control. | 5% |
|  | Supervise the work of junior research staff  | 5% |
|  | Carry out occasional undergraduate supervision, demonstrating or lecturing duties within own area of expertise, under the direct guidance of a member of departmental academic staff. | 5% |
|  | Any other duties as allocated by the line manager following consultation with the post holder. | 5%  |

| Internal and external relationships |
| --- |
| Direct responsibility to holders of research award or academic supervisor. May have additional reporting and liaison responsibilities to external funding bodies or sponsors or collaborators.May be asked to serve on a relevant School/Department committee, for example research committee. Collaboration and shared working with colleagues in other work areas and institutions. |

| Special Requirements |
| --- |
| To be available to work in the lab in Southampton General Hospital and on University of Southampton main campus as required by the specified research project. To attend, if requested, national and international conferences for the purpose of disseminating research results.*Applications for Research Fellow positions will be considered from candidates who are holding a relevant PhD qualification.* |

**PERSON SPECIFICATION**

|  |  |  |  |
| --- | --- | --- | --- |
| Criteria | Essential | Desirable | How to be assessed |
| Qualifications, knowledge and experience | PhD or equivalent professional qualifications and experience in **animal studies and** **molecular biology** related to respiratory research (desirable) with experience in RTqPCR, Western blotting, ELISA, Immunohisto/cytochemistry and image analysis.Detailed understanding and knowledge of RTqPCR, Western blotting, ELISA, Immunohisto/cytochemistry and image analysis. | PhD in respiratory research in human and animal models.Experience or knowledge of research-related animal models and models for respiratory research.Holding of a home office personal licence.Knowledge of RNA-Seq analysis and bioinformatics analysis.Experience with clinical research including GCP training.Teaching at undergraduate level and contributing to teaching at postgraduate level | CV, application and interview |
| Planning and organising | Able to organise own research activities to deadline and quality standards |  | CV, application and interview |
| Problem solving and initiative | Able to develop understanding of complex problems and apply in-depth knowledge to address themAble to develop original techniques/methods |  | Interview |
| Management and teamwork | Work effectively in a team, understanding the strengths and weaknesses of others to help teamwork developmentAble to contribute to School/Department management and administrative processesAble to supervise work of junior research staff, delegating effectively |  | CV, application and interview |
| Communicating and influencing | Communicate new and complex information effectively, both verbally and in writing, engaging the interest and enthusiasm of the target audienceAble to present research results at group meetings and conferencesAble to write up research results for publication in leading peer-viewed journalsWork proactively with colleagues in other work areas/institutions, contributing specialist knowledge to achieve outcomes |  | CV, application and interview |
| Other skills and behaviours | Understanding of relevant Health & Safety issuesPositive attitude to colleagues and students |  | CV, application and interview |
| Special requirements | Able to attend national and international conferences to present research results |  | CV, application and interview |

**JOB HAZARD ANALYSIS**

**Is this an office-based post?**

|  |  |
| --- | --- |
| ☐ Yes | If this post is an office-based job with routine office hazards (eg: use of VDU), no further information needs to be supplied. Do not complete the section below. |
|  No | If this post is not office-based or has some hazards other than routine office (eg: more than use of VDU) please complete the analysis below.Hiring managers are asked to complete this section as accurately as possible to ensure the safety of the post-holder. |

## - HR will send a full PEHQ to all applicants for this position. Please note, if full health clearance is required for a role, this will apply to all individuals, including existing members of staff.

|  |  |  |  |
| --- | --- | --- | --- |
| **ENVIRONMENTAL EXPOSURES** | **Occasionally** (<30% of time) | **Frequently**(30-60% of time) | **Constantly**(> 60% of time) |
| Outside work  |  |  |  |
| Extremes of temperature (eg: fridge/ furnace) | X |  |  |
| ## Potential for exposure to body fluids |  | X |  |
| ## Noise (greater than 80 dba - 8 hrs twa) |  |  |  |
| ## Exposure to hazardous substances (eg: solvents, liquids, dust, fumes, biohazards). Specify below: experiments with mice and human lung tissue |  | X |  |
| Frequent hand washing |  | X |  |
| Ionising radiation  |  |  |  |
| **EQUIPMENT/TOOLS/MACHINES USED** |
| ## Food handling  |  |  |  |
| ## Driving university vehicles(eg: car/van/LGV/PCV)  |  |  |  |
| ## Use of latex gloves (prohibited unless specific clinical necessity) |  |  |  |
| ## Vibrating tools (eg: strimmers, hammer drill, lawnmowers)  |  |  |  |
| **PHYSICAL ABILITIES** |
| Load manual handling | X |  |  |
| Repetitive crouching/kneeling/stooping |  |  |  |
| Repetitive pulling/pushing |  |  |  |
| Repetitive lifting |  |  |  |
| Standing for prolonged periods | X |  |  |
| Repetitive climbing (ie: steps, stools, ladders, stairs) | X |  |  |
| Fine motor grips (eg: pipetting) |  | X |  |
| Gross motor grips |  |  |  |
| Repetitive reaching below shoulder height | X |  |  |
| Repetitive reaching at shoulder height |  | X |  |
| Repetitive reaching above shoulder height | X |  |  |
| **PSYCHOSOCIAL ISSUES** |
| Face to face contact with public | X |  |  |
| Lone working | X |  |  |
| ## Shift work/night work/on call duties  |  |  |  |