|  |  |  |
| --- | --- | --- |
| **Addendum**  This document provides additional information relating to both specific aspects of the post/faculty and any post specific person specification criteria. The information contained within this document should always be read in conjunction with the accompanying generic Role Profile. | | |
| **Job Title:** | Research Fellow in Host-Pathogen Interactions in Mycobacterial Infection | |
| **Background Information/Relationships**  Dr Simmonds’ research group investigates the pathogenesis of Buruli ulcer. This neglected tropical disease is caused by subcutaneous infection with *Mycobacterium ulcerans*, an opportunistic environmental pathogen. They focus on understanding the disease process, particularly relating to the action of the unique exotoxin mycolactone, In 2014 the group identified mycolactone’s mechanism of action (<https://www.ncbi.nlm.nih.gov/pubmed/24699819> ). We have now determined how this mechanism, targeting the Sec61 translocon at the ER/cytosol interface, drives endothelial dysfunction () and autophagy () amongst other responses.  A major recent success of the group was establishing the *in vivo* model of *M. ulcerans* infection at the University of Surrey, in a derogated CL3 room in our recently built £5Million Biomedical Research Facility <https://www.surrey.ac.uk/school-biosciences-medicine/biomedical-research-facility> . We are now one of <10 groups worldwide able to study the whole organism response to infection with this pathogen.  The current post is funded for three years in total; one year from Dr Simmonds’ Wellcome Trust Investigator Award, focussing on how host-directed therapies modulating vascular biology alter the course of *M. ulcerans* infection, and 2 year’s new funding from the MRC to study the role of autophagy in the macrophage response to infection. The current post will focus primarily on the *in vivo* aspects of both projects, working closely with senior post-doc Dr Belinda Hall.  You will be joining a committed and enthusiastic team, that has strong collaborations nationally and internationally. Notably the MRC funding involves close collaboration with leading TB researcher Max Gutierrez at The Crick Institute. You can read more about Dr Simmonds’ research on her staff profile page <http://www.surrey.ac.uk/microbial/People/simmonds_rachel_staff_profile/> | | |
| **Person Specification**  This section describes the sum total of knowledge, experience & competence required by the post holder that is necessary for standard acceptable performance in carrying out this role. This is in addition to the criteria contained within the accompanying generic Role Profile. | | |
|  | | **Essential/ Desirable** |
| PhD (or be close to completion) in Microbiology, Immunology, Inflammatory Diseases or a closely allied subject. | | E |
| BSc in Molecular or Cell Biology/Immunology/Biomedical Science/Microbiology or closely allied subject, which included modules covering eukaryotic/mammalian molecular biology and cell biology in depth | | E |
| Proven proficiency in a range of techniques relevant to analysis of samples generated from *in vivo* procedures (such as IHC, imaging, flow cytometry, ELISA) | | E |
| Home Office Procedure Individual Licence holder or willingness to train | | E |
| Be a reliable and communicative team player | | E |
| A track record of high-quality first-author publications in the areas of Microbiology, Immunology, Host-Pathogen response (or similar) | | D |
| Experience of *in vivo* models of infection, vascular biology, inflammatory disease (or similar) | | D |
| Experience managing colonies of transgenic mice | | D |
| Experience of working with high containment pathogens | | D |
| Experience of supervising undergraduate/postgraduate project students | | D |
|  | |  |
|  | |  |
|  | |  |
| **Special Requirements** | | **Essential/ Desirable** |
| Ability to work out of regular office hours, including to undertake PIL responsibilities (including during weekends/public holidays) as necessary | | E |
| Willingness to travel within the UK and abroad for conferences | | D |
| **Key Responsibilities**  This document is not designed to be a list of all tasks undertaken but an outline record of any faculty/post specific responsibilities (5 to 8 maximum). This should be read in conjunction with those contained within the accompanying generic Role Profile. | | |
| The main responsibilities of this post are:   * To perform *in vivo* research into host response to *M. ulcerans*, focussing on the involvement of the vascular system and autophagy in macrophages. * Take the lead in analysing samples from the *in vivo* experiments, and perform relevant related *in vitro* experiments * To contribute to the success of the larger team, by working collaboratively with other group members * To generate and pursue original research ideas aligned with the subject area   Your duties will also include:   * Participation in the writing, preparation, and submission of manuscripts for publication * Communication and presentation of research findings in the form of internal and external seminars/meetings/conferences * Contributing to the general smooth running of the lab * Helping with the supervision of undergraduate and postgraduate students   **N.B. The above list is not exhaustive**. | | |