

TrIFIC 4

Adaptive immunity and its modulation in *Aspergillus fumigatus* infection and ABPA (Allergic bronchopulmonary aspergillosis) in patients with Cystic Fibrosis.

Applications are invited for a Cystic Fibrosis Trust funded 3-year PhD studentship. This studentship is integral to a major Strategic Research Centre in Fungal Immunotherapy (TrIFIC) made to Imperial College London collaborating with the University of Manchester, University of Exeter, University of Massachusetts and Radboud University Nijmegen. The overall aim of the SRC is to systematically define the underlying mechanisms of inflammation in pulmonary aspergillosis in the context of cystic fibrosis. This will enable development of immuno-diagnostic tests to identify which patients will benefit from targeted immunotherapies that can be repurposed in CF-related fungal disease.

We are seeking a highly motivated student to join the Lung Immunology Group led by Professor Rosemary Boyton within the Faculty of Medicine of Imperial College London at the Hammersmith Campus. The laboratory of Professor Boyton has a strong track record in molecular immunology approaches for investigation of innate and adaptive mechanisms in infectious and allergic inflammation. The Lung Immunology Group uses a wide range of cutting-edge methodologies for experiments based in human studies and transgenic laboratory models. Fungal infections are considered one of the key areas of unmet need in biomedical research. With respect to immunological studies, the precise nature of immune pathways that may be either protective or pathogenic are poorly mapped. Immunity to the fungal pathogen, *Aspergillus fumigatus* is a case in point, with pathologies that can result either from fungal colonisation in the face of inadequate protective immunity, or from over-exuberant Th2 immunity and ABPA. It is envisaged that the planned project will use state of the art approaches to characterise adaptive immunity and its modulation during *Aspergillus* related lung disease. Other studies ongoing in the lab are looking at vaccine candidates for chronic bacterial lung infection, antiviral T cell immunity, autoimmunity and the impact of the microbiota.

The selected candidate will be trained in cellular and molecular immunology and microbiology. In addition, the candidate will be utilising state-of-the-art technologies including flow cytometry, transcriptomics, proteomics, and in vivo models of infectious and allergic inflammation using transgenics. Imperial College London is among the top 10 universities in the World and has an established PhD programme. The university provides support with high-quality training and career development activities which includes development of skills essential for career progression such as presentation and writing skills. The student will be based at the Hammersmith Hospital Campus of Imperial College London, which provides an exciting training environment. There will be an opportunity for the PhD student to work collaboratively with Professor Stuart Levitz at University of Massachusetts Medical School, USA.

To apply: please send your CV (with contact details of 2 academic referees), and a research statement (max. 1.5 pages) describing why you are suitable for this PhD studentship to Ms. Emily Wood (e.wood@imperial.ac.uk) **by 22nd July 2019**. Informal enquires can be sent to Professor Rosemary Boyton (r.boyton@imperial.ac.uk). Please note that only shortlisted candidates will be contacted for interviews which will be on Tuesday 13th August 2019. Successful students will be expected to begin the PhD in October 2019.

Funding Notes:

The studentship is open to UK, EU and overseas nationals, includes payment of home/EU fees and a stipend for 3 years starting at £22,278 per annum in October 2019. Overseas students are expected to cover the difference between the home/EU and overseas fee.

Applicants must have a first or upper second-class BSc degree from a UK University, or the overseas equivalent, in immunology, biochemistry or microbiology and a strong interest in immunity to infection. A relevant Master's degree and experience in laboratory techniques and immunology would be advantageous. Applicants are required to meet Imperial College's English language requirements: <http://www.imperial.ac.uk/study/pg/apply/requirements/english>

References:

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Subject areas:

Biochemistry
Immunology
Microbiology