

**Horizon 2020 Marie Skłodowska-Curie Actions  
Individual Fellowships Call 2017 – Expression of Interest**

**Contact Person: Prof Cliff Taggart**

**Research Field(s)**

- |   |  |
|---|--|
| <input type="checkbox"/> Chemistry CHE                              | <input type="checkbox"/> Environment and Geosciences ENV |
| <input type="checkbox"/> Social and Human Sciences SOC              | <input checked="" type="checkbox"/> Life Sciences LIF    |
| <input type="checkbox"/> Economic Sciences ECO                      | <input type="checkbox"/> Mathematics MAT                 |
| <input type="checkbox"/> Information Science and Engineering<br>ENG | <input type="checkbox"/> Physics PHY                     |

**Keywords:**

**Respiratory Disease, Innate Immunity, Inflammation**

**Short description of the Faculty/Dept./School/Centre:**

The Centre for Experimental Medicine at Queen's University Belfast is an interdisciplinary research centre which is committed to the highest quality scientific endeavour, with over 250 basic and clinical scientists working together to understand mechanisms of disease and use that understanding to develop innovative new treatments and therapies to improve patient outcomes in a number of disease areas including respiratory disease. We are based in Belfast in the award winning Wellcome-Wolfson Institute for Experimental Medicine which was opened in 2015. The Centre houses a number of shared technical resources including a flow cytometry platform (multicolour cell acquisition and sorting capabilities), a pre-clinical retinal imaging unit (confocal ophthalmoscopy, ERG), histology services (wax and frozen tissue processing staining) and equipment for assessing cell and tissue metabolism (Seahorse). Research within the Centre is further underpinned by Faculty core facilities providing support in genomics (next generation sequencing), advanced imaging (multiphoton, TIRF, electron microscopy), bioinformatics (high performance computing), proteomics (mass spectrometry), and a modern biological services unit (conventional and SPF). Our clinical research is facilitated within the Northern Ireland Clinical Trials Unit and the Wellcome-Wolfson Northern Ireland Clinical Research Facility

**Short Description of the research project**

Taggart and colleagues have identified a number of factors which correlate significantly with airway inflammation in the acute and chronically disease lung (Am J Resp Crit Care Medicine 2014, 190(2):165-74, Mucosal Immunol. 2016, 9(3):669-76, Thorax. 2013, 68(4):315-21). Using models of acute and chronic lung inflammation, Taggart and his colleagues at Queen's University Belfast and the University of Heidelberg (Prof Marcus Mall) will analyse novel mediators of inflammation (proteases, miRNA) that drive lung disease. In addition, they will target mediators of lung inflammation with small molecule inhibitors and other biologics in order to ameliorate aspects of inflammation-induced lung damage and mucus plugging. The work will highlight novel pathways of pulmonary inflammation combined with strategies for the alleviation of acute and chronic lung disease.

**Expertise required by the applicant**

Some small animal in vivo experience would be desirable but not essential. Basic skills in Western blotting, ELISA, tissue culture, flow cytometry and microscopy would also be desirable.

**Application procedure**

Please submit a cover letter and your CV to Professor Cliff Taggart: [c.taggart@qub.ac.uk](mailto:c.taggart@qub.ac.uk) by 19<sup>th</sup> May 2017.

It is envisaged that this project would be submitted to the MSCA Individual Fellowships call, deadline 14<sup>th</sup> September 2017.