"This equipment enables us to test whole human lungs in the laboratory, so we can progress towards clinical trials with the proof that the therapy actually works in human tissue."

Professor Cecilia O'Kane

CREATING NEW HOPE FOR PATIENTS

Our ambitious and innovative research is focussed on some of the most common and most devastating illnesses, such as acute respiratory distress syndrome (ARDS), cystic fibrosis and asthma.

When people are critically ill, their lungs become leaky and fill with fluid, leading to difficulty in breathing and the need for support from a ventilator. This is known as ARDS. At present, there is no effective treatment, but clinical research programmes led by **Professor Cecilia O'Kane, Professor Danny McAuley** and **Professor Bronagh Blackwood** are working to change that.

We are testing new therapies in clinically-relevant models of ARDS, through early -phase experimental trials and in large definitive trials, with the potential to make a major impact on clinical care and save many lives each year.

Professor Stuart Elborn is leading the major European **iABC** project – Inhaled Antibiotics in Bronchiectasis (BE) and Cystic Fibrosis (CF). Thanks to inhaled antibiotics, patients with respiratory infections can now live longer than ever before and enjoy a better quality of life. However, infections are becoming increasingly resistant to the few drugs available and are putting lives at risk.

Our international team aims to advance the development of two inhaled antibiotics for patients with CF and BE and to find ways of improving clinical trials for treatments.

Professor Liam Heaney is leading the **RASP-UK Consortium**, a large-scale project which will provide world-leading changes to the care of patients with severe asthma. It is moving away from the 'one size fits all' approach and will provide more effective targeted treatments.

The Consortium is another example of high-level collaboration led by Queen's. It brings together clinical and academic excellence from UK universities and NHS Severe Asthma Centres in partnership with the pharmaceutical industry.

The primary focus is to target steroid treatments more effectively and to understand why some patients do not respond to them. New treatments being developed by our industry partners will lead to the expansion of a clinical trials programme within the UK severe asthma clinical centres.

"Collaborating through the RASP-UK Consortium enables us to put people with asthma at the centre of this work. Through collaboration between clinicians, the pharmaceutical industry and patients, we can aim for better, targeted treatment to improve the lives of people with asthma."

Dr Samantha Walker
Director of Research and Policy,
Asthma UK