SCAF/16/02 - Inflammation in Cystic Fibrosis Lung Disease: Defining the Role of Calprotectin

Cystic Fibrosis (CF) is a genetic disease that leads to the production of excessive sticky mucous, chronic lung infection, and progressive lung damage leading to debilitating breathlessness. In spite of new treatments allowing most patients to live into adulthood, they continue to suffer from significant lung disease which has massive impact on their daily life. The major cause of lung damage in CF is the response of the body's immune system to the bacteria in the lung. We have previously shown that calprotectin, a protein made by white blood cells, is found in high levels in the lung fluid and blood from people with CF. We think that calprotectin is a major controller of lung damage in CF lungs and might be a target for the development of new CF drugs. Our present research aims to learn how calprotectin controls the damage process in the CF lung, and additionally how we might target this process with new drugs to reduce lung injury and promote repair.