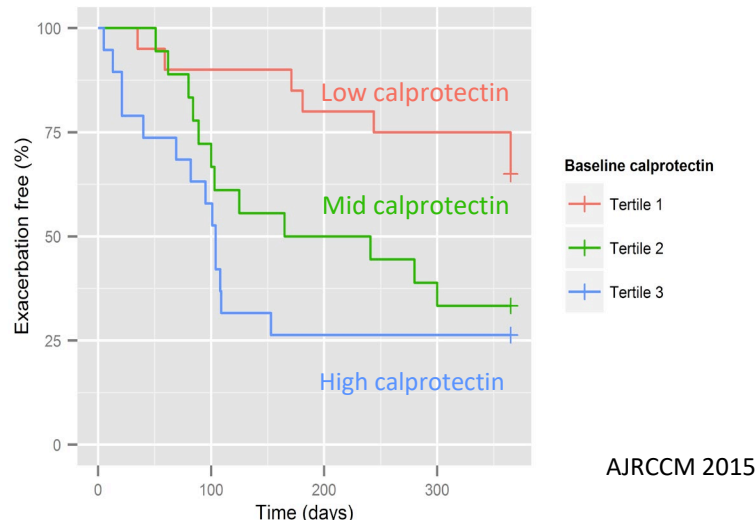


R. Gray Group

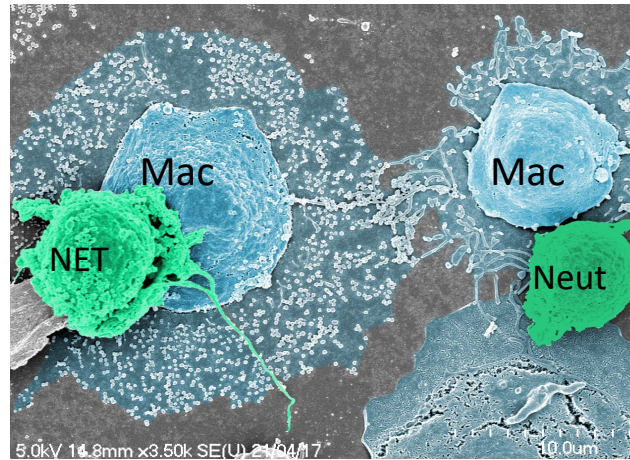
Inflammation, Resolution and Repair in Cystic Fibrosis

What's the problem?

- **Inflammation** damages lungs in CF
- We described calprotectin as a major biomarker of inflammation in CF
- We discovered that CF neutrophils live longer and release more NETs which contain calprotectin
- We have demonstrated that NETs and calprotectin stimulate macrophages and drive inflammation
- We have pioneered the measurement of calprotectin in people with CF and higher levels mean worse outcomes

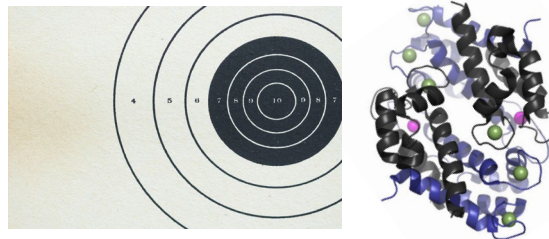


How do we investigate this ? Immune cell co-culture



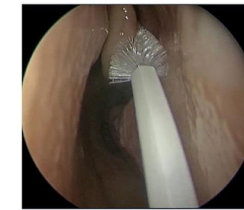
Drug discovery

Can we target calprotectin to stop bad neutrophil macrophage interactions and drive **resolution**?

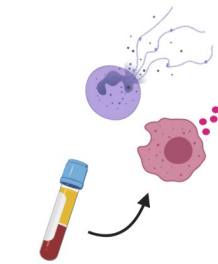


Pioneering 2D and 3D cultures of epithelial and immune cells for lung repair research

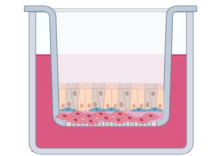
Patient Samples



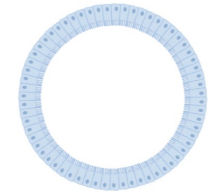
Airway Cells



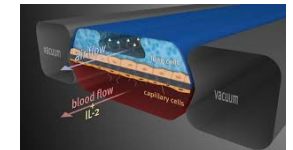
Immune Cells



Airway Cultures



Organoids



Lung Chip

By resolving inflammation can we help CF lungs to **repair** themselves?

