**Get to know members of the RSF Assembly**

**Is your research clinical, basic science or translational?**
Translational Science

**Tell us about your research?**
I study various aspects of the pathophysiology of COPD, but I have a specific interest in studying the role of cell death and endogenous danger signals, called Damage Associated Molecular Patterns (DAMPs) in COPD. I currently specifically study these DAMPs in the context of COPD co-morbidities and bronchoscopic intervention treatments. My aim is to connect basic science with clinical science to ensure the translational aspect of my studies.

**Where do you see yourself in 5 years?**
In five years from now I hope that I together with my teams and collaborators have demonstrated the importance of various DAMPs and their receptors in various aspect of the pathophysiology of COPD. Additionally, I hope to have identified ways to clinically use DAMPs as target in the treatment of COPD patients.

**What do you find is the major benefit of RSF Assembly Membership?**
The RSF assembly creates a perfect platform to engage with fellow researchers and initiate collaborations with them.
Identification of DAMPs as major constituents of the surface proteome of lung implantable silicone/nitinol devices

Background: Lung implantable devices have been widely adopted as mechanical interventions for a wide variety of pulmonary pathologies. Despite successful initial treatment, long-term efficacy can often be impacted by fibrotic or granulation tissue formation at the implant sites.

Goal: This study aimed to explore the lung-device interface by identifying the adhered proteome on lung devices explanted from patients with severe emphysema.

Methods: In this study, scanning electron microscopy is used to visualize the adhesion of cells and proteins to silicone and nitinol surfaces of explanted endobronchial valves. By applying high-resolution mass-spectrometry, the surface proteome of eight explanted valves is characterized.

Results: Here, 263 unique protein species were identified to be mutually adsorbed on explanted endobronchial valves. Enrichment analyses reveal dominant clusters of functionally-related ontology terms associated with pattern recognition receptor signaling, immune responses, and cell adhesion. Matching results show that damage-associated molecular patterns (DAMPs) are cardinal in the formation of the surface proteome.

Conclusion: This is the first study investigating the composition of the adhered proteome on explanted lung devices. This study indicates that DAMPs are important for developing a protein layer on lung implantable devices, potentially contributing to the development of granulation tissue formation.

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