

ERS Online Research Seminar

Sputum inflammometry as a research tool and an aid to clinical phenotyping and asthma/COPD management

08 – 09 February 2023

Wednesday, 08 February 2023

09:00 – 09:10 Introduction and aims – Antonio Spanevello (IT)

SESSION I

Chairs: Louis-Philippe Boulet (CA) and Alexander Mathioudakis (UK)

09:10 – 09:20 2002 ERJ Guidelines in relation to what we have learnt in 20 years – Ratko Djukanovic (UK)

09:20 – 09:40 Discussion

09:40 – 10:10 The Freddy Hargreave Lecture. Sputum analysis: Past, present and the future – Parameswaran Nair (CA)

10:10 – 10:25 Discussion

10:25 – 10:45 **Break**

SESSION II

Chairs: Stelios Loukides (GR), Sara Cuevas-Ocana (UK), and Nikolaos Lazarinis (SE)

10:45 – 11:05 Sputum Induction: Techniques, safety including COVID precautions and use in children – Florence Schleich (BE)

11:05 – 11:15 Discussion

11:15 – 11:35 Overview of current sputum processing techniques – Patrizia Pignatti (IT)

11:35 – 11:45 Discussion

SESSION III

Chairs: Celeste Porsbjerg (DK), Dina Visca (IT) and Sebastian Riemann (BE)

11:45 – 12:05 Relation between biomarker findings in sputum and blood – Maarten van den Berge (NL)

12:05 – 12:15 Discussion

12:15 – 12:30 Lessons learned about airway biology from the UCSF Sputum Cell Analysis Core for multicenter NIH Asthma Trials and Cohort studies – John Fahy (US)

12:30 – 12:45 Discussion

12:45– 13:00 Summary of day 1 – Sven-Erik Dahlén (SE)

All timings are in Central European Time (CET)

Thursday, 09 February 2023

SESSION IV

Chairs: Chris Brightling (UK) and Niki Ubags (CH)

09:00 – 09:20 Processing for analysis of cells including staining and QC criteria – Vijay Mistry (UK)

09:20 – 09:30 Discussion

09:30 – 09:45 Use of sputum plugs for immunofixation and histopathology – Manali Mukherjee (CA)

09:45 – 09:55 Discussion

09:55 – 10:10 Optimising methods for soluble mediators, proteomics, transcriptomics, and epigenetics – Peter Gibson (AU)

10:20 – 10:30 Discussion

10:30 – 10:45 Flow cytometry analysis – Michael Fricker (AU)

10:45 – 11:00 Discussion

11:00 – 11:15 **Break**

SESSION V

Chairs: Anneke ten Brinke (NL), Bart Hilvering (NL), and Andrew Higham (UK)

11:15 – 11:30 Single cell studies and differential gene expression – Ian Adcock (UK)

11:30 – 11:40 Discussion

11:40 – 11:55 Microbiome and metagenome techniques – Chris Brightling (UK)

11:55 – 12:05 Discussion

12:05 – 12:20 Application of sputum data in clinical studies including repeatability and power assessments for different outcomes – Renaud Louis (BE)

12:20 – 12:30 Discussion

12:30 – 13:00 Summary of issues and challenges for processing and analysis of sputum – Sven-Erik Dahlén (SE)

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