



Virtual academy on Lung Microbiome: from study design to data analysis

1 - 2 December 2022

Thursday, 01 December 2022

Session 1 - Microbiome in lung disease:

Chair: N. Ubags

- 09:00–09:15 Introduction and aims - D. Bogaert, N. Ubags
- 09:15–09:45 How to think about the microbiome - R. Dickson
- 09:45–10:15 Spatial considerations in lung microbiome research: which sample site is most suited for your study - C. Pattaroni
- 10:15–10:30 *Coffee break*
- 10:30–11:00 Environmental exposures and the lung microbiome - P. Hansbro
- 11:00–11:30 Microbiome and the virome in lung disease - M. Clokie
- 11:30–12:30 *Lunch*

Session 2 - Workshop: Study design for lung microbiome research

Chair: L. Segal

- 12:30–13:00 How to design a microbiome study (Clinical and experimental aspects)
- 13:00–14:15 Group work on own study design or using an ‘example study’
- 14:15–14:45 Presentation & discussion - R. Dickson, D. Bogaert, P. Hansbro, L. Segal, A. Crabbe, N. Ubags, C. Pattaroni
- 14:45–15:00 *Coffee break*

Session 3 - Host-microbe interactions in lung disease

Chair: D. Bogaert

- 15:00–15:30 Role of biofilm formation on the lung microbiome - A. Crabbé
- 15:30–16:00 Chronic inflammation and the lung microbiome: cause or consequence - P. Molyneaux
- 16:00–16:30 Orchestration of the lung microbiome by the gut - N. Ubags
- 16:30–17:00 Integrated data analysis to study host-microbe interactions - L. Segal



Friday, 02 December 2022

Session 4 – Workshop: Lab aspects of lung microbiome research

Chair: A. Crabbé

- 09:00–09:30 Contamination and the ‘reagent microbiome’ - M. Cox
09:30–10:00 How to set up your lab for microbiome analysis - A. Ruiz Rodriguez
10:00–10:30 Discussion using real-life studies and related questions to discuss challenges from sampling to data
10:30–10:45 *Coffee break*

Session 5 – Therapeutic strategies and the microbiome

Chair: M. Cox

- 10:45–11:15 Antibiotics and immunosuppressant medication in microbiome studies - S. Chotirmall
11:15–11:45 Nutritional and environmental drivers of a healthy microbiome – M. Schloter
11:45–12:15 Vaccines and the microbiome: a two-way street? - D. Bogaert
12:15–12:45 Alternative interventions and the microbiome (Pre-/pro-biotics and phages) - S. Lebeer
12:45–13:30 *Lunch*

Session 6 – Workshop: Data analysis in lung microbiome research

Chair: W. de Steenhuijsen Piters

- 13:30–14:00 The bioinformatic needs for studying microbiome data - W. de Steenhuijsen Piters
14:00–14:30 Statistical analysis of microbiome data - from data tables to results - J. Thorsen
14:30–15:30 Review of prerecorded talk/data analysis exercise and Q&A
15:30–16:00 *Coffee break*
16:00–16:35 The future of microbiome studies in lung diseases & Q&A - R. Dickson
16:35–17:00 Share learning experience/course-feedback - D. Bogaert, N. Ubags
Closing remarks – End of the course