

ERS Research Seminar

***The Human Lung Cell Atlas: charting the cellular landscape
of the lung in health and disease***

08 – 09 March 2020

Estoril, Portugal

Sunday, 08 March 2020

- 13.30 – 13.45 Registration
- 13.45 – 14.00 Introduction and welcome
Martijn Nawijn (Netherlands) and Herbert Schiller (Germany)

Session I – Single-cell RNA-sequencing: a novel tool for mapping the cellular landscape in the lung

- 14.00 – 14.30 *The mouse lung cell atlas: identification of the ionocyte as a novel airway epithelial cell*
Daniel Montoro (USA)
- 14.30 – 15.00 *A cellular census of the healthy human lung: applying single-cell techniques for a lung cell atlas*
Kerstin Meyer (UK)
- 15.00 – 15.20 General discussion
- 15.20 – 15.40 *Coffee break*

Session II – Novel single-cell technologies that will provide additional depth to the Lung Cell Atlas

- 15.40 – 16.10 *Single-cell profiling of open chromatin using THS-Seq in human lung tissue*
Thu Elizabeth Duong (USA)
- 16.10 – 16.40 *Spatially resolved transcriptomics - a data driven approach to gene expression analysis in lung*
Joakim Lundeberg (Sweden)
- 16.40 – 17.10 *A map of the lung epithelium at single cell resolution*
Christos Samakovlis (Sweden)
- 17.10 – 17.40 *Life beyond the pixels: single-cell analysis using machine learning and image analysis methods*
Peter Horvath (Hungarian)
- 17.40 – 18.00 General discussion

Monday, 09 March 2020

Session III: Location and activation-induced molecular phenotypes of structural cells in the lung

- 09.00 – 09.30 Regional differences between epithelial cell phenotypes along the bronchial tree
Pascal Barbry (France)
- 09.30 – 10.00 High-Resolution mapping of cytokine-induced cell state transitions in the airway epithelium
Katherine Benson McCauley (USA)
- 10.00 – 10.20 General discussion
- 10.20 – 10.50 *Coffee break*

Session IV: The diseased human lung cell atlas: a roadmap towards precision medicine

- 10.50 – 11.20 Systems biology for respiratory disease: Lessons learned from U-Biopred
Ian Adcock (UK)
- 11.20 – 11.50 Unique cell states in pulmonary fibrosis revealed by scRNA-Seq
Alexander Misharin (USA)
- 11.50 – 12.20 The airway wall cellular landscape in asthma: a call to arms for the respiratory community
Martijn Nawijn (Netherlands)
- 12.20 – 12.40 General discussion
- 12.40 – 13.00 Concluding remarks and closing of the ERS research seminar
- 13.00 *Lunch*