

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	<u><i>The mouse lung cell atlas: identification of the ionocyte as a novel airway epithelial cell</i></u> Daniel Montoro (USA)
14.30 – 15.00	<u><i>A cellular census of the healthy human lung: applying single-cell techniques for a lung cell atlas</i></u> Speaker TBC
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	<u><i>Single-cell profiling of open chromatin using THS-Seq in human lung tissue</i></u> Thu Elizabeth Duong (USA)
16.10 – 16.40	<u><i>Spatially resolved transcriptomics - a data driven approach to gene expression analysis in lung</i></u> Speaker TBC
16.40 – 17.10	<u><i>A map of the lung epithelium at single cell resolution</i></u> Christos Samakovlis (Sweden)
17.10 – 17.40	<u><i>Life beyond the pixels: single-cell analysis using machine learning and image analysis methods</i></u> Peter Horvath (Hungarian)
17.40 – 18.00	General discussion

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

09.00 – 09.30	<u>Regional differences between epithelial cell phenotypes along the bronchial tree</u> Pascal Barbry (France)
09.30 – 10.00	<u>High-Resolution mapping of cytokine-induced cell state transitions in the airway epithelium</u> 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	<u>Systems biology for respiratory disease: Lessons learned from U-Biopred</u> Ian Adcock (UK)
11.20 – 11.50	<u>Unique cell states in pulmonary fibrosis revealed by scRNA-Seq</u> Alexander Misharin (USA)
11.50 – 12.20	<u>The airway wall cellular landscape in asthma: a call to arms for the respiratory community</u> 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