ERS Research Seminar

Innovative 3D models for understanding mechanisms underlying lung diseases: powerful tools for translational research

4-5 November 2021
Lisbon, Portugal

Thursday, 04th November 2021

08.00 – 08.30 Arrival and registration
Coffee and networking

08.30 – 08.40 Welcome and opening – Janette Burgess, Ramon Farre

Opening Session – Keynote lecture
Chairs: Janette Burgess (Netherlands), Ramon Farre (Spain)

08.40 – 09.20 What is the need and why is it the time for innovative models for understanding human lung diseases – Daniel Weiss (USA)

09.20 – 09.30 General discussion

Session I – Technological advances for developing translational lung models

09.30 – 10.00 Developing a lung on a chip model – Olivier Guenat (Switzerland)
10.00 – 10.30 Precision cut lung slices going beyond airway responses – Speaker TBC
10.30 – 10.45 Abstract oral presentation 1
10.45 – 11.15 General discussion

11.15 – 11.30 Coffee break

Session II – Harnessing the lung for developing translational 3D models

11.30 – 12.00 Human lung ECM derived hydrogels – Janette Burgess (Netherlands)
12.00 – 12.30 3D printing the human lung using hydrogels – Darcy Wagner (Sweden)
12.30 – 12.45 Abstract oral presentation 2
12.45 – 13.15 General discussion

13.15-14.00 Lunch break

Session III – The challenge of mechanical parameters in the 3D environment

14.00 – 14.30 3D imaging in biomaterials – Speaker TBC
14.30 – 15.00 Advanced measurements of 3D cell/ECM mechanics – Ramon Farre (Spain)
15.00 – 15.15 Abstract oral presentation 3
15.15 – 15.45 General discussion
15.45 – 16.00  *Coffee break*

16.00 – 17.45  Breakout groups to discuss current challenges and needs

17.45 – 18.00  *Break*

18.00 – 19.30  **Poster session** – with predinner networking drinks

20.00  *Dinner*

**Friday, 05th November 2021**

08.30 – 09.30  Report back from break out groups and identification of goals for newly established networks  
**Chairs:** Janette Burgess, Ramon Farre  
- Discussion of research seminar’s outcomes  
- Preparation of outputs

09.30 – 10.00  *Coffee break*

**Session IV – Harnessing 3D models of the lung for translational outcomes**

10.00 – 10.30  Mechanopharmacology of the lung – Speaker TBC  
10.30 – 11.00  3D organoids informing lung regeneration – Emma Rawlins (UK)  
11.00 – 11.30  Using tissue mimetic models to understand lung cancer – Dania Movia (Ireland)  
11.30 – 11.45  Abstract oral presentation 4  
11.45 – 12.15  General discussion

12.15 – 13.15  Closing remarks – Janette Burgess, Ramon Farre

13.15 – 14.00  Lunch on departure