

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