

ERS Research Seminar

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

14 – 16 March 2021

Estoril, Portugal

Sunday, 14th March 2021

15.00 – 15.30 Arrival and registration
Coffee and networking

18.00 – 18.10 Welcome and opening – Janette Burgess, Ramon Farre

Opening Session – Keynote lecture

Chairs: Janette Burgess (Netherlands), Ramon Farre (Spain)

18.10 – 19.00 What is the need and why is it the time for innovative models for understanding human lung diseases – Daniel Weiss (USA)

19.00 – 20.30 *Dinner and networking*

Monday, 15th March 2021

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

08.30 – 09.00 Human lung ECM derived hydrogels – Janette Burgess (Netherlands)

09.00 – 09.30 3D printing the human lung using hydrogels – Darcy Wagner (Sweden)

09.30 – 09.45 Abstract oral presentation 1

09.45 – 10.00 General discussion

10.00-10.30 *Coffee break*

Session II – Technological advances for developing translational lung models

10.30 – 11.00 Developing a lung on a chip model – Olivier Guenat (Switzerland)

11.00 – 11.30 3D printing electrically conductive/sensing hydrogels – Speaker TBC

11.30 – 12.00 3D imaging in biomaterials – Speaker TBC

12.00 – 12.15 Abstract oral presentation 2

12.15 – 12.45 General discussion

12.45 – 14.00 *Lunch break*

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

14.00 – 14.30 Mechanopharmacology of the lung in 3D – 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 – 16.15 *Coffee break*

16.15 – 18.00 Breakout groups to discuss current challenges and needs

18.00 – 19.00 *Break*

19.00 – 20.30 **Poster session** – with predinner networking drinks

20.30 *Dinner*

Tuesday, 16th March 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 Using tissue mimetic models to understand lung cancer – Dania Movia (Ireland)
10.30 – 11.00 3D organoids informing lung regeneration – Emma Rawlins (UK)
11.00 – 11.15 Abstract oral presentation 4
11.15 – 11.45 General discussion

11.45 – 12.15 Closing remarks – Janette Burgess, Ramon Farre

12.15 – 14.00 Lunch and networking

Departure