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