



EASL Basic School of Hepatology

Precision Cut Liver Slices and Liver Organoids – versatile ex-vivo models of liver disease

15 - 17 September 2022

The Roger Williams Institute of Hepatology, London, UK

DIRECTORS

Dr Shilpa Chokshi, Dr Elena Palma, Dr Luca Urbani

PROGRAMME OVERVIEW

Day 1, Thu 15 Sep

- 12:00 – 13:00 **Hotel Check-In** (20min walk/15min by bus)
- 13:30 – 14:00 **Registration & Welcome Coffee**
- 14:00 – 14:20 **Welcome**
Introduction/Learning Objectives/Health & Safety – *Directors, Natalie Day, Phil Howard*
- 14:20 – 15:30 **Icebreaker introduction**
- 15:30 – 17:30 **State-of-the-art: Experimental models of liver diseases**
- 15:30 – 16:00 Keynote lecture 1 (25+5 mins) *Precision Cut Liver Tissue Slices – applications, advantages and limitations*
Prof. Peter Olinga, Netherlands (confirmed). Intro: Elena Palma
- 16:00 – 16:30 Keynote lecture 2 (25+5 mins) *Liver Organoids – the good, the bad and the ugly*
Prof. Ludovic Vallier, Cambridge, UK (confirmed). Intro: Luca Urbani
- 16:30 – 17:00 **Coffee Break**
- 17:00 – 18:00 **Talks and breakout sessions**
- 17:00 – 17:10 *Precision cut liver slices versus organoids as models of liver disease* – Luca Urbani
- 17:10 – 17:20 *How to monitor disease processes in ex-vivo models* – Shilpa Chokshi
- 17:20 – 17:30 *Tumour slices and Tumoroids* – Elena Palma
- 17:30 – 17:45 *Addressing patient heterogeneity in PCLS and Organoids – Advantage or Curse?* – Gautam Mehta
- 17:45 – 18:00 *Collecting surgical waste for discard – regulatory pathways and ethics* – Vish Patel
- 18:00 – 18:30 **Visit of the facility – walkround in 4 groups**
- 18:30 – 19:30 **Welcome drinks and Pub style quiz**
- 19:30 – 21:30 **Dinner**

Day 2, Fri 16 Sep

08:30 – 11.45 1st Practical session

Participants will be divided into 4 teams for small group hands-on experience in the lab:

Module 1. (1h25') Preparation of PCLS from liver explants (floor: G)

Elena Palma, Una Rastovic, Ravi Jagatia, Ellen Hook, Nicola Harris, Phoebe Tsou

Module 2. (1h25') Tissue dissociation and organoid derivation (floor: 1 & 2)

Sara Campinoti, Luca Urbani, Lai Wei, Bruna Almeida, Sandra Phillips, Fabio Grundland Freile, Stijn den Daas

11:45 – 12:00 Coffee Break

12:00 – 12:30 Talks and breakout sessions

Histological evaluations in PCLS and organoids: which stains, how and why – Prof Robert D Goldin

12:30 – 13:15 Lunch

13:15 – 16.00 2nd Practical session

Participants will be divided into 4 teams for small group hands-on experience in the lab:

Module 3. (1h25') Slice handling and culture, induction of liver injury and drug treatment of PCLS, and isolation of immune cells (floor: G)

Elena Palma, Una Rastovic, Ravi Jagatia, Ellen Hook, Nicola Harris

Module 4. (1h25') 3D culture of organoids and expansion (floor: 1 & 2)

Sara Campinoti, Luca Urbani, Lai Wei, Bruna Almeida, Anna Hadjichambi, Christos Konstantinou, Sandra Phillips, Michele Vacca, Gabriele Mocciano

16:00 – 16:15 Coffee Break

16:15 – 19:30 Project applications of the models

5' pitches from participants + 3' specific feedback and advice from the Faculty

20:00 – 22:30 Dinner with 'Speed' networking with the Faculty at the venue

20:00 – 20:30 Bus transport to restaurant

20:30 – 22:00 Dinner with 'Speed' networking with the Faculty at the restaurant

22:00 – 22:30 Return to hotel venue (via bus)

Day 3, Sat 17 Sep

Please remember to check out from the hotel and bring your luggage to the Institute.

9:00 – 9:15 Summary of day before & questions

9:15– 12:05 3rd Practical session with coffee break

Participants will be divided into 4 teams for small group hands-on experience in the lab:

Module 5. Gelatin embedding of PCLS (35 min) (2 groups; floor: 1)



Una Rastovic, Nicola Harris, Ellen Hook

- Module 6. Paraffin embedding of organoids (35 min) (1 group; floor: 2)
Bruna Almeida, Lai Wei, Fabio Grundland Freile
- 10:25 – 10:55 Coffee Break
- Module 7. Immunofluorescence characterization of PCLS and organoids (35 min) (2 groups; floor: 1)
Sara Campinoti, Una Rastovic, Christos Konstantinou, Gabriele Mocciaro, Stijn den Daas
- Module 8. Imaging and microscopy (35 min) (1 group; floor: 2)
Luca Urbani, Ravi Jagatia, Elena Palma
- 12:10 – 12:40 Post-school quiz and survey (online)**
- 12:40 – 14:00 Closing remarks, Lunch bag and depart**