EASL Basic School of Hepatology

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

2 – 4 October 2024
The Roger Williams Institute of Hepatology, London, UK

DIRECTORS
Prof Shilpa Chokshi, Dr Elena Palma, Dr Luca Urbani

PROGRAMME OVERVIEW

Day 1, Wed 2nd Oct

12:00 – 13:00 Hotel Check-In

13:30 – 14:00 Registration & Welcome Coffee

14:00 – 14:30 Welcome

Introduction and Learning Objectives/ Health & Safety induction
Directors, Natalie Day, Karim Maghlaoui

14:30 – 15:30 Icebreaker introduction

15:30 – 17:00 State-of-the-art: Experimental models of liver diseases

15:30 – 16:15 Keynote lecture 1 and Q&A
Precision Cut Liver Tissue Slices – applications, advantages and limitations
Prof. Peter Olinga, Netherlands. Intro: Elena Palma

16:15 – 17:00 Keynote lecture 2 and Q&A
Liver Organoids – from basic research to therapeutic applications
Prof Meritxell Huch, Cambridge, UK. Intro: Luca Urbani

17:00 – 17:30 Coffee Break (staffroom)

17:30 – 18:10 Talks and breakout sessions

17:30 – 17:40 *Precision cut liver slices versus organoids as models of liver disease* – Luca Urbani

17:40 – 17:50 *How to monitor disease processes in ex-vivo models (+omics)* – Shilpa Chokshi

17:50 – 18:00 *Tumour slices and Tumour organoids* – Elena Palma

18:00 – 18:10 *Biomechanical analysis of in vitro and ex vivo models* – Eileen Gentleman

18:10 – 18:30 **Visit of the facility – walkround in 2 groups**

18:30 – 19:30 **Welcome drinks and Pub style quiz**

19:30 – 21:30 **Dinner at The Roger Williams Institute of Hepatology**

Day 2, Thu 3rd Oct

08:15 – 8:30 **Delegates and chaperones gather in the boardroom**

08:30 – 12:00 **1st Practical session with coffee break**

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

Module 1. Preparation of PCLS from liver explants (1h30') (floor: G)
Elena Palma, Una Rastovic, Ravi Jagatia, Nicola Harris, Sergio F. Bozzano, Wendy Fernandes, Antonio Riva

Module 2. Tissue dissociation and organoid derivation (1h30') (floor: 1 & 2)
Sara Campinoti, Luca Urbani, Lai Wei, Bruna Almeida, Sandra Phillips, Fabio Grundland Freile, Phoebe Tsou, Arturo Simoni Nieves, Wendy Fernandes, Caitlin Rore, Kavitha Kirubendran

12:00 – 12:30 **Talks and breakout sessions**

Sample analysis using spatial technologies (speakers TBC)

12:30 – 13:15 **Lunch (staffroom)**

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. Slice handling, culture and processing (1h15') (floor: G)
Elena Palma, Una Rastovic, Ravi Jagatia, Sergio F. Bozzano, Nicola Harris

Module 4. 3D culture of organoids and expansion (1h15') (floor: 1 & 2)
Sara Campinoti, Luca Urbani, Lai Wei, Bruna Almeida, Anna Hadjichambi, Christos Konstantinou, Sandra Phillips, Michele Vacca, Phoebe Tsou, Arturo Simoni Nieves

16:00 – 16:30 **Coffee Break (boardroom)**

16:30 – 19:00 **Applications of the models** with project-specific feedback from the Faculty

19:00 – 22:30 **Dinner with 'Speed' networking with the Faculty**

19:00 – 19:30 Bus transport to restaurant and group picture

19:30 – 22:00 Dinner with 'Speed' networking with the Faculty (venue to be confirmed)

22:00 – 22:30 Return to hotel (via coach)

Day 3, Fri 4th Oct

8:00 – 8:30 **Hotel Check-out**

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

9:15 – 12:00 **3rd Practical session with coffee break**

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

Module 5. Embedding of PCLS for histological analysis/IF (35') (floor: 1)
Una Rastovic, Nicola Harris, Dimple Zope, Sergio F Bozzano

Module 6. Embedding of organoids for histological analysis/IF (35') (floor: 2)
Bruna Almeida, Lai Wei, Fabio Grundland Freile,

Module 7. Immunofluorescence characterization of organoids (35') (floor: 1)
Sara Campinoti, Una Rastovic, Christos Konstantinou, Kavitha Kirubendran

Module 8. Imaging and microscopy (35') (floor: 2)
Luca Urbani, Ravi Jagatia

12:00 – 12:30 **Post-school quiz and survey (online)**

12:30 – 14:00 **Closing remarks, Lunch bag (staffroom) and depart**