

**Training school in novel experimental models for cholangiocarcinoma: from ex vivo patient-derived organoids to in vivo animal models  
(March 11<sup>th</sup> and 12<sup>th</sup> 2021)**

*School coordinators: Prof. Chiara Braconi and Prof. Diego F. Calvisi*

*\*\*Please note all times are in CET*

**DAY 1-SESSION 1: CHOLANGIOCARCINOMA**

**Moderators: Chiara Braconi & Diego Calvisi**

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| 09:30 | <b>Introduction to the school (Chiara Braconi-Diego Calvisi)</b>   |
| 09:45 | <b>Introduction to COST as a platform to support training<br/>Vincenzo Cardinale &amp; Jesus Banales</b>   |
| 10:00 | <b>Opening Lecture</b><br><b>Cholangiocarcinoma: current challenges in the clinical management; how can we use novel models to fill in the gaps?</b><br>John Bridgewater (University College London, UK) |
| 10:30 | <b>Patients' perspective: green or red light for invasive translational studies?</b><br>Helen Morement, AMMF   |
| 11:00 | <b>BREAK</b>   |

**DAY 1 – SESSION 2: ORGANOIDS AND EX VIVO MODELS**

**Moderators: Chiara Braconi**

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| 11:30 | <b>Ex vivo patient- derived models of CCA</b><br>Anna Grabowska (University of Nottingham, UK)  |
| 12:00 | <b>Microfluidic technology for combinatorial screening of patient-derived tumoroids</b><br>Michele Zagnoni (University of Strathclyde, UK)                        |
| 12:30 | <b>Primary cell models to better investigate genomics and epigenomics of cholangiocarcinoma</b><br>Jesper Andersen (University of Copenhagen, DK)                 |
| 13:00 | <b>Patient Derived Organoids: the experience of the International Cholangiocarcinoma Research Network</b><br>Mitesh Borad (Mayo Clinic, USA)                      |
| 13:30 | <b>Lunch</b>  |
| 14:00 | <b>Educational videos/operational issues in organoid development</b><br>- organoid culturing: technical issues Colin Rae)<br>- organoid imaging (Francesco Amato) |

## DAY2 – SESSION 1: IN VIVO MODELS

**Moderator: Diego Calvisi**

- 9:30 **Animal models of CCA: state-of-the-art, limitations, and unsolved questions**  
Prof. Diego F. Calvisi (University of Regensburg, DE)
- 10:00 **Cholangiocarcinoma models through hydrodynamic tail injection**  
Luke Boulter (University of Edinburgh, UK)
- 10:30 **Histomorphology of CCA models: how to make your discoveries applicable to humans**  
Guido Carpino (University Foro Italico, IT)
- 11:00 **BREAK**
- 11:30 **Novel targets for modelling intrahepatic cholangiocarcinoma**  
Javier Cubero (Complutense University of Madrid, SP)
- 12:00 **Cholangiocarcinoma patient-derived xenografts (PDX)**  
Serena Mancarella (S. De Bellis" Research Hospital, IT)
- 12:30 **Models for the study of therapy resistance in CCA**  
Rocio Rodriguez Macias (University of Salamanca, SP)
- 13:00 **Lunch**
- 14:00 **Educational videos/operational issues in animal research**  
- Hydrodynamic tail vein injection (Prof. Diego F. Calvisi's lab)  
- Genetic strategies for in vivo modelling (Dr. Silve Vicent's lab)
- 14:30 **Conclusive remarks**