



Organoids: Modelling Organ Development and Disease in 3D Culture - Virtual



EMBL Courses and Conferences during the Coronavirus pandemic

With the onsite programme paused, many of our events are now being offered in virtual formats.

Registration is open as usual for many events, with back-up plans in place to move further courses and conferences online as necessary. Registration fees for any events affected by the COVID-19 disruption are fully refundable.

More information for participants of events at EMBL Heidelberg can be found [here](#).

Programme

Registered participants will receive the final information E-Mail on Wednesday, 14 October and the zoom details on Tuesday afternoon, 20 October.

Got something to say? Tweet it! #EESOrgan or Download the poster [here](#).

- The virtual symposium includes live streamed talks from invited speakers with Q&A sessions after each talk
- All selected short talks will be pre-recorded with live Q&A sessions in individual zoom rooms
- Information on the live stream and access to the discussion platform and digital posters will be provided shortly before the start of the event.
- Access to the recorded talks will be available from 14 October until 2 November 2020.

The following times are used in the programme below:

- Central European Summer Time (CEST): eg. Berlin, Amsterdam Paris
- Eastern Daylight Time (EDT): eg. New York, Quebec

To find out the equivalent time zone in your location, enter Berlin, the CEST programme time and your city into the [Time Zone Converter](#).

Day 1 - Wednesday 21 October 2020

Time	Speaker
14:00-14:15 (CEST) 08:00-08:15 (EDT)	Welcome remarks Chair of the day: Madeline Lancaster
14:15-15:05 (CEST) 08:15-09:05 (EDT)	Keynote Lecture Understanding human brain development and disease: from embryos to organoids Paola Arlotta - Harvard University, USA AVAILABLE ON DEMAND AFTER LIVE STREAM
15:05-15:10 (CEST) 09:05-09:10 (EDT)	Break (to setup and switch to the next live talk)
15:10-16:00 (CEST) 09:10-10:00 (EDT)	Keynote Lecture Human pluripotent stem cell-derived gastrointestinal organoids as new models to study human organ development and digestive diseases James Wells - Cincinnati Children's Hospital Medical Center, USA AVAILABLE ON DEMAND AFTER LIVE STREAM
16:00-16:15 (CEST) 10:00-10:15 (EDT)	Break
16:15-17:15 (CEST) 10:15-11:15 (EDT)	Panel discussion on "organoid quality control" Panel Chair: Madeline Lancaster, MRC Laboratory of Molecular Biology, UK Panelists: – Meritxell Huch - Max Planck Institute of Molecular Cell Biology and Genetics, Germany – Jürgen Knoblich - Institute of Molecular Biotechnology, Austria – Sally Temple, Neural Stem Cell Institute, USA – Hans Clevers - Hubrecht Institute, The Netherlands – James Wells - Cincinnati Children's Hospital Medical Center, USA – Karl R. Koehler - Boston Children's Hospital, USA AVAILABLE ON DEMAND AFTER LIVE STREAM
17:15-17:45 (CEST) 11:15-11:45 (EDT)	Meet the speakers in individual zoom break out rooms Paola Arlotta, James Wells, Saskia Suijkerbuijk, Gray Camp, Anne Grapin-Botton, Alexandra Eicher
17:45-19:45 (CEST) 11:45-13:45 (EDT)	Virtual Poster Session 1 (all posters) including live chats, recorded flash talks and discussion channel on slack
20:00-21:00 (CEST) 14:00-15:00 (EDT)	Optional: Speed networking (using Zoom, pre-registration required)
	End of day 1 - Continued access to digital posters, networking and discussion platforms, pre-recorded talks

Day 2 - Thursday 22 October 2020

Time	Speaker
12:00-15:05 (CEST) 06:00-09:05 (EDT)	Session 1: Concepts from Developmental Biology Session Chair: Jürgen Knoblich
12:00-12:25 (CEST) 06:00-06:25 (EDT)	Organoid medicine in human GI diseases Mamoru Watanabe - Tokyo Medical and Dental University, Japan AVAILABLE ON DEMAND AFTER LIVE STREAM
12:25-12:30 (CEST) 06:25-06:30 (EDT)	Break (to setup and switch to the next live talk)

12:30-12:55 (CEST) 06:30-06:55 (EDT)	Balancing cell fate, tissue shape and embryo size: Insights from 3D stem cell cultures Marta Shahbazi - University of Cambridge, UK AVAILABLE ON DEMAND AFTER LIVE STREAM
12:55-13:00 (CEST) 06:55-07:00 (EDT)	Break (to setup and switch to the next live talk)
13:00-13:25 (CEST) 07:00-07:25 (EDT)	Lineage dynamics during brain organoid formation Barbara Treutlein - ETH Zürich, Switzerland
13:25-13:40 (CEST) 07:25-07:40 (EDT)	Short Break
13:40-14:05 (CEST) 07:40-08:05 (EDT)	Blastoids: Modelling blastocyst development and implantation solely from stem cells Nicolas Rivron - Institute of Molecular Biotechnology, Austria AVAILABLE ON DEMAND AFTER LIVE STREAM
14:05-14:10 (CEST) 08:05-08:10 (EDT)	Break (to setup and switch to the next live talk)
14:10-14:35 (CEST) 08:10-08:35 (EDT)	Probing the genomic fidelity of cerebral organoids Arnold Kriegstein - University of California, San Francisco, USA AVAILABLE ON DEMAND AFTER LIVE STREAM
14:35-14:40 (CEST) 08:35-08:40 (EDT)	Break
14:40-15:10 (CEST) 08:40-09:10 (EDT)	Meet the Speakers in individual zoom break out rooms Mamoru Watanabe, Marta Shahbazi, Barbara Treutlein, Nicolas Rivron, Arnold Kriegstein, Nami Sugiyama (Matsuda), Johannes Jung
15:10-15:40 (CEST) 09:10-09:40 (EDT)	Optional ERC Workshop European Research Council funding opportunities: all you need to know before applying
15:10-15:40 (CEST) 09:10-09:40 (EDT)	Optional Meet the editors - Katherine Brown, Development, The Company of Biologists - Ieva Gailite, The EMBO Journal and Lise Roth, EMBO Molecular Medicine - Véronique Gebala, Nature and Ann Le Good, Nature Communications - Esther Schnapp, EMBO reports - Claudia Willmes, Cell Press
15:40-17:15 (CEST) 09:40-11:15 (EDT)	Virtual Poster Session 2 (all posters) including live chats, recorded flash talks and discussion channel on slack
17:15-19:30 (CEST) 11:15-13:30 (EDT)	Session 2: Organoid architecture Session Chair: James Wells
17:15-17:40 (CEST) 11:15-11:40 (EDT)	Development and evolution of human brain size Madeline Lancaster - MRC Laboratory of Molecular Biology, UK AVAILABLE ON DEMAND AFTER LIVE STREAM
17:40-17:45 (CEST) 11:40-11:45 (EDT)	Break (to setup and switch to the next live talk)
17:45-18:10 (CEST) 11:45-12:10 (EDT)	Engineering epithelial organoid morphogenesis Matthias Lutolf - École Polytechnique Fédérale de Lausanne, Switzerland
18:10-18:15 (CEST) 12:10-12:15 (EDT)	Break (to setup and switch to the next live talk)
18:15-18:40 (CEST) 12:15-12:40 (EDT)	Hair-bearing human skin organoids generated from pluripotency Karl R. Koehler - Boston Children's Hospital, USA

18:40-18:45 (CEST) 12:40-12:45 (EDT)	Break (to setup and switch to the next live talk)
18:45-19:10 (CEST) 12:45-13:10 (EDT)	Cell types of the human retina and its organoids at single-cell resolution Botond Roska - Institute of Molecular and Clinical Ophthalmology, Switzerland AVAILABLE ON DEMAND AFTER LIVE STREAM
19:10-19:40 (CEST) 13:10-13:40 (EDT)	Meet the Speakers in individual zoom break out rooms Madeline Lancaster, Matthias Lutolf, Karl Koehler, Botond Roska, Iva Kelava, Marie Banner, Marta Roccio
19:50-20:10 (CEST) 13:50-14:10 (EDT)	Optional: Industry Session (log-in details will be available in slack)
20:15-21:15 (CEST) 14:15-15:15 (EDT)	Optional: Virtual Bar Mixer (using Zoom, pre-registration required)
	End of day 2 - Continued access to digital posters, networking and discussion platforms, pre-recorded talks

Day 3 - Friday 23 October 2020

Time	Speaker
12:00-15:05 (CEST) 06:00-09:05 (EDT)	Session 3: Organoids from adult stem cells Session chair: Meritxell Huch
12:00-12:25 (CEST) 06:00-06:25 (EDT)	Building the human lung: lessons from organoids Emma Rawling - The Gurdon Institute, UK AVAILABLE ON DEMAND AFTER LIVE STREAM
12:25-12:30 (CEST) 06:25-06:30 (EDT)	Break (to setup and switch to the next live talk)
12:30-12:55 (CEST) 06:30-06:55 (EDT)	Dosage in time: Unlocking the developmental impact of copy number variations through brain organoids Giuseppe Testa - University of Milan, Human Technopole and European Institute of Oncology, Italy AVAILABLE ON DEMAND AFTER LIVE STREAM
12:55-13:00 (CEST) 06:55-07:00 (EDT)	Break (to setup and switch to the next live talk)
13:00-13:25 (CEST) 07:00-07:25 (EDT)	Organoid systems to investigate maternal-fetal interactions of early human pregnancy Margherita Yayoi Turco - University of Cambridge, UK
13:25-13:40 (CEST) 07:25-07:40 (EDT)	Short Break
13:40-14:05 (CEST) 07:40-08:05 (EDT)	Self-organization in intestinal organoid development Prisca Liberali - Friedrich Miescher Institute for Biomedical Research, Switzerland AVAILABLE ON DEMAND AFTER LIVE STREAM
14:05-14:10 (CEST) 08:05-08:10 (EDT)	Break (to setup and switch to the next live talk)
14:10-14:35 (CEST) 08:10-08:35 (EDT)	Adult tissue stem cells – a tale of fate and plasticity Helmuth Gehart - ETH Zürich, Switzerland AVAILABLE ON DEMAND AFTER LIVE STREAM
14:35-15:05 (CEST) 08:35-09:05 (EDT)	Meet the Speakers in individual zoom break out rooms Emma Rawlins, Giuseppe Testa, Margherita Yayoi Turco, Prisca Liberali, Helmuth Gehart, Sasha Mendjan, Cayetano Pleguezuelos Manzano

15:05-16:45 (CEST) 09:05-10:45 (EDT)	Virtual Poster Session 3 (all posters) including live chats, recorded flash talks and discussion channel on slack
16:45-19:15 (CEST) 10:45-13:15 (EDT)	Session 4: Organoids in regenerative medicine/therapy Session Chair: Anne Grapin-Botton
16:45-17:10 (CEST) 10:45-11:10 (EDT)	Lgr5 Stem Cell-based organoids in human disease Hans Clevers - Hubrecht Institute, The Netherlands AVAILABLE ON DEMAND AFTER LIVE STREAM
17:10-17:15 (CEST) 11:10-11:15 (EDT)	Break (to setup and switch to the next live talk)
17:15-17:40 (CEST) 11:15-11:40 (EDT)	Human Time vs. Mouse Time with Recapitulated Segmentation Clocks Miki Ebisuya - EMBL Barcelona, Spain AVAILABLE ON DEMAND AFTER LIVE STREAM
17:40-17:45 (CEST) 11:40-11:45 (EDT)	Break (to setup and switch to the next live talk)
17:45-18:10 (CEST) 11:45-12:10 (EDT)	Improving kidney organoid production by controlling scale and conformation Kynan Lawlor - Murdoch Children's Research Institute, Australia AVAILABLE ON DEMAND AFTER LIVE STREAM
18:10-18:15 (CEST) 12:10-12:15 (EDT)	Break (to setup and switch to the next live talk)
18:15-18:40 (CEST) 12:15-12:40 (EDT)	Neuromuscular Organoids to Model Human Development and Disease Mina Gouti - Max-Delbrück Center for Molecular Medicine, Germany
18:40-18:45 (CEST) 12:40-12:45 (EDT)	Break (to setup and switch to the next live talk)
18:45-19:10 (CEST) 12:45-13:10 (EDT)	Publishing policies and initiatives at EMBO press Esther Schnapp, EMBO reports, Germany AVAILABLE ON DEMAND AFTER LIVE STREAM
19:10-19:40 (CEST) 13:10-13:40 (EDT)	Meet the Speakers in individual zoom break out rooms Hans Clevers, Miki Ebisuya, Kynan Lawlor, Mina Gouti, Esther Schnapp, Jakob Metzger, Veronica Krenn, Maria Duque-Corre
19:50-20:10 (CEST) 13:50-14:10 (EDT)	Optional: Industry Session (log-in details will be available in slack)
20:15-21:15 (CEST) 14:15-15:15 (EDT)	Optional: Virtual Speed Networking (using Zoom, pre-registration required)
	Continued access to digital posters, networking and discussion platforms, pre-recorded talks

Day 4 - Saturday 24 October 2020

Time	Speaker
11:30-14:30 (CEST) 05:30-08:45 (EDT)	Session 5: Organoids in disease modeling Session Chair: Hans Clevers
11:30-11:55 (CEST) 05:30-05:55 (EDT)	Deepening the understanding of gastrointestinal diseases using organoid technology Toshiro Sato, Keio University, Japan AVAILABLE ON DEMAND AFTER LIVE STREAM
11:55-12:00 (CEST) 05:55-06:00 (EDT)	Break (to setup and switch to the next live talk)

12:00-12:25 (CEST) 06:00-06:25 (EDT)	A cerebral organoid model for Tuberous sclerosis identifies human-specific aspects of brain development Jürgen Knoblich - Institute of Molecular Biotechnology, Austria AVAILABLE ON DEMAND AFTER LIVE STREAM
12:25-12:30 (CEST) 06:25-06:30 (EDT)	Break (to setup and switch to the next live talk)
12:30-12:55 (CEST) 06:30-06:55 (EDT)	Infection, inflammation and cancer in the gut Sina Bartfeld - University of Würzburg, Germany
12:55-13:00 (CEST) 06:55-07:00 (EDT)	Break (to setup and switch to the next live talk)
13:00-13:25 (CEST) 07:00-07:25 (EDT)	Liver and pancreas organoids; their application to the study of tissue regeneration and disease Meritxell Huch - Max Planck Institute of Molecular Cell Biology and Genetics, Germany AVAILABLE ON DEMAND AFTER LIVE STREAM
13:25-13:30 (CEST) 07:25-07:30 (EDT)	Break (to setup and switch to the next live talk)
13:30-13:55 (CEST) 07:30-07:55 (EDT)	A chimeric organoid-based model for studying neuro-immune interactions under physiological conditions Simon Schafer - Salk Institute for Biological Studies, USA AVAILABLE ON DEMAND AFTER LIVE STREAM
13:55-14:10 (CEST) 07:55-08:10 (EDT)	Announcement of poster prize winners and closing remarks
14:10-14:40 (CEST) 08:10-08:40 (EDT)	Meet the Speakers in individual zoom break out rooms Jürgen Knoblich, Sina Bartfeld, Meritxell Huch, Simon Schafer, Aurelien Bidaud-Meyn, Cindrilla Chumduri, Eyal Karzbrun

Pre-recorded short talks

Access to the recorded talks will be available from 14 October until 2 November 2020.

Exploring human lacrimal gland biology using organoids and single-cell RNA sequencing

Marie Bannier - Hubrecht Institute, The Netherlands

Identifying new genes implicated in Microvillus inclusion disease: lessons from combined use of *C. elegans* and intestinal organoids

Aurelien Bidaud-Meynard - University of Rennes, France

Charting human development using a multi-organ cell atlas and organoid technologies

Gray Camp - Institute of Molecular and Clinical Ophthalmology Basel, Switzerland

Organoid models to study cervical epithelial transition zone homeostasis, metaplasia, and coinfections

Cindrilla Chumduri - University of Würzburg, Germany

Discovering early interactions of whipworm larvae within host epithelial syncytia during intestinal colonisation using caecaloids

Maria Adelaida Duque-Correa - Wellcome Sanger Institute, UK

Engineering complex human gastric tissues by using three independent human pluripotent stem cell derived germ layers

Alexandra Eicher - Cincinnati Children's Hospital Medical Center, USA

Three Dimensional Models of Human Pancreas Organogenesis to Understand Diabetes

Anne Grapin-Botton - MPI-CBG, Germany; DanStem; University of Copenhagen, Denmark

3D intestinal organoid systems for assessment of immune recognition of adenovirus-infected primary cells by NK cells

Johannes Jung - Heinrich Pette Institute, Germany

Human organoids on-a-chip reveal principles of neural tube morphogenesis

Eyal Karzbrun - University of California, Santa Barbara, USA

ONLY AVAILABLE UNTIL 24 OCTOBER 2020

Sex hormones influence neural progenitor dynamics during human brain development

Iva Kelava - MRC Laboratory of Molecular Biology, UK

Brain organoid modelling of viral infections reveals unique and novel aspects of viral pathogenesis in the brain

Veronica Krenn - Institute of Molecular Biotechnology, Austria

Cardioids reveal self-organizing principles of human cardiogenesis

Sasha Mendjan - Institute of Molecular Biotechnology, Austria

Micropattern-based organoid screens and deep learning data analysis reveal new targets for Huntington's Disease

Jakob Metzger - Rockefeller University, USA

Mutational signature in colorectal cancer caused by genotoxic pks+ E. coli

Cayetano Pleguezuelos Manzano - Hubrecht Institute, The Netherlands

Cochlear organoid models to study ototoxicity and regeneration

Marta Roccio - University of Zurich, Switzerland

Lineage tracing reveals distinct roles of partial and full epithelial-to-mesenchymal transition in breast cancer metastasis and chemoresistance

Nami Sugiyama (Matsuda) - University of Basel, Switzerland

Cell competition drives growth of cancer cells through forced cell death and cell fate change in intestinal organoids

Saskia Suijkerbuijk - Netherlands Cancer Institute, The Netherlands