Genome Engineering: CRISPR/Cas from Cells to Mice - Virtual

EMBL COURSE

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

Got something to say? Tweet it with #EMBLCRISPRcas

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.

— The virtual course includes live-streamed invited speakers with Q&A sessions after each talk.

— Information on the live stream and access to the discussion platform will be provided shortly before the start of the event.

— Access to the recorded talks will be available for 1 week after the start of the event.

Day 1 - Monday 28 September 2020

Time	Speaker/Practical
13:00 - 13:20 (CEST) 07:00 - 07:20 (EDT)	**Welcome and Introduction** Birgit Koch - Max Planck Institute for Medical Research, Germany Yvonne Yeboah - EMBL Heidelberg, Germany Elisabeth Zielonka - EMBL Heidelberg, Germany
13:20 - 14:00 (CEST) 07:20 - 08:00 (EDT)	Interactive session: **Flash talks from participants (2 slides / 2 min)**
14:00 - 14:15 (CEST) 08:00 - 08:15 (EDT)	**Break**
14:15 - 15:00 (CEST) 08:15 - 09:00 (EDT)	Live talk followed by Q&A session: **Introduction into CRISPR/Cas9** Sibylle Chantal Vonesch - EMBL Heidelberg, Germany
15:00 - 15:30 (CEST) 09:00 - 09:30 (EDT)	**Break (Optional Quiz from 15:00 - 15:15)**
15:30 - 17:00 (CEST) 09:30 - 11:00 (EDT)	Interactive session: **Project discussion in 2 parallel groups of 8 with four participants presenting** **(Discussion time: 20 min per participant)**
17:00 (CEST) 11:00 (EDT)	**End of Day 1 - Continued access to networking and discussion platform, pre-recorded lectures**

Day 2 - Tuesday 29 September 2020

Time	Speaker/Practical
12:45 - 13:00 (CEST) 06:45 - 07:00 (EDT)	**Overview of the day** Birgit Koch - Max Planck Institute for Medical Research, Germany

13:00 - 13:45 (CEST) 07:00 - 07:45 (EDT)	Live talk followed by Q&A session: **Purification of Cas9 protein** Kim Remans - EMBL Heidelberg, Germany
13:45 - 14:00 (CEST) 07:45 - 08:00 (EDT)	**Break**
14:00 - 14:30 (CEST) 08:00 - 08:30 (EDT)	Introduction to practical: **The art of CRISPR design - Guide RNA design with Thermo Fisher** Alexander Schneidereit - Thermo Fisher Scientific
14:30 - 15:00 (CEST) 08:30 - 09:00 (EDT)	Introduction to practical: **Overview of gRNA design tools** Birgit Koch - Max Planck Institute for Medical Research, Germany
15:00 - 15:30 (CEST) 09:00 - 09:30 (EDT)	Introduction to practical: **gRNA/Donor design for embryos** Neil Humphreys - EMBL Rome, Italy
15:30 - 16:00 (CEST) 09:30 - 10:00 (EDT)	**Break**
16:00 - 18:00 (CEST) 10:00 - 12:00 (EDT)	Self-paced practical module: **gRNA/Donor design - assistance from trainer until 18:00 per chat**
18:00 (CEST) 12:00 (EDT)	**End of Day 2 - Continued access to networking and discussion platform, pre-recorded lectures**

Day 3 - Wednesday 30 September 2020

Time	Speaker/Practical
12:45 - 13:00 (CEST) 06:45 - 07:00 (EDT)	**Overview of the day** Neil Humphreys - EMBL Rome, Italy
13:00 - 13:45 (CEST) 07:00 - 07:45 (EDT)	Live talk followed by Q&A session: **Genome and epigenome editing using CRISPR-Cas system** Claudio Mussolino - Medical Center-University of Freiburg, Germany
13:45 - 14:00 (CEST) 07:45 - 08:00 (EDT)	**Break**

14:00 - 15:30 (CEST) 08:00 - 09:30 (EDT)	Interactive session: **Project discussion in 2 parallel groups of 8 with four participants presenting** **(Discussion time: 20 min per participant)**
15:30 - 16:00 (CEST) 09:30 - 10:00 (EDT)	**Virtual Coffee (optional)**
16:00 - 17:00 (CEST) 10:00 - 11:00 (EDT)	Live talk followed by Q&A session: **Cell line Generation- Testing strategies for knock- in and knock-out cells** Birgit Koch - MPI for Medical Research Heidelberg, Germany
17:00 (CEST) 11:00 (EDT)	**End of Day 3 - Continued access to networking** **and discussion platform, pre-recorded lectures**

Day 4 - Thursday 1 October 2020

Time	**Speaker/Practical**
12:45 - 13:00 (CEST) 06:45 - 07:00 (EDT)	**Overview of the day** Elisabeth Zielonka - EMBL Heidelberg, Germany
13:00 - 13:45 (CEST) 07:00 - 07:45 (EDT)	Live talk followed by Q&A session: **Towards unexpected phenotypes with CRISPR/Cas** Manuel Kaulich - Universität Klinikum FFM, Germany
13:45 - 14:00 (CEST) 07:45 - 08:00 (EDT)	**Break**
14:00 - 14:40 (CEST) 08:00 - 08:40 (EDT)	Interactive session part 1: **Imaged-based high-throughput screening RNAi vs CRISPR** Beate Neumann - EMBL Heidelberg, Germany
14:40 - 15:00 (CEST) 08:40 - 09:00 (EDT)	**Break**
15:00 - 16:00 (CEST) 09:00 - 10:00 (EDT)	Interactive session part 2: **Imaged-based high-throughput screening RNAi vs CRISPR** Beate Neumann - EMBL Heidelberg, Germany
16:00 (CEST) 10:00 (EDT)	**End of Day 4 - Continued access to networking** **and discussion platform, pre-recorded lectures**

Day 5 - Friday 2 October 2020

Time	Speaker/Practical
12:45 - 13:00 (CEST) 06:45 - 07:00 (EDT)	**Overview of the day** Neil Humphreys - EMBL Rome, Italy
13:00 - 13:45 (CEST) 07:00 - 07:45 (EDT)	Live talk followed by Q&A session: **Gene Editing in different experimental models** Antony Adamson - University of Manchester, UK
13:45 - 14:00 (CEST) 07:45 - 08:00 (EDT)	**Break**
14:00 - 14:45 (CEST) 08:00 - 08:45 (EDT)	Live talk followed by Q&A session: **CRISPR-Cas genome editing to generate transgenic mice** Neil Humphreys - EMBL Rome, Italy
14:45 - 15:15 (CEST) 08:45 - 09:15 (EDT)	**Break**
15:15 - 16:30 (CEST) 09:15 - 10:30 (EDT)	Interactive session: **Ethical Issues of CRISPR Technology and Genome Engineering** Antony Adamson and Neil Humphreys
16:30 - 17:30 (CEST) 10:30 - 11:30 (EDT)	Virtual Social Programme: **Happy Hour Mixer**
17:30 (CEST) 11:30 (EDT)	**End of Day 5 - Continued access to networking and discussion platform, pre-recorded lectures**

Days 6/7 - Saturday/Sunday 3/4 October 2020

Time	Speaker/Practical
	Self-paced modules on Learning Platform

Day 8 - Monday 5 October 2020

Time	Speaker/Practical
13:00 - 13:45 (CEST) 07:00 - 07:45 (EDT)	Summary of results, final discussions, feedback session
13:45 - 14:15 (CEST) 07:45 - 08:15 (EDT)	**Break**

14:15 - 15:00
(CEST)
08:15 - 09:00 (EDT)

Summary of results, final discussions, feedback session
(continued)

15:00 (CEST)
09:00 (EDT)

End of the course