EMBL

Genome Engineering: CRISPR / Cas

EMBL COURSE

ThermoFisher SCIENTIFIC

We have moved our website to embl.org/events. The content below is no longer being updated.

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? Share it with #EMBLCRISPR

HIDE ALL

Sunday 16 September 2018

Time	Speaker
from 17.00	**Arrival & Welcome at the ISG Hotel**
	Welcoming round of organizers, trainers, speakers at the ISG Hotel **Ice-breaker (Flash talks)**

Time	Speaker
18:30 - 19:15	**Introduction into CRISPR/Cas9** Sibylle Chantal Vonesch - EMBL Heidelberg, Germany
19:30	**Dinner - ISG Hotel**

Monday 17 September 2018

Time	Speaker
9.00 - 9.30	**Arrival & Welcome** Yvonne Yeboah, Elisabeth Zielonka - EMBL Heidelberg, Germany
9.30 - 10.15	**Purification of Cas9 protein** Kim Remans - EMBL Heidelberg, Germany
10.15 - 10.45	**Coffee Break**
10.45 - 11.45	**gRNA/Donor design (Intro to practical)** Thermo Fischer Scientific
11.45 - 12.30	**Practical 1-1** Guide RNA Synthesis – PCR for IVT templates
12.30 - 13.30	**Lunch in the EMBL Canteen**
13.30 - 14.30	**CRISPR issues and applications** Dana Carroll - The University of Utah, United States of America
14.30 - 15.00	**Coffee break**
15.00 - 16.30	**Practical 1-2** PCR gel analysis and set up IVT
16.30 - 18.00	**Practicals 2 & 3 in groups** Transfection of 293FT cells with gRNA & Cas9mRNA lipofection Electroporation of 293FT with gRNA & Cas9protein Guide RNA design task
18.00 - 19.00	**Dinner in the EMBL Canteen**
19.00 - 20.30	**Practicals 2 & 3 in groups continues** Transfection of 293FT cells with gRNA & Cas9mRNA lipofection Electroporation of 293FT with gRNA & Cas9protein Guide RNA design task

Tuesday 18 September 2018

Time	Speaker
9.00 - 9.45	**Genome and epigenome editing using CRISPR-Cas system** Claudio Mussolino - Medical Center -University of Freiburg, Germany
9.45 - 10.00	**Coffee break**
10.00 - 11.00	**Generation and validation of endogenously tagged cell lines** Birgit Koch - Max Planck Institute for Medical Research, Germany
11.00 - 12.30	**Practicals in groups** a) Introduction to FACS by Malte Paulsen FACS sorting of knock in cells – single cell sort b) Individual project discussion
12.30 - 13.30	**Lunch in the EMBL Canteen**
13.30 - 15.00	**Practicals in groups continues** a) Introduction to FACS by Malte Paulsen FACS sorting of knock in cells – single cell sort b) Individual project discussion
15.00 - 15.15	**Coffee break**
15.15 - 17.45	**Practicals 1-3 & 4 in groups continues** IVT cleanup, quantitation and analysis of gRNA Transfection of 293FT-eBFP cells using CRISPR/Cas9 for SNP (RNPs)
17.45 - 18.30	**Dinner in the EMBL Canteen**
18.30 - 20.30	**Practicals 1-3 & 4 in groups** IVT cleanup, quantitation and analysis of gRNA Transfection of 293FT-eBFP cells using CRISPR/Cas9 for SNP (RNPs)

Wednesday 19 September 2018

Time	Speaker
09.00 - 09.30	**CRISPR & HiBiT Protein Tag –A perfect team to investigate endogenous protein biology** Erik Bonke - Promega, Germany
09.30 - 10.00	**High Efficiency Gene Editing using Programmable EnGen Ribonucleoprotein Complexes** Karl von Laer - New England Biolabs, Germany
10.00 - 10.15	**Coffee break**
10.15 - 12.00	**Practical 5-1 & 5-2** GCD Cell Harvest and lysis, set up GCD PCR

Time	Speaker
12.00 - 13.00	**Lunch in the EMBL Canteen**
13.00 - 13.45	**Mammalian cell engineering: The genome editing toolbox and considerations for use** Jon Chesnut - Thermo Fisher Scientific, USA
13.45 - 14.15	**Practical 5-3** CR analysis, set up GCD re-annealing reaction
14.15 - 16.15	**Practicals 5-4 & 5-5 in groups** Set up digestion for GCD, gel purification & sample submission for sanger sequencing Gel analysis of GCD
16.15 - 16.30	**Coffee break**
16.30 - 18.30	**TIDE - rapid, powerful and easy analysis of CRISPR experiments** Victor Dillard - Desktop Genetics, UK
18.30 - 19.30	**Dinner in the EMBL Canteen**

Thursday 20 September 2017

Time	Speaker
9.00 - 10.30	**Practicals 6 in groups** Examine BFP cells via microscopy and FACS Knock-In cell validation - DNA Preparation
10.30 - 12.00	**Practicals 6 in groups continues** Examine BFP cells via microscopy and FACS Knock-In cell validation - DNA Preparation
12.00 - 13.00	**Lunch in the EMBL Canteen**
13.00 - 13.45	**Genome-wide and targeted screens using CRISPR/Cas9 system** Balca R. Mardin - BioMed X, Germany
13.45 - 15.00	**Practical** Knock-In cell validation – Set up Junction PCR
15.00 - 15.30	**Coffee Break**
15.30 - 16.30	**Optimizing CRISPR ribonucleoprotein components for precision genome editing** Justin Barr - Integrated DNA Technologies, United States of America
17.00	**Shuttle downtown**
from 19.00	**Dinner downtown**

Friday 21 September 2018

Time	Speaker
9.00 - 10.00	**CRISPR-Cas9 transgenic mice - from concept to founder** Neil Humphreys – EMBL Rome
10.00 - 11.00	**Practical** Knock-In cell validation (1) - Gel electrophoresis of junction PCR
11.00 - 11.30	**Coffee Break**
11.30 - 12.15	**Practical** Knock-In cell validation (2) - Analysis of gel electrophoresis
12.15 - 13.00	**Final Project Discussion**
13.00 - 14.00	**Lunch in the EMBL Canteen**
14.00 - 16.00	**Summary of results, final discussions, feedback session**
16.00 - 16.15	**Coffee Break**
16.15 - 16.30	**Closing remarks & End of the course**