



# Chromatin Signatures During Differentiation: Integrated Omics

EMBL COURSE



**We have moved our website to [embl.org/events](https://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 The content below is no longer being updated.**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

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### Day 1 - Monday 2 September 2019

Time	Speaker	Location
	Introduction to basics & pull-down	
08:40	<b>Bus from ISG Hotel to EMBL</b>	Bus stop in front of ISG Hotel
08:45 - 09:00	<b>Arrival &amp; Registration</b>	Flex Labs A&B

Time	Speaker	Location
	<b>Welcome, Introduction &amp; Breaking the ice</b>	
09:00 - 10:00	Paola Grandi - Cellzome/GSK, Germany Kyung-Min Noh - EMBL Heidelberg, Germany	Flex Labs A&B
	<b>Practical:</b>	
	<b>Overview experiments</b>	
10:00 - 12:30	Paola Grandi - Cellzome/GSK, Germany Kyung-Min Noh - EMBL Heidelberg, Germany	Training Lab B
	<b>ESC differentiation</b>	
	Kyung-Min Noh - EMBL Heidelberg, Germany	
12:30 - 13:30	<b>Lunch break</b>	EMBL Canteen
	<b>Practical:</b>	
13:30 - 15:00	<b>Laboratory work-Cell lysate preparation; Native and cross-link condition</b>	Training Lab B
	<b>Chromatin assembly, conformation, dynamics and accessibility</b>	
15:00 - 16:00	Karsten Rippe - German Cancer Research Cente (DKFZ) and the Bioquant Center in Heidelberg, Germany	Flex Labs A&B
16:00 - 16:30	<b>Coffee break and meet the speaker</b>	Flex Labs A&B
	<b>Practical (cont.):</b>	
16:30 - 19:00	<b>Laboratory work-Cell lysate preparation; Micrococcal nuclease and sonication, check digestion pattern</b>	Training Lab B
19:00 - 20:00	<b>Dinner</b>	EMBL Canteen
20:00 - 22:00	<b>Flash Talk Session</b>	ATC Rooftop Lounge
22:00	<b>Bus to ISG Hotel</b>	In front of ATC entrance

## Day 2 - Tuesday 3 September 2019

Time	Speaker	Location
		Chem-MS and Chem-seq

08:40	<b>Bus from ISG Hotel to EMBL</b>	Bus stop in front of ISG Hotel
09:00 - 10:00	<b>Identification of clinical candidates among epigenetics targets</b> Emmanuel Demont - GSK, United Kingdom	Flex Labs A&B
10:00 - 10:30	<b>Coffee break and meet the speaker</b>	Flex Labs A&B
10:30 - 12:30	<b>Practical: Chem-seq: small-molecule probe preparation. Laboratory work-Chromatin immunoprecipitation for Chem-seq and Mass-spec</b>	Training Lab B
12:30 - 13:30	<b>Lunch break</b>	EMBL Canteen
13:30 - 16:00	<b>Practical: Preparation of samples for MS; elution from the small molecule-beads, gel running, staining/destaining</b>	Training Lab B
16:00 - 16:30	<b>Coffee break</b>	Flex Labs A&B
16:30 - 17:30	<b>Protein stability proteomics for identification of small molecule targets</b> Mikhail Savitski - EMBL Heidelberg, Germany	Flex Labs A&B
17:30 - 19:00	<b>Practical (cont.): Preparation of samples for DNA sequencing</b>	Training Lab B
19:00 - 20:00	<b>Dinner</b>	EMBL Canteen
20:00 - 22:00	<b>Poster Session I</b>	ATC Helix A
22:00	<b>Bus to ISG Hotel</b>	In front of ATC entrance

## Day 3 - Wednesday 4 September 2019

Time	Speaker	Location
		ChIP-MS and ChIP-seq
08:40	<b>Bus from ISG Hotel to EMBL</b>	Bus stop in front of ISG Hotel

### Identification of chromatin-associated protein networks

09:00 - 10:30	Jeroen Krijgsveld - German Cancer Research Center (DKFZ), Germany <b>Introduction on MS</b> Nico Zinn - Cellzome/GSK, Germany	Flex Labs A&B
10:30 - 10:45	<b>Coffee break and meet the speaker</b>	Flex Labs A&B
10:45 - 12:45	<b>Practical: Chromatin immunoprecipitation for ChIP-seq and Mass-spec; DNA-Protein (mass spec analysis of proteins and in parallel sequencing of the DNA)</b> Mandy Rettel - EMBL Heidelberg, Germany	Training Lab B
12:45 - 13:30	<b>Lunch break</b>	EMBL Canteen
13:30 - 14:30	<b>Histone PTM proteomics: investigate multi-layered gene regulation</b> Tiziana Bonaldi - European Institute of Oncology, Italy	Flex Labs A&B
14:30 - 15:30	<b>Practical: Tandem Mass Tag (TMT) labeling</b>	Training Lab B
from 15:30	<b>Free afternoon / evening</b>	
15:35	<b>Bus to ISG Hotel</b>	In front of ATC entrance
16:15	<b>Bus from ISG Hotel to Neckarmünzplatz</b>	Bus stop in front of ISG Hotel
from 16:30	<b>Optional - guided tour of Heidelberg</b>	Neckarmünzplatz

## Day 4 - Thursday 5 September 2019

Time	Speaker	Location
		NGS Library generation
08:40	<b>Bus from ISG Hotel to EMBL</b>	Bus stop in front of ISG Hotel

09:00 - 10:00	<b>Using variation across individuals for generating cell-type specific gene regulatory networks</b> Judith Zaugg- EMBL Heidelberg, Germany	Flex Labs A&B
10:00 - 10:30	<b>Coffee break and meet the speaker</b>	Flex Labs A&B
10:30	<b>Group photo</b>	
10:30 - 12:30	<b>Practical: Library generation, Preparation of sample for MS: gel-cutting, digestion and elution</b> Mandy Rettel - EMBL Heidelberg, Germany	Training Lab B
12:30 - 13:30	<b>Lunch break</b>	EMBL Canteen
13:30 - 16:00	<b>Practical: Library generation, Submitting samples for sequencing and protein identification</b> Mandy Rettel - EMBL Heidelberg, Germany	Training Lab B
16:00 - 16:30	<b>Coffee break</b>	Flex Labs A&B
16:30 - 17:30	<b>Genomic-pipeline</b> Vladimir Benes - EMBL Heidelberg, Germany	Flex Labs A&B
17:30 - 18:30	<b>Tour of Genecore Facility and Proteomics Facility</b> Dominic Helm - EMBL Heidelberg, Germany	Genecore Facility Proteomics Facility
18:30 - 19:00	<b>Q&amp;A Session</b> Dominic Helm - EMBL Heidelberg, Germany	Flex Labs A&B
19:00 - 20:00	<b>Dinner</b>	EMBL Canteen
20:00 - 21:30	<b>Poster Session II</b>	ATC Helix A
21:30	<b>Bus to ISG Hotel</b>	EMBL public bus stop

## Day 5 - Friday 6 September 2019

Time	Speaker	Location
		Data Analysis
08:40	<b>Bus from ISG Hotel to EMBL</b>	Bus stop in front of ISG Hotel

09:00 - 10:00	<b>Protein-chromatin interaction analysis</b> Charles Girardot - EMBL Heidelberg, Germany	Computer Training Lab
10:00 - 10:30	<b>Coffee break and meet the speaker</b>	Computer Training Lab
10:30 - 12:30	<b>Practical:</b> <b>GBCS- ChIP-seq data analysis with Galaxy</b> Charles Girardot - EMBL Heidelberg, Germany	Computer Training Lab
12:30 - 13:30	<b>Lunch break</b>	EMBL Canteen
13:30 - 14:30	<b>The developing mouse nervous system in the light of histone methylation</b> Tanja Vogel - University of Freiburg, Germany	Computer Training Lab
14:30 - 15:30	<b>Practical:</b> <b>GSK MS-data analysis</b> Maria Faelth-Savitski - Cellzome/GSK, Germany	Computer Training Lab
15:30 - 16:00	<b>Coffee break and Q&amp;A Session</b>	Computer Training Lab
16:00 - 17:30	<b>Practical (cont.):</b> <b>GBCS- ChIP-seq and GSK MS-data analysis</b> Maria Faelth-Savitski - Cellzome/GSK, Germany Charles Girardot - EMBL Heidelberg, Germany Mathias Andres Saver Cortes - EMBL Heidelberg, Germany Jelle Scholtalbers - EMBL Heidelberg, Germany	Computer Training Lab
17:30 - 18:30	<b>Wrap-up and closing of the course</b>	Computer Training Lab
18:40	<b>Bus to ISG Hotel</b>	In front of ATC entrance
19:10	<b>Bus to Kulturbrauerei</b>	Bus stop in front of ISG Hotel
from 19:30	<b>Course Dinner</b>	Kulturbrauerei Heidelberg