



Molecular Geobiology

EMBO PRACTICAL COURSE



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 The content below is no longer being updated.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? Tweet it with [#EMBLgeo](#)

Please note the below programme is subject to changes

[HIDE ALL](#)

Day 1 - Sunday 26 August 2018

Time

Speaker

Location

Time	Speaker	Location
14:00 - 15:15	Welcome and ice-breaker (flash talks, challenges & expectations, EMBL introduction) Elisabeth Zielonka - EMBL Heidelberg, Germany	ISG Hotel
15:15- 15:30	Course overview Haley Sapers - Caltech, USA	ISG Hotel
15:30 - 16:30	Lecture: Prebiotic chemistry and the origins of life Antonio Lazcano - National Autonomous University of Mexico, Mexico	ISG Hotel
16:30 - 17:30	Lecture: Introduction to Field Geology Gordon Osinski - Western University, Canada	ISG Hotel
17:30 - 18:00	Coffee break	ISG Hotel
18:00 - 19:00	Lecture: Performing in-situ Biology Field Experiments Alexandra Pontefract - MIT, USA	ISG Hotel
19:00 - 20:00	Lecture: Collecting Samples for Biology & Geochemistry Charles Cockell - University of Edinburgh, UK Gordon Osinski - Western University, Canada	ISG Hotel
20:00	Dinner	ISG Hotel

Day 2 - Monday 27 August 2018

Time	Speaker	Location
07:00 - 09:30	Departure to Nördlingen from ISG	
09:30 - 11:00	Tower/church/introduction Ries Crater	
11:00 - 12:00	Travel to Site 1 (Hainsfarth) - Lunch on bus	
12:00 - 14:00	Site 1 (Hainsfarth)	
14:00 - 15:00	Travel time to (Aumühle)	
15:00 - 17:00	Site 2 (Aumühle)	
17:00 - 20:00	Travel back to Nördlingen, optional museum visit/dinner in town	

Time	Speaker	Location
20:00	Departure Back to Heidelberg	

Day 3 - Tuesday 28 August 2018

Time	Speaker	Location
09:45 - 10:00	Introduction to EMBL Yvonne Yeboah - EMBL Heidelberg	Flex Lab A & B
10:00 - 11:00	Lecture: Microbial Diversity in Rock Hosted Systems Sophie Nixon - University of Manchester, UK	Flex Lab A & B
11:00 - 11:30	Lecture: General concepts in “omics” techniques for the study of microbial communities José Eduardo Gonzalez-Pastor - Center of Astrobiology Madrid, Spain	Flex Lab A & B
11:30 - 12:00	Lecture: Nucleic Acid Extraction from Rocks: Pros and Cons Mercedes Moreno-Paz - CSIC Madrid, Spain	Flex Lab A & B
12:00 - 13:00	Lunch break	EMBL Canteen
13:00 - 14:00	Lecture: Pilot Experiments, Metadata, Uncounfounded Experiments, and Resampling - How to Design a Microbiome Study Jennifer Ronholm - McGill University, Canada	
14:00 - 16:00	Practical: Nucleic Acid Extraction Mercedes Moreno-Paz - CSIC Madrid, Spain Alexandra Pontefract - MIT, USA Jennifer Ronholm - McGill University, Canada Sonja Blasche - EMBL Heidelberg, Germany	Training Lab B
16:00 - 16:30	Coffee break	Flex Lab A & B
16:30 - 18:30	Practical: Nucleic Acid Extraction Mercedes Moreno-Paz - CSIC Madrid, Spain Alexandra Pontefract - MIT, USA Jennifer Ronholm - McGill University, Canada Sonja Blasche - EMBL Heidelberg, Germany	Training Lab B

Time	Speaker	Location
18:30 - 19:30	Dinner	EMBL Canteen
19:30 - 21:00	Poster Session & Drinks	

Day 4 - Wednesday 29 August 2018

Time	Speaker	Location
	Practical: Library Preparation & Nanopore sequencing	
09:00 - 10:00	Alexandra Pontefract - MIT, USA Jennifer Ronholm - McGill University, Canada Bianka Baying - EMBL Heidelberg, Germany Dinko Pavlinic - EMBL Heidelberg	Training Lab B
	Lecture: Energy in Biological Systems	
10:00 - 11:00	Tori Hoehler - NASA-Ames Research Center, USA	Flex Lab A & B
11:00 - 11:30	Coffee break	Flex Lab A & B
	Lecture: Intro to Mineralogy and Geochemistry	
11:30 - 12:30	Haley Sapers - Caltech, USA	Flex Lab A & B
12:30 - 13:30	Lunch break	EMBL Canteen
	Practical: Library Preparation (cont.) & Nanopore sequencing	
13:30 - 16:30	Alexandra Pontefract - MIT, USA Jennifer Ronholm - McGill University, Canada Bianka Baying - EMBL Heidelberg, Germany Dinko Pavlinic - EMBL Heidelberg, Germany	Training Lab B
	Genecore Facility Tour	
16:30 - 17:30	Vladimir Benes - EMBL Heidelberg, Germany	Gene Core Facility
	Quiz round and re-cap of the day	
17:30 - 18:30	José Eduardo Gonzalez-Pastor - Center of Astrobiology Madrid, Spain	Flex Lab A & B
18:30 - 19:30	Dinner	EMBL Canteen
19:30 - 21:30	Poster Session & Drinks	

Day 5 - Thursday 30 August 2018

Time	Speaker	Location
09:00 - 10:00	Seminar: Microbial Metabolism & Thermodynamic calculations Tori Hoehler - NASA-Ames Research Center, USA	Training Lab B
10:00 - 11:00	Lecture: The elusive traces of life in deep time : biosignatures in the oldest rocks on Earth Frances Westall - CNRS, France	Flex Lab A & B
11:00 - 11:30	Coffee break	Flex Lab A & B
11:30 - 12:30	Lecture: Microscopy for geobiology Haley Sapers - Caltech, USA Alexandra Pontefract - MIT, USA	Flex Lab A & B
12:30 - 13:30	Lunch break	EMBL Canteen
13:30 - 14:30	Lecture: EDS Frank Bauer - Oxford Instruments, Germany Beate Gade - Oxford Instruments, Germany	Flex Lab A & B
14:30 - 15:30	Lecture: Tutorial on SEM sample prep Haley Sapers - Caltech, USA Alexandra Pontefract - MIT, USA	Flex Lab A & B
15:30 - 16:00	Coffee break	Flex Lab A & B
16:00 - 18:30	Tutorial on correlative microscopy Fibics Atlas remote	Training Lab B
18:30	Free evening	

Day 6 - Friday 31 August 2018

Time	Speaker	Location
08:30 - 10:30	Practical: EM rotation 1 (SEM/EDX data analysis) Frank Bauer - Oxford Instruments, Germany Beate Gade - Oxford Instruments, Germany Nicole Schieber - EMBL Heidelberg	Training Lab B
10:30 - 11:00	Coffee break flexible	Flex Lab A & B

Time	Speaker	Location
	Practical: EM rotation 2 (SEM/EDX data analysis)	
10:30 - 12:30	Frank Bauer - Oxford Instruments, Germany Beate Gade - Oxford Instruments, Germany Nicole Schieber - EMBL Heidelberg	Flex Lab A & B
12:30 - 13:30	Lunch break	EMBL Canteen
	Lecture: Processing Sequencing Data	
13:30 - 14:30	Vladimir Benes - EMBL Heidelberg, Germany Jan Provaznik - EMBL Heidelberg, Germany	Computer training lab
	Practical: Processing Sequencing Data	
14:30 - 15:30	Jan Provaznik - EMBL Heidelberg, Germany Yongkyu Kim - EMBL Heidelberg, Germany	Computer training lab
15:30 - 16:00	Coffee break	Computer training lab
	Practical: Processing Sequencing Data (cont.)	
16:00 - 17:30	Jan Provaznik - EMBL Heidelberg, Germany Yongkyu Kim - EMBL Heidelberg, Germany	Computer training lab
17:30 - 19:00	Course wrap-up	Computer training lab
19:00	Bus to ISG Hotel	
19:30	Course farewell dinner	