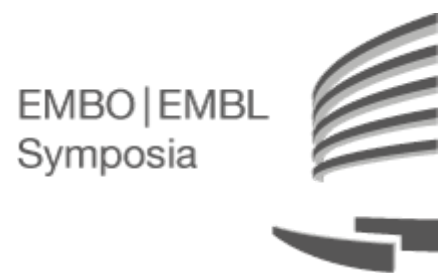




# The Organism and its Environment



## **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! #EESOrganism

### Day 1 - Sunday 1 March 2020

<b>Time</b>	<b>Speaker</b>
11:30 - 13:15	Registration and Lunch
13:15 - 13:30	Opening remarks

<b>Time</b>	<b>Speaker</b>
13:30 - 14:30	<b>Keynote Speaker:</b> <b>Epistasis, the spice of life: Lessons from the study of the plant immune system</b> Detlef Weigel - Max Planck Institute for Developmental Biology, Germany
14:30 - 18:30	<b>Session 1 - Small-scale evolutionary experiments: model organisms</b> <b>Chair:</b> Detlev Arendt - EMBL Heidelberg, Germany
14:30 - 15:00	<b>Towards a dynamical understanding of microbial communities</b> Paul Rainey - Max Planck Institute for Evolutionary Biology, Germany
15:00 - 15:15	<b>In cellulo high-resolution investigation of macromolecular events upon environmental stress</b> Matteo Allegretti - EMBL Heidelberg, Germany
15:15 - 15:30	<b>Forecasting mobilome activity and its adaptive potential in response to climate change</b> Pierre Baduel - École Normale Supérieure (IBENS), France
15:30 - 16:00	<b>The role of natural transposable element insertions in environmental adaptation</b> Josefa González - Institute of Evolutionary Biology (CSIC-UPF), Spain
16:00 - 16:30	<b>Coffee break and Meet the Speakers</b>
16:30 - 17:00	<b>Tolerance and Resistance: Eukaryotic responses of cells and populations to drug stress</b> Judith Berman - Tel Aviv University, Israel
17:00 - 17:30	<b>Watching domestication of yeast in real time</b> Maitreya Dunham - University of Washington, USA
17:30 - 17:45	<b>Evolution of immune regulation: structure, activity, and biology of transcription factor NF-kappaB in early metazoans</b> Leah Williams - Boston University, USA
17:45 - 18:00	<b>Specialisation and plasticity in a primitive social insect</b> Adolfo Alsina - Max Planck Institute for the Physics of Complex Systems, Germany
18:00 - 18:30	<b>Comparative cell biology in evolution and ecology</b> Detlev Arendt - EMBL Heidelberg, Germany
18:30 - 20:00	<b>Dinner</b>
20:00 - 21:30	<b>Welcome reception in the ATC Rooftop Lounge and poster pinning</b>

## Day 2 - Monday 2 March 2020

<b>Time</b>	<b>Speaker</b>
<b>09:00 - 12:30</b>	<b>Session 2 - Small-scale evolutionary experiments: model ecosystems</b> Chair: Jonathan Howard, Instituto Gulbenkian de Ciência, Portugal
09:00 - 09:30	<b>How legumes police their symbionts</b> Lindsey Turnbull - University of Oxford, UK
09:30 - 09:45	<b>Amphipod-bacterial symbioses in sulfidic caves: a new model ecosystem to study organismal adaptation to chemosynthetic environments</b> Jean-François Flot - Université Libre de Bruxelles (ULB), Belgium
09:45 - 10:00	<b>Evolving animal microbiomes in the anthropocene</b> Ananya Jana - Indian Institute of Science, India
10:00 - 10:30	<b>Following eco-evolutionary dynamics in the gut in real time</b> Isabel Gordo - Instituto Gulbenkian de Ciência, Portugal
10:30 - 11:00	<b>Coffee break and Meet the Speakers</b>
11:00 - 11:30	<b>Unicellular and multicellular functions of bacterial biofilms during stress</b> Knut Drescher - Max Planck Institute for Terrestrial Microbiology, Germany
11:30 - 11:45	<b>Drosophila melanogaster interaction with stable gut-colonizing bacteria in wild populations</b> Luis Teixeira - Instituto Gulbenkian de Ciência, Portugal
11:45 - 12:00	<b>Gene amplification as a form of population-level gene expression regulation</b> Isabella Tomanek - Institute of Science and Technology Austria, Austria
12:00 - 12:30	<b>Perturbing synthetic gut microbial communities</b> Peer Bork - EMBL Heidelberg, Germany
12:30 - 14:00	<b>Lunch</b>
<b>14:00 - 17:00</b>	<b>Session 3: Effects of environmental variation and stress</b> Chair: Kiran Patil - EMBL Heidelberg, Germany
14:00 - 14:15	<b>Impact of industrial and climate change on the Amazonian biodiversity</b> Guilherme Oliveira - Vale Institute of Technology, Brazil
14:15 - 14:30	<b>The life course impacts of extreme, dynamic environments in short-lived model organisms: a focus on aging</b> Brandon Pearson - Columbia University, USA
14:30 - 15:00	<b>Neuropeptide-mediated environmental responses in the hydrozoan Clytia</b> Evelyn Houlston - French National Centre for Scientific Research and University Pierre et Marie Curie, France

15:00 - 15:30	<b>Coffee break and Meet the Speakers</b>
15:30 - 16:00	<b>Rules of engagement: molecular arms races between host and viral genomes</b> Harmit Malik - Fred Hutchinson Cancer Research Center, USA
16:00 - 16:15	<b>Mechanisms underlying functional innovation in the nuclear receptor superfamily</b> Greg Slodkowicz - MRC Laboratory of Molecular Biology, UK
16:15 - 16:30	<b>Phenotypic enhancement and multimodality of drug resistance at the single-cell level</b> Miki Umetani - The University of Tokyo / RIKEN, Japan
16:30 - 17:00	<b>What limits adaptation to complex environments?</b> Nick Barton - Institute of Science and Technology Austria, Austria
17:00 - 18:30	<b>Poster Session 1</b>
18:30 - 20:00	<b>Dinner</b>
20:00 - 21:30	<b>After dinner drinks in the ATC Rooftop Lounge</b>

## Day 3 - Tuesday 3 March 2020

<b>Time</b>	<b>Speaker</b>
09:00 - 12:30	<b>Session 4 - Adaptive responses to environmental variation</b> Chair: Justin Crocker - EMBL Heidelberg, Germany
09:00 - 09:30	<b>The network of life - introgression and adaptive evolution in Lepidoptera</b> Chris Jiggins - University of Cambridge, UK
09:30 - 09:45	<b>Adaptation of cellular functions to climate conditions through liquid-liquid phase separation</b> Christiane Iserman - University of North Carolina at Chapel Hill, USA
09:45 - 10:00	<b>Proteome dynamics of cold-adapted species in response to warming and confounding environmental variables</b> Joshua Ebner - University of Basel, Switzerland
10:00 - 10:30	<b>Drosophila glue: at the interface between pupae and the environment</b> Virginie Courtier-Orgogozo - French National Centre for Scientific Research - Institut Jacques Monod, France
10:30 - 11:00	<b>Coffee break and Meet the Speakers</b>
11:00 - 11:30	<b>From development to deep time: Reconstructing the evolution of diversity with a phenomic approach</b> Anjali Goswami - Natural History Museum, UK

- 11:30 - 11:45 **Interspecies comparative analyses reveal distinct carbohydrate-responsive systems among *Drosophila* species**  
Kaori Watanabe - Kyoto University, Japan
- 11:45 - 12:00 **Microbes-Mechanics-Materials: A critical nexus?**  
Anupam Sengupta - University of Luxembourg, Luxembourg
- 12:00 - 12:30 **Adapting to different winters: non-coding transcripts and epigenetic switching at *FLC***  
Caroline Dean - John Innes Centre, UK
- 12:30 - 14:00 **Lunch**
- 14:00 - 17:00 **Session 5: Population level genome changes in nature**  
Chair: Vincent Colot - Institut de Biologie de l'École Normale Supérieure, France
- 14:00 - 14:30 **What keeps pathogens in check in the wild?**  
Anna-Liisa Laine - University of Zurich, Switzerland
- 14:30 - 14:45 **Genomic analysis of speciation and adaptation in the Lake Malawi cichlid fish radiation**  
Richard Durbin - University of Cambridge, UK
- 14:45 - 15:00 **PhenoChip: A single-cell phenomic platform for high-throughput photophysiological analyses of microalgae**  
Lars Behrendt - Uppsala University, Sweden
- 15:00 - 15:30 **Context-dependent phenotype switch and historical contingency in bacterial populations**  
Silvia De Monte - French National Centre for Scientific Research, France
- 15:30 - 16:00 **Coffee break and Meet the Speakers**
- 16:00 - 16:30 **Adaptations to the Arctic in marine plankton communities**  
Chris Bowler - Ecole Normale Supérieure, France
- 16:30 - 16:45 **Identifying the genetic steps toward adaptation to a novel edaphic environment**  
Emmanuel Tergemina - Max Planck Institute for Plant Breeding Research, Germany
- 16:45 - 17:00 **Non-random developmental variants accrue in *Paramecium* after forty sexual generations in nutrient-rich and selection-free conditions**  
Francesco Catania - University of Muenster, Germany
- 17:00 - 18:30 **Poster Session 2**
- 18:30 - 20:30 **Gala Dinner**
- 20:30 - 23:00 **Conference reception in the ATC Rooftop Lounge**

## Day 4 - Wednesday 4 March 2020

<b>Time</b>	<b>Speaker</b>
	<b>Session 6 - Preparing for the future</b>
<b>09:00 - 11:45</b>	Chair: Detlef Weigel - Max Planck Institute for Developmental Biology, Germany
	<b>Evaluating the effect of past environmental changes on macroevolutionary processes</b>
09:00 - 09:30	Hélène Morlon - CNRS Ecole Normale Supérieure, France
	<b>Adaptation to the environment by endosymbiosis - A model systems' approach</b>
09:30 - 09:45	Annika Guse - Heidelberg University, Germany
	<b>Cancer as a selective force on the evolution of multicellular organisms</b>
09:45 - 10:15	Frederic Thomas - French National Centre for Scientific Research, France
10:15 - 10:45	<b>Coffee break and Meet the Speakers</b>
	<b>Experimental evolution with digital organisms</b>
10:45 - 11:00	Moshe Khurgel - Bridgewater College, USA
	<b>The stress of ecological success: Ancestral reconstructions decipher the adaptations of archaea radiating into moderate terrestrial and marine environments</b>
11:00 - 11:15	Christa Schleper - University of Vienna, Austria
	<b>The biomass distribution on Earth</b>
11:15 - 11:45	Yinon Bar-On - Weizmann Institute of Science, Israel
11:45 - 12:00	<b>Closing Remarks and Poster Prize</b>
12:00	<b>Packed Lunch</b>
12:10	<b>Bus departure to downtown</b>
12:20	<b>Bus departure to Frankfurt Airport</b>