



# Methods for Analysis of Circular RNAs: No Tautology

EMBO PRACTICAL 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 The content below is no longer being updated.**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

Got something to say? Tweet it with [#EMBOCircRNAs](#)

Day 1 - Sunday 17 November 2019

Time	Speaker	Location
14:00 - 14:30	Arrival & Welcome	ISG Hotel

Time	Speaker	Location
14:30 - 15:30	<b>Lecture - Circular RNAs, wet-lab &amp; computational tools to detect and analyze them</b> Christoph Dieterich - Heidelberg University Hospital, Germany	ISG Hotel
15:30 - 16:00	<b>Coffee break</b>	ISG Hotel
16:00 - 17:00	<b>Lecture - circRNAs role brain development</b> Marie-Laure Baudet - University of Trento, Italy	ISG Hotel
17:00 - 18:00	Overview of the wet-lab practical exercise, Q&A on sample QC criteria	ISG Hotel
18:00	Get-together & dinner	ISG Hotel

## Day 2 - Monday 18 November 2019

Time	Speaker	Location
07:45	Bus to EMBL	ISG Hotel bus stop
08:00 - 08:30	Housekeeping notes, familiarization with the training lab, protocol introduction	Flex Lab A & B
08:30 - 09:30	RNase digestion, bead clean-up, RNA fragmentation	Training Lab B
09:30 - 10:00	1 <sup>st</sup> strand synthesis preparation	Training Lab B
10:00 - 10:30	<b>Coffee break</b>	Flex Lab A & B
10:30 - 11:00	Review of bead cleanup and 2 <sup>nd</sup> strand synthesis preparation	Training Lab B
11:00 - 12:00	<b>Lecture - Biogenesis and function of circRNAs</b> Irene Bozzoni - Sapienza University of Rome, Italy	Flex Lab A & B
12:00 - 13:00	Bead clean-up and set up end repair reaction	Training Lab B
13:00 - 14:00	<b>Lunch break</b>	EMBL Canteen
14:00 - 14:30	Adaptor ligation	Training Lab B

14:30 - 15:00	User enzyme treatment	Training Lab B
15:00 - 15:30	<b>Coffee break</b>	Flex Lab A & B
15:30 - 16:30	<b>Lecture - Biogenesis and function of AUG circRNAs</b> Thomas Birkballe Hansen - Aarhus University, Denmark	Flex Lab A & B
16:30 - 17:35	Bead clean-up	Training Lab B
17:35 - 18:30	Summary of the day + Q&A	Flex Lab A & B
18:30 - 19:30	Tapas Night	ATC Rooftop Lounge
19:30 - 21:00	Presentations by participants	ATC Rooftop Lounge
21:00	Bus to ISG Hotel	ATC entrance

## Day 3 - Tuesday 19 November 2019

Time	Speaker	Location
08:40	Bus to EMBL	ISG Hotel bus stop
09:00 - 09:30	PCR set up	Training Lab B
09:30 - 10:30	<b>Lecture - Circular RNAs modulating myogenic transcription</b> Myriam Gorospe - National Institute on Aging, USA	Flex Lab A & B
10:30 - 10:35	<b>Group photo</b>	
10:35 - 11:20	Final PCR clean-up	Training Lab B
11:20 - 11:40	<b>Coffee Break</b>	Flex Lab A & B
11:40 - 12:30	Library QC: Qubit, Bioanalyzer	Training Lab B
12:30 - 13:30	<b>Lunch break</b>	EMBL Canteen
13:30 - 14:30	Discussion of QC results and pool of final libraries	Training Lab B
14:30 - 15:00	Start sequencing run	Training Lab B

15:00 - 15:30	<b>Coffee Break</b>	Flex Lab A & B
15:30 - 17:30	Introduction to qPCR	Training Lab B
17:30 - 18:30	Q&A session	Flex Lab A & B
18:30 - 19:30	Dinner	EMBL Canteen
19:30 - 21:00	Presentations by participants	ATC Rooftop Lounge
21:00	Bus to ISG Hotel	ATC entrance

## Day 4 - Wednesday 20 November 2019

Time	Speaker	Location
08:40	Bus to EMBL	ISG Hotel bus stop
09:00 - 10:00	<b>Lecture - Circtools, bioinformatics suite for data analysis</b> Tobias Jakobi - Heidelberg University Hospital, Germany	Flex Lab A & B
10:00 - 10:30	<b>Coffee break</b>	Computer Training Lab
10:30 - 13:00	Data analysis, part I (combination of tutorials and hands-on exercise): Introduction to R NGS data structure, post-sequencing data QC, alignment algorithms (from reads-to-gene lists), interpretation of results	Computer Training Lab
13:00 - 14:00	<b>Lunch break</b>	EMBL Canteen
14:00 - 16:00	Data analysis, part II (combination of tutorials and hands-on exercise): Starting the circtools workflow: 'Detect' module for circRNA detection	Computer Training Lab
16:00 - 16:30	<b>Coffee break</b>	Computer Training Lab
16:30 - 18:00	Data analysis, part II (combination of tutorials and hands-on exercise)	Computer Training Lab
from 18:00	Free evening	

18:00	Bus to ISG Hotel	ATC entrance
18:15	Bus to Neckarmünzplatz	ISG Hotel bus stop
18:30	Optional - Guided Tour of Heidelberg	Neckarmünzplatz

## Day 5 - Thursday 21 November 2019

Time	Speaker	Location
08:40	Bus to EMBL	ISG Hotel bus stop
09:00 - 10:00	<b>Lecture - Circular RNAs: regulation and function in the vascular system</b> Stefanie Dimmeler - Goethe-University Frankfurt am Main, Germany	Flex Lab A & B
10:00 - 10:30	<b>Coffee break</b>	Computer Training Lab
10:30 - 13:00	Data analysis, part III (combination of tutorials and hands-on exercise): Throughout the day, application of 'quickcheck', 'circtest', 'reconstruct', 'exon' & 'enrich' modules from the 'circtools' suite and analysis of generated results	Computer Training Lab
13:00 - 14:00	<b>Lunch break</b>	EMBL Canteen
14:00 - 18:00	Data analysis, part III (combination of tutorials and hands-on exercise): application of 'quickcheck', 'circtest', 'reconstruct', 'exon' & 'enrich' modules from the 'circtools' suite and analysis of generated results	Computer Training Lab
18:00 - 18:30	Summary of the day	Computer Training Lab
18:30	Bus to ISG Hotel	ATC entrance
18:50	Bus to restaurant "Oskar"	ISG Hotel bus stop
19:00	Course Dinner	Restaurant Oskar

## Day 6 - Friday 22 November 2019

Time	Speaker	Location
08:40	Bus to EMBL	ISG Hotel bus stop
09:30 - 10:30	<b>Lecture - Molecular and Physiological functions of circRNAs</b> Sebastian Kadener - Brandeis University, USA	Flex Lab A & B
10:30 - 11:00	<b>Coffee break</b>	Computer Training Lab
11:00 - 13:00	Data analysis, part IV (hands-on exercise, competition): Participants independently working with circtools on defined datasets	Computer Training Lab
13:00 - 14:00	<b>Lunch break</b>	EMBL Canteen
14:00 - 16:00	Data analysis, part IV (hands-on exercise): Participants independently working with circtools on defined datasets, evaluation of the outcome	Computer Training Lab
16:00 - 16:30	Wrap-up and course feedback	Computer Training Lab
16:30	Bus to ISG Hotel, Heidelberg main train station & Lufthansa Shuttle bus	ATC entrance