

## CCP programmable nucleases (CRISPR/Cas9)

### Transgenesis Course

TT2016 meeting  
Prague, Czech Republic

#### **Day 1 – Wednesday 16<sup>th</sup> March 2016**

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08:30 - 09:00	Arrival and Registration
09.00 - 09:15	Welcome and Introduction to IMG and CCP <i>Radislav Sedlacek (IMG/CCP)</i>
09:15 - 09:25	Introduction to the Course and the Teaching Material <i>Björn Schuster (IMG/CCP)</i>
09:25 - 10:00	Lecture: Mouse transgenesis: <i>Pros-and-cons</i> of programmable nucleases <i>Radislav Sedlacek</i>
10:00 - 10:45	Sponsored lecture – Guide design and demonstration of web based tool <i>Leigh Brody – Desktop Genetics</i>
10:45 – 11:00	<b>TEA and COFFEE</b>
11:00 - 13:00	Practical training session I. A. CRISPR/Cas9 Zygote injection – <i>Ronald Naumann</i> B. Electroporation of zygotes – <i>Haoyi Wang</i> C. Bioinformatics, experimental design & targeting & genotyping - <i>Björn Schuster</i>
13:00 –14:00	<b>LUNCH</b>
14:00 –14:30	Targeting design – validation of the tools - genotyping <i>Björn Schuster (IMG/CCP)</i>
14:30 - 16:00	CRISPR validation practical (cell culture & transfection) <i>Björn Schuster &amp; Jana Kopkanova (IMG/CCP)</i>
16.00 – 16.15	<b>TEA and COFFEE</b>
16:15 – 17:00	Lecture – oocyte biology and zygote electroporation technology <i>Haoyi Wang – Institute of Zoology, China</i>
19:30	<b>MEET IN PRAGUE FOR DINNER</b>

**Day 2 – Thursday 17<sup>th</sup> March 2016**

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09:00 - 09:15	Recap/Review
09:15 – 10:00	Lecture – Genotyping strategies and tools <i>Jana Kopkanova &amp; Björn Schuster (IMG/CCP)</i>
10:00 - 10:45	Sponsored Lecture – CRISPR genome editing workflow <i>Caroline Becket - Merck Millipore Sigma</i>
10:45 – 11:00	<b>TEA AND COFFEE</b>
11:00 – 13:00	Practical training session II. A. CRISPR/Cas9 Zygote injection – <i>Ronald Naumann</i> B. Electroporation of zygotes – <i>Haoyi Wang</i> C. Bioinformatics, experimental design & targeting & genotyping - <i>Björn Schuster</i>
13:00 – 14:00	<b>LUNCH</b>
14:00 – 14:20	Targeting design – validation of the tools - genotyping <i>Björn Schuster (IMG/CCP)</i>
14:20 - 16:00	CRISPR validation practical (DNA isolation and PCR based genotyping I) <i>Jana Kopkanova &amp; Björn Schuster (IMG/CCP)</i>
16.00 – 16:15	<b>TEA &amp; COFFEE</b>
16:15 – 17:00	Lecture - CRISPR technology <i>Lluis Montoliu – CNB, Spain</i> <i>This lecture will be a joint lecture with the Cryopreservation workshop</i>
19:30	<b>MEET IN PRAGUE FOR DINNER</b>

### **Day 3 – Friday 18<sup>th</sup> March 2016**

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09:00 - 09:45	Development CRISPR-Cas9 technology & Cpf1 <i>Bernd Zetsche – Broad Institute, USA</i>
09:45 - 10:00	<b>TEA AND COFFEE</b>
10:00 - 12:00	Practical training session III. A. CRISPR/Cas9 Zygote injection – <i>Ronald Naumann</i> B. Electroporation of zygotes – <i>Haoyi Wang</i> C. Bioinformatics, experimental design & targeting & genotyping - <i>Björn Schuster</i>
12:00 - 13:00	<b>LUNCH</b>
13:00 - 15:00	CRISPR validation practical (PCR based genotyping) <i>Jana Kopkanova &amp; Björn Schuster (IMG/CCP)</i>
15:00 - 15:15	<b>TEA and COFFEE</b>
15:15 - 16:00	Collection of results and preparation of short presentations
16:00 - 17:15	Short group presentations and discussion
17:15 - 17:30	Summary & Conclusions <i>Radislav Sedlacek</i>
17:30	End of course



## THE TRAINING TEAM

### Head:

Radislav Sedlacek (CCP/IMG, Czech Republic)

### Education team:

Björn Schuster (CCP/IMG, Czech Republic)  
Lluís Montoliu (CNB, Spain)  
Bernd Zetsche (Broad Institute, USA)  
Haoyi Wang (Institute of Zoology, China)  
Wenbo Wang (Institute of Zoology, China)  
Ronald Naumann (MPI, Dresden, Germany)  
Jana Kopkanova (CCP/IMG, Czech Republic)  
Leigh Brody (Desktop Genetics, UK)  
Caroline Becket (Merck Millipore Sigma)

### Technical assistance:

Henrieta Palesova (CCP/IMG, Czech Republic)  
Irena Jenickova (CCP/IMG, Czech Republic)  
Dana Kopperova (CCP/IMG, Czech Republic)  
Jana Jezkova (CCP/IMG, Czech Republic)

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