



Czech Centre for Phenogenomics

## **ANATOMICAL BASES OF MOUSE MULTIMODAL IMAGING TRAINING COURSE PROGRAMME – JANUARY 16-20, 2017**

The aim of this training course is to capacitate participants to localize and interpret the basic anatomical details using imaging technologies.

### **TUTORS**

**Jesús Ruberte París** Full Professor of Veterinary Anatomy  
Head of Mouse Imaging Platform  
Center for Animal Biotechnology and Gene Therapy  
Universitat Autònoma de Barcelona

**Marc Navarro Beltrán** Professor of Veterinary Anatomy  
Mouse Imaging Platform  
Center for Animal Biotechnology and Gene Therapy  
Universitat Autònoma de Barcelona

Lectures will be followed by practical sessions in which participants will visualize isolated bones and dissect specific organs of the mouse body.

**LOCATION** **Czech Centre for Phenogenomics / BIOCEV**  
Prumyslova 595  
252 50 Vestec  
Czech Republic  
Europe

**TUTION FEE** **€ 1500**

The course fee includes lunches & refreshments during course and two joint evening meals. Accommodation and transport costs are not included in the fee and has to be covered by participants on their own.

### **HOW TO APPLY?**

Applications for this course should include:

- A letter of motivation
- Short CV (1 page)
- A reference letter

Applications should be sent to [ccp@phenogenomics.cz](mailto:ccp@phenogenomics.cz) till **31st October 2016**.

Maximum number of participants is 12. We will send a notification of acceptance to selected participants on 15th November 2016.



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## **DETAILED DAILY COURSE PROGRAMME**

### **MONDAY 16TH JANUARY**

<b>12:30-13:00</b>	<b>Welcome and Introduction</b> <b>R. Sedlacek, director of CCP, and J. Ruberte</b>
<b>13:00-14:00</b>	General concepts in morphological mouse phenotyping. Directional terms and planes of the mouse body <b>J. Ruberte</b>
<b>14-15:30</b>	Anatomy of development. Morphology of placenta <b>J. Ruberte</b>
<b>15:30-16:00</b>	Coffee break and refreshment
<b>16:00-17:00</b>	Bone Ontogeny. Skeletal Nomenclature, bone architecture and types of bone. Strain, gender and age differences <b>J. Ruberte</b>
<b>17:00-18:00</b>	Skeleton of thoracic limb: scapula, clavicle, humerus, ulna, carpal, metacarpal and digital bones. Identification of main anatomical features in isolated bones, X-ray and microCT images <b>M. Navarro</b>
<b>18:00-19:00</b>	Skeleton of pelvic limb: coxal, femur, tibia, fibula, tarsal and metatarsal bones. Identification of main anatomical features in isolated bones, X-ray and microCT images. <b>M. Navarro</b>

### **TUESDAY 17TH JANUARY**

<b>9:00-11:00</b>	Skeleton of the head: skull and mandible. Identification of main anatomical features in isolated bones, X-ray and microCT images <b>J. Ruberte</b>
<b>11-11:30</b>	Coffee break and refreshment
<b>11:30-13:00</b>	Skeleton of the trunk: vertebral column, ribs and sternum. Identification of main anatomical features in isolated bones, X-ray and microCT images <b>M. Navarro</b>
<b>13:00-14:00</b>	Lunch
<b>14:00-15:00</b>	Arthrology: main synovial joints <b>M. Navarro</b>
<b>15:00- 16:00</b>	Myology: types of muscles and their topography <b>M. Navarro</b>



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16:00-16:30 Coffee break and refreshment  
16:30-18:30 Dissection of main muscular groups  
**M. Navarro and J. Ruberte**

### WEDNESDAY 18TH JANUARY

9:00-10:00 Ontogeny of circulatory system. Anatomy of the heart  
**J. Ruberte**

10:00-11:00 Structure of blood and lymphatic vessels. Components of the vascular wall.  
**J. Ruberte**

11:00-11:30 Coffee break and refreshment

11:30-12:30 Localization, disposition and topography of main vessel trunks. Identification by X-ray angiography, CT and MRI.  
**M. Navarro**

12:30-13:30 Lunch

13:30-15:30 Lymphatic system. Anatomy of spleen, thymus and lymphatic nodes. Visualization of lymphatic nodes by Evan's blue injection  
**J. Ruberte**

15:30-16:00 Coffee break and refreshment

16:00-17:30 Respiratory apparatus: nasal cavities, larynx, trachea and lungs. Anatomy and Imaging  
**M. Navarro**

17:30-19:00 Dissection of the thorax  
**M. Navarro and J. Ruberte**

### THURSDAY 19TH JANUARY

9:00-11:00 Digestive tract: oral cavity, pharynx, esophagus, stomach, intestine, liver and pancreas. Anatomy and imaging  
**M. Navarro**

11:00-11:30 Coffee break and refreshment

11:30-13:30 Urinary organs and male and female genital organs. Anatomy and imaging.  
**J. Ruberte**

13:30-14:30 Lunch



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- 14:30-16:30** Dissection of male abdomen and pelvic cavity  
**M. Navarro and J. Ruberte**
- 16:30-17:00** [Coffee break and refreshment](#)
- 17:00-19:00** Dissection of female abdomen and pelvic cavity.  
**J. Ruberte and M. Navarro**

## **FRIDAY 20TH JANUARY**

- 9:00-11:00** Central nervous system: Development, anatomy and imaging.  
**J. Ruberte**
- 11:00-11:30** [Coffee break and refreshment](#)
- 11:30-12:30** Vestibulocochlear organ. Anatomy and imaging.  
**M. Navarro**
- 12:30-13:30** [Lunch](#)
- 13:30-15:00** Eye and related structures: Anatomy and imaging.  
**J. Ruberte**
- 15:00-16:00** Retinal Vascularization. *In vivo* fluorescent angiography and scanning confocal microscopy analysis  
**J. Ruberte**
- 16:00-16:30** [Coffee break and refreshment](#)
- 16:30-18:00** Dissection of the central nervous system, eye and ear.  
**J. Ruberte and M. Navarro**
- 18:00** **Concluding remarks**
- 18:30** End of course / Departures

The days for two joint evening meals would be selected later.

# GENERAL INFORMATION

## Public Transport from Prague Airport

### Bus Lines:

- **119:** Prague Airport - Nádraží Veleslavín (metro line A) - **15 min**
- **100:** Prague Airport - Zličín (metro line B) - **18 min**
- **Airport express:** Prague Airport - **Prague Main Train Station** (metro line C and connection to SC, EC, IC and EN trains) - **35 min**

### Bus stop:

- Terminál 1
- Terminál 2 – in front of the Arrival hall

### Public Transport Ticket Sale

- Public Transport counters in Arrival Halls of Terminals 1 & 2 (from 7 am to 10 pm),
- Automats placed at bus stops (cash required),
- From a bus driver (cash required).

### Ticket prices/Fares:

- **Actual public transportation information are available here:**

<http://www.dpp.cz/en/public-transit-to-prague-airport/>

- **Public transportation fares available here:**

<http://www.dpp.cz/en/fares-in-prague/>

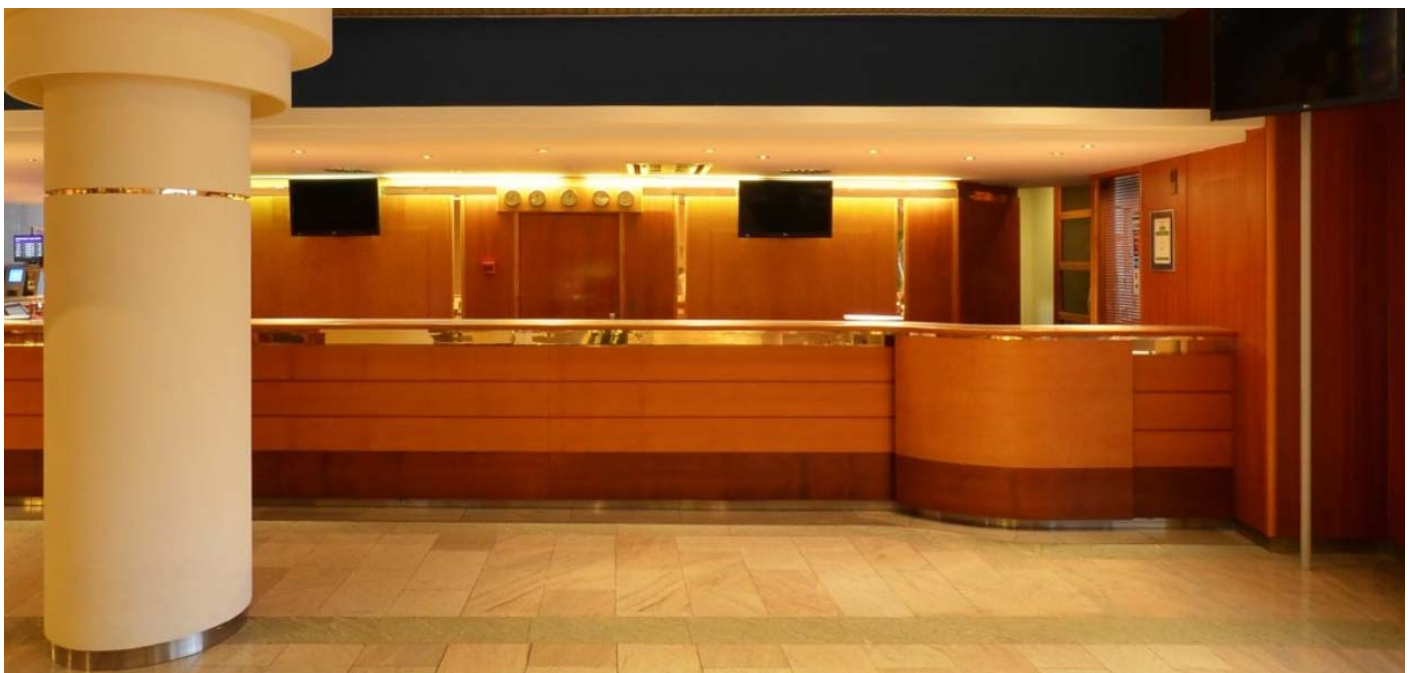
More info: [www.dpp.cz](http://www.dpp.cz)

*Please see the adjacent map for metro links to the city*

## Panorama Hotel Prague



## Meeting point



*Reception foyer 10mins before departure of the shuttle bus*

# METRO LINES

Regular situation valid from 13. 12. 2015



Linka	Orientační intervaly linek metra											
	Pracovní dny						Sobota					
	5-6	6-10	10-14	14-18	18-20	20-24	5-8	8-20	20-24	5-12	12-16	16-20
A	10-7,5	2-4	5	3-4	5-7,5	10	10	7,5	10	10	7,5	10
B	10-7,5	4-8	10	6-8	7,5-10	10	10	7,5	10	10	7,5	10
C	10-7,5	2-4	5	3-4	5-7,5	10	10	7,5	10	10	7,5	10
	10-6	2-3	3-4	2-3	4-7,5	10	10	7,5	10	10	7,5	10
	10-6	3-6	7,5	4-6	7,5	10	10	7,5	10	10	7,5	10

**Vysvětlivky:**

- přestup na vlaky
- bus na letiště
- parkoviště P+R
- infocentrum

**Bezbariérová přístupnost stanic:**

- plná – z úrovně terénu až na nástupiště
- částečná – pouze po eskalátorech (v obou směrech)
- částečná – pouze po eskalátorech (přes obchodní centrum)

**Legenda:**

- přestupní stanice
- stanice ve stavbě
- konečná stanice
- A

**234 704 511**  
www.ropid.cz

Grafické zpracování plánů: Ing. Pavel Maciák



\* Panorama Hotel Prague