

Excursion within the course Imaging Systems in Medicine at the Center for Advanced Preclinical Imaging, 1st Faculty of Medicine, Charles University

Location: Salmovská 3, Prague 2

Date/time:

1st group May 7, 2025, 9:00 – 11:00

2nd group May 21, 2025, 9:00 – 11:00

Since the building is locked, we will always meet in front of the building at the given time.

CAPI works with experimental animals, so a short safety briefing will be given before the excursion.

During the excursion, students will visit laboratories equipped with the following imaging methods:

- Computed tomography (CT)
- Positron emission tomography (PET)
- Single photon emission tomography (SPECT)
- Magnetic resonance imaging (MRI)
- Magnetic particle imaging (MPI)
- Ultrasound imaging (US)
- Photoacoustic imaging (PA)
- Optical imaging

Students will become familiar with the principle of individual methods and instrument hardware. Some instruments will allow imaging of phantoms, biological samples in vitro, or in vivo examinations of experimental animals. Experiments can also be performed on suitable objects brought by the students. When choosing them, however, it is necessary to take into account not only the dimensions (all devices in CAPI are designed for imaging small laboratory rodents - mice and rats), but especially their physical properties. Therefore, it is advisable for students to study the basics of more common imaging methods (CT, MRI, US) in advance, so that they have an idea of what can be imaged by which method, and which method is the most suitable for the selected object.