

Affiliation: Masaryk University, Faculty of Medicine
Study program: PhD program Biomedical Sciences
Specialization: Cell and Tissue Morphology
Workplace: Department of Anatomy, Faculty of Medicine, MU
Form of study: Full-time

Supervisor: doc. MUDr. Marek Joukal, Ph.D.; mjoukal@med.muni.cz

Title: Regulation of the delta peripheral opioid receptors in pain conditions

Brief annotation (max 200 words): Delta opioid receptors are present on thinly myelinated nerve fibers innervating healthy skin. However, they are functional only in inflammatory pain and after peripheral nerve injury. Mechanism how those receptors are activated is still unclear. The aim of the proposed doctoral topic is to address the mechanism of delta opioid receptors activation in pain conditions, including traumatic nerve injury and inflammatory pain. The experiments will be performed on *in vivo* and *ex vivo* models using electrophysiological and immunohistochemical methods as well as western blot and RT-PCR.

Funding:

The PhD position is supported by InGA projects.

Requirements:

- Graduate student of the General Medicine, Molecular Biology or Biochemistry
- Experience with the lab work – *in vivo* models, IHC, WB, RT-PCR, electrophysiology
- Active knowledge of English (min. B2)

Requirements to successfully obtain a PhD degree in the Biomedical Sciences PhD program:

- Have at least one first author publication in an international research journal with an impact factor above the median IF in the field or have two first author publications with the IF in Q3. Importantly, the affiliation to the Faculty of Medicine, Masaryk University must be listed.
- Gain a set of minimum credits (240 ECTS in 4-year study period), pass 4 faculty-wide courses + an English language course and 4 field-specific courses.
- Pass the doctoral state exam.
- Take an active part in teaching.
- Participate in the annual PhD conference.
- Present research outcomes at least once at an international conference (poster, presentation).
- Spend at least one month abroad on an internship.

Additional information on the supervisor: <https://anatomy.med.muni.cz/>

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