

Affiliation: Masaryk University, Faculty of Medicine
Study program: PhD program Biomedical Sciences
Specialization: Biochemistry and Molecular Biology
Workplace: Department of Biology
Mode: Full-time

Supervisor: **Michaela Bosáková, Ph.D.**
Funding: Czech Science Foundation

Title: Novel mechanisms of skeletogenesis

Brief annotation:

The bone formation and skeletogenesis are complex processes many aspects of which are not understood. In order to develop treatments for developmental and aging bone disorders, we need to uncover molecular mechanisms that are involved. We recently found that mutation in *GRK2* produces a lethal skeletal disorder in humans. Now our goal is to learn about the mechanisms *Grk2* uses to produce and maintain a healthy skeleton.

This project will involve conditional mouse models, ex-vivo explants and cellular models. The selected PhD candidate will have an access to advanced instrumentation and state-of-the-art techniques to tackle the needs of the project, as well as enthusiastic colleagues and collaborators.

Requirements: Motivated, curiosity-driven and committed
Well-organized and communicative
Experience with animal models is advantageous but not essential
Master's degree in biological sciences or similar

Informal inquiries about the PhD topic are welcome at bosakovam@med.muni.cz.

Recent publications in: *Science Translational Medicine* (2021), *EMBO Molecular Medicine* (2020), *PNAS* (2019), *Human Molecular Genetics* (2018)

Full list available at: <https://www.researchgate.net/profile/Michaela-Bosakova>