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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 is a complex process that involves coordinated function of many signaling systems. Disrupted skeletogenesis and bone homeostasis manifests in wide range of developmental and aging bone disorders, yet our understanding of mechanisms that drive their pathogenesis is limited. 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:

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

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

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