Department of Biology
Faculty of Medicine • Masaryk University

Program: **Biomedicínské vědy / Biomedical Sciences**

Specializace: **Biochemie a molekulární biologie / Biochemistry and Molecular Biology**

Forma studia: **prezenční**

Školitel: **Dr. Pavel Krejčí**

Research topic: Non-canonical signaling of human receptor tyrosine kinases (Neobvyklé signální dráhy lidských receptorových tyrozinových kináz)

Summary: The major focus of dr. Krejčí Laboratory research for over 15 years has been to dissect the mechanisms of fibroblast growth factor (FGF) signalling. We are interested in pathological FGF-receptor (FGFR) signaling in disease, namely the skeletal disorders caused by activating mutations in FGFR3 (hypochondroplasia, achondroplasia, thanatophoric dysplasia, SADDAN). Our studies encompass many different areas of the FGF field including expression of FGF ligands *in vivo*, mechanisms of FGF/FGFR-mediated regulation of cell function, molecular mechanisms of FGFR signal transduction, biochemistry of FGFR kinase activation, development of FGFR inhibitors, and others. In our research, we actively collaborate with other scientists worldwide, including those from Norway (Dr. A. Wiedlocha, Oslo University), USA (Dr. D. Krakow, University of California Los Angeles; Dr. K. Hristova, John Hopkins University, Baltimore) and the Czech Republic (Dr. L. Trantirek, Masaryk University CEITEC, Brno; Dr. P. Konik, University of South Bohemia, Ceske Budejovice; Dr. M. Buchtova, Masaryk University).

Requirements on applicants:

- MSc degree in cellular and molecular biology, biochemistry or similar field
- Basic training in modern molecular biology techniques
- Well-organized, motivated and passionate about research
- English on communicative level is an advantage

Short info on the supervisor: For the summarizing info on the Group leader Pavel Krejčí go to http://www.achondroplasia-registry.cz/index-en.php?pg=research

Publications:
All research outcomes may be seen at http://www.achondroplasia-registry.cz/index-en.php?pg=research

General information on the PhD programme and a guide How to Apply