

Mgr. JAKUB ČERVENKA



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0000-0002-9947-2045

KEY SKILLS

- Proteomics
- Mass spectrometry
- Stem cell differentiation
- Bioinformatics
- Grant administration
- MS Office

LANGUAGES

Czech	Native speaker
English	B1/B2

CERTIFICATES & COURSES

- Academic writing I-III (2016-2017, CAW CAS)
- Fundamentals of research work (2016, CAS)
- ISAC LETF Prague cytometry workshop (2019, ISAC)
- Quantitative proteomics: Strategies and tools to probe biology (2018, EMBO)

PERSONAL PROFILE

PhD. student with over 11 years of experience within molecular biology and proteomics. Specialized in molecular and cellular biology techniques, bioinformatics and proteomics (mainly mass spectrometry-based methods). Currently focused on quantitative targeted analyses of neural cells proteome and secretome.

SKILLS

- Rich experience in **method development** and **workflow establishment**
- Deep knowledge of **molecular biology techniques**
- Practical experience with **liquid chromatography**, **mass spectrometry** and **antibody-based proteomics**
- Thorough knowledge of **data analyses** and work with **databases**
- Experimental experience with **cell cultures**, including human stem cells
- Ability to **effectively** look for and design **solutions**
- Successful **grant application and administration**
- Ability to **work** both **individually** and in a **team**
- Very good **communication skills**
- **Preciseness, reliability** and **systematic** approach to work
- **Positive** attitude to life and work
- **Quick adaptation**
- I am motivated by **new challenges** and **fair approach**

WORK EXPERIENCE

Researcher

First Faculty of Medicine, Charles University, Institute of Biochemistry and Experimental Oncology - Laboratory of Proteomics
09/2022 – present

PhD. student – researcher

Institute of Animal Physiology and Genetics of the Czech Academy of Sciences, v.v.i. - Laboratory of Applied Proteome Analyses
09/2015 – present

- Method development and optimization as well as establishment of novel workflows for sample preparation, data acquisition and data analyses for mass spectrometry (e.g., DDA, SWATH-MS and SRM approaches)

- Summer school of tissue engineering (2013, TUL)
- Prague cytometry workshop (2016, ISAC)
- 16. School of mass spectrometry (2015, SCI MUNI)
- School of molecular biotechnologies Profession (2010, PU)
- Summer school focused on living cells microscopy (2014, AUC)

HOBBIES

- Scouting
 - Herpetology
 - Photography
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- Mass spectrometry and antibody-based proteomic analyses, including operating and maintenance of LC-MS/MS systems
- Human neural stem cells cultivation and differentiation
- Gene expression analyses (RT-qPCR)
- Bioinformatic analyses of protein or RNA sequences, cellular pathways and database mining
- Successful grant applications and grant administration (both as a principal researcher and a team member)
- Regular presentation at international conferences (both oral and poster)
- First authorship of verified technology – Extraction of extracellular vesicle proteins for proteomic analyses
- Authorship of six articles in international peer-reviewed journals with impact factor and four book chapters

Mgr. (Bc.) student – researcher

Department of Genetics and Microbiology, Faculty of Science, Charles University - Laboratory of Biology of Yeast Colonies

09/2010 – 09/2015

- Genetic manipulations (i.e., gene deletion, gene overexpression, GFP tagging) in yeast *Saccharomyces cerevisiae*
- Application of molecular and cellular biology techniques (e.g., Southern blot, northern blot, western blot, microscopy, testing of inhibitors, PCR etc.)

EDUCATION

Developmental and Cell Biology - Faculty of Science, Charles University

09/2015 – present

- Doctoral study program
- Thesis title *Neural signalling pathways regulation at protein level*

Molecular Biology and Genetics of Eukaryotes - Faculty of Science, Charles University

09/2012 – 09/2015

- Master's degree
- Thesis title *The effect of Vps34p in yeast colony*
- Passed methodologically oriented theoretical lectures and practical courses, e.g., Computational genomics; Separation, analytical, and labelling methods of low molecular weight molecules and proteins; Proteomics; Proteomics and biopolymers primary structure determination etc.

Biology - Faculty of Science, Charles University

09/2009 – 09/2012

- Bachelor's degree
- Thesis title *Endoplasmic reticulum stress*