Igor Cervenka

molecular biologist :: bioinformatician :: computer enthusiast

I am a research professional with over **15 years of experience** in both experimental and computational biology looking to build predictive models using machine learning and AI technologies that will drive improved clinical outcomes for patients. I am a **self-motivated** and **result-oriented team player** who loves to tackle new challenges. Thanks to my extensive knowledge of **biochemistry**, **physiology** and **molecular biology**, I am well-equipped to handle even the most challenging scientific problems. Solid foundation in **programming**, **statistical analysis** and **data science** enables me to take an interdisciplinary approach to research and my passion for advancing scientific knowledge drives me to continually learn and develop my skillset, keeping me at the forefront of my field.

CONTACT

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bit.ly/cervenka_scholar

ACHIEVEMENTS

21 publications
312 cumulative impact factor
2144 citations
15 h-index
7 grants awarded with
120k in funding (EUR)
6 trained students
collaborations with
8 laboratories in
5 different countries

EDUCATION

2010-2014
Ph.D. in Biology
Masaryk University - Brno - CZ

2008-2010
M.Sc. in Molecular Biology
Masaryk University - Brno - CZ

2006-2008
Applied Informatics
Completed 162 ECTS credits
Masaryk University - Brno - CZ

2005-2008
B.Sc. in Molecular Biology
Masaryk University - Brno - CZ

For details see:
bit.ly/cervenka_education

INTERESTS

bass guitar
programming
tinkering
volleyball

CAREER

Mar 2016 - present | Bioinformatician - Karolinska Institutet - Sweden
- NGS analysis and development of workflow automation (RNA-Seq, ChIP-Seq, Enhancer Identification)
- Designing tools to automate batch generation of interactive reports
- Analysis and visualization of high throughput, time-series and small-scale experimental data
- Integrated omics approaches to identify pathways impacted in muscle dystrophy models
- Development of computational tool for kinase activity profiling on chip
- Applying machine learning to discover novel pharmaceutical targets in mitochondrial metabolism
- UNIX server administration

Jan 2015 - present | Research Associate - Karolinska Institutet - Sweden
- HECTD1 regulation of muscle function through stabilization of contractile apparatus
- Post-translational regulation of PGC-1a1 stability
- Role of PGC-1a isoforms in splicing and metabolic control through dimerization
- Kynurenine metabolism and GPR35 regulate tissue homeostasis, inflammation and energy expenditure
- Increasing skeletal muscle efficiency by rerouting kynurenine metabolites to malate-aspartate shuttle

Jan 2011 - Feb 2014 | Webmaster and IT consultant - Masaryk University - Czechia
- Creating and maintaining department website
- Creating conference websites and design materials
- Implementation of Mass Spectrometry analysis script in PHP
- Purchasing and setup of computer hardware

Feb 2007 – Dec 2014 | Research assistant - Masaryk University - Czechia
- Involvement of Wnt signaling pathway in regulation of centrosomal cycle
- Phosphorylation of Dishevelled protein by novel kinases
- Identification of C-terminal linear polyglutamylation, a novel post-translational modification catalyzed by TTLL enzyme

SKILLS

For more detailed breakdown, please see icervenka.github.io

- western blotting
- protein expression
- immunoprecipitation
- molecular cloning
- CRISPR-Cas9
- virus production
- enzymatic assays
- RT-qPCR
- RNA-Seq
- IHC/IF
- cryosectioning
- confocal microscopy
- cell culture
- primary and stable cell line generation
- flow cytometry/sorting
- metabolic flux analysis
- animal handling
- phenotyping
- i.p., i.v injections
- data manipulation
- data analysis
- data visualization
- workflow automation
- NGS analysis
- machine learning
- artificial intelligence
- image processing
- MS office suite
- R
- Python
- PHP
- UNIX shell
- Java
- Javascript
- MySQL/SQL
- Git

REFERENCES

Prof. Jorge L. Ruas
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PERSONALITY