

# Curriculum Vitae

## Vjačeslav Tret'jačenko

### Education

- 2015 – now      PhD in Biochemistry at Faculty of Science of Charles University in Prague
- 2014 – now      MSc in Chemical Informatics and Bioinformatics at the University of Chemical Technology, Prague  
Principal courses: Bioinformatics, Chemical Informatics, Gene Expression Analysis, Data Structures and Algorithms, Python Programming, Statistics, Data Mining and Machine Learning, Systems Biology, Chemical Biology, Genomics, Computational Drug Design
- 2013 – 2015      MSc in Biochemistry at Faculty of Science of Charles University in Prague  
Principal courses: Biochemistry, Molecular Biology, Analytical Biochemistry, Enzymology, Biophysical Chemistry, Structural Biology, Proteomics, Genetic Engineering
- 2010 – 2013      BSc in Biochemistry at Faculty of Science of Charles University in Prague  
Principal courses: Biochemistry, Organic Chemistry, Analytical Chemistry, Inorganic Chemistry, Physical Chemistry, Nuclear Chemistry, Physics, Mathematics

### Experience

- 2015 – now      Department of Biochemistry, Charles University in Prague  
PhD thesis: The effect of amino acid repertoire on protein structure and function  
Supervisor: Klára Hlouchová PhD
- 2013 – 2015      Laboratory of proteases of human pathogens, Institute of Organic Chemistry and Biochemistry ASCR  
Master thesis: Never Born Proteins: Occurrence and characterization of secondary structure motifs  
Supervisor: Klára Hlouchová PhD
- 2012 – 2013      Laboratory of Molecular Structure Characterization, Institute of Microbiology ASCR  
Bachelors thesis: Expression of recombinant form of nepenthesin I from *Nepenthes gracilis*.  
Supervisor: Petr Man PhD

### Conference talks and poster presentations

- November, 2016      Students Scientific Conference (SVK) at University of Chemical Technology, Prague  
conference talk – Dark protein space: from theory to high throughput experiment  
**best talk award**
- September, 2016      CSBMB Conference, Prague, Czech Republic  
poster presentation - The Effect of Genetic Code Evolution on Protein Structure Space
- September, 2016      Origins and evolution of life on Earth and the Universe, Liblice, Czech Rep.  
poster presentation - The Effect of Genetic Code Evolution on Protein Structure Space
- June, 2016      ENBIK2016 Conference, Loučeň, Czech Republic  
conference talk – Occurrence of secondary structure in protein sequence space
- May, 2016      Prague Protein Spring Conference, Prague, Czech Republic  
poster presentation – Occurrence of secondary structure in the vast protein sequence space
- December, 2015      Students Scientific Conference (SVK) at University of Chemical Technology, Prague  
presentation of master's thesis – Occurrence of structure in random protein sequences  
**2nd best talk award**

- November, 2014                      Students Scientific Conference (SVK) at University of Chemical Technology,  
Prague  
presentation of bachelor thesis/publication - Expression of recombinant form of nepenthesin I  
from *Nepenthes gracilis*
- May, 2014                              Prague Protein Spring Conference, Prague, Czech Republic  
participation in poster presentation: The effect of amino acid repertoire on the  
protein structure universe

## Research stays and collaborations

- January, 2016 – March, 2016      Virtual screening for allosteric ligands of HIV-1 protease  
research stay at laboratory of Medical Pharmacology and Toxicology, Arctic University of  
Tromsø, Norway  
EEA and Norway grants, accepted project: NF-CZ07-INS-5-172-2015
- 2015 – now                              Development of fluorogenic probes for methionine sulfoxide reductase and  
their applications in chemical biology and organic synthesis  
participation in collaboration project with laboratory of Chemical Biology, Department of  
Organic Chemistry, Charles University in Prague

## Research papers

- Makukhin, N., **Tretyachenko, V.**, Moskowitz, J., Misek, J. A Ratiometric Fluorescent Probe for Imaging of the Activity of Methionine Sulfoxide Reductase A in Cells. *Angew Chem Int Ed Engl.*, September 2016
- Fejfarová, K., Kádek, A., Mrázek, H., Hausner, J., **Tretyachenko, V.**, Koval, T., ... & Dohnálek, J. (2016). Crystallization of nepenthesin I using a low-pH crystallization screen. *Acta Crystallographica Section F: Structural Biology Communications*, 72(1), 24-28.
- Kádek, A., **Tretyachenko, V.**, Mrazek, H., Ivanova, L., Halada, P., Rey, M., Schriemer, D.C., Man, P. Expression and characterization of plant aspartic protease nepenthesin-1 from *Nepenthes gracilis*. *Protein Expr Purif*, Vol. 95, March 2014, p. 121–128