

KLARA HLOUCHOVA, Ph.D.

EDUCATION AND TRAINING

04/2013 - present	CHARLES UNIVERISTY, PRAGUE, CZECH REPUBLIC Part-time appointment at the Department of Biochemistry, interrupted completely during 12/2013-12/2014 due to <i>second parental leave</i> and resumed at 50% after that (planned as full time since February 2017)
01/2011 – 03/2013	UNIVERSITY OF COLORADO BOULDER, USA post-doctoral position, laboratory of Prof. Shelley Copley, CIRES theme: Molecular evolution of enzymes and metabolic pathways
04/2009-04/2010	CAREER BREAK (<i>first parental leave</i>)
2005 – 2009	IOCB, CZECH ACADEMY OF SCIENCE, CZECH REPUBLIC PhD training, Group of Dr. Jan Konvalinka Thesis: Characterization of glutamate carboxypeptidase III: structure and activity in an evolutionary context
2006 & 2008	NATIONAL CANCER INSTITUTE, FREDERICK, USA Two one-month research stays, Macromolecular Crystallography Laboratory, group of Dr. Jacek Lubkowski (Crystallization and structure solving of Glutamate Carboxypeptidase III)
2002 – 2005	CHARLES UNIVERSITY, PRAGUE, CZECH REPUBLIC MSc., Biochemistry
1996 – 2000	The Prague British School, Czech Republic IGCSE and IB diploma, full scholarship student

CONFERENCES AND WORKSHOPS

January 17-21, 2016	GRC on Origins of Life, Galveston TX, USA (invited talk)
June 14-19, 2015	Astrobiology Science Conference, Chicago, USA (poster presenter)
April 16-20, 2012	Astrobiology Science Conference, Atlanta, Georgia, USA
October 20-24, 2007	5 th General Assembly of the International Proteolysis Society, Patras, Greece (research talk)
May 22-26, 2006	International School on Biological Crystallization, Granada, Spain
December 8-10, 2005	Latin American Astronomy Summer School, Santiago, Chile
June 12 – July 9, 2005	10 th Vatican Summer School of Observational Astronomy and Astrophysics (VOSS) – on Astrobiology, Castel Gandolfo, Italy (Vatican Observatory fellowship award)
October 2-9, 2004	FEBS Advanced course: Advanced methods in protein crystallization, Nové Hradý, the Czech Republic (FEBS fellowship award)

FELLOWSHIPS AND GRANTS

01/2017	Three-year junior research grant from the Czech Science Foundation (theme: Terrestrial protein sequence and structure space evolution)
2011-2012	CIRES post-doctoral fellowship (theme: planetary metabolism)
2005	Vatican Observatory Foundation Fellowship to attend VOSS, Italy
1996-2000	The British International School of Prague director's study fellowship

PUBLICATIONS

- (1) Navrátil M, Tykvart J, Schimer J, Páchl P, Navrátil V, Rokob TA, Hloučová K, Rulíšek L & Konvalinka J. (2016) Comparison of the substrate specificity of human glutamate carboxypeptidases II and III: A kinetic, X-ray and QM/MM study. *FEBS J.* **283**, 2528-45.

- (2) Yadid I, Rudolph J, Hlouchova K, & Copley SD. (2013) Sequestration of a highly reactive intermediate in an evolving pathway for degradation of pentachlorophenol. *Proc Natl Acad Sci US A*. 110, E2182-90.
- (3) Hlouchova K, Rudolph J, Pietari JMH, Behlen LS, & Copley SD (2012) Pentachlorophenol hydroxylase, a poorly functioning enzyme required for degradation of pentachlorophenol by *Sphingobium chlorophenolicum*. *Biochemistry* **51**, 3848-60.
- (4) Hlouchová K, Navrátil V, Tykvart J, Šácha P & Konvalinka J. (2012) GCPII variants, paralogs and orthologs. *Curr Med Chem* **19**, 1316-22.
- (5) Hlouchová K, Bařinka C, Konvalinka J & Lubkowski J (2009) Structural insight into the evolutionary and pharmacologic homology of glutamate carboxypeptidases II and III. *FEBS Journal* **276**, 4448-4462.
- (6) Rovensk M, Hlouchov K, Šcha P, Mlochov P, Hork V, Zmenk J, Bařinka C, Konvalinka J (2008) Tissue expression and enzymologic characterization of human prostate specific membrane antigen and its rat and pig orthologs. *Prostate* **68**,171-82.
- (7) Bařinka C, Hlouchov K, Rovensk M, Majer P, Dauter M, Hin N, Ko YS, Tsukamoto T, Slusher BS, Konvalinka J & Lubkowski J (2008) Structural Basis of interactions between human glutamate carboxypeptidase II and its substrate analogs. *J Mol Biol* **376**, 1438-50.
- (8) Bařinka C, Rovensk M, Mlochov P, Hlouchov K, Plechanovov A, Majer P, Tsukamoto T, Slusher BS, Konvalinka J & Lubkowski J (2007) Structural Insight into the pharmacophore pocket of human glutamate carboxypeptidase II. *J Med Chem* **50**, 3267-73.
- (9) Šcha P, Zmenk J, Bařinka C, Hlouchov K, Vcha A, Mlochov P, Hilgert I, Eckschlager T & Konvalinka J (2007) Expression of glutamate carboxypeptidase II in human brain. *Neuroscience* **144**, 1361-72.
- (10) Hlouchov K, Bařinka C, Klusk V, Šcha P, Mlochov P, Majer P, Rulšek L & Konvalinka J (2007) Biochemical characterization of human glutamate carboxypeptidase III. *J Neurochem* **101**, 682-96.

BOOK CHAPTERS

Hlouchov K, Bařinka C & Konvalinka J (2011) Glutamate carboxypeptidase II as a therapeutic target. In: Proteinases as drug targets. Ben Dunn ed., RSC Publishing, 62-95.

INVITED TALKS

Gordon Research Conference on Origins of Life, Galveston TX, USA, January 17-21, 2016

Seminar Series: Modern Concepts in Structural Biology, University of Vienna, Austria, January 26, 2017