

**CURRICULUM VITAE**  
**VIKTOR V. HUSAK**

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**I. ADDRESS**

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**II. PERSONAL**

**Date and place of Birth:** May 02, 1982 (Trostjanez, Ivano-Frankivsk region, Ukraine)

**Sex:** male

**Nationality:** Ukrainian

**Family status:** married

**Languages:** Ukrainian, Russian, English, German

**III. EDUCATION**

**2009, 18 March:** Public defense of Ph.D. thesis in Special Scientific Council of Yuriy Fed'kovych Chernivtsi National University (Chernivtsi, Ukraine).

**2004-2007:** Ph.D. student, Department of Biochemistry, Precarpathian National University. Ph.D. thesis "Comparative characteristics of AMP-deaminase from the white muscle of fish tolerant to the unfavorable environmental conditions"

**2003-2004:** Specialist degree in Biochemistry, Department of Biochemistry, Precarpathian National University. S.Sc. thesis "Purification and properties SOD from liver of pigs".

**2002-2003:** Bachelor's degree in Biology, Department of Biology and Ecology, Precarpathian National University. B.Sc. thesis "The activity of SOD in different tissues of *Carassius auratus*".

**1999-2004:** undergraduate student, Precarpathian National University. Obtained the diploma with distinction.

**IV. TEACHING EXPERIENCE AND SUPERVISION OF STUDENTS**

**2011-present:** Associate Professor, Biochemistry and Biotechnology Dept., PNU.

**2009-2010:** Lector, Department of Biochemistry, Precarpathian National University.

**2007-2008:** Assistant of Department of Biochemistry, Precarpathian National University.

**General theoretical and practical courses**

7. "Hydrobiology", general course - lectures & practice, Biochemistry Dept, Precarpathian National University, 20010-2013, Ivano-Frankivsk, Ukraine.
6. "Bioinformatics", special course - practice, Biochemistry Dept, Precarpathian National University, 20010-present, Ivano-Frankivsk, Ukraine.
5. "Biochemistry of Adaptations", special course –practice, Natural Sciences Dept., Precarpathian University, 2010-present, Ivano-Frankivsk, Ukraine.
4. "Ichthyology", special course - lectures & practice, Biochemistry Dept, Precarpathian National University, 2009-2012, Ivano-Frankivsk, Ukraine.
3. "Biotechnology" general course - lectures & practice, Biochemistry Dept, Precarpathian National University, 2009-present, Ivano-Frankivsk, Ukraine.
2. "Biochemistry", general course – practice, Natural Sciences Dept., Precarpathian University, 2010-present, Ivano-Frankivsk, Ukraine.

1. “Kinetics of enzymatic reactions” – special course – lectures & practice, Natural Sciences Dept., Precarpathian University, 2009-present, Ivano-Frankivsk, Ukraine.

#### **Undergraduate students**

Petruk Jevhen – Dept. of Biochemistry, Precarpathian National University, Ivano-Frankivsk, Ukraine

#### **V. AREAS OF SCIENTIFIC INTERESTS**

- Oxidative stress in fish
- Biochemical aspects of free radical metabolism
- Modification of enzymes by reactive oxygen species
- Adaptations of living organisms to changeable environmental conditions (temperature, oxygen level, presence of xenobiotics, etc)
- Protective mechanisms against different stresses
- Influence of biologically active compounds, adaptogens on living organisms
- Effects of transition metals, pesticides and other environmental pollutants and xenobiotics on living organisms

#### **VI. CURRENT RESEARCH WORK**

- Investigation of environmental pollutants, transition metal ions, xenobiotic, pesticide effects on goldfish *Carassius auratus*
- Analysis of free radical-induced perturbations and development of oxidative stress in different tissues (brain, liver, kidney and gill) of goldfish *Carassius auratus*, exposed to environmental pollutants
- Assessment of the influence of transition metal ions and pesticides on some biochemical and hematological parameters of *Carassius auratus*
- Study of fish adaptation to stress factors with interest to environmental changes (temperature, oxygen level, presence of xenobiotics, etc)
- Enzyme purification and investigation

#### **VII. AWARDS AND GRANTS**

- Grant for scientific-technical collaboration between Ukrainian State Committee of Science and Technique and German Federal Ministry of Investigations and Technologies “Fish as a model to study human-induced environmental changes”, March-August 2011 (researcher in the project).
- Grant for scientific-technical collaboration between Ukrainian State Committee of Science and Technique and German Federal Ministry of Investigations and Technologies “Fish as a model to study human-induced environmental changes”, November-December 2010 (researcher in the project).
- Diploma (second place) for the best poster presentation in II International conference of young scientist “Biology: from molecule to biosphere”, Charkiv, Ukraine, November 19-21, 2007.
- Diploma in co-authorship with T. Bagnykova (second place) for the best poster presentation in congress of Ukrainian society of cell biology, Lviv, 2004.

#### **VIII. PROFESSIONAL EXPERIENCE / TRAINING / SCHOLARSHIP**

1. Attendance at IV Summer School “Molecular microbiology and biotechnology”, Odesa I.I. Mechnykov National University, Odesa, Ukraine, 2012.

#### **IX. TECHNICAL SKILLS**

- Assaying of activities of the main antioxidant (catalase, superoxide dismutase) and associated enzymes (malate dehydrogenase, isocitrate dehydrogenase, glucose-6-phosphate dehydrogenase), enzymes of glutathione metabolism (glutathione-S-transferase, glutathione

- peroxidase, glutathione reductase, glutathione peroxidase), enzymes of carbohydrate metabolism (lactate dehydrogenase)
- Determination of the main oxidative stress markers such as thiobarbituric reactive substances, carbonyl proteins, level of total and oxidized glutathione, low molecular mass thiols and lipid peroxides level
  - Protein purification techniques: ion-exchange chromatography, native and SDS-electrophoresis
  - Experiment planning, results systematization and presentation, manuscript preparation

## **X. PROFESSIONAL SOCIETIES**

Ukrainian Biochemical Society

## **XI. PUBLICATIONS**

**18. Husak V.V.** Copper and copper-containing pesticides: metabolism, toxicity and oxidative stress // Journal of Vasyl Stefanyk Precarpathian National University. Vol. 2, No. 1 (2015), 39-51.

**17. Maksymiv IV, Husak VV, Mosiichuk NM, Matviishyn TM, Sluchy IY, Storey JM, Storey KB, Lushchak VI.** Hepatotoxicity of herbicide Sencor in goldfish may result from induction of mild oxidative stress // Pestic Biochem Physiol. 2015 Jul;122:67-75. doi: 10.1016/j.pestbp.2014.12.020. (IF 2.014).

**16. Mosiichuk N.M., Husak V.V., Maksymiv I.V., Hlodan O.Y., Storey J.M., Storey K.B., Lushchak V.I.** Toxicity of environmental Gesagard to goldfish may be connected with induction of low intensity oxidative stress in concentration- and tissue-related manners // Aquatic Toxicology. 165, 2015. - P. 249–258 (IF 3.451).

**15. Husak V.V., Mosiichuk N.M., Maksymiv I.V., Sluchy I.Y., Storey J.M., Storey K.B., Lushchak V.I.** Histopathological and biochemical changes in goldfish kidney due to exposure to the herbicide Sencor may be related to induction of oxidative stress // Aquatic Toxicology. 155, 2014. - P. 181–189.

**14. Kubrak O.I., Poigner H., Husak V.V., Rovenko B.M., Meyer S., Abele D., Lushchak V.I.** Goldfish brain and heart are well protected from Ni<sup>2+</sup>-induced oxidative stress. Comparative Biochemistry and Physiology Part C: Toxicology & Pharmacology. dx.doi.org/10.1016/j.cbpc.2014.03.011 (IF 2.707)

**13. Matviishyn T.M., Kubrak O.I., Husak V.V., Storey K.B., Lushchak V.I.** Tissue-specific induction of oxidative stress in goldfish by 2,4-dichlorophenoxyacetic acid: Mild in brain and moderate in liver and kidney. Environmental Toxicology and Pharmacology. Volume 37, Issue 2, March 2014, Pages 861–869 (IF 1.975)

**12. Kubrak OI, Atamaniuk TM, Husak VV, Lushchak VI.** Transient effects of 2,4-dichlorophenoxyacetic acid (2,4-D) exposure on some metabolic and free radical processes in goldfish white muscle, Food Chem Toxicol. 2013 59C, :356-361. doi: 10.1016/j.fct.2013.06.023 (IF 3.010 )

**11. Atamaniuk TM, Kubrak OI, Husak VV, Storey KB, Lushchak VI.** The mancozeb-containing carbamate fungicide tattoo induces mild Oxidative Stress in goldfish brain, liver, and kidney, Environ Toxicol. 2013. doi: 10.1002/tox.21853 (IF 2.708 )

10. Kubrak O.I., Husak V.V., Rovenko B.M., Poigner H., Abele D., Lushchak V.I. Antioxidant system efficiently protects goldfish gills from Ni<sup>2+</sup>-induced oxidative stress, *Chemosphere*, 2013, 90(3), 971-976. (IF 3.137)
9. Kubrak O.I., Atamaniuk T.M., Husak V.V., Drohomiretska I.Z., Storey J.M., Storey K.B., Lushchak V.I. Oxidative stress responses in blood and gills of *Carassius auratus* exposed to the mancozeb-containing carbamate fungicide Tattoo. *Ecotoxicol Environ Saf.* 2012, 85, 37–43. (IF 2.294).
8. Kubrak O.I., Husak V.V., Rovenko B.M., Poigner H., Mazepa M.A., Kriews M., Abele D., Lushchak V.I. Tissue specificity in nickel uptake and induction of oxidative stress in kidney and spleen of goldfish *Carassius auratus*, exposed to waterborne nickel, *Aquatic Toxicology*, 2012, 118-119, 88-96. (IF 3.761).
7. Kubrak O.I., Rovenko B.M., Husak V.V., Storey J.M., Storey K.B., Lushchak V.I. Nickel induces hyperglycemia and glycogenolysis and affects the antioxidant system in liver and white muscle of goldfish *Carassius auratus* L., *Ecotoxicol Environ Saf.* 2012, 80, 231-237. (IF 2.203 ).
6. Kubrak O.I., Rovenko B.M., Husak V.V., Vasylykiv O.Yu., Storey K.B., Storey J.M., Lushchak V.I. Goldfish exposure to cobalt enhances hemoglobin level and triggers tissue-specific elevation of antioxidant defenses in gills, heart and spleen, *Comp. Biochem. Physiol.*, 2012, 155(2), 325-332. (IF 2.325).
5. Kubrak O.I., Husak V.V., Rovenko B.M., Storey J.M., Storey K.B., Lushchak V.I., Cobalt-induced oxidative stress in brain, liver and kidney of goldfish *Carassius auratus*, *Chemosphere*, 2011,85(6), 983-989. (IF 3.115)
4. Lushchak V.I., Husak V.V., Storey J.M., Storey K.B., AMP-deaminase from goldfish white muscle: regulatory properties and redistribution under exposure to high environmental oxygen level, *Fish Physiol. Biochem.*, 2009, 35 (3), 443-452. (2009 IF 1.545)
3. Lushchak V.I., Husak V.V., Storey K.B. Regulation of AMP-deaminase activity from white muscle of common carp *Cyprinus carpio*, *Comp. Biochem. Physiol.*, 2008, 149 (2), 362-369. (IF 1.468)
2. Husak V.V., Lushchak V.I. Inactivation of AMP-deaminase from white muscle of *Cyprinus carpio* in the systems with free radical oxidation, *Ukr. Biochem. J.*, 2007, 79 (6), 42-47.
1. Lushchak V.I., Bagnyukova T.V., Husak V.V., Luzhna L.I., Lushchak O.V., Storey K.B. Hyperoxia results in transient oxidative stress and an adaptive response by antioxidant enzymes in goldfish tissues, *Int. J. Biochem. Cell Biol.*, 2005, 37 (8), 1670-1680. (IF 4.152)