CURRICULUM VITAE
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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, English, German

III. EDUCATION

2009, 18 March: Public defense of Ph.D. thesis in Special Scientific Council of Yurij 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

10. "Mathematical methods in biology", general course - practice, Biochemistry Dept, Precarpathian National University, 2022-present, Ivano-Frankivsk, Ukraine.
9. "Blood biochemistry", special course - lectures, Biochemistry Dept, Precarpathian National University, 2023-present, Ivano-Frankivsk, Ukraine.
8. "Enzymology", general course - lectures, Biochemistry Dept, Precarpathian National University, 2020-present, Ivano-Frankivsk, Ukraine.

7. “Hydrobiology”, general course - lectures & practice, Biochemistry Dept, Precarpathian National University, 2010-2013, Ivano-Frankivsk, Ukraine.
6. “Bioinformatics”**,** special course - practice, Biochemistry Dept, Precarpathian National University, 2010-2020, 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, 2010-2015, Ivano-Frankivsk, Ukraine.
1. “Kinetics of enzymatic reactions” – special course – lectures & practice, Natural Sciences Dept., Precarpathian University, 2009-2012, Ivano-Frankivsk, Ukraine.

V. AREAS OF SCIENTIFIC INTERESTS

- Plant micropropagation
- Oxidative stress in organisms
- 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, pesiticide effects on living organisms
- Analysis of free radical-induced perturbations and development of oxidative stress in plant explants
- Assessment of the influence of transition metal ions on some physiological and biochemical parameters of *plants*
- 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

- 2020-2022 – «Development of methodology for complex biorisk assessment of pesticide-polluted environment for target and non-target organisms», National Research Foundation of Ukraine (researcher in the project).
- 2015-2017 – Project of the Ministry of Education and Science: "Study of molecular mechanisms of adaptation of living organisms to adverse factors and development of ways to increase adaptation potential", deadline - 01.01.2015-31.12.2017, N 0115U002304 (responsible executor in the project).
- 2011 – 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).
- 2010 – 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).
- 2009-2011 – Project of the Ministry of Education and Science: "Regulation of free radical processes in the response of living organisms to the action of adverse environmental factors", deadline - 01.01.2009-31.12.2011, N 0109U001412 (responsible executor of 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 (gluthatione-S-transferase, glutathione peroxidase, glutathione reductase, glutathione peroxidase), enzymes of carbohydrate metabolism (lactate dehadrogenase)
- 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

25. **Husak V,** Strutynska T, Burdyliuk N, Pitukh A, Bubalo V, Falsfushynska H, Strilbytska O, Lushchak O. Low-toxic herbicides Roundup and Atrazine disturb free radical processes in Daphnia in environmentally relevant concentrations. EXCLI Journal, 21, 595-609, 2022

https://doi.org/10.17179/excli2022-4690

24. Mosiichuk N, **Husak V**, Storey KB, Lushchak V. Acute exposure to the penconazole-containing fungicide Topas induces metabolic stress in goldfish. Chem. Res. Toxicol., 2021.

https://doi.org/10.1021/acs.chemrestox.1c00174

23.**Husak VV**, Vasyliuk DV, Shcherba RM, Lushchak VI. Effect of light emitted by diodes on growth and pigment content of black currant plantlets in vitro. Agriculturae Conspectus Scientificus. 2020; 85(4): 317-323.

http://acs.agr.hr/acs/index.php/acs/article/view/1781

22. Lushchak VI, Matviishyn TM, **Husak VV**, Storey JM, Storey KB. Pesticide toxicity: a mechanistic approach. EXCLI J. 2018. 17:1101-1136.

https://doi.org/10.17179/excli2018-1710

21. **Husak VV**, Mosiichuk NM, Kubrak OI, Matviishyn TM, Storey JM, Storey KB, Lushchak VI. Acute exposure to copper induces variable intensity of oxidative stress in goldfish tissues. Fish Physiol Biochem. 2018. 44(3):841-852.
https://doi.org/10.1007/s10695-018-0473-5

20. **Husak VV**, Mosiichuk NM, Storey JM, Storey KB, Lushchak VI. Acute exposure to the penconazole-containing fungicide Topas partially augments antioxidant potential in goldfish tissues. Comp Biochem Physiol C Toxicol Pharmacol. 2017. 193:1-8.
https://doi.org/10.1016/j.cbpc.2016.12.003

19. **Husak VV**, Mosiichuk NM, Maksymiv IV, Storey JM, Storey KB, Lushchak VI. Oxidative stress responses in gills of goldfish, Carassius auratus, exposed to the metribuzin-containing herbicide Sencor. Environ Toxicol Pharmacol. 2016. 45:163-9.
https://doi.org/10.1016/j.etap.2016.05.028

18. Maksymiv IV, **Husak VV**, Mosiichuk NM, Matviishyn TM, Sluchyk 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. 122:67-75.
https://doi.org/10.1016/j.pestbp.2014.12.020

17. Mosiichuk NM, **Husak VV**, Maksymiv IV, Hlodan OY, Storey JM, Storey KB, Lushchak VI. Toxicity of environmental Gesagard to goldfish may be connected with induction of low intensity oxidative stress in concentration- and tissue-related manners. Aquat Toxicol. 2015. 165:249-58.
https://doi.org/10.1016/j.aquatox.2015.06.007

16. **Husak VV**. Copper and copper-containing pesticides: metabolism, toxicity and oxidative stress // Journal of Vasyl Stefanyk Precarpathian National University. 2015. 2(1):39-51.

15. Kubrak OI, Poigner H, Husak VV, Rovenko BM, Meyer S, Abele D, Lushchak VI. Goldfish brain and heart are well protected from Ni^{2+}-induced oxidative stress. Comp Biochem Physiol C Toxicol Pharmacol. 2014. 162:43-50.
https://doi.org/10.1016/j.cbpc.2014.03.011

14. Kubrak OI, **Husak VV**, Rovenko BM, Poigner H, Kriews M, Abele D, Lushchak VI. Antioxidant system efficiently protects goldfish gills from Ni(2+)-induced oxidative stress. Chemosphere. 2013 Jan;90(3):971-6.
https://doi.org/10.1016/j.chemosphere.2012.06.044

13. Matviishyn TM, Kubrak OI, **Husak VV**, Storey KB, Lushchak VI. Tissue-specific induction of oxidative stress in goldfish by 2,4-dichlorophenoxyacetic acid: mild in brain and moderate in liver and kidney. Environ Toxicol Pharmacol. 2014. 37(2):861-9.
https://doi.org/10.1016/j.etap.2014.02.007

12. 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. 2014. 29(11):1227-35.
https://doi.org/10.1002/tox.21853

11. Kubrak OI, **Husak VV**, Rovenko BM, Storey JM, Storey KB, Lushchak VI. Cobalt-induced oxidative stress in brain, liver and kidney of goldfish Carassius auratus. Chemosphere. 2011. 85(6):983-9.
https://doi.org/10.1016/j.chemosphere.2011.06.078

10. Kubrak OI, Atamaniuk TM, **Husak VV**, Drohomyretska IZ, Storey JM, Storey KB, Lushchak VI. 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.
https://doi.org/10.1016/j.ecoenv.2012.08.021

9. 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. 59:356-61.
https://doi.org/10.1016/j.fct.2013.06.023

8. **Husak VV**, Mosiichuk NM, Maksymiv IV, Sluchyk IY, Storey JM, Storey KB, Lushchak VI. Histopathological and biochemical changes in goldfish kidney due to exposure to the herbicide Sencor may be related to induction of oxidative stress. Aquat Toxicol. 2014. 155:181-9.
https://doi.org/10.1016/j.aquatox.2014.06.020

7. Kubrak OI, **Husak VV**, Rovenko BM, Poigner H, Mazepa MA, Kriews M, Abele D, Lushchak VI. Tissue specificity in nickel uptake and induction of oxidative stress in kidney and spleen of goldfish Carassius auratus, exposed to waterborne nickel. Aquat Toxicol. 2012. 15;118-119:88-96.
https://doi.org/10.1016/j.aquatox.2012.03.016

6. Lushchak VI, **Husak VV**, Storey KB. Regulation of AMP-deaminase activity from white muscle of common carp Cyprinus carpio. Comp Biochem Physiol B Biochem Mol Biol. 2008. 149(2):362-9.
https://doi.org/10.1016/j.cbpb.2007.10.008

5. Kubrak OI, Rovenko BM, **Husak VV**, Vasylkiv OY, Storey KB, Storey JM, Lushchak VI. Goldfish exposure to cobalt enhances hemoglobin level and triggers tissue-specific elevation of antioxidant defenses in gills, heart and spleen. Comp Biochem Physiol C Toxicol Pharmacol. 2012. 155(2):325-32.
https://doi.org/10.1016/j.cbpc.2011.09.012

4. Kubrak OI, Rovenko BM, **Husak VV**, Storey JM, Storey KB, Lushchak VI. Nickel induces hyperglycemia and glycogenolysis and affects the antioxidant system in liver and white muscle of goldfish Carassius auratus L. Ecotoxicol Environ Saf. 2012. 80:231-7.
https://doi.org/10.1016/j.ecoenv.2012.03.006

3. Lushchak VI, **Husak VV**, Storey JM, Storey KB. AMP-deaminase from goldfish white muscle: regulatory properties and redistribution under exposure to high environmental oxygen level. Fish Physiol Biochem. 2009. 35(3):443-52.
https://doi.org/10.1007/s10695-008-9270-x

2. **Husak VV**, Lushchak VI. [Inactivation of AMP-deaminase from white muscle of Cyprinus carpio in the systems with free radical oxidation]. Ukr Biokhim Zh (1999). 2007. 79(6):42-7.

1. Lushchak VI, Bagnyukova TV, **Husak VV**, Luzhna LI, Lushchak OV, Storey KB. Hyperoxia results in transient oxidative stress and an adaptive response by antioxidant enzymes in goldfish tissues. Int J Biochem Cell Biol. 2005. 37(8):1670-80.
https://doi.org/10.1016/j.biocel.2005.02.024