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B.Sc. Jovica Lončar – CURRICULUM VITAE

First name: Jovica
Family name: Lončar
Date of birth: June 23rd 1980
Place of birth: Zagreb, Croatia
Nationality: Croatian
Present position: Ph.D. student, Laboratory for Molecular Ecotoxicology, Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb, Croatia,
Marital status: Single

Education:

- B. Sc., 2005, Faculty of Food Technology and Biotechnology, Biotechnology, University of Zagreb, Zagreb, Croatia
- PhD - 2007 - in progress, Faculty of Food Technology and Biotechnology, Biotechnology, University of Zagreb, Zagreb, Croatia

Employment:

- 2005 - 2007, Research Assistant Laboratory for Molecular Ecotoxicology, Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb, Croatia
- 2007 – present, Ph.D. student, Laboratory for Molecular Ecotoxicology, Division for Marine and Environmental Research, Rudjer Bošković Institute, Zagreb, Croatia

Graduation thesis:

- Estimation of the effect of cigarette smoke on the genome of human lymphocytes exposed to γ -radiation by using micronucleus and chromatid breakage assays, Faculty of Food Technology and Biotechnology, University of Zagreb, Zagreb, Croatia, 2005.

PhD thesis (*work in progress*):

Preliminarily title:

Investigation of the expression profiles and transport activity of ecotoxicologically relevant ABC transport proteins in primary and stable fish cell lines

Research Experience:

Environmental toxicology: work on phase I and phase II enzymes of detoxification systems in fish; investigation of the presence and function of ABC transporters as a part of multixenobiotic resistance (MXR) mechanism in aquatic organisms

Methods: enzymatic analysis (glutathione-S-transferase, EROD), cell culture technique (fish cell lines, primary hepatocytes culture), molecular biology techniques (Western Blot, RNA isolation, PCR, cloning), basic bioinformatics methods, basic statistical methods, *in vivo* measurement of protein transport activity (accumulation or efflux of model substrates in/from exposed aquatic specimens, specific tissues etc.).

Publications:

1. Traven, L., Žaja, R., Lončar, J., Smital, T., Mićović, V., 2008. CYP1A induction potential and the concentration of priority pollutants in marine sediment samples – In vitro evaluation using the PLHC-1 fish hepatoma cell line. *Toxicol in Vitro*. 22, 1648-1656.
2. Zaja, R., Caminada, D., Lončar, J., Fent, K., Smital, T., 2008. Development and characterization of P-glycoprotein 1 (Pgp1, ABCB1)-mediated doxorubicin-resistant PLHC-1 hepatoma fish cell line. *Toxicol. Appl. Pharm.* 227, 207-218.
3. Lončar, J., Popović, M., Zaja, R., Smital, T., 2010. Gene expression analysis of the ABC efflux transporters in rainbow trout (*Oncorhynchus mykiss*). *Comp. Biochem. Physiol. C-Toxicol. Pharmacol* 151 (2), 209-215.
4. Popovic, M., Zaja, R., Loncar, J., Smital, T., 2010. A novel ABC transporter: The first insight into zebrafish (*Danio rerio*) Abch1. *Marine Environmental Research* 69 (SUPPL. 1), S11-S13.
5. Fischer, S., Loncar, J., Zaja, R., Schnell, S., Schirmer, K., Smital, T., Luckenbach, T. (2011) Constitutive mRNA expression and protein activity levels of nine ABC efflux transporters in seven permanent cell lines derived from different tissues of rainbow trout (*Oncorhynchus mykiss*). *Aquatic Toxicology* 101 (2), 438-446.

Projects:

Ongoing:

- *Systematic Research of the Adriatic Sea as a Base for Sustainable Development of the Republic of Croatia - Project "Adriatic"*, (1998 -) – Project supported by the Government of the Republic of Croatia;
- *Ecotoxicological significance of ABC transport proteins in aquatic organisms*, (2007-2011) – Project supported by the Ministry of Science Education and Sports;
- *Assessment of hazardous chemical contamination in the Sava River basin*, (2007-2009) – NATO Science for Piece Project.

Past:

- *EMCO - Reduction of environmental and health risks, posed by Emerging Contaminants, through advanced treatment of municipal and industrial wastes. EC FP6 Project (2004-2007);*
- *SARIB - Sava River Basin: Sustainable Use, Management and Protection of Resources (2004-2007) – EC FP6 project*