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EDITORS

Vladimir PEŠIĆ &
Sead HADŽIABLAHOVIĆ

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CYP1A INDUCTION IN THE HEPATOPANCREAS OF *MERLUCCIUS MERLUCCIUS*, *TRIGLA LUCERNA* AND *LIZA RAMADA* IN THE REGION OF THE SEA-PORT BAR

Mirjana Mihailović¹, Jelena Arambašić¹, Desanka Bogojević¹, Svetlana Dinić¹, Nevena Grdović¹, Ilijana Grigorov¹, Svetlana Ivanović-Matić¹, Svetlana Labus-Blagojević², Vesna Martinović¹, Miodrag Petrović¹, Aleksandra Uskoković¹, Melita Vidaković¹ & Goran Poznanović¹

¹ Molecular Biology Laboratory, Institute for Biological Research 'Siniša Stanković', Despot Stephen Blvd. 142, 11060 Belgrade, Serbia and Montenegro; ² Institute for Public Health Milan Jovanović-Batut, Doktora Subotića 5, 11000 Belgrade, Serbia and Montenegro

The cytochrome P450 isozymes that are responsible for the biotransformation of xenobiotic compounds such as polycyclic aromatic hydrocarbons (PAHs) and polychlorinated biphenyls (PCBs), are represented by the CYP1A subfamily of proteins in fish. CYP1A is well-established biomarker for environmental contamination in aquatic ecosystems. The aim of this study was to investigate CYP1A expression in the hepatic microsomal pellet of the European hake - *Merluccius merluccius*, the Tub gurnard - *Trigla lucerna* and the Thinlip gray mullet *Liza ramada* during winter and spring in the sea-port Bar (Adriatic sea, Serbia and Montenegro), a region of intensive urban and industrial activities. Samples of sea water and sediment in this area were analysed for PAHs and PCBs. The presence of representative compounds from both groups was established in both seasons. Western blot analysis revealed the induction of CYP1A in all examined fish species, with increased relative amounts of CYP1A in spring compared to winter. A species-specific response, characterized by the highest CYP1A level in the hepatopancreas of *Liza ramada* and the lowest level in *Trigla lucerna* was observed. Minimal concentrations of PAHs and PCBs in sea water that are considered capable of exerting a negative impact on marine organisms differ between countries. Therefore, the observed induction of CYP1A could present a biological effect that links the bioavailability of the compounds of interest and their intrinsic toxicity. Measurements of biomarker responses in fish from contaminated sites could contribute to environmental monitoring and environmental risk assessment.
