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## „Smart Bio“

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# ABSTRACT BOOK

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# Native Fish Species As A Test - Objects For The Investigation Of The Hydroecosystem Existent State

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## Abstract

The diagnostic method of first deviations in the most sensitive components of biotic groups is described. Morphological parameters of bone fish liver were used as biotest-systems of ecological monitoring. Forecasting of the toxicant influence on the native ichthyofauna state by morphometric indices of internal parenchymatous fish organs became possible. We have proved that protoplasmic and hemolytic toxicants have break the cell metabolism, causing dystrophy, erythrocyte decomposition, and cell necrobiosis in the fish liver.

The obtained results can be used for diagnostics of various types of hydroecosystems, and also they can be a scientific basis for preservation of biological diversity of the ecosystem in conditions of increased anthropogenic loading.

**Keywords:** anthropogenic loading, hydroecosystems, ichthyofauna, native fish species, liver, biomarkers, toxicants, reservoir, morphological parameters, pollutants.

## References

- [1] Scardi, M., Tancioni, L., Cataudella, S. (2006). *Monitoring methods based on fish*. Biological monitoring of rivers / [eds. G. Ziglio, M. Siligardi, G. Flaim]. – Chichester : John Wiley & Sons. – P. 135–153 [in English].
- [2] Schlenk, D., Handy, R., Steinert, S. [et al.]. (2008) Biomarkers. *The toxicology of fishes*. Boca Raton; London; New York: CRC Press, 683–731 [in English].
- [3] Van der Oost, R. (2003). Fish bioaccumulation and biomarkers in environmental risk assessment: a review. *Environ. Toxicol. Pharmacol.*, 13, 57–149 [in English].
- [4] Handy, R. D. (2002). Biomarker approaches for ecotoxicological biomonitoring at different levels of biological organization. *Handbook of Environmental Monitoring*, 9.1–9.32 [in English].
- [5] Schlenk, D., Handy, R., & Steinert, S. (2008). Biomarkers. *The toxicology of fishes*. Boca Raton; London; New York: CRC Press, 683-731 [in English].
- [6] Prysiazhniuk N. M, Grynevych, N. E., Kunovskii, Y.V., Michalsky, O.R. (2017). Patent on useful model № 119573, MPK G01N33/12 C12Q1/12 (2006.01) «Method of bioindication of reservoirs»; Zaiavl. 27.04.17. Opubl. 25.09.2017. Biul. № 18 [in Ukrainian].