

Aleksandras Rybakovas

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

2003 – 2008 PhD, after defending the work in the field of ecology and environmental science (Biomedical Sciences) at Vilnius University, Institute of Ecology. Thesis title – "Analysis of genotoxic and cytotoxic effects of environmental pollution in the Baltic and North Sea organisms".
2001 – 2003 Master's degree in biology at Vilnius University, Faculty of Natural Sciences. Program of genetics.
1997 – 2001 Bachelor's degree in biology at Vilnius University, Faculty of Natural Sciences. Molecular biology program.

PROFESSIONAL EXPERIENCE

2014 – present Work as a senior researcher at the Nature Research Centre, at the Laboratory of Evolutionary Ecology of Hydrobionts, by implementing ecological, genetic and genotoxicological studies of aquatic animals.
2012 – 2014 Sales manager at UAB Grida, by consulting and selling laboratory equipment.
2001 – 2012 Implementation of aquatic genotoxicity studies conducted by the Institute of Ecology, and later, accordingly, by the Nature Research Centre.
1998 – 2001 Participation in studies conducted by the Helminthology Laboratory of the Institute of Ecology.

RESEARCH INTERESTS

Monitoring and post-accident studies of marine and freshwater ecosystems, assessment of pollution-induced effects in aquatic bioindicator organisms. Cytogenetic, biochemical, hematological and other biomarker analysis in invertebrates, fish, reptiles and birds. Disease and developmental disorder assessment, karyological and molecular studies.

PUBLICATIONS

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (with citation index):

1. Butrimavičienė L., Nalivaikienė R., Kalcienė V., Rybakovas A. 2021. Impact of Cu²⁺ and Zn²⁺ mixture on haematological parameters of rainbow trout (*Oncorhynchus mykiss*), laboratory exposure and recovery. *Ecotoxicology* 30, 873–884 (2021). <https://doi.org/10.1007/s10646-021-02404-7>
2. Rybakovas, A., Arbačiauskas, K., Markovskienė, V., Jokšas, K. 2019. Contamination and genotoxicity biomarker responses in bivalve mussels from the major Lithuanian rivers. *Environmental and molecular mutagenesis*. <https://doi.org/10.1002/em.22336>
3. Valskienė, R., Baršienė, J., Butrimavičienė, L., Pažusienė, J., Grygiel, W., Stankevičiūtė, M., Rybakovas, A. 2019. Induction of nuclear abnormalities in herring (*Clupea harengus membras*), flounder (*Platichthys flesus*), and Atlantic cod (*Gadus morhua*) collected from the

- southern part of the Gotland Basin — the Baltic Sea (2010–2017). *Environmental Science and Pollution Research*. 26 (13): 13366-13380. <https://doi.org/10.1007/s11356-019-04687-0>.
4. Šidagytė, E., Razlutskiy, V., Alekhnovich, A., Rybakovas, A., Moroz, M., Šniukštaitė, V., Vaitonis, G., Arbačiauskas, K. 2017. Predatory diet and potential effects of *Orconectes limosus* on river macroinvertebrate assemblages of the southeastern Baltic Sea basin: implications for ecological assessment. *Aquatic Invasions*. 12 (4): 523–540. <https://doi.org/10.3391/ai.2017.12.4.09>.
 5. Rybakovas, A., Baršienė, J., Lang, T. 2009. Environmental genotoxicity and cytotoxicity in the offshore zones of the Baltic and the North Seas. *Marine Environmental Research*. 68: 246-256. <https://doi.org/10.1016/j.marenvres.2009.06.014>.
 6. Baršienė, J., Lehtonen, K.K., Köhler, A., Broeg, K., Vourinen, P.J., Lang, T., Pempkowiak, J., Šyvokienė, J., Dedonytė, V., Rybakovas, A., Repečka, R., Vountisjärvi, H., Kopecka, J. 2006. Biomarker responses in flounder (*Platichthys flesus*) and mussel (*Mytilus edulis*) in the Klaipėda-Būtingė area (Baltic Sea). *Marine Pollution Bulletin*. 53: 422-436 <https://doi.org/10.1016/j.marpolbul.2006.03.009>.
 7. Baršienė, J., Dedonytė, V., Rybakovas, A., Andreikėnaitė, L., Andersen, O.K. 2006. Investigation of micronuclei and other nuclear abnormalities in peripheral blood and kidney of marine fish treated with crude oil. *Aquatic Toxicology*. 78: 99-104. <https://doi.org/10.1016/j.aquatox.2006.02.022>.

Scientific articles published in conference proceedings, indexed in „Clarivate Analytics Web of Science“ database:

1. Rybakovas A., Baršienė J., Lang T. 2007. Peculiarities of environmental genotoxicity in offshore zones of the Baltic and North Seas. ICES 2007 Annual Science Conference. CM 2007 Documents. Theme Session on Effects of hazardous substances on ecosystem health in coastal and brackish-water ecosystems: present research, monitoring strategies, and future requirements ICES CM 2007/I:06.
2. Baršienė J., Rybakovas A., Andreikėnaitė L. 2007. Environmental genotoxicity studies in marine fish and mussels. ICES 2007 Annual Science Conference. CM 2007 Documents. Theme Session on Effects of hazardous substances on ecosystem health in coastal and brackish-water ecosystems: present research, monitoring strategies, and future requirements (I) ICES CM 2007/I:05.

Other reviewed scientific publications (books, books' chapters, collections of articles, articles, textbooks and etc.):

1. Baršienė J., Lyons B., Rybakovas A., Martinez-Gomez C., Andreikėnaitė L., Brooks S., Maes T. (2012) Background document: micronucleus assay as a tool for assessing cytogenetic/DNA damage in marine organisms, pp 71–83. In: Davies I.M., Vethaak D. (eds) Integrated marine environmental monitoring of chemicals and their effects. ICES Cooperative Research Report, 315. ICES, Copenhagen, 277.

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

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| 2015 – 2018 | Work in the project – "Implication of species and functional diversity for aquatic ecosystem services under increasing eutrophication and chemical pollution" (RETRO), founded by the Research Council of Lithuania via the program — "Sustainability of agro-, forest and water ecosystems" (No. SIT - 10/2015). |
| 2015 – 2016 | Guidance of Lithuanian-Belarus collaboration project "Effects of invasive crayfish |

- on macroinvertebrate communities and ecological water quality parameters", founded by the Research Council of Lithuania (No. TAP LB-13/2015)
- 2010 — 2011 Work in the project - "Environmental geno-citotoxicity studies in marine "Atlantic-North Sea-Baltic Sea" ecosystems" (GENCITOX), financed by the Research Council of Lithuania (No. MIP-10123).
- 2009 – 2011 Work in the project – "Biological Effects of Anthropogenic Chemical Stress: Tools for Assessment of Ecosystem Health" (BEST), founded through the European Community's Seventh Framework Program (FP/2007-2013) under grant agreement No. 217246 made with the joint Baltic Sea research and development program BONUS.
- 2008 Participation in North Atlantic and North Sea monitoring studies and the ICON project – "Integrated Assessment of Contaminant Impacts on the North Sea"
- 2008 Work in the project – "Ecotoxicological evaluation of the Klaipeda area of the Baltic Sea with biomarker indication system", financed by Lithuanian State Science and Study foundation (Contract No. T-68/08).
- 2005 – 2006 Work in D-6 project - "Evaluation of the environmental state of the sea area in Lithuanian territorial waters and economic zone adjacent to the Russian oil platform D-6", financed by Finland's Ministry of Environment.
- 2001 – 2004 Work in EU BEEP project - "Biological Effects of Environmental Pollution in Marine Coastal Ecosystems", financed by the European Commission (Research Directorate General, Environment Program–Marine Ecosystems, Contract No. EVK3-CT2000-00025).

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. Micutaitė J., Kalcienė V., Nalivaikienė R., Rybakovas A., Butrimavičienė L. Responses of biochemical biomarkers in *Unionidae* molluscs from the Neris river (Lithuania). 17th international conference of Life Sciences „The COINS 2022“. February-3 March 2022, Vilnius, Lithuania: 62. <https://thecoins.eu/static/resources/booksofabstracts/COINS2022.pdf>
2. Nalivaikienė R., Kalcienė V., Rybakovas A., Pūtys Ž., Višinskienė G., Butrimavičienė L. Geno- and cytotoxic responses in flounder (*Platichthys flesus*) from the Lithuanian coastal zone (Baltic Sea). 64th International Conference for Students of Physics and Natural Sciences „Open Readings 2021“. March 16–19. 2021. Center for Physical Sciences and Technology, Vilnius. https://www.openreadings.eu/wp-content/uploads/2021/03/Abstract_book_2021S.pdf
3. Nalivaikienė R., Kalcienė V., Rybakovas A., Jakutait V., Butrimavičienė L. Responses of biochemical biomarkers in bivalve mussels (*Unio pictorum*) from the Nemunas river (Lithuania). 16th international conference of Life Sciences „The COINS 2021“. March 27–30. 2021. Life Sciences Center, Vilnius University, Vilnius. <https://www.thecoins.eu/static/resources/booksofabstracts/COINS2021.pdf>
4. Rybakovas, A., Arbačiauskas, K., Jokšas, K., Markovskienė V. 2018. Assessment of contaminant concentrations and genotoxicity biomarker responses in bivalve mussels (*Unionidae*) from Lithuanian Rivers. // The 3rd Central European Symposium for Aquatic Macroinvertebrate Research, July 8–13, Lodz, Poland, Book of abstracts: 144.