Danguolė Montvydienė

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

1995 – 2002	Vilnius University and Institute of Botany (Vilnius, Lithuania), PhD (Doctor of Biomedicine Sciences, 04 B, Botany).
1989 – 1994	Vilnius University, Faculty of Natural Sciences, Department of Genetics, M.Sc. in Biology-Genetics.

PROFESSIONAL EXPERIENCE

2024 – until now	Senior Researcher of the Laboratory of Ecotoxicology, State Scientific Research Institute Nature Research Center, Lithuania
2021 – 2024	Senior Researcher of the Laboratory of Ecotoxicology, Institute of Ecology of Nature Research Center, Lithuania
2019 – 2021	Senior Researcher of the Sector of Ecological Physiology and Toxicology at the Laboratory of Fish Ecology, Institute of Ecology of Nature Research Center, Lithuania
2016 – 2019	Researcher of the Sector of Ecological Physiology and Toxicology at the Laboratory of Fish Ecology, Institute of Ecology of Nature Research Center, Lithuania
2014 – 2016	Senior Researcher of the Laboratory of Algology and microbial ecology, Institute of Botany of Nature Research Center, Lithuania
2010 – 2014	Senior Researcher of the Laboratory of Radioecology, Institute of Botany of Nature Research Center, Lithuania
2008 – 2010	Senior Researcher of the Laboratory of Radioecology, Institute of Botany, Lithuania
2004 – 2008	Researcher of the Laboratory of Radioecology, Institute of Botany, Lithuania
2002 – 2004	Junior Researcher of the Laboratory of Radioecology, Institute of Botany, Lithuania

RESEARCH INTERESTS

Main research interests: ecotoxicology, nanotoxicology, plant and fish physiology, ecology, and environmental science. My research focuses on the effects of various stressors (heavy metals, cyanotoxins, nanomaterials, radionuclides, etc.) on the growth and physiological condition of algae, higher plants, crustaceans, and fish. I study the physiological and biochemical mechanisms of organism responses to individual pollutants and their mixtures, as well as interactions between contaminants in multicomponent mixtures. My work includes ecotoxicological assessment of industrial wastewater and aquatic ecosystem contamination using biological methods, and investigation of the distribution and accumulation of pollutants in aquatic environments. I am also interested in the uptake and transfer of substances within organisms, particularly those with potential applications in wastewater treatment. Additionally, I study changes in the ecotoxicological status of aquatic ecosystems under anthropogenic pressure and explore possibilities for the sustainable reuse of treated wastewater in technological processes and agriculture.

PUBLIKATIONS

Articles published in journals (books), indexed in Clarivate Analytics Web of Science database (with citation index)

1. Račkauskas, S., Montvydienė, D., Jurgelėnė, Ž., Skrodenytė Arbačiauskienė, V., Virbickas, T., Poviliūnas, J., & Rakauskas, V. (2025). Immediate and delayed impacts of Alizarin Red S dye on *Salmo trutta* fry: Physiological and fitness responses. *Fishes*, *10*(12), 1-11. doi:10.3390/fishes10120624. IF: 2,400, Q1.
2. Jurgelėnė, Ž., Morkvėnas, A., Dzingelevičienė, R., Dzingelevičius, N., Baranauskis, K., Montvydienė, D., Kowalkowski, T., Raugelė, S., Buszewski, B., & Karabanovas, V. (2025). Effects of co-treatment with nano/microplastics and hydroxychloroquine on early development stages of *Salmo trutta*. *Marine environmental research*, 208, 1-12. doi:10.1016/j.marenvres. IF: 3,200, Q1.
3. Kalnaitytė-Vengelienė, A., Montvydienė, D., Januškaitė, E., Jurgelėnė, Ž., Kazlauskas, M., Kazlauskienė, N., & Bagdonas, S. (2024). The effects of CdSe/ZnS quantum dots on autofluorescence properties and growth of algae *Desmodesmus communis*: dependence on cultivation medium. *Environmental science: Nano*, *11*(4), 1701-1712. doi:10.1039/d3en00955f. IF: 5,100, Q1.
4. Skrodenytė Arbačiauskienė, V., Butrimienė, R., Kalnaitytė-Vengelienė, A., Bagdonas, S., Montvydienė, D., Stankevičiūtė, M., Sauliutė, G., Jokšas, K., Kazlauskienė, N., Karitonas, R., Matviienko, N., & Jurgelėnė, Ž. (2024). A multiscale study of the effects of a diet containing CdSe/ZnS-COOH quantum dots on *Salmo trutta fario* L.: Potential feed-related nanotoxicity. *Science of the total environment*, *906*, 1-12. doi:10.1016/j.scitotenv.2023.167696. IF: 8,000, Q1.
5. Kazlauskas M., Jurgelėnė Ž., Šemčuk S., Jokšas K., Kazlauskienė N., Montvydienė D. (2023) Effect of graphene oxide on the uptake, translocation and toxicity of metal mixture to *Lepidium sativum* L. plants: mitigation of metal phytotoxicity due to nanosorption. *Chemosphere* 312, 1.https://doi.org/10.1016/j.chemosphere.2022.137221 , IF: 8,94, Q1.
6. Butrimienė, R., Kalnaitytė, A., Januškaitė, E., Bagdonas, S., Jurgelėnė, Ž., Butkauskas, D., Virbickas, T., Montvydienė, D., Kazlauskienė, N., & Skrodenytė Arbačiauskienė, V. (2022). Interactions of semiconductor Cd-based quantum dots and Cd2+ with gut bacteria isolated from wild *Salmo trutta* fry. *PeerJ*, 10, 1-22. doi:10.7717/peerj.14025/supp-6. IF: 3,061; Q2.
7. Jurgelėnė, Ž., Montvydienė, D., Šemčuk, S., Stankevičiūtė, M., Sauliutė, G., Pažusienė, J., Morkvėnas, A., Butrimienė, R., Jokšas, K., Pakštas, V., Kazlauskienė, N., & Karabanovas, V. (2022). The impact of co-treatment with graphene oxide and metal mixture on *Salmo trutta* at early development stages: The sorption capacity and potential toxicity. *Science of the total environment,* 838(4), 1-18. doi:10.1016/j.scitotenv.2022.156525. IF: 10,753; Q1.
8. Jurgelėnė, Ž., Montvydienė, D., Stakėnas, S., Poviliūnas, J., Račkauskas, S., Taraškevičius, R., Skrodenytė Arbačiauskienė, V., & Kazlauskienė, N. (2022). Impact evaluation of marking *Salmo trutt*a with alizarin red S produced by different manufacturers. *Aquatic toxicology*, 242, 1-12. doi:10.1016/j.aquatox.2021.106051. IF: 5,202; Q1.
9. Montvydienė, D., Jagminas, A., Jurgelėnė, Ž., Kazlauskas, M., Butrimienė, R., Žukauskaitė, Z., & Kazlauskienė, N. (2021). Toxicological effects of different-sized Co–Fe (CoFe2O4) nanoparticles on *Lepidium sativum* L.: towards better understanding of nanophytotoxicity. *Ecotoxicology*, 30(2), 277-291. doi:10.1007/s10646-020-02340-y. IF: 2,935; Q3.
10. Montvydienė, D., Šulčius, S., Jurgelėnė, Ž., Makaras, T., Kalcienė, V., Taraškevičius, R., Kazlauskas, M., & Kazlauskienė, N. (2020). Contrasting ecotoxic effects of landfill leachate and cyanobacterial biomass on aquatic organisms. *Water, air, and soil pollution*, 231(7), 1-14. doi:10.1007/s11270-020-04684-x. IF: 4,223; Q2.
11. Makaras, T., Montvydienė, D., Kazlauskienė, N., Stankevičiūtė, M., & Raudonytė-Svirbutavičienė, E. (2020). Juvenile fish responses to sublethal leachate concentrations: comparison of sensitivity of different behavioral endpoints. *Environmental science and pollution research*, 27(5), 4876-4890. doi:10.1007/s11356-019-07211-6. IF: 4,223; Q2.
12. Makaras, T., Montvydienė, D., Kazlauskienė, N., & Stankevičiūtė, M. (2019). Rapidness- and sensitivity-based comparison of behavioral and respiratory responses of European perch and Rainbow trout to metal mixture exposure. *Bulletin of environmental contamination and toxicology*, 103(3), 391-399. doi:10.1007/s00128-019-02682-2 IF: 1,657; Q3.
13. Rotomskis, R., Jurgelėnė, Ž., Stankevičius, M., Stankevičiūtė, M., Kazlauskienė, N., Jokšas, K., Montvydienė, D., Kulvietis, V., & Karabanovas, V. (2018). Interaction of carboxylated CdSe/ZnS

quantum dots with fish embryos: Towards understanding of nanoparticles toxicity. *Science of the total environment*, 635, 1280-1291. doi:10.1016/j.scitotenv.2018.04.206. IF: 5,589; Q1.

14. Jurgelėnė, Ž., Kazlauskienė, N., Montvydienė, D., Kulvietis, V., Rotomskis, R., & Jokšas, K. (2018). Embryotoxicity of quantum dots in rainbow trout *Oncorhynchus mykiss* during the hatching period. *Bulletin of environmental contamination and toxicology*, 101(2), 191-196. doi:10.1007/s00128-018-2367-IF: 1,650; Q3.
15. Makaras, T., Svecevičius, G., Kazlauskienė, N., & Montvydienė, D. (2018). Rapid detection of sublethal toxicity using locomotor activity of Rainbow trout juveniles. *Bulletin of environmental contamination and txicology*, 100(2), 221-227. doi:10.1007/s00128-017-2244-x. IF: 1,650; Q3.
16. Šulčius, S., Montvydienė, D., Mazur-Marzec, H., Kasperovičienė, J., Rulevičius, R., & Cibulskaitė, Ž. (2017). The profound effect of harmful cyanobacterial blooms: From food-web and management perspectives. *Science of the total environment*, 609, 1443-1450. doi:10.1016/j.scitotenv.2017.07.253. IF: 4,610; Q1.
17. Marčiulionienė, E. D., Lukšienė, B., Montvydienė, D., Jefanova, O., Mažeika, J., Taraškevičius, R., Stakėnienė, R., Petrošius, R., Maceika, E., Tarasiuk, N., Žukauskaitė, Z., Kazakevičiūtė, L., & Volkova, M. (2017). 137Cs and plutonium isotopes accumulation/retention in bottom sediments and soil in Lithuania: A case study of the activity concentration of anthropogenic radionuclides and their provenance before the start of operation of the Belarusian Nuclear Power Plant (NPP). *Journal of environmental radioactivity*, 178-179, 253-264. doi:10.1016/j.jenvrad.2017.07.024. IF: 2,263; Q2.
18. Marčiulionienė, E. D., Montvydienė, D., Svecevičius, G., Taraškevičius, R., Kazlauskienė, N., & Jefanova, O. (2015). Heavy metal metal migration from closed landfill in the water, bottom sediments and macrophytes of neighboring aquatic ecosystem. *Fresenius environmental bulletin*, 24(10), 3371-3380. IF: 0,372; Q4.
19. Marčiulionienė, E. D., Montvydienė, D., Kazlauskienė, N., & Kesminas, V. (2011). Changes in macrophytes and fish communities in the cooler of Ignalina nuclear power plant (1988-2008). *Journal of environmental engineering and landscape management*, 19(1), 21-33. doi:10.3846/16486897.2011 IF: 1,958; Q2.
20. Montvydienė, D., & Marčiulionienė, E. D. (2007). Assessment of toxic interaction of metals in binary mixtures using *Lepidium sativum* and *Spirodela polyrrhiza*. *Polish journal of environmental studies*, *16*(5), 777-783. IF: 0,627; Q4.
21. Marčiulionienė, E. D., Lukšienė, B., Kiponas, D., Montvydienė, D., Maksimov, G., Darginavičienė, J., & Gavelienė, V. (2006). Influence of Cs-137 and Sr-90 on vegetative and generative organs of *Lepidium sativum L*. and *Tradescantia* clone 02. *Nukleonika*, *51*(4), 193-201. IF: 0,207; Q4.
22. Montvydienė, D., & Marčiulionienė, E. D. (2004). Assessment of toxic interactions of heavy metals in a multicomponent mixture using *Lepidium sativum* and *Spirodela polyrrhiza*. *Environmental toxicology*, 19(4), 351-358. doi:10.1002/tox.20041. IF: 1,373; Q1.
23. Kazlauskienė, N., Svecevičius, G., Vosylienė, M. Z., Marčiulionienė, E. D., & Montvydienė, D. (2004). Comparative study on sensitivity of higher plants and fish to heavy fuel oil. *Environmental toxicology*, 19(4), 449-451. doi.org/10.1002/tox. IF: 1,373; Q1.
24. Marčiulionienė, E. D., Montvydienė, D., Kiponas, D., Lukšienė, B., & Butkus, D. (2004). Toxicity to *Tradescantia* of technogenic radionuclides and their mixture with heavy metals. *Environmental toxicology*, 19(4), 346-350. doi.org/10.1002/tox.20040. IF: 1,373; Q1.

Articles in journals indexed in the Web of Science database without an impact factor

1. Jurgelėnė, Ž., Jagminas, A., Montvydienė, D., Stankevičiūtė, M., Sauliutė, G., Pažusienė, J., Butrimienė, R., Sukovienė, A., Jokšas, K., Kazlauskienė, N., & Karabanovas, V. (2024). Toxicity of different-sized cobalt ferrite (CoFe2O4) nanoparticles to *Oncorhynchus mykiss* at early development stages. *Environmental science and pollution research*, *31*(27), 39735-39747. doi:10.1007/s11356-024-33841-6. (Scopus, Q1).

Articles in journals indexed in the Scopus database

1. Matviienko, N., Montvydienė, D., Kazlauskienė, N., Jurgelėnė, Ž., Didenko, A., & Koziy, M. (2025). Changes in *Acipenser ruthenus* liver structure during domestication: Preliminary data. *Aquaculture and fisheries*, *10*(6), 1009-1020. doi:10.1016/j.aaf.2025.03.002. Q1.

2. Marčiulionienė, E. D., Kiponas, D., Lukšienė, B., & Montvydienė, D. (2006). Evaluation of toxic and genotoxic effects of low-level 137Cs ionising radiation on plants. *Arhiv za higijenu rada i toksikologiju*, *57*(1), 3-7.

Articles in journals indexed in the Clarivate Analytics Web of Science database with an impact factor

1. Marčiulionienė, E. D., Montvydienė, D., & Paškauskas, R. (2011). The Impact of Ignalina Nuclear Power Plant wastewater of Lake Drūkšiai before the decommissioning of the plant (2007-2009). In *Advanced water supply and wastewater treatment: a road to safer society and environment* (pp. 277-286). Dordrecht: Springer. doi:10.1007/978-94-007-0280-6
2. Marčiulionienė, E. D., & Montvydienė, D. (2011). The coolong pond of Ignalina NPP as a model system evaluating effect of radioactive, chemical and thermal pollution to aquatic plants. In *Environmental engineering: the 8th international conference: selected papers: May 19-20, 2011, Vilnius, Lithuania. Vol. 1* (pp. 216-220). Vilnius: Technika.
3. Montvydienė, D., Marčiulionienė, E. D., Kazlauskienė, N., Ratkelytė, E., Lukšienė, B., Tautkus, S., & Padarauskas, A. (2008). Toxic impact of different salts of metals on organisms. In *Environmental engineering: the 7th international conference: selected papers: May 22-23, 2008, Vilnius, Lithuania. Vol. 1* (pp. 231-238). Vilnius: Technika.
4. Lakačauskienė, R., Montvydienė, D., & Marčiulionienė, E. D. (1999). Assesment of the effect of heavy metals on the test organism *Spirodela polyrrhiza*. In *Heavy metals in the environment: an integrated approach* (pp. 186-191). Vilnius, Lithuania.

Articles in journals indexed in other databases

1. Montvydienė, D., Marčiulionienė, E. D., Volkova Rogačiova, M., Paškauskas, R., Mažeika, J. ir Jefanova, O. (2016). 137Cs ir 40K akumuliacija ir pernaša sistemoje Nemuno upė–užliejamosios pievos–Kuršių marios. *Visuomenės sveikata*, priedas1, 25-28 [Index Copernicus]
2. Marčiulionienė, E. D., Montvydienė, D., Kazlauskienė, N., Lukšienė, B., Jasinevičienė, D., & Tautkus, S. (2014). Response of test-organisms to different Na and Cu salts. *Botanica Lithuanica*, *20*(2), 131-141. doi:10.2478/botlit-2014-0020 [VINITI; Biological Abstracts; TOC Premier]
3. Montvydienė, D. (2009). Drūkšių ežero ekotoksikologinės būklės įvertinimas naudojant augalus - testuojamuosius organizmus. *Visuomenės sveikata*, *1*(priedas), 53-58 [Index Copernicus]
4. Marčiulionienė, E. D., Montvydienė, D., Kiponas, D., Dušauskienė Duž, R., & Lukšienė, B. (2003). Genotoxic impact of ionizing radiation at low exposure doses of technogenic radionuclide accumulated in plants. *Environmental and chemical physics*, *25*(4), 218-227. [Compendex]
5. Kazlauskienė, N., Marčiulionienė, E. D., Montvydienė, D., Svecevičius, G., & Vosylienė, M. Z. (2003). Comparative studies of the toxic effects of heavy metal model mixture on organisms of different phylogenetic levels and ontogenesis. *Environmental and chemical physics*, *25*(3), 116-122. [Compendex]
6. Marčiulionienė, E. D., Montvydienė, D., Kazlauskienė, N., & Svecevičius, G. (2002). Comparative analysis of the sensitivity of test-organisms of different phylogenetic levels and life stages to heavy metals. *Environmental and chemical physics*, *24*(2), 73-78. [Compendex]

Articles in other peer-reviewed scientific publications (journals, serial publications, books, or edited volumes of articles)

1. Marčiulionienė, E. D. ir Montvydienė, D. (2002). Augalų testorganizmų panaudojimas ekotoksikologiniams tyrimams. *Botanica Lithuanica*, *suppl.4*, 75-90.

ARTICLES IN SCIENTIFIC CONFERENCE PROCEEDINGS

Articles in conference proceedings indexed in the Web of Science database

1. Marčiulionienė, E. D., Montvydienė, D., & Paškauskas, R. (2011). The Impact of Ignalina Nuclear Power Plant wastewater of Lake Drūkšiai before the decommissioning of the plant (2007-2009). In

Advanced water supply and wastewater treatment: a road to safer society and environment (pp. 277-286). Dordrecht: Springer. doi:10.1007/978-94-007-0280-6

2. Marčiulionienė, E. D., & Montvydienė, D. (2011). The cooling pond of Ignalina NPP as a model system evaluating effect of radioactive, chemical and thermal pollution to aquatic plants. In *Environmental engineering: the 8th international conference: selected papers: May 19-20, 2011, Vilnius, Lithuania. Vol. 1* (pp. 216-220). Vilnius: Technika.
3. Montvydienė, D., Marčiulionienė, E. D., Kazlauskienė, N., Ratkelytė, E., Lukšienė, B., Tautkus, S., & Padarauskas, A. (2008). Toxic impact of different salts of metals on organisms. In *Environmental engineering: the 7th international conference: selected papers: May 22-23, 2008, Vilnius, Lithuania. Vol. 1* (pp. 231-238). Vilnius: Technika.
4. Lakačauskienė, R., Montvydienė, D., & Marčiulionienė, E. D. (1999). Assesment of the effect of heavy metals on the test organism *Spirodela polyrrhiza*. In Heavy metals in the environment: an integrated approach (pp. 186-191). Vilnius.

Articles in other peer-reviewed conference proceedings

1. Šemčuk, S., Montvydienė, D., Jokšas, K., Lujanienė, G., Pakštas, V., Selskis, A., Mažeika, K., Talaikis, M., Kazlauskienė, N., Butrimienė, R., & Jurgelėnė, Ž. (2025). Application of nano-magnetite-chitosan adsorbent for removal of emerging contaminants in different environmental media. In *Proceedings of the twelfth international conference on environmental management, engineering, planning and economics (CEMEPE 2025) and SECOTOX conference, May 25-29, 2025, Mykonos Island, Greece* (pp. 186-187). Grafima Publ.
2. Šemčuk, S., Montvydienė, D., Kazlauskienė, N., Pakštas, V., Bukauskas, V., Javed, M., Lujanienė, G., Jokšas, K., & Jurgelėnė, Ž. (2024). Eco-friendly nano-adsorbents for removal of emerging contaminants in aquatic ecosystems. In *Eleventh international conference on environmental management, engineering, planning and economics (CEMEPE 2024) and SECOTOX conference; June 16-20, 2024, Lefkada island, Greece* (pp. 380-380). Lefkada island.
3. Šemčuk, S., Montvydienė, D., Kazlauskienė, N., Pakštas, V., Bukauskas, V., Javed, M., Lujanienė, G., Jokšas, K., & Jurgelėnė, Ž. (2024). Graphene oxide nanoparticles for water purification in the post-war period: removal of heavy metals from water bodies. In *Eleventh international conference on environmental management, engineering, planning and economics (CEMEPE 2024) and SECOTOX conference; June 16-20, 2024, Lefkada island, Greece* (pp. 373-379). Lefkada island.
4. Butrimienė, R., Kalnaitytė, A., Januškaitė, E., Bagdonas, S., Jurgelėnė, Ž., Butkauskas, D., Virbickas, T., Montvydienė, D., Kazlauskienė, N., & Skrodenytė Arbačiauskienė, V. (2022). An in vitro assay to assess the antibacterial efficacy of Cd-based, Cd-free quantum dots and Cd2+ on gut bacteria from wild *Salmo trutta* fry. In *Proceedings of the ninth international conference on environmental management, engineering, planning & economics (CEMEPE 2022) and SEXOTOX conference, June 5-9, 2022, Mykonos, Greece* (pp. 258-267). Thessaloniki: Grafima publications.
5. Jurgelėnė, Ž., Stankevičiūtė, M., Kazlauskienė, N., Montvydienė, D., Baršienė, J., Jokšas, K., & Markuckas, A. (2018). Investigation of quantum dots toxicity, genotoxicity, cytotoxicity, and uptake in rainbow trout *Oncorhynchus mykiss* larvae. In *Protection and restoration of the environment XIV: international conference, Thessaloniki, July 2018: book of proceedings* (pp. 775-784). Thessaloniki: Aristotle University of Thessaloniki.
6. Taraškevičius, R., Čičiurkaitė, I., Garnaga-Budrė, G., Jasiulionis, M., Lesutienė, J., Montvydienė, D., Suzdalev, S. ir Vaitkevičienė, V. (2018). Spektrometro Spectro Xepos HE galimybės aplinkos mėginių cheminės sudėties tyrimuose. Iš *Jūros ir krantų tyrimai 2018: 11-oji nacionalinė jūros mokslų ir technologijų konferencija: konferencijos medžiaga: 2018 gegužės 24-25 d* (pp. 132-134). Klaipėda: [Klaipėdos universiteto leidykla].

7. Jefanova, O., Marčiulionienė, E. D., Montvydienė, D., Žukauskaitė, Z., Lukšienė, B., & Mažeika, J. (2017). The ecotoxicological impact of the nuclear facilities' effluent and CS-137 on the test organism *Lepidium Sativum*. In *RAD conference proceedings* (Vol. 2, pp. 115-120). Niš: RAD Association.
8. Montvydienė, D., Kasperovičienė, J., Šulčius, S., Makaras, T., Rulevičius, R. ir Paškauskas, R. (2016). Kuršių marių fitoplanktono biomasės ekotoksikologinis įvertinimas. Iš *Jūros ir krantų tyrimai 2016: 9-oji nacionalinė jūros mokslų ir technologijų konferencija: konferencijos medžiaga: 2016 balandžio 27-29 d* (pp. 101-105). Klaipėda: [Klaipėdos universiteto leidykla].
9. Jefanova, O., Marčiulionienė, E. D., Mažeika, J., Paškauskas, R., Montvydienė, D., Volkova Rogačiova, M., Stakėnienė, R., Kazbaris, M., Vybernaitė-Lubienė, I., Minevičiūtė, I. ir Mockutė, A. (2014). 137Cs ir 40K akumuliacija ir sklaida Nemuno ir Kuršių marių grunte bei makrofituose. Iš *Technologijos mokslo darbai Vakarų Lietuvoje: [konferencijos medžiaga]* ([t.] 9, pp. 91-94). Klaipėda: Klaipėdos universiteto leidykla.
10. Marčiulionienė, E. D., Montvydienė, D., & Lukšienė, B. (2012). Toxic effect of radionuclides and heavy metals accumulated in plants - testorganisms. In *International conference on environmental pollution and public health (EPPH2012): [proceedings]: Shanghai, China, May 17- 20, 2012* (pp. 763-766). Shanghai: SciRes.
11. Kazlauskienė, N., Svecevičius, G., Marčiulionienė, E. D., Montvydienė, D., Kesminas, V., Staponkus, R., Taujanskis, E., & Slučkaitė, A. (2012). The effect of persistent pollutants on aquatic ecosystem: a complex study. In *Ocean: past, present and future: IEEE* (pp. 1-6). Klaipėda. doi:10.1109/BALTIC.2012.6249198.
12. Kazlauskienė, N., Vosylienė, M. Z., Svecevičius, G., Burba, A., Marčiulionienė, E. D., Montvydienė, D., Taujanskis, E. ir Slučkaitė, A. (2011). Biologinių testų komplekso taikymas vertinant vandens aplinkos toksiškumą. Iš *Jūros ir krantų tyrimai - 2011: 5-oji mokslinė-praktinė konferencija: konferencijos medžiaga: 2011 balandžio 13-15, Palanga* (pp. 122-131). Klaipėda.
13. Lukšienė, B., Marčiulionienė, E. D., Montvydienė, D., & Gudelienė, I. (2009). Transfer of 137Cs and 90Sr to plants from contaminated medium. In Радиоактивность и радиоактивные элементы в среде обитания человека: материалы III международной конференции: г. Томск, 23-27 июня 2009 г (pp. 717-720). Томск.
14. Lukšienė, B., Marčiulionienė, E. D., & Montvydienė, D. (2009). Assessment of accumulation and toxicity of Na and Cu salts to plants. In *International conference on xenobiotics in the urban water cycle: XENOWAC 2009: 11th-13th March 2009, Cyprus: proceedings* (Nicosia, pp. 1-6).
15. Marčiulionienė, E. D., Lukšienė, B., Montvydienė, D., & Kiponas, D. (2008). Estimation of 137Cs and 90Sr ionizing radiation impact on the plant vegetative and generative organs. In *International conference on radioecology and environmental radioactivity: posters proceedings: 15-20 June 2008, Bergen, Norway.*

TEXTBOOKS AND TEACHING MATERIALS

1. Vosylienė, M. Z. (Ed.), Marčiulionienė, E. D. (Ed.), Kazlauskienė, N. (Ed.), Montvydienė, D. (Ed.), & Svecevičius, G. (Ed.). (2003). The Use of Biological Test Complex for the Assessment of Water Toxicity. Vilnius: Lithuanian Society of Hydrobiologists.

SCIENCE COMMUNICATION PUBLICATIONS

1. Marčiulionienė, E. D., Lukšienė, B., Montvydienė, D., Sakalauskas, V., Sevriukova, O., Druteikienė, R., Jefanova, O., & Žukauskaitė, Z. (2017). Radiocesium phytotoxicity to single cells and higher plants. In *Impact of cesium on plants and the environment* (p. 209-230). Switzerland: Springer. doi:10.1007/978-3-319-41525-3_12
2. Kazlauskienė, N., Vosylienė, M. Z., Marčiulionienė, E. D., Montvydienė, D. ir Beržinskienė, J. (2004). Kairių sąvartyno filtrato ir melioracijos griovių vandens (po avarijos) toksiškumo įvertinimas

biologiniais metodais. Iš *Vandens telkinių apsauga ir valdymas: straipsnių rinkinys: tarptautinė mokslinė konferencija, Kaunas, 2004 m. spalio 29 d* (pp. 100-104). Kaunas.

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

International research projects (Leadership and Participation):

2023-2025: "Creating a Strategy for Assessing and Restoring War-affected Aquatic Ecosystem"(SPS MYP NATO, G6085). *Principal Investigator.*
2021-2023: "Development of functional fish feed additives from natural algal biomass" (funded by Agency of Science, Innovation and Technology of Lithuania (MITA)). *Co-Investigator.*
2020-2024: Framework for Organizational Decision-Making Process in Water Reuse for Smart Cities (SMART-WaterDomain). *Co-Investigator*.
2017-2020: Cyanobacteria, Viruses, protozoan and Metazoan – Understanding ecological interaction of ecosystems. International collabotation between Lithuanian and Poland Academies of Sciences. *Researcher.*
2014-2018: European network for algal-bioproducts (EUALGAE). ESSEM COST Action. *Researcher.*
2013-2014: „Complex invetigations of the Tytuvėnai lakes" (part of project „Cross Border Cooperation for Sustainable Management of Lake Areas in Kurzeme and Lithuania "). ES1408 International program. *Principal Investigator.*

National research projects (Leadership and Participation):

2025-2028: "Nanoparticles: bioactivities, intergenerational transfer, mechanisms and protection future generations" (funded by Research Council of Lithuania). *Principal Investigator.*
2025-2028: "The role of probiotics in mitigating the impact of herbicides on winter wheat under climate change conditions: physiological, pathological, and ecotoxicological aspects" (funded by Research Council of Lithuania). *Researcher.*
2020-2022: "Fish as a model of trophic ontogenesis in the study of nanoparticles transport through aquatic food chain in the context of climate change" (funded by Research Council of Lithuania). *Co-Investigator.*
2015-2018: "Nanoparticle and heavy metal toxicity mechanisms in fish during ontogenesis" (funded by Research Council of Lithuania). *Co-Investigator.*
2012–2014: "Persistent pollutants in aquatic ecosystem: complex studies and modeling" (funded by Research Council of Lithuania). *Co-Investigator*.
2008-2009: "To carry out comprehensive research in order to assess and predict the impact of nuclear power plant decommissioning on people in the nuclear power plant region" (Institutes of Botany, Physics, Geology and Geography) with the Center for Radiation Protection. *Co-Investigator.*
2008-2009: "Assistance in the preparation of the environmental impact assessment report of a new nuclear power plant" sections: Soil and subsoil. Water and underground water. Radioecological status of the flora and fauna of Lake Drūkšiai. Monitoring. Socio-Economic Environment (Institutes of Botany, Geology and Geography, and Physics) with LEI. 2007: "Assessment of Organism Interactions with Different Metal Salts'. Lithuanian State Science and Studies Foundation. *Co-Investigator.*
2007: "To assess the radioecological and ecotoxicological condition of the cooling basin of the state company Ignalina nuclear power plant, i.e. Lake Drūkšiai, to predict the impact of radionuclide ionizing radiation on flora and fauna during the operation of the power plant and after its operation, and to carry out surveys of the power plant environment (terrestrial flora, fauna, soil, groundwater, drinking water , food, air, external radiation dose complex radiological studies in order to determine the effects of radiation on people and the environment in the region of the Ignalina nuclear power plant" (Botany, Physics, Geology and Geography) with the Radiation Protection Center. *Co-Investigator.*
2006: "Catalyst Waste Toxicity Study" (2006). *Co-Investigator.*
2003-2006: "Research and applications of radioactive waste generation, its dispersion, environmental and human". *Co-Investigator.*

2002: "Assessment of the environmental impact of an emergency spill of leachate from the Kariai landfill using biological methods and prediction of ecological consequences". *Co-Investigator*.
2002: "Comprehensive assessment of the toxic and genotoxic effects of heavy metals and radionuclides on plants (at the plant, cellular and subcellular levels". (funded by Lithuanian State Science and Studies Foundation). *Co-Investigator.*
2002: "Assessment of the environmental impact of the emergency spillage of left landfill leachate using biological methods and prediction of ecological consequences". *Co-Investigator*.
2001: "To investigate the accumulation of radionuclides in plants under the influence of various chemical substances and to evaluate the genotoxic effects on plants caused by the determined exposure of these toxicants". (funded by Lithuanian State Science and Studies Foundation). *Co-Investigator.*
2000-2001: "Effect of liquid fuels and sorbents used in Lithuanian energy industry on aquatic organisms and assessment of its ecotoxicological consequences". 1998–1999: "Complex studies of the effects of pollutants prevalent in Lithuanian waters". (funded by Lithuanian State Science and Studies Foundation). *Co-Investigator.*
1993-1997: "Application of biotests in the evaluation of the ecotoxicological condition of Drūkšiai Lake". (funded by Lithuanian State Science and Studies Foundation). *Co-Investigator.*
1993–1997: Lithuanian State Science Program: "Atomic energy and environment". *Co-Investigator.*

PATENTS

European patent **EP4566457A1**. IMPROVEMENT OF NUTRITIONAL VALUE OF FISH FEED. This invention is related to the field of aquaculture, particularly with increasing efficiency of standard fish feed, especially to improving the physiological parameters, growth intensity and physico-chemical meat properties of rainbow trout (*Oncorhynchus mykiss*) and African catfish (*Clarias gariepinus*). Inventors: SAVICKIENE NIJOLE; KAROSIENE JURATE; BALCIUNAITE - MURZIENE GABRIELE; KUDLINSKIENE IEVA; BERNATONIENE JURGA; **MONTVYDIENE DANGUOLE**; PALECKAITIS MINDAUGAS; KASPEROVICIENE JURATE; MIKNIENE ZOJA; MORUDOV DMITRIJ; JURGELENE ZIVILE; MATULYTE INGA; SKRODENYTE-ARBACIAUSKIENE VESTA; DAINYS JUSTAS; SAVICKAS ARUNAS; JEKABSONE AISTE.
https://worldwide.espacenet.com/patent/search/family/089771849/publication/EP4566457A1?q=pn%3DEP4566457

INTERNSHIP AND TRAINING

2007 NATO Advanced Research Workshop „Dangerous Pollutants (Xenobiotics) in Urban Water Cycle“Lednice, Czech Republic.
2015 Internship at the Institute of Oceanography, Faculty of Oceanography and Geography, University of Gdańsk (Poland), focusing on liquid chromatography and mass spectrometry methods for the analysis of cyanotoxins in water and sediment samples.

PARTICIPATION IN SCIENTIFIC CONFERENCES (2025)

1. Montvydienė D., Karosienė J., Stankevičiūtė M., Butrimienė R., Mažeika J., Gylytė B., Matviienko N., Skrotskyi S., Jurgelėnė Ž. integrated chemical and ecotoxicological assessment of the impact of military activities on aquatic ecosystems in Ukraine. Aquaculture Europe 2025, 22-25 September, Valencia, Spain. https://aquaeas.org/_pdf/Posters/AE2025_0732.pdf
2. Gylytė B., Karitonas R., Manusadžianas L., Matviienko N., Montvydienė D. Multigenerational toxicity of ciprofloxacin, sulfamethoxazole and tetracycline in Ceriodaphnia dubia. Aquaculture Europe 2025, 22-25 September, Valencia, Spain. https://aquaeas.org/_pdf/AE2025_PinkPages.pdf
3. Jurgelėnė Ž., Matviienko N., Sangiacomo C., Licitra R., Fronte B., Montvydienė D. Embryotoxic effects of contaminated waters from war zones on Danio rerio in early development. Aquaculture Europe 2025, 22-25 September, Valencia, Spain. https://aquaeas.org/_pdf/Posters/AE2025_0076.pdf

4. Karosiene J., Petrenas G., Jurgelene Z., Šemcuk S., Montvydiene D. A diatom-based bioassay for environmental contaminants: implications for aquatic ecosystems and aquaculture water quality. Aquaculture Europe 2025, 22-25 September, Valencia, Spain. https://aquaeas.org/_pdf/Posters/AE2025_0826.pdf
5. Matviienko N., Montvydiene D., Kucheruk A., Savenko N., Oliinyk O., Skrotskyi S. Degradation of aquatic ecosystems in Ukraine: wartime challenges. Aquaculture Europe 2025. September 22-25, Valencia, Spain. https://aquaeas.org/_pdf/Posters/AE2025_0185.pdf
6. Montvydienė D., Karosienė J., Butrimienė R., Kazlauskienė N., Matviienko N., Skrotskyi S., Jurgelėnė Ž. Evaluation of the effects of water from war-impacted regions of Ukraine on autotrophic test organisms. 19th International Conference on Environmental Science and Technology (CEST), September 3-6, Kos, Greece.
7. Montvydienė D., Karosienė J., Butrimienė R., Kazlauskienė N., Matviienko N., Skrotskyi S., Jurgelėnė Ž. Assessing the impact of water from war-affected areas of Ukraine on test-organisms. Twelfth international conference on environmental management, engineering, planning and economics (CEMEPE 2025) and SECOTOX conference; May 25-29, 2025, Myconos, Greece.
8. Gylytė B., D. Montvydienė, Ž. Jurgelėnė, N. Matviienko, S. Skrotskyi. Acute toxicity in war-affected waters: evaluating risk to aquatic crustaceans. „12th International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2025) &SECOTOX Conference ". 25-29 May, Mykonos Island, Greece.
9. Montvydienė D., Karosienė J., Butrimienė R., Kazlauskienė N., Matviienko N., Skrotskyi S., Jurgelėnė Z. 2025. Evaluation of the effects of water from war-impacted regions of Ukraine on autototrophic test organisms. 19th International Conference on Environmental Science and Technology Kos (CEST2025), Greece, 3 to 6 September 2025. Abstract book: 362. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cest.gnest.org/sites/default/files/2025-10/BOOK_ABSTRACTS_WEBSITE_1.pdf
10. Jurgelėnė Ž., Kazlauskienė N., Matviienko N., Skrotskyi S., Montvydienė D. 2025. Assessing the impact of war-affected water samples on early developmental stages of Danio rerio. 19th International Conference on Environmental Science and Technology Kos (CEST2025), Greece, 3 to 6 September 2025. Abstract book: 364. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cest.gnest.org/sites/default/files/2025-10/BOOK_ABSTRACTS_WEBSITE_1.pdf
11. Karosienė J., Petrėnas G., Jurgelėnė Ž., Šemčuk S., Montvydienė D. 2025. Vulnerability of the pollution-tolerant diatom Nitzschia palea to metal pollution. 19th International Conference on Environmental Science and Technology Kos (CEST2025), Greece, 3 to 6 September 2025. Abstract book: 363. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cest.gnest.org/sites/default/files/2025-10/BOOK_ABSTRACTS_WEBSITE_1.pdf
12. Petrėnas G., Montvydienė D., Jurgelėnė Ž., Šemčuk S., Karosienė J., 2025. Effect of graphene oxide (GO) on diatom Nitzschia palea. 42nd International Conference of the Polish Phycological Society. 27-30 May 2025. Bialystok-Tykocin, Poland. Abstract book: 69
13. Vasyliuk O.M., Khomenko L.A., Skrotskyi S.O., Artiukh L., Matviienko N., Montvydiene D. Microbiological assessment of war-affected water bodies in Kyiv region.Тези XVI з'їзд Товариства мікробіологів України ім. С.М. Виноградського, 02-06 червня, Тернопіль, 2025. – С. 87.

PARTICIPATION IN THE STUDY PROCESS

Supervision of PhD students:

Research area: *Natural sciences* (N000). Research field: Ecology and Environmental sciences (N012)

Greta Šaltytė	„Herbicide effectiveness under climate change conditions: impacts on terrestrial plants and aquatic organisms". (2025–). Supervisor: dr. J. Jankauskienė, **consultant: dr. D. Montvydienė**.

Gediminas Petrėnas	„Response of benthic diatoms to contamination by heavy metals and nanoparticles and the application of indicator models to assess pollution in freshwater ecosystems". (2023-). Supervisor dr. J. Karosienė, **consultant: dr. D. Montvydienė**.
Mindaugas Kazlauskas	„Interactions of newly engineered and natural nano- and micro-scale materials with model organisms: effects, mechanisms and environmental consequences ". (2019-2023). The doctoral dissertation has been successfully defended. **Supervisor: dr. D. Montvydienė.**
Reza Pashaei	"Distribution, bioaccumulation, and ecotoxicological effects of emerging pollutants in aquatic ecosystem". (2019-2023). Klaipėda University. The doctoral dissertation has been successfully defended. **Member of Defense Council: Dr. D. Montvydienė.**

Research area: *Natural sciences* (N000). *Research field*: Physics (N002)

Vitaliy Romanenko	"The study of anthropogenic radionuclide transport with suspended matter in the system Neman River – Baltic Sea". (2019-2023). Vilniaus University, Center for Physical Sciences and Technology. The doctoral dissertation has been successfully defended. **Member of Defense Council: Dr. D. Montvydienė.**

Research area: *Natural sciences* (N000). *Research field*: Chemistry (N003)

Joel Edith Flora	"Investigation of chitosan-graphene oxide nanocomposites and their application in environmental protection" ((2019-2023). Vilniaus University, Center for Physical Sciences and Technology. The doctoral dissertation has been successfully defended. **Member of Defense Council: Dr. D. Montvydienė.**

Supervision of Bachelor's and Master's students:

2002-2026: Participation in the supervision of Bachelor's and Master's theses of students at Vilnius University and Vytautas Magnus University.

AWARDS

2007 – Awarded the Lithuanian National Science Prize (with co-authors D. Marčiulionienė, N. Kazlauskienė, M.-Z. Vosylienė, and G. Svecevičius) for the series of works "Application of biological tests for the assessment of water toxicity (1986–2006)".