Vesta Skrodenytė-Arbačiauskienė

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

1997	Ph.D., Natural Sciences, Biology, Ecology 2B (Institute of Ecology, Vilnius University). Doctoral dissertation: "*Dependence on environmental pollution of bacterioflora found in water and fish digestive tract, and their enzymatic activity*", scientific supervisor – dr. V. Grybauskienė. Field of research: Ecology and Environmental Science.
1985 – 1990	M.Sc., honors diploma of biologist, lecturer of biology and chemistry, Vilnius University, Lithuania.

PROFESSIONAL EXPERIENCE

2025 02 03 – unitl now	**Senior researcher** Laboratory of Fish Ecology, State Scientific Research Institute Nature Research Centre
2019 – 2025	**Senior researcher** Laboratory of Fish Ecology, Institute of Ecology, Nature Research Centre
2002 – 2018	**Senior researcher** Laboratory of Ecology and Physiology of Hydrobionts, Institute of Ecology, from 2010 01 01 – Institute of Ecology, Nature Research Centre
1999 – 2002	**Senior researcher** Laboratory of Immunology and Genetics, Institute of Ecology
1997 – 1998	**Researcher** Laboratory of Immunology and Genetics, Institute of Ecology
1995 – 1997	**Assistant** Laboratory of Immunology and Genetics, Institute of Ecology
1992 – 1995	**Ph.D student** Laboratory of Immunology and Genetics, Institute of Ecology
1990 – 1991	**Technical assistant** Laboratory of Ecology and Physiology of Hydrobionts, Institute of Ecology

RESEARCH INTERESTS

Studies of symbiotic and parasitic microorganisms of fish and insects, with a focus on their molecular systematics, ecology and toxicology. Genetic studies of Hymenoptera insects. Molecular techniques: DNA extraction, amplification by PCR, cloning, sequencing and sequence analysis, metagenomic analylsis. Toxicological studies of fish gut microbiome: effects of nanoparticles and other chemical compounds on fish gut bacteria *in vitro* and *in vivo*.

PUBLICATIONS

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

1. Orlovskytė, S., Budrys, E., **Skrodenytė-Arbačiauskienė, V**., Blažytė-Čereškienė, L. (2025). The dark European honey bee *Apis mellifera mellifera* in Lithuania: data on mitotype diversity of native bee population. Journal of Apicultural Research, 1–4. https://doi.org/10.1080/00218839.2024.2327125
2. **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(9):167696. https://doi.org/10.1016/j.scitotenv.2023.16769.
3. 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 Cd^{2+} with gut bacteria isolated from wild *Salmo trutta* fry. PeerJ, 10, 1-22. https://doi.org/10.7717/peerj.14025.
4. Jurgelėnė Ž., Montvydienė D., Stakėnas S., Poviliūnas J., Račkauskas S., Taraškevičius **R., Skrodenytė-Arbačiauskienė V.,** Kazlauskienė N. 2022. Impact Evaluation of Marking *Salmo trutta* with Alizarin Red S Produced by Different Manufacturers. Aquatic Toxicology. Vol 242: https://doi.org/10.1016/j.aquatox.2021.106051
5. **Skrodenytė-Arbačiauskienė V,** Virbickas T, Lukša J, Servienė E, Blažytė-Čereškienė L, Kesminas V. 2022. Gut Microbiome of Wild Baltic Salmon (*Salmo salar* L.) Parr. *Microbial Ecology*, 84, 1294–1298. https://doi.org/10.1007/s00248-021-01910-9
6. **Skrodenytė-Arbačiauskienė V.**, A. Budreinė, L. Blažytė-Čereškienė, E. Budrys. **2019**. Illumina-based 16S metagenomic analysis of the indigenous gut microbiota of cavity-nesting bee *Megachile centuncularis*: a comparison with the cavity-nesting wasp *Ancistrocerus antilope*. *Journal of Apicultural Research*. 58 (4): 587–590. https://doi.org/10.1080/00218839.2019.1614734
7. Blažytė-Čereškienė L., **Skrodenytė-Arbačiauskienė V.,** Radžiūtė S., Čepulytė-Rakauskienė R., Nedveckytė I., Būda V. **2016.** Honey bee infection caused by *Nosema* spp. in Lithuania. *Journal of Apicultural Science.* 60 (2): 77-87. https://doi.org/10.1515/jas-2016-0019
8. Blažytė-Čereškienė L., **Skrodenytė-Arbačiauskienė V.,** Radžiūtė S., Čepulytė-Rakauskienė R., Apšegaitė V., Būda V. **2016.** A three-year survey of honey bee viruses in Lithuania. *Journal of Apicultural Research*. 55 (2): 176-184. https://doi.org/10.1080/00218839.2016.1211389
9. Blažytė-Čereškienė L., **Skrodenytė-Arbačiauskienė V.,** Būda V. 2014. Microsporidian parasites of honey bees *Nosema ceranae* and *N. apis* in Lithuania: supplementary data on occurrence along Europe. *Journal of Apicultural Research*. 53 (3): 374-376. https://doi.10.3896/IBRA.1.53.3.04
10. **Skrodenyte-Arbaciauskiene V.**, Radziute S., Stunzenas V., Buda V. 2012. *Erwinia typographi* sp. nov., isolated from bark beetle (*Ips typographus*) gut. *International Journal of Systematic and Evolutionary Microbiology.* 62: 942-948. https://doi.10.1099/ijs.0.030304-0

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

2020 – 2023 **investigator**: 2021-2023 mm. EUREKA project „Design of functional fish feed additives from wild algal biomass (Eco-Aqua-Recycle)" . The Lithuanian Agency for Science, Innovation and Technology (MITA) agreement No 01.2.2-MITA-K-

702-10-0008, grant number E!13474 ECO-AQUA-RECYCLE.

2020 – 2022 **investigator**: "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 the Research Council of Lithuania).

2022 **investigator**: Applied research program project on beekeeping and bee products: „Study of microsporidian and viral infections in Lithuanian dark bee colonies used for breeding and selection"(Funded by the Ministry of Agriculture of the Republic of Lithuania).

2021 **investigator**: Applied research program project on beekeeping and bee products "Searching for potential sites for the conservation of native Lithuanian bees" (Funded by the Ministry of Agriculture of the Republic of Lithuania).

2020 **investigator**: Applied research program project on beekeeping and bee products "Comparison of virus and microsporidian infections in colonies of native and introduced subspecies" (Funded by the Ministry of Agriculture of the Republic of Lithuania).

2019 **investigator:** Applied research program project on beekeeping and bee products "Possible influence of hygienic behaviour of bees on the prevalence of viruses and microsporidia in honey bee colonies" (Funded by the Ministry of Agriculture of the Republic of Lithuania).

2018 **investigator:** Applied research program project on beekeeping and bee products: „Does hygienic behaviour of bees influence the prevalence of viruses and microsporidia in honey bee colonies?" (Funded by the Ministry of Agriculture of the Republic of Lithuania).

2017 – 2019 **investigator**: "Assessment of the survival likelihood of the local bee *Apis mellifera mellifera* in Lithuania" (Funded by the Ministry of Agriculture of Lithuania).

2014 – 2016 **investigator: "**Trophic networks and ecosystem functions of Hymenoptera in forest and in clearcut areas" (Funded by the Research Council of Lithuania).

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. R. Butrimienė, V. Skrodenytė-Arbačiauskienė, Ž. Jurgelėnė, N. Matviienko, N. Kazlauskienė. Effects of oral exposure of CdSe/ZnS-COOH quantum dots on gut microbiota and bioaccumulation in tissues of *Salmo trutta fario* L. Ninth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2023) and SECOTOX conference. June 05-09, 2023, Skiathos island, Greece. https://cemepe10.civil.auth.gr/

2. R. Butrimienė, A. Kalnaitytė, E. Januškaitė, S. Bagdonas, Ž. Jurgelėnė, D. Butkauskas, T. Virbickas, D. Montvydienė, N. Kazlauskienė and **V. Skrodenytė-Arbačiauskienė**. 2022. An *in vitro* assay to assess the antibacterial efficacy of Cd-based, Cd-free quantum dots and Cd^{2+} on gut bacteria from wild *Salmo trutta* fry. – *Ninth International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2022) and SECOTOX conference.* Mykonos island, Greece June 5-9, 2022, ISBN: 978-618-5494-97-1
3. Jurgelėnė, Ž., Butrimienė, R., Kazlauskienė, N., Montvydienė, D., **Skordenytė-Arbačiauskienė, V.,** Stankevičius, M., Rotomskis, R. 2020. Investigations of QDs impact on fish trophic ontogenesis. *Abstract of Conference Protection and Restoration of the Environment XV* July 7-10, 2020, Kalamata, Greece http://www.preXV.civil.upatras.gr
4. Butrimienė R, **Skrodenytė-Arbačiauskienė V**, Montvydienė D, Jurgelėnė Ž, Butkauskas D, Agnė Kalnaitytė, Bagdonas S, Kazlauskienė N. Effects of Cd based, Cd free quantum dots and Cd^{2+} on isolated gut microbiota of *Salmo trutta* fry. *64th Scientific Conference for Students of Physics and Natural Sciences.* March 16-19,2021 *Vilnius*. OPEN READINGS 2021, Abstract book, 53. https://www.openreadings.eu/wp-content/uploads/2021/03/Abstract_book_2021S.pdf

PARTICIPATION IN THE STUDY PROCESS

The Council Member of the doctoral dissertation:

Field of science: *Natural sciences* (N000), *Biology* (N010)

Tatjana Kirtiklienė	Doctoral dissertation: „Investigation of charakteristics and transmission of the virulent strains of pathogenic microorganisms in the view of molecular epidemiology“.	2022-12-15
Bazilė Ravoitytė	Doctoral dissertation: “Investigation of the functioning of dsRNA viruses in *Saccharomyces* genus yeasts”.	2020-12-18

Field of science: *Natural sciences* (N000), *Ecology and Environmental Science* (N 012)

Ksenija Savadova-Ratkus	Doctoral dissertation: „Bloom-forming cyanobacteria, cyanotoxins and significant factors for their dynamics in freshwaters“.	2019-07-05
Field of science: Eglė Jakubavičiūtė	*Biomedical Sciences, Ecology and Environmental Science* (03B) Doctoral dissertation: „Three-spined stickleback (*Gasterosteus aculeatus* L.) in the baltic sea: feeding ecology and implications for stock identification“.	2018-02-23
Adomas Ragauskas	Doctoral dissertation: „Investigation into population genetic structure of ell *Anguilla anguilla* (L.) and perch *Perca fluviatilis* L. within the context of anthropogenic activity“.	2013-06-20
Mindaugas Raulinaitis	Doctoral dissertation: “Effects of hydromechanical lake remediation on distribution of metals and metalloids in bottom sediments”.	2012-12-14

Supervision of bachelor and master students:

Augustė-Ona Jančauskaitė	Master thesis: "Influence of urban anthropogenic pollution for the structure of water microbiota: metagenome analysis" (VU Life Sciences Center, Microbiology and Biotechnology study program).	2018 – 2019

OTHERS

Identified a novel species:
2012 - *Erwinia typographi* sp. nov. DSM 22678T (=Y1T =LMG 25347T), DSM 24222, DSM 24223.

Awards: 1997 - Ibaraki Kasumigaura Prize (Japan) for oral presentation "Aquatic bacteria and its proteolytic activity in an anthropogenicaly contaminated environment" presented at the 7th International Conference on Lakes Conservation and Management, San Martin de las Andes, Argentina.