

# Vesta Skrodenytė-Arbačiauskienė

## CONTACT INFORMATION

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<https://www.researchgate.net/profile/Vesta-Skrodenyte-Arbaciauskiene/research>

## EDUCATION AND ACADEMIC DEGREE

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- 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: microbiology, ecology.
- 1985 – 1990 M.Sc., honors diploma of biologist, lecturer of biology and chemistry, Vilnius University, Lithuania.

## PROFESSIONAL EXPERIENCE

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- 2019 01 01 – unitl **Senior researcher**  
now 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

Animal and insect gut microbiota research, molecular identification (PCR, cloning), metagenomic analysis. Honey bee microsporidia research, bee genomic research. Toxicological studies of microorganisms: effects of nanoparticles on fish gut bacteria *in vitro* and *in vivo*.

## PUBLICATIONS

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

1. 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<sup>2+</sup> with gut bacteria isolated from wild *Salmo trutta* fry. *PeerJ*, 10, 1-22. <https://doi.org/10.7717/peerj.14025>.
2. 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>
3. **Skrodenytė-Arbačiauskienė V,** Virbickas T, Lukša J, Servienė E, Blažytė-Čereškienė L, Kesminas V. 2021. Gut Microbiome of Wild Baltic Salmon (*Salmo salar* L.) Parr. *Microbial Ecology*. <https://doi.org/10.1007/s00248-021-01910-9>
4. **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>
5. 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>
6. 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>
7. 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>
8. **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**

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- 2020 – 2023     **principal investigator:** “Development of functional fish feed additives from natural algae mass” (Projects supported by the EU).
- 2020 – 2022     **principal 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             **principal 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             **principal 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             **principal 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 **principal 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 **principal 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 **principal 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 **principal 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**

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### ***International scientific conferences:***

1. 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<sup>2+</sup> 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
2. Jurgelėnė, Ž., Butrimienė, R., Kazlauskienė, N., Montvydienė, D., Skrodenytė-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>
3. 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<sup>2+</sup> 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](https://www.openreadings.eu/wp-content/uploads/2021/03/Abstract_book_2021S.pdf)

## **PARTICIPATION IN THE STUDY PROCESS**

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### ***The Council Member of the doctoral dissertation:***

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

Tatjana

Doctoral dissertation: „Investigation of characteristics and 2022-12-15

- [Kirtiklienė](#) transmission of the virulent strains of pathogenic microorganisms in the view of molecular epidemiology“.
- [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: *Biomedical Sciences, Ecology and Environmental Science (03B)* 2018-02-23
- [Eglė Jakubavičiūtė](#) Doctoral dissertation: „Three-spined stickleback (*Gasterosteus aculeatus* L.) in the baltic sea: feeding ecology and implications for stock identification “.
- [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**

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**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 anthropogenically contaminated environment" presented at the 7th International Conference on Lakes Conservation and Management, San Martin de las Andes, Argentina.