Juliana Lukša

CONTACT INFORMATION

Address	Akademijos Str. 2, Vilnius LT-08412, Lithuania
Tel. no.:	+370 5 272 9363
E-mail:	Juliana.luksa@gamtc.lt
	https://www.researchgate.net/profile/Juliana-Luksa
	https://www.linkedin.com/in/julianaluksa/

EDUCATION AND ACADEMIC DEGREE

2012 – 2016	PhD in Biomedical sciences, Biology (01B), Vytautas Magnus University, Nature Research Centre, Centre of Innovative Medicine, Agder University (Norway), University of Latvia. Title of the PhD thesis: "*Saccharomyces cerevisiae* K2 killer system: interplay between killing and resistance". Supervisor – dr. E. Servienė. Field of research: virology, high throughput screening, application of bioinformatics tools.
2010 – 2012	Vilnius University, Master's degree in Biochemistry. Title of the thesis: "Interplay between killing and resistance in *Saccharomyces cerevisiae* K2 killer system". The work was carried out at the Nature research centre, Laboratory of Genetics. Field of research: virology, molecular methods, protein structure prediction.
2006 – 2010	Vilnius Gediminas Technical University, Bachelor's degree in Bioengineering. Title of the thesis: "Analysis of glucose dehydrogenase-synuclein expression in yeast *Saccharomyces cerevisiae*". The work was carried out at the Nature research centre, Laboratory of Genetics. Field of research: genetic engineering, biotechnology.

PROFESSIONAL EXPERIENCE

Since 2020	**Senior** R**esearcher** at the Laboratory of Genetics Nature Research Centre, Vilnius, Lithuania
2020 – 2022	**Senior Researcher** - Postdoc at the Department of Biochemistry and Molecular Biology, Life Sciences Center, Vilnius, Lithuania
2017 – 2020	**Researcher** at the Laboratory of Genetics Nature Research Centre, Vilnius, Lithuania
2014 – 2017	**Biologist** at the Laboratory of Genetics Nature Research Centre, Vilnius, Lithuania

RESEARCH INTERESTS

Virus-host interactions, environmental microbial communities, statistical analysis, quantitative and qualitative research, the use of bioinformatic tools, data visualization techniques.

PUBLICATIONS

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

1. **Lukša J.,** Celitan E., Servienė E., Serva S. (2022) Association of ScV-LA Virus with host protein metabolism determined by proteomics analysis and cognate RNA sequencing. Viruses, 14: art. no. 2345. https://doi.org/10.3390/v14112345
2. Aleknavičius, D., **Lukša, J.,** Strazdaitė-Žielienė, Z., Servienė, E. (2022) The bacterial microbiota of edible insects Acheta domesticus and Gryllus assimilis revealed by high content analysis. Foods, 11 (8): art. no. 1073. https://doi.org/10.3390/jof8040381
3. Ravoitytė, B., **Lukša, J.,** Wellinger, R.E., Serva, S., Servienė, E. (2022) Adaptive response of Saccharomyces hosts to totiviridae L-A dsRNA viruses is achieved through intrinsically balanced action of targeted transcription factors. Journal of fungi, 8 (4): art. no. 381. https://doi.org/10.3390/jof8040381
4. Vepštaitė-Monstavičė, I., **Lukša, J.,** Servienė, E. (2021) Interaction of host factors in response to yeast K2 toxin stress - attractiveness for plant protection. Zemdirbyste-Agriculture, 108 (4): 313–320. https://doi.org/10.13080/z-a.2021.108.040
5. Stanevičienė, R., **Lukša, J.,** Strazdaitė-Žielienė, Z., Ravoitytė, B., Losinska-Sičiūnienė, R., Mozūraitis, R., Servienė, E. (2021) Mycobiota in the carposphere of sour and sweet cherries and antagonistic features of potential biocontrol yeasts. Microorganisms, 9 (7): art. no. 1423. https://doi.org/10.3390/microorganisms9071423
6. Novickij, V., Stanevičienė, R., Gruskienė, R., Badokas, K., **Lukša, J.,** Sereikaitė, J., Mažeika, K., Višniakov, N., Novickij, J., Servienė, E. (2021) Inactivation of bacteria using bioactive nanoparticles and alternating magnetic fields. Nanomaterials, 11 (2): art. no. 342. https://doi.org/10.3390/nano11020342
7. Skrodenytė Arbačiauskienė, V., Virbickas, T., **Lukša, J.,** Servienė, E., Blažytė-Čereškienė, L., Kesminas, V. Gut microbiome of wild Baltic salmon (Salmo salar L.) parr. Microbial ecology, 0: art. no. 1–5. https://doi.org/ 10.1007/s00248-021-01910-9
8. Ravoitytė, B., **Lukša, J.,** Yurchenko, V., Serva, S., Servienė, E. (2020) Saccharomyces paradoxus transcriptional alterations in cells of distinct phenotype and viral dsRNA content. Microorganisms, 8 (12): art. no. 1902. https://doi.org/10.3390/microorganisms8121902
9. **Lukša, J.,** Vepštaitė-Monstavičė, I., Apšegaitė, V., Blažytė-Čereškienė, L., Stanevičienė, R., Strazdaitė-Žielienė, Ž., Ravoitytė, B., Aleknavičius, D., Būda, V., Mozūraitis, R., Servienė, E. (2020) Fungal microbiota of sea buckthorn berries at two ripening stages and volatile profiling of potential biocontrol yeasts. Microorganisms, 8 (3): art. no. 456. https://doi.org/10.3390/microorganisms8030456
10. Vepštaitė-Monstavičė, I., **Lukša, J.,** Konovalovas, A., Ežerskytė, D., Stanevičienė, R., Strazdaitė-Žielienė, Z., Serva, S., Servienė, E. (2018) Saccharomyces paradoxus K66 Killer System Evidences Expanded Assortment of Helper and Satellite Viruses. Viruses-Basel. 10 (10): art. no. 564. https://doi.org/10.3390/v10100564
11. **Lukša, J.,** Vepštaitė-Monstavičė, I., Yurchenko, V., Serva, S., Servienė, E. (2018) High content analysis of sea buckthorn, black chokeberry, red and white currants microbiota - A pilot study. Food Research International. 111: 597–606. https://doi.org/10.1016/j.foodres.2018.05.060
12. Vepštaitė-Monstavičė, I., **Lukša, J.,** Stanevičienė, R., Strazdaitė-Žielienė, Ž., Yurchenko, V., Serva, S., Servienė, E. (2018) Distribution of apple and blackcurrant microbiota in Lithuania and the Czech Republic. Microbiological Research. 206: 1-8. https://doi.org/10.1016/j.micres.2017.09.004
13. **Lukša, J.,** Ravoitytė, B., Konovalovas, A., Aitmanaitė, L., Butenko, A., Yurchenko, V., Serva, S., Servienė, E. (2017) Different metabolic pathways are involved in response of Saccharomyces cerevisiae to L-A and M viruses. Toxins. 9 (8): art. no. 233. https://doi.org/10.3390/toxins9080233

14. Krivorotova, T., Stanevičienė, R., **Lukša, J.,** Servienė, E., Sereikaitė, J. (2017) Impact of pectin esterification on the antimicrobial activity of nisin-loaded pectin particles. Biotechnology Progress. 33 (1): 245-251. https://doi.org/10.1002/btpr.2391

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

2020 – 2022	**Senior researcher – Postdoc,** European Union and Research Council of Lithuania project for Development of Scientific Competences of Scientists, other Researchers and Students through Practical Research Activities "Viractome – integrative approach for functional yeast virus analysis" (09.3.3-LMT-K-712-19-0157.
2019 – 2023	**Substituting member of management committee,** European Cooperation in Science and Technology (COST) project, CA18113 action "Understanding and exploiting the impact of low pH on microorganisms".
2018 – 2019	**Project coordinator,** Research Council of Lithuania project Development of Scientific Competences of Scientists, other Researchers and Students through Practical Research Activities "Modulation of efficiency of nanostructured bacteriocins", Nr 09.3.3.-LMT-K-712-10-0100,
2014 – 2016	**Project participant,** National scientific research program „Sustainability of agro-, forest and water ecosystems" project „Agroecosystems microbiota under climate change: structure and concordance mechanisms". Project: SIT-7/2015
2013 – 2015	**Project participant,** Research Council of Lithuania project "Interplay between killing and resistance in *Saccharomyces cerevisiae* K2 killer system". Project: MIP-042/2013.
2011 – 2012	**Project participant,** Research Council of Lithuania project "Genome-wide screening for *Saccharomyces cerevisiae* genes modulating sensitivity for K2 toxin". Project: MIP-061/2011.

INTERNSHIP AND TRAINING

2020 – 2022	Post-doctoral training "Viractome – integrative approach for functional yeast virus analysis" (Life Science Center, Department of Biochemistry and Molecular biology, Vilnius, Lithuania).
2022 07	EMBL Practical course Proteomics bioinformatics 2022 (Hinxton, United Kingdom).
2022 03 / 04	Proteomic research and bioinformatic analysis Life Science Research Center and Institute of Environmental Technologies (Ostrava, Czech Republic).
2021 06	12th International summer school on computational mass spectrometry-based proteomics (Online course).
2018 04	EMBO Practical course: Microbial metagenomics: a 360˚ approach, (Heidelberg, Germany).
2015 07	Transcriptomic research and bioinformatic analysis Life Science Research Center and Institute of Environmental Technologies (Ostrava, Czech Republic).

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. **Lukša J.,** Ravoitytė B., Servienė E., Serva S. 2022. Interplay between Totiviridae L-A dsRNA virus and Saccharomyces spp. host: integrative transcriptomic and proteomic analysis. *FEMS*, June 30 - July 02, Belgrade, Serbia. https://biokeemiaselts.ee/febs3-conference/
2. **Lukša J.,** Ravoitytė B., Servienė E., Serva S. 2022. Interplay between Totiviridae L-A dsRNA virus and Saccharomyces spp. host: integrative transcriptomic and proteomic analysis. *FEBS3+*, June 15-17, Talinn, Estonia. https://biokeemiaselts.ee/febs3-conference/
3. **Lukša J.,** Ravoitytė B., Servienė E., Serva S. 2022. Interplay between Totiviridae L-A dsRNA virus and Saccharomyces spp. host: integrative transcriptomic and proteomic analysis. *Mikrobiology 2022*, Birstonas, Lithuania. http://www.mikrobiologija.lt/
4. Aleknavičius, D., **Lukša, J.,** Strazdaitė Žielienė, Ž., Servienė, E. 2022 Metagenomic analysis of bacterial communities of the edible insect the house cricket. *FEBS3+*, June 15-17, Talinn, Estonia. https://biokeemiaselts.ee/febs3-conference/
5. Stanevičienė, R., **Lukša, J.,** Strazdaitė Žielienė, Ž., Ravoitytė, B., Losinska-Sičiūnienė R., Servienė E. 2022. High content analysis of cherries-assiociated mycobiota. *Mikrobiology 2022*, Birstonas, Lithuania. http://www.mikrobiologija.lt/
6. Servienė, E., **Lukša, J.,** Vepštaitė-Monstavičė, I., Blažytė-Čereškienė, Laima; Stanevičienė, Ramunė; Strazdaitė Žielienė, Ž., Ravoitytė, B., Aleknavičius, D., Būda, V., Mozūraitis, R. 2020. Fungal microbiota of sea buckthorn berries at two ripening stages and volatile profiling of potential biocontrol yeasts. *FEMS online conference on microbiology*, October 28-31, Belgrad, Serbia. Book of abstracts: 381.
7. Serva, S.; Konovalovas, A.; Aitmanaitė, L.; **Lukša, J.,** Servienė, E. Systems biology of intrinsic yeast viruses. 2020. *FEMS online conference on microbiology* October 28-31, Belgrad, Serbia. Book of abstracts: 241
8. Servienė, E., **Lukša, J.,** Stanevičienė, R., Ravoitytė, B., Strazdaitė Žielienė, Ž. High content analysis of fruit and berry fungal microbiota. 2020. *EuroMicropH 1st open meeting*, Lisbon, Portugal. Book of abstracts: 56
9. **Lukša, J.,** Ravoitytė, B., Konovalovas, A., Aitmanaitė, L., Yurchenko, V., Serva, S., Servienė, E. 2020. Response mechanisms of model organism Saccharomyces cerevisiae to yeast viruses. *EuroMicropH 1st open meeting*, Lisbon, Portugal. Book of abstracts: 36.
10. Ravoitytė, B., Stanevičienė, R., Vepštaitė-Monstavičė, I., Sederevičiūtė, A., **Lukša, J.,** Strazdaitė Žielienė, Ž., Servienė, E. Effects of temperature and pH on Saccharomyces paradoxus killer yeasts. 2019. *XXIX International conference on yeast genetics and molecular biology*, August 18-22, Gothenburg, Sweden. Book of abstracts: 378
11. **Lukša, J.,** Vepštaitė-Monstavičė, I., Stanevičienė, R., Strazdaitė Žielienė, Ž., Serva, S., Servienė, E. 2019. High content analysis of microbiota on medical properties possessing berries. *8th Congress of European Microbiologists*, July 7-11, Glasgow, Scotland. Book of abstracts: 1445
12. Stanevičienė, R., **Lukša, J.,** Vepštaitė-Monstavičė, I., Strazdaitė Žielienė, Ž., Servienė, E. 2019. Yeasts-commensals in the sea buckthorn ecosystem. *8th congress of European microbiologists*, July 7-11, Glasgow, Scotland. Book of abstracts: 1446.
13. Umbrasaitė, J., **Lukša, J.,** Sereikaitė, J., Servienė, E. 2019. Isolation, purification, and characterization of Saccharomyces cerevisiae K2 toxin. *FEBS3+ conference of Latvian, Lithuanian and Estonian biochemical societies*, 17-19 June, Riga, Latvia, Book of abstracts:106-107.
14. Servienė, E., Stanevičienė, R., Vepštaitė-Monstavičė, I., **Lukša, J.,** Strazdaitė-Žielienė, Ž., Apšegaitė, V., Butkienė, R., Aleknavičius, D., Blažytė-Čereškienė, L., Būda, V., Mozūraitis, R. 2019. Sea buckthorn berry-related yeasts and their volatiles.

FEBS3+conference of Latvian, Lithuanian and Estonian Biochemical societies, June 17-19, Riga, Latvia. Book of abstracts: 107-108.

15. Babonaitė, M., Novickij, V., Stanevičienė, R., Sereikaitė, J., Gruškienė, R., Servienė, E., **Lukša, J.** 2019. Modulation of efficiency of nanostructured nisin. *62nd International conference for students of physics and natural sciences open readings*, March 19-22, Vilnius, Lithuania. Book of abstracts: 249.
16. Ravoitytė, B., **Lukša, J.,** Konovalovas, A., Aitmanaitė, L., Serva, S., Servienė, E. 2018. Gene expression alterations in budding yeast Saccharomyces cerevisiae induced by elimination of L-A-lus and M-2 dsRNA viruses. *Vita Scientia: international conference*, 3rd January 2018, Vilnius, Lithuania. Book of abstracts: 46-47.
17. **Lukša, J.,** Ravoitytė, B., Konovalovas, A, Aitmanaitė, L., Yurchenko, V., Serva, S., Servienė, E. 2018 Global gene expression change during Totiviridae dsRNA viruses infection in Saccahromyces cerevisiae. *15th International conference of the Lithuanian Biochemical Society*, June 26-29, Dubingiai, Lithuania. Book of abstracts: 37-38.
18. Vepštaitė-Monstavičė, I., **Lukša, J.,** Urbonavičius, J., Servienė, E. 2018. Interaction of yeast genetic factors in response to Saccharomyces cerevisiae K2 toxin stress. *EFB conference "Microbial stress: from systems to molecules and back"*, April 23-25, Kinsale, Ireland. Book of abstracts: 78.

PARTICIPATION IN THE STUDY PROCESS

Supervision of bachelor and master students:

Vilnius Gediminas Technical University: Bachelors (2) and Master (1) in Bioengineering.

OTHER

Awards:

2022 EMBL-EBI training bursary.
2020 Laureate of the Lithuanian Academy of Sciences Young scientists and doctoral students research competition
2019 Research Council of Lithuania, Development of Scientific Competences of Scientists
2018 Research Council of Lithuania, Development of Scientific Competences of Scientists
2017 Laureate of the “The best doctoral dissertation in physical, technological, biomedical sciences” organized by Lithuanian Society of Young Researchers
2017 Research Council of Lithuania travel grant
2016 Research Council of Lithuania travel grant
2016 Research Council of Lithuania - promotional scholarship
2014 FEBS travel award
2013 Research Council of Lithuania - promotional scholarship