

Algirdas Valys

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

2024 10 – now	PhD studies in Biology (N 010), State Scientific Research Institute Nature Research Centre (joint studies with Vytautas Magnus University and Centre for Innovative Medicine), Vilnius, Lithuania. Preliminary dissertation thesis: “The importance of plants in viral transmission and prevention of viral diseases”, supervisor – dr. Živilė Strazdaitė-Žielienė.
2022 – 2024	Master of Life Sciences (<i>Magna Cum Laude</i>), study programme - Biochemistry, Vilnius University, Life Sciences Center, Vilnius, Lithuania. Master’s thesis: „Antiviral effect of plant extracts“, supervisor – dr. Živilė Strazdaitė-Žielienė.
2018 – 2022	Bachelor of Life Sciences (<i>Cum Laude</i>), study programme – Molecular Biology, Vilnius University, Life Sciences Center, Vilnius, Lithuania. Bachelor’s thesis: „Investigation of yeast viruses inactivating factors“, supervisor – dr. Živilė Strazdaitė-Žielienė.
2014 – 2018	High school diploma, Vilnius lyceum, Vilnius, Lithuania.

PROFESSIONAL EXPERIENCE

2025 11 – now	Junior researcher State Scientific Research Institute Nature Research Centre, Laboratory of Genetics, Vilnius, Lithuania.
2023 11 – 2025 10	Biologist State Scientific Research Institute Nature Research Centre, Laboratory of Genetics, Vilnius, Lithuania.
2021 11 – 2023 10	Senior laboratory assistant State Scientific Research Institute Nature Research Centre, Laboratory of Genetics, Vilnius, Lithuania.

RESEARCH INTERESTS

Areas of research: plant-based substances and extracts, their antimicrobial (antibacterial, antifungal, antiviral) properties and mechanisms of action, model systems utilized for researching these properties; insect viruses, ecology of viruses.

Methodical knowledge: microorganism cultivation, light microscopy, bacterial transformation, nucleic acid extraction and purification from laboratory microorganisms as well as nature samples, electrophoretic analysis, PCR, RT-PCR, qPCR, *in vitro* transcription.

PUBLICATIONS

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

1. **Valys, A.**, Strazdaitė-Žielienė, Ž., Mikalkėnas, A., Būdienė, J., Celitan, E., Serva, S., Servienė, E. Essential oils expose diverse targets on non-enveloped ScV-L-A totivirus. *Pharmaceutical Biology*. 2025; 63(1):663-682. Q1
2. Vepškaitė-Monstavičė, I., Ravoitytė, B., Būdienė, J., **Valys, A.**, Lukša, J., Servienė, E. Essential Oils of *Mentha arvensis* and *Cinnamomum cassia* Exhibit Distinct Antibacterial Activity at Different Temperatures In Vitro and on Chicken Skin. *Foods*. 2023; 12(21):3983. Q1

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

2024 – 2027	Research Council of Lithuania Researcher Groups project “Microcosmos of flower and honey bee drones and sustainable hive health”. Project participant . Project leader – dr. Elena Servienė, project no. S-MIP-24-55.
2023 - 2024	Research Council of Lithuania Student scientific internship project. In vitro model system utilization for investigating the mechanisms of action of essential oils. Project participant . Project leader – dr. Živilė Strazdaitė-Žielienė, project no. P-ST-23-52.
2023	Research Council of Lithuania Student summertime scientific internship project. Investigation of the effect of plant hydrolates on microorganism viability using qPCR and microbiological methods. Project participant . Project leader – dr. Živilė Strazdaitė-Žielienė, project no. P-SV-23-26.
2022 – 2023	Research Council of Lithuania Student scientific internship project. Investigation of the mechanisms of action of essential oils against yeast viruses. Project participant . Project leader – dr. Živilė Strazdaitė-Žielienė, project no. P-ST-22-169.

INTERNSHIP AND TRAINING

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. **Valys, A.**, Strazdaitė-Žielienė, Ž., Mikalkėnas, A., Būdienė, J., Celitan, E., Serva, S., Servienė, E. Antiviral efficacy of essential oils and their constituents. 49th FEBS Congress, 5-9 July 2025, Istanbul, Turkey. Poster presentation.
2. **Valys, A.**, Strazdaitė-Žielienė, Ž., Mikalkėnas, A., Būdienė, J., Celitan, E., Serva, S., Servienė, E. Plant-Based Substances for Virus Inactivation. FEBS3+ Baltics: Biochemistry at

- the Fore Line, 23-25 April 2025, Vilnius, Lithuania. Book of Abstracts, 129. Poster presentation.
3. Lapinskaitė, V., **Valys, A.**, Stanevičienė, R., Vepškaitė-Monstavičė, I., Bartkutė, P., Strazdaitė-Žielienė, Ž., Servienė, E. Microorganisms on honey bee drone larvae and varroa mites – implications for hive health and food safety. EurBee 10th Congress of Apidology, 16-19 September 2024, Tallinn, Estonia. Book of Abstracts, 78. Poster presentation.
 4. **Valys, A.**, Strazdaitė-Žielienė, Ž., Mikalkėnas, A., Serva, S., Servienė, E. Antifungal and Antiviral Effects of Essential Oils. Lithuanian biochemical society's 16th international scientific conference "Biochemistry Targeting Diseases", 28-30 June 2023, Taujėnai, Lithuania. Book of Abstracts, 40. Poster presentation.
 5. **Valys, A.**, Strazdaitė-Žielienė, Ž., Serva, S., Servienė, E. Antimicrobial Efficacy of Plant Hydrolates. International students scientific conference „The COINS 2023“, 24-27 April 2023, Vilnius, Lithuania. Book of Abstracts, 11. Poster presentation.
 6. **Valys, A.**, Vepškaitė-Monstavičė, I., Strazdaitė-Žielienė, Ž., Serva, S., Servienė, E. Antimicrobial Potency of Essential Oils. FEBS3+, 15-17 June 2022, Tallinn, Estonia. Book of Abstracts, 155-156. Poster presentation.

National scientific conferences:

1. **Valys, A.**, Strazdaitė-Žielienė, Ž., Mikalkėnas, A., Būdienė, J., Celitan, E., Serva, S., Servienė, E. Eterinių aliejų poveikis skirtingiems ScV-L-A totiviruso komponentams. 18th conference of Lithuanian young scientists „Bioateitis: gamtos ir gyvybės mokslų perspektyvos“, 27 November 2025, Vilnius, Lithuania. Book of Abstracts, 27. Oral presentation.
2. **Valys, A.**, Strazdaitė-Žielienė, Ž. In Vitro Modelinių Sistemų Panaudojimas Eterinių Aliejų Veikimo Mechanizmų Tyrimams. Research Council of Lithuania organized students scientific conference „Naujoji mokslininkų karta“, 16-17 May 2024, Vilnius, Lithuania. Book of Abstracts, 50-51. Oral presentation.
3. **Valys, A.**, Strazdaitė-Žielienė, Ž. Eterinių Aliejų Poveikio Mielių Virusams Mechanizmų Tyrimai. Research Council of Lithuania organized students scientific conference „Naujoji mokslininkų karta“, 18 April 2023, online event. Book of Abstracts, 13-14. Oral presentation.
4. Vepškaitė-Monstavičė, I., **Valys, A.**, Strazdaitė-Žielienė, Ž., Serva, S., Servienė, E. Antimicrobial Potency of Essential Oils. Lithuanian microbiological soc'ety's national conference "Mikrobiologija 2022", 28-29 April 2022, Birštonas, Lithuania. Book of Abstracts, 70. Poster presentation.

PARTICIPATION IN THE STUDY PROCESS

OTHER

1. Member of Lithuanian microbiological society from 2022 until now.
2. Member of Lithuanian biochemical society from 2022 until now.
3. Science popularization article in online newsletter delfi.lt
<https://www.delfi.lt/mokslas/mokslas/pasauli-purto-nauji-itin-pavojingo-patogeno-protrukiai-mokslininkai-perspeja-kad-zoonoze-sukels-gresme-ir-zmonems-90455057>

