

Marija Žižytė-Eidetienė

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

2005 – 2009 Biomedical sciences, Biology (01 B), microbiology, bacteriology, virology, mycology (B 230) (Vilnius University and institute of Botany of Nature Research Centre).
Dissertation thesis: “The identification and molecular characterization of sugar beet rhizomania causing virus”, supervisor – habil. dr. Juozas Benediktas Staniulis, consultant – prof. Jari Valkonen.
Emphasis: virology; electron microscopy; molecular biology methods.

2002 – 2004 Vilnius University, Biochemistry / master’s degree.
Master's theses: "Immobilization and catalytic activity of *Pseudomonas mendocina* 3121-1 lipase in glycerolysis reactions".
Vilnius University, Department of Biochemistry and Biophysics.
Emphasis: enzymology, study of lipase-catalyzed esterification reactions, thin-layer chromatography.

1998 – 2002 Vilnius University, Biochemistry / bachelor's degree.
Bachelor's theses: "Specificity study of lipase from *Pseudomonas mendocina* 3121-1".
Vilnius University, Department of Biochemistry and Biophysics.
Emphasis: enzymology, determination of physico-chemical properties of lipase, spectrophotometry.

PROFESSIONAL EXPERIENCE

2023 10 – until now **Senior researcher**
Laboratory of Plant Pathology, Nature Research Centre, Vilnius, Lithuania.

2018 02 – 2023 10 **Researcher**
Laboratory of Plant Pathology, Nature Research Centre, Vilnius, Lithuania.

2010 10 – 2018 02 **Junior researcher**
Plant Virus Laboratory, Nature Research Centre, Vilnius, Lithuania.
(Since 2017 07 01 – Laboratory of Plant Pathology)

2010 02 – 2010 10 **Specialist**
Plant Virus Laboratory, Nature Research Centre, Vilnius, Lithuania.

2009 10 – 2010 02 **Junior researcher**
Plant Virus Laboratory, institute of Botany, Vilnius, Lithuania.

- 2005 10 – 2009 10 **PhD student**
Plant Virus Laboratory, institute of Botany, Vilnius, Lithuania.
- 2005 05 – 2005 10 **Senior laboratory assistant**
Plant Virus Laboratory, institute of Botany, Vilnius, Lithuania.

RESEARCH INTERESTS

Plant pathogens, characterization of their genomes; study of plant pathogens spreading paths, their damage done to plants and possible control of plant diseases. Methods used: transmission electron microscopy; ELISA: double antibody sandwich enzyme linked immunosorbent assay (DAS-ELISA), TAS-ELISA; PCR methods: reverse transcription polymerase chain reaction (RT-PCR), nested PCR, multiplex RT-PCR, immunocapture RT-PCR; extraction and purification of nucleic acids (DNA and RNA); polyacrylamide and agarose gel electrophoresis; gene cloning, restriction fragment length polymorphism (RFLP); analysis of obtained sequencing data (comparison of nucleotide and amino acid sequences) and primer design (LaserGene DNASTar program package); construction of phylogenetic trees (MegaX, ClustalX, TreeView computer programs); gene sequence analysis using NCBI GeneBank database (Blast; ClustalW; EMBOSS Transeq programs).

PUBLICATIONS

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

1. Dėlkus M., Žižytė-Eidietienė M., Ivanauskas A., Valiūnas D. 2025. First Report of ‘*Candidatus Phytoplasma trifolii*’-Related Strain Associated with Vaccinium Reddish Witches’-Broom Disease of European Blueberry in Lithuania. – *Plant Disease*, in press.
<https://doi.org/10.1094/PDIS-11-24-2431-PDN>
2. Dėlkus M., Žižytė-Eidietienė M., Ivanauskas A., Valiūnas D. 2024. First Report of Lingonberry Stunted Yellows Disease of *Vaccinium vitis-idaea* associated with ‘*Candidatus Phytoplasma trifolii*’-Related Phytoplasma Strain in Lithuania. – *Plant Disease*, 108(5): 1391.
<https://doi.org/10.1094/PDIS-02-24-0284-PDN>
3. Jankovska-Bortkevič, E., Jurkonienė S., Gavelienė V., Šveikauskas V., Mockevičiūtė R., Vaseva I., Todorova D., Žižytė-Eidietienė M., Šneideris D., Prakas P. 2023. Dynamics of Polyamines, Proline, and Ethylene Metabolism under Increasing Cold in Winter Oilseed Rape. – *International Journal of Molecular Sciences*, 24(14):11402.
<https://doi.org/10.3390/ijms241411402>.
4. Ivanauskas A., Valiūnas D., Rimsaitė J., Danilov J., Šneideris D., Žižytė-Eidietienė M., Wei W. 2022. New genetically distinct phytoplasmas and insect carriers associated with pine tree disease revealed by a survey in Curonian Spit, Lithuania. – *Canadian Journal of Forest Research*, 52 (1): 1–8 . <https://doi.org/10.1139/cjfr-2021-0152>.
5. Šneideris, D., Ivanauskas, A., Žižytė, M., Valiūnas, D. 2021. secA gene suitability for fast and easy identification of Phytoplasmas by RFLP analysis. – *European Journal of Plant Pathology*, 160 (3): 737–743. <https://doi.org/10.1007/s10658-021-02262-3>.
6. Valiūnas D., Jomantiene R., Ivanauskas A., Šneideris D., Žižytė-Eidietienė M., Shao J., Yan Z., Costanzo S., Davis R. E. 2019. Rapid detection and identification of ‘*Candidatus Phytoplasma pini*’-related strains based on genomic markers present in 16S rRNA and *tuf* genes. – *Forest Pathology*, 49(6): e12553. <https://doi.org/10.1111/efp.12553>.
7. Urbanavičienė L., Šneideris D., Žižytė M. 2015. *Wheat streak mosaic virus* detected in winter wheat in Lithuania. – *Zemdirbystė-Agriculture*, 102(1): 111-114. <https://doi.org/10.13080/z-a.2015.102.014>.

8. Šneideris D., Žižytė M., Zitikaitė I., Urbanavičienė L., Staniulis J. 2013. First report of two distinct strains of *pepino mosaic virus* infecting tomatoes in greenhouses in Lithuania. – *Journal of Plant Pathology*, 95(1): 217. <http://dx.doi.org/10.4454/JPP.V95I1.024>.
9. Žižytė M., Valkonen J., Staniulis J. 2013. Characterization of *beet necrotic yellow vein virus* infecting sugar beet in Lithuania. – *Journal of Plant Pathology*, 95(1): 211-216. <http://dx.doi.org/10.4454/JPP.V95I1.023>.
10. Urbanavičienė L., Žižytė M. 2012. Identification of *Brome mosaic virus* in cocksfoot (*Dactylis glomerata* L.) and meadow fescue (*Festuca pratensis* Huds.) in Lithuania. – *Zemdirbyste-Agriculture*, 99(2): 167-172. ISSN 1392-3196.
11. Šneideris D., Zitikaitė I., Žižytė M., Grigaliūnaitė B., Staniulis J. 2012. Identification of nepoviruses in tomato (*Lycopersicon esculentum* Mill.). – *Zemdirbyste-Agriculture*, 99(2): 173-178. ISSN 1392-3196.
12. Staniulis J., Zitikaitė I., Žižytė M., Jackevičienė E., Urbanavičienė L., Šneideris D. 2012. Detection and molecular identification of alien viruses of plums, sugar beets and tomatoes. – *Zemdirbyste-Agriculture*, 99(1): 85-92. ISSN 1392-3196.
13. Zitikaitė I., Staniulis J., Urbanavičienė L., Žižytė M. 2011. *Cucumber mosaic virus* identification in pumpkin plants. – *Zemdirbyste-Agriculture*, 98(4): 421-426. ISSN 1392-3196.

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (without citation index):

1. Norkus T., Staniulis J., Žižytė M., Melnyk M., Yusko L., Snigur H., Budzanivska I., Polischuk V. 2008. Molecular identification of *Plum pox virus* isolates from Lithuania and Ukraine. – *Zemdirbyste-Agriculture*, 95(3): 277-285. ISSN 1392-3196.

Other reviewed scientific publications (books, books' chapters, collections of articles, articles, textbooks and etc.):

1. Ivanauskas A., Rimsaite J., Danilov J., Soderman G., Sneideris D., Zizyte-Eidetiene M., Wei W. Valiunas D. 2021. A survey of potential insect vectors of mountain pine proliferation decline phytoplasma in Curonian Spit, Lithuania. – *Environmental Sciences Proceedings*, 3(1): 81. <https://doi.org/10.3390/IECF2020-07977>.
2. Žižytė M., Staniulis J., Syumka A., Nurmukhammedov A. 2011. Soil-borne viruses detected in sugar beet in Lithuania and Ukraine. – “Taras Shevchenko’ Kyiv National University’ Scientific Bulletin, Biology Series”, 59: 33-36. ISSN 1728-2748.
3. Staniulis J., Žižytė M., Norkus T., Yusko L., Snigur H., Budzanivska I. 2008. Incidence of *Plum pox virus* in Lithuania and Ukraine. – “Taras Shevchenko’ Kyiv National University’ Scientific Bulletin, Biology Series”, 51: 50-54. ISSN 1728-2748.
4. Žižytė M., Staniulis J. 2008. *Beet necrotic yellow vein virus*: purification and detection by electron microscopy and western blot. – “Taras Shevchenko’ Kyiv National University’ Scientific Bulletin, Biology Series”. 51: 54-55. ISSN 1728-2748.
5. Zizyte M., Staniulis J. 2007. Investigations on *Beet necrotic yellow vein virus* in Lithuania. – “*Virus vector management in a changing climate*”. Kristianstad: Nordic Association of Agricultural Scientists (NJF), 33-35. ISSN 1653-2015.
6. Žižytė M., Staniulis J., Zitikaitė I. 2006. Identification of *Beet necrotic yellow vein virus* isolate detected in Lithuania. – *Agronomy Research*, 4(Special issue): 475-478. ISSN 1406-894X.

Reviewed scientific articles, published in Lithuania:

1. Žižytė-Eidetienė M., Valiūnas D. 2018. In Memoriam Juozas Benediktas Staniulis (1938–2018). – *Botanica*, 24(1): 101–112. ISSN 2538-8657. DOI: 10.2478/botlit-2018-0010.
2. Žižytė M., Šneideris D., Zitikaitė I., Urbanavičienė L., Staniulis J. 2013. Characterization of two distinct *pepino mosaic virus* isolates from tomato in Lithuania. – *Botanica Lithuanica*, 19(1): 22-27. ISSN 1392-1665.
3. Žižytė M., Kučinskaitė-Kodžė I., Staniulis J. 2009. Preparation of polyclonal antiserum to *Beet necrotic yellow vein virus* and its application for immunodiagnosics. – *Biologija*, 55(3–4): 93–98. ISSN 1392-0146. DOI: 10.2478/v10054-009-0015-2.
4. Bendikienė V., Žižytė M., Juodka B. 2004. The Specificity of *Pseudomonas mendocina* 3121-1 lipase. – *Biologija*, 2(1): 43–45. ISSN 1392-0146.

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

- | | |
|-------------|---|
| 2024 – 2028 | <p>Member of Working groups
 COST Action CA23107 - Network for Evidence Synthesis in The Agri-Food Sector (EU-NESA), project Coordinator: Harper Adams University, Edgmond, United Kingdom.</p> |
| 2021 – 2025 | <p>Management Committee member
 COST Action CA20113 - A sound proteome for a sound body: targeting proteolysis for proteome remodelling (ProteoCure), project Coordinator: Centre national de la recherche scientifique (CNRS), France.</p> |
| 2022 – 2026 | <p>Member of Working groups
 COST Action CA21134 - Towards zero Pesticide AGRiculture: European Network for sustainability (TOP-AGRI-Network), project Coordinator: INRAE147 rue de l'Université, France.</p> |
| 2021 – 2021 | <p>Principal investigator
 Examination of the surface viricidal effect of materials “Coatings”. Customer: Innovative company "MKDS", UAB. Project no. 2021/PER-4-9; 05/19/2021.</p> |
| 2013 – 2012 | <p>Principal investigator
 Biotechnology and Biopharmacy: fundamental and applied research. Project: No. VP1-3.1-ŠMM-08-K-01-005/KS-560000-1757.</p> |
| 2011– 2010 | <p>Principal investigator
 National research program "Lithuanian ecosystems: climate change and human impact", Investigation on genetic diversity and factors affecting spread of alien virus strains of stone fruits and vegetables in Lithuania. Project: No. LEK-16/2010.</p> |
| 2010 – 2009 | <p>Principal investigator
 Lithuanian-Ukrainian bilateral cooperation in scientific research and experimental development project „Identification and comparative molecular characteristics of the virus rhizomania and others spread by soil viruses of sugar beet in Lithuania and Ukraine”. Project: No. V-23/2009, TAP-34/2010, TAP-48/2010.</p> |
| 2008 – 2007 | <p>Principal investigator
 Lithuanian-Ukrainian bilateral cooperation in scientific research and experimental development project „Investigation of distribution of plum pox virus in Lithuania and Ukraine and development of biotechnological methods of obtaining of virus-free planting material“. Project: No. V-09/2007, V-12/2008, SUT-268.</p> |

INTERNSHIP AND TRAINING

2006 02 / 03 Symposium and Postgraduate course „Agro-Biotechnology focused on Root-Microbe Systems (AB-RMS). Root infection biology: pathogenic interactions. (University of Hamburg, Hamburg, Germany).

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. Dėlkus M., Mikalauskas A., **Žižytė-Eidetienė M.**, Ivanauskas A., Valiūnas D. 2024. Detection of Lingonberry Stunted Yellows Disease associated with '*Candidatus* Phytoplasma trifolii' in the natural habitat of Lithuania. - *International Conference of Life Sciences "The COINS 2024"*, 15-18 April, Vilnius, Lithuania. Book of Abstracts: 105.
<https://thecoins.eu/posters/about>
<https://thecoins.eu/about/past>
2. Dėlkus M., **Žižytė-Eidetienė M.**, Valiūnas D. 2023. '*Candidatus* phytoplasma rubi' detection in blackberries (*Rubus plicatus*) and raspberries (*Rubus idaeus*) in Lithuania. – *X International Conference „Bioresources and Viruses“*, 11-13 September, Kyiv, Ukraine. Book of Abstracts: 64.
https://global-uploads.webflow.com/638e14438e3336e28f604839/64f98c528caea04829368494_ICBV_2023_Book_abstracts_.pdf
3. Ivanauskas A., Rimsaite J., Danilov J., Soderman G., Sneideris D., **Zizyte-Eidetiene M.**, Wei W. Valiunas D. 2021. A survey of potential insect vectors of mountain pine proliferation decline phytoplasma in Curonian Spit, Lithuania. – *The 1st International Electronic Conference on Forests — Forests for a Better Future: Sustainability, Innovation, Interdisciplinarity*, 15-30 November. Environmental Sciences Proceedings: 2021, 3(1): 81.
<https://doi.org/10.3390/IECF2020-07977>
Presentation slides <https://sciforum.net/manuscripts/7977/slides.pdf>
4. Staniulis J., Zitikaitė I., **Žižytė M.**, Jackevičienė E., Urbanavičienė L. Šneideris D. 2011. Detection and molecular identification of alien viruses affecting stone fruit and vegetable crops in Lithuania. – *International workshop-seminar “Plant biotechnology advances in agriculture”*, 27 – 28 October, Kaunas, Lithuania. Book of Abstracts: 27.
5. Šneideris D., Zitikaitė I., Grigaliūnaitė B., **Žižytė M.**, Staniulis J. 2011. Identification of nepoviruses in tomatoes. – *International workshop-seminar “Plant biotechnology advances in agriculture”*, 27 – 28 October, Kaunas, Lithuania. Book of Abstracts: 24.
6. **Žižytė M.**, Staniulis J., Syumka A., Nurmukhammedov A. 2010. Soil-borne viruses detected in sugar beet in Lithuania and Ukraine. – *Vlth International conference “Bioresources and viruses“*, 14 – 17 September, Kyiv, Ukraine. Book of Abstracts: 110 – 111.
7. **Zizyte M.**, Staniulis J. 2008. Molecular analysis of BNYVV type detected in Lithuania. – *7th International Working Group on Plant Viruses with Fungal Vectors (IWGPVFFV) symposium*, 1 – 4 September, Quedlinburg, Germany. Book of Abstracts: 38.
8. **Zizyte M.**, Staniulis J. 2007. Investigations on *Beet necrotic yellow vein virus* in Lithuania. Nordic Association of Agricultural Scientists (NJF). – *Seminar 402 “Virus vector management in a changing climate”*, 9 – 11 October, Kristianstad, Sweden. Book of Abstracts: 33 – 35.
9. **Žižytė M.**, Staniulis J. 2007. *Beet necrotic yellow vein virus*: purification and detection by electron microscopy and western blot. – *Vth International conference “Bioresources and viruses“*, 10 – 13 September, Kyiv, Ukraine. Book of Abstracts: 107.

10. Žižytė M. 2006. The occurrence and detection of sugar beet disease rhizomania in Lithuania. – *Second symposium of the agrobiotec network: root soil microbe interaction*, 25 February – 3 March, Hamburg, Germany. Book of Abstracts: 63.
11. Žižytė M., Staniulis, J., Zitkaitė, I. 2006. Characterization of *Beet necrotic yellow vein virus* isolate detected in Lithuania. – *International conference „Development of environmentally friendly plant protection“*, 5 – 7 September, Pühajärve, Estonia. Book of Abstracts: 56.

National scientific conferences:

1. Dėlkus M., Žižytė-Eidetienė M., Ivanauskas A., Valiūnas D. 2024. Diversity and prevalence of phytoplasmas in Lithuanian berry plants. 17th *Conference of Young Scientists "Biofuture: Perspective of Natural and Life Sciences"*. 21 November, Vilnius, Lithuania. Book of Abstracts: 12.
<https://gamtostyrimai.lt/wp-content/uploads/2024/11/2024-11-21-konferencijos-BIOATEITIS-pranesimu-tezes.pdf>
2. Dėlkus M., Valiūnas D, Žižytė-Eidetienė M., Ivanauskas A. 2023. Fitoplazminių infekcijų uoginiuose augaluose plitimo keliai ir kontrolės būdai. Kaip išvengti pesticidų? – HERBOLOGIJA 2023: Piktžolių ekologija ir kontrolė: programa ir pranešimų santraukos: 27-30. 23 March, Kaunas, Lithuania. ISBN 9786094491160.
https://zua.vdu.lt/wp-content/uploads/2023/03/Herbologu-konferencijos-2023-03-21_1-1.pdf
3. Žižytė M. 2009. Identification and characterization of sugar beet rhizomania causing virus. – *Conference of Young Scientists "Biofuture: Perspective of Natural and Life Sciences"*, 15 December, Vilnius, Lithuania. Book of Abstracts: 4 – 5.
4. Žižytė M., Staniulis J. 2008. Detection and characterization of sugar beet rhizomania agent in Lithuania. – *Xth conference of Lithuanian Biochemical Society "Biochemistry and systems biology"*, 20 – 22 June, Tolieja, Lithuania. Book of Abstracts: 71.