

Virmantas Stunžėnas

CONTACT INFORMATION

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<https://www.researchgate.net/profile/Virmantas-Stunzenas>
<https://scholar.google.com/citations?user=QhJyPD8AAAAJ&hl=en>

EDUCATION AND ACADEMIC DEGREE

1993 Doctor degree in Ecology N 012, Vilnius University/Institute of Ecology, Vilnius, Lithuania.
Dissertation topic: „Interactions between clones of the phytohelminth *Heterodera trifolii* Goffart, 1932 and its host, white clover *Trifolium repens* L.", supervisor – habil. dr V. Kontrimavičius.
Research field: biology, inheritance of parasite – host interactions

1980-1985 St. Petersburg (former Leningrad) University, biology-zoology.
Diploma work: “Tetraploid clover nematodes in Lithuania”.
Research field: invertebrate zoology, taxonomy

PROFESSIONAL EXPERIENCE

2012 – until now **Senior Researcher**
P. B. Šivickis Laboratory of Parasitology, Institute of Ecology, Nature Research Centre, Lithuania.

2011 **Researcher**
Nature Research Centre, Lithuania, Institute of Ecology

2010 **Senior Researcher**
Institute of Ecology, Nature Research Centre, Lithuania.

2003 – 2009 **Senior Researcher**
Institute of Ecology of Vilnius University

1993– 2003 **Researcher**
Institute of Zoology and Parasitology, Lithuanian Academy of Sciences

1985– 1993 **Junior researcher**
Institute of Zoology and Parasitology, Lithuanian Academy of Sciences

RESEARCH INTERESTS

DNA sequence analysis and mRNA is used to study animal systematics, taxonomy, cytogenetics, phylogeography, parasite-host relationships, molluscs, invasive species, mammalian immunology, the immune regulation and self- non-self recognition.

PUBLICATIONS

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

1. Petkevičiūtė, R., Stunžėnas, V., Stanevičiūtė, G. 2022. Diversity of European lissorchiid trematodes from fish and snail hosts with comments on the validity of the genus

- Parasymphylodora* Szidat, 1943. *Journal of Helminthology* 96: e67. DOI: 10.1017/S0022149X22000542
2. **Stunžėnas, V.**, Binkienė, R. 2021. Description of *Crenosoma vismani* n. sp., parasitic in the lungs of *Lynx lynx* (L.) (Carnivora: Felidae), with identification key to the species of the genus *Crenosoma* Molin, 1861 (Nematoda: Crenosomatidae). *Systematic Parasitology*. 98: 73-83. DOI: 10.1007/s11230-020-09961-1
 3. Petkevičiūtė, R., Zhokhov, A.E., **Stunžėnas, V.**, Poddubnaya, L.G., Stanevičiūtė, G. 2020. *Phyllodistomum kupermani* n. sp. from the European perch, *Perca fluviatilis* L. (Perciformes: Percidae), and redescription of *Phyllodistomum macrocotyle* (Lühe, 1909) with notes on the species diversity and host specificity in the European *Phyllodistomum* spp. (Trematoda: Gorgoderidae). *Parasites & Vectors* 13: 561. DOI: [10.1186/s13071-020-04434-2](https://doi.org/10.1186/s13071-020-04434-2)
 4. Petkevičiūtė, R., Stanevičiūtė, G. **Stunžėnas, V.** 2020. Exploring species diversity of lissorchiid trematodes (Digenea: Lissorchiidae) associated with the gravel snail, *Lithoglyphus naticoides*, in European freshwaters. *Journal of Helminthology* e152. DOI: 10.1017/S0022149X2000036X
 5. Binkienė, R., Miliūtė, A., **Stunžėnas, V.** 2019. Molecular data confirm the taxonomic position of *Hymenolepis erinacei* (Cyclophyllidea: Hymenolepididae) and host switching, with notes on cestodes of Palaearctic hedgehogs (Erinaceidae). *Journal of Helminthology* 93(2): 195-202. DOI: [10.1017/S0022149X18000056](https://doi.org/10.1017/S0022149X18000056).
 6. Petkevičiūtė, R., **Stunžėnas, V.**, Zhokhov, A.E., Poddubnaya, L.G., Stanevičiūtė, G. 2018. Diversity and phylogenetic relationships of European species of *Crepidostomum* Braun, 1900 (Trematoda: Allocreadiidae) based on rDNA, with special reference to *Crepidostomum oschmarini* Zhokhov & Pugacheva, 1998. *Parasites & Vectors* 11: 530. DOI: 10.1186/s13071-018-3095-y
 7. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G. 2018. Comments on species divergence in the genus *Sphaerium* (Bivalvia) and phylogenetic affinities of *Sphaerium nucleus* and *S. corneum* var. *mamillanum* based on karyotypes and sequences of 16S and ITS1 rDNA. *PLoS ONE* 13(1): e0191427. DOI: [10.1371/journal.pone.0191427](https://doi.org/10.1371/journal.pone.0191427)
 8. Valskienė, R., Baršienė, J., Butrimavičienė, L., Grygiel, W., **Stunžėnas, V.**, Jokšas, K., Stankevičiūtė, M. 2018. Environmental genotoxicity and cytotoxicity levels in herring (*Clupea harengus*), flounder (*Platichthys flesus*) and cod (*Gadus morhua*) inhabiting the Gdansk Basin of the Baltic Sea. *Marine Pollution Bulletin* 133: 65–76. DOI: [10.1016/j.marpolbul.2018.05.023](https://doi.org/10.1016/j.marpolbul.2018.05.023).
 9. **Stunžėnas, V.**, Petkevičiūtė, R., Poddubnaya, L.G., Stanevičiūtė, G., Zhokhov, A.E. 2017. Host specificity, molecular phylogeny and morphological differences of *Phyllodistomum pseudofolium* Nybelin, 1926 and *Phyllodistomum angulatum* Linstow, 1907 (Trematoda: Gorgoderidae) with notes on Eurasian ruffe as final host for *Phyllodistomum* spp. *Parasites & Vectors* 10: 286. DOI: 10.1186/s13071-017-2210-9.
 10. Baršienė, J., Butrimavičienė, L., Grygiel, W., **Stunžėnas, V.**, Valskienė, R., Greiciūnaitė, J., Stankevičiūtė, M. 2016. Environmental genotoxicity assessment along the transport routes of chemical munitions leading to the dumping areas in the Baltic Sea. *Marine Pollution Bulletin* 103(1-2): 45–53. DOI: [10.1016/j.marpolbul.2015.12.048](https://doi.org/10.1016/j.marpolbul.2015.12.048).
 11. Petkevičiūtė, R., Kudlai, O., **Stunžėnas, V.**, Stanevičiūtė, G. 2015. Molecular and karyological identification and morphological description of cystocercous cercariae of *Phyllodistomum umblae* and *Phyllodistomum folium* (Digenea, Gorgoderidae) developing in European sphaeriid bivalves. *Parasitology International* 64: 441–447. DOI: 10.1016/j.parint.2015.06.007.
 12. Stanevičiūtė, G., **Stunžėnas, V.**, Petkevičiūtė, R. 2015. Phylogenetic relationships of some species of the family Echinostomatidae Odner, 1910 (Trematoda), inferred from nuclear rDNA sequences and karyological analysis. *Comparative Cytogenetics* 9(2): 257–270. DOI: 10.3897/CompCytogen.v9i2.4846

13. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G., Zhokhov, A.E. 2015. European *Phyllodistomum* (Digenea, Gorgoderidae) and phylogenetic affinities of *Cercaria duplicata* based on rDNA and karyotypes. *Zoologica Scripta* 44: 191–202. DOI: 10.1111/zsc.12080
14. **Stunžėnas, V.**, Petkevičiūtė, R., Stanevičiūtė, G., Binkienė, R. 2014. *Rhipidocotyle fennica* (Digenea: Bucephalidae) from *Anodonta anatina* and pike *Esox lucius* in Lithuania. *Parasitology Research* 113: 3881–3883. DOI: 10.1007/s00436-014-4102-7.
15. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G. 2014. Differentiation of European freshwater bucephalids (Digenea: Bucephalidae) based on karyotypes and DNA sequences. *Systematic Parasitology* 87 (2): 199–212. DOI: 10.1007/s11230-013-9465-0
16. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G. 2012. Clarification of the systematic position of *Cercariaeum crassum* Wesenberg-Lund, 1934 (Digenea), based on karyological analysis and DNA sequences. *Journal of Helminthology* 86: 293–301. DOI: 10.1017/S0022149X11000393
17. Skrodenytė-Arbačiauskienė, V., Radžiūtė, S., **Stunžėnas, V.**, Būda, V. 2012. *Erwinia typographi* sp.nov., isolated from 1 bark beetle (*Ips typographus*) gut. *International Journal of Systematic and Evolutionary Microbiology* 62: 942-948.
18. **Stunžėnas, V.**, Petkevičiūtė, R., Stanevičiūtė, G. 2011. Phylogeny of *Sphaerium solidum* (Bivalvia) based on karyotype and sequences of 16S and ITS1 rDNA. *Central European Journal of Biology* 6(1): 105–117. DOI 10.2478/s11535-010-0101-6
19. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G., Sokolov, S.G. 2010. Comparison of the developmental stages of some European allocreadiid trematode species and a clarification of their life-cycles based on ITS2 and 28S sequences. *Systematic Parasitology* 76: 169–178. DOI: 10.1007/s11230-010-9249-8.
20. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G., Lee, T., Ó Foighil, D. 2007. Pronounced karyological divergence of the North American congeners *Sphaerium rhomboideum* and *S. occidentale* (Bivalvia: Veneroida: Sphaeriidae). *Journal of Molluscan Studies* 73: 315–321. DOI: 10.1093/mollus/eym025
21. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G. 2006. Polymorphism of the *Sphaerium corneum* (Bivalvia, Veneroida, Sphaeriidae) revealed by cytogenetic and sequence comparison. *Biological Journal of the Linnean Society* 89: 53–64. DOI: 10.1111/j.1095-8312.2006.00657.x
22. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G. 2004. Cytogenetic and sequence comparison of adult *Phyllodistomum* (Digenea: Gorgoderidae) from the three-spined stickleback with larvae from two bivalves. *Parasitology* 129 (6): 771–778. DOI: 10.1017/S0031182004006109
23. **Stunžėnas, V.**, Cryan, J.R., Molloy, D.P. 2004. Comparison of rDNA sequences from colchicine treated and untreated tissues. *Parasitology International* 53(3): 223-228. DOI: 10.1016/j.parint.2003.12.003

Scientific articles published in conference proceedings, indexed in „Clarivate Analytics Web of Science“ database:

1. Kudlai, O., **Stunžėnas, V.** 2013. First description of cercaria of *Stephanoprora pseudoechinata* (Olsson, 1876)(Digenea: Echinostomatidae) using morphological and molecular data, *Tropical Medicine & International Health*. 18 (s1): 230
2. Petkevičiūtė, R., **Stunžėnas, V.**, Stanevičiūtė, G. 2013. DNA based analysis of the life cycles of *Phyllodistomum* spp. (Digenea, Gorgoderidae): current status of knowledge and perspectives. *Tropical Medicine & International Health*. 18 (s1): 229.
3. Stanevičiūtė, G., **Stunžėnas, V.**, Petkevičiūtė, R. 2013. Studies of *Rhipidocotyle fennica* Gibson, Taskinen & Valtonen 1992 (Digenea: Bucephalidae), parasitising bivalvia *Anodonta anatina*, based on DNA sequences. *Tropical Medicine & International Health*. 18 (s1): 229.

4. **Stunžėnas, V.**, Petkevičiūtė, R., Stanevičiūtė, G. 2015. Differentiation and phylogenetic analysis of Gorgoderina, Gorgodera and Phyllodistomum spp. based on rDNA sequences with comments on their karyotypes and life cycles. 6-th Conference of the Scandinavian-Baltic society for parasitology, Current trends in parasitology. 23-24.
5. Stanevičiūtė, G., Petkevičiūtė, R., **Stunžėnas, V.**, Kudlai, O. 2015. Cystocercous cercariae in sphaeriid bivalves and notes on the life cycle of Phyllodistomum umblae (Fabricius, 1780). 6-th Conference of the Scandinavian-Baltic society for parasitology, Current trends in parasitology, 24.

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

1. **Stunžėnas, V.** 2012. Book review. The Evolutionary History of Nematodes: As revealed in Stone, Amber and Mummies. *Zoology and Ecology* 22 (1): 78-79.
2. Sruoga, V., **Stunžėnas, V.**, Paulavičiūtė, B. 2009. COI gene as a molecular marker of Elachista species (Lepidoptera: Elachistidae: Elachistinae) from different Lithuanian populations. *Proceedings of the Latvian Academy of Sciences. Section B* 63(1/2): 21–24.
3. **Stunžėnas, V.**, Petkevičiūtė, R. and Stanevičiūtė, G. 2005. What are hosts of *Phyllodistomum folium* (Trematoda, Gorgoderidae)? The comparison of ribosomal DNA sequences of trematodes from intermediate and final hosts. *Bulletin of the Scandinavian-Baltic Society for Parasitology* 14: 146-147.

Reviewed scientific articles, published in Lithuania:

1. Bernotienė, R., **Stunžėnas, V.** 2009. On the biology of *Simulium galeratum* in Lithuania: ecological and molecular data. *Ekologija* 55(2): 121-124.
2. Skrodenytė-Arbačiauskienė, V., Būda, V., Radžiūtė, S., **Stunžėnas, V.** 2006. Myrcene-resistant bacteria isolated from the gut of phytophagous insect *Ips typographus*. *Ekologija* 4: 1-6.
3. Baltrūnaitė, L., Mažeikytė, J. R., **Stunžėnas, V.** 2006. New data on the distribution of mitochondrial DNA lineages of the field vole (*Microtus agrestis*) in Lithuania and Belarus. *Acta Zoologica Lituanica* 16: 115-118.
4. **Stunžėnas, V.** 2001. Parasite and its host interaction: new point of view on immune regulation. *Acta Zoologica Lituanica* 11(4): 405-413. DOI: 10.1080/13921657.2001.10512478
5. **Stunžėnas V.**, Stanevičiūtė G. 2001. The effect of total RNA on splenocyte response to allogeneic cells. *Biologija* 1: 36-38.
6. **Stunžėnas V.**, Stanevičiūtė G. 2000. How parasites change their environment – host immunity for survival in the host. New hypothesis. *Ekologija* 4: 32-40.
7. **Stunžėnas, V.** 1998. Inheritance of ability to inoculate clover clones in parthenogenetic clones nematode *Heterodera trifolii* Goffart, 1932. *Acta Zoologica Lituanica, Parasitologica* 8: 53-60. DOI: 10.1080/13921657.1998.10541439
8. Arnastauskienė, T., Jakimavičius, A., **Stunžėnas, V.** 1995. Baltic—Scandinavian Symposium on Parasitic Zoonoses and Ecology of Parasites. *Acta Zoologica Lituanica* 1(2): 71-75. DOI: 10.1080/13921657.1995.10541380
9. **Stunžėnas, V.** 1993. *Heterofera trifolii* Goffart, 1932 and *Trifolium repens* L. clones interaction. *Acta Parasitologica Lituanica* 24: 92-99.
10. **Stunžėnas, V.** 1993. Interaction of phytonematode *Heterodera trifolii* Goffart, 1932 and it's host *Trifolium repens* L. genotypes in two temperature regimes. *Biologija* 1: 49-50.
11. **Stunžėnas, V.** 1992. Influence of temperature on interaction of clones *Heterodera trifolii* Goffard 1936 and *Trifolium repens* L. *Experimental Biology* 2(2): 24-28. ISSN 0235-7232

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

- 2019-2024 **Project leader in Lithuania**
 COST (European Cooperation in Science and Technology) CA18239,
 „Conservation of freshwater mussels: a pan-European approach
- 2015 – 2018 **Project leader**
 Research Council of Lithuania. Contract MIP-043/2015. " Specificity of parasitic
 platyhelminthes and their speciation in relation to the host spectrum"
- 2013 – 2015 **Principal Investigator**
 Research Council of Lithuania. Contract No. MIP-52/2013. “Studies on evolution
 of life-cycles and phylogeny of flukes based on molecular and karyological data”.
- 2012-2013 **Project leader**
 Ministry of Science and Education. Lithuanian – Ukrainian scientific cooperation
 programe. Contract No. TAP-LU-11-034. „Species diversity and host specificity of
 bucephalid flukes: life cycle analysis and phylogeny revealed by morphological,
 karyological and molecular methods”
- 2010-2011 **Project leader**
 Research Council of Lithuania. Contract No. MIP-84/2010. “Molecular
 identification and life cycles of flukes associated with bivalve mollusks and
 fishes”.
- 2010-2011 **Principal Investigator**
 Research Council of Lithuania. Contract No. LEK-10/2010. “Studies of invasive
 freshwater mollusks and associated flukes communities using genetic markers”.
- 2012-2013 **Principal Investigator**
 Research Council of Lithuania. Contract No. MIP-33/2012. "GENOTOX-CG"
- 2008-2009 **Project leader**
 Project „ Postglacial recolonization of ecosystems in Central Europe and
 phylogeography of *Sphaerium* species“ supported by an agreement between
 Lithuanian Academy of Sciences and Hungarian Academy of Sciences.
- 2007-2009 **Investigator**
 Lithuanian State Science and Study Foundation. Project No. C-07002 „Trends in
 ecosystems development, and studies on the molecular phylogeography of
 populations in the Baltic region”
- 2005-2006 **Investigator**
 US National Science Foundation New investigator’s Twinning Program, “Towards
 a comprehensive phylogeny of holarctic Sphaeriidae (Mollusca: Bivalvia):
 systematics, genome amplification and phylogeography”
- 2003-2006 **Investigator**
 Lithuanian State Science and Study Foundation. Project No. C-03056 “Formation
 and Changes of Post-glacial Ecosystems in the Baltic Region (relation between
 molecular and traditional data)”
- 2001-2002 **Investigator**
 US National Science Foundation New investigator’s Twinning Program,
 “Cytogenetics - a tool for species discrimination among trematode parasites of
 zebra mussels"

INTERNSHIP AND TRAINING

- 2012 Cruises 357 and 360 of the Research Vessel "Walther Herwig III" led by Dr.
 Thomas Lang (Johann Heinrich von Thünen Institute). During the expeditions, the
 research methods of fish monitoring at sea were introduced. Conducted training in

the cytogenetic preparations.

- 2005 Natural history museum in Ann Arbor, Michigan and University of Michigan Biological Station on the shore of Douglas Lake, USA
- 2002 The Laboratory for Conservation and Evolutionary Genetics and field research laboratory of the New York State Museum, USA

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. 2017 - EUROMAL - 8th European Congress of Malacological Societies, Krakow, Poland.
2. 2016 - EMOP XII – the 12th European Multicolloquium of Parasitology, Turku, Finland.
3. 2015 - 6th Conference of the Scandinavian-Baltic Society for Parasitology, Uppsala, Sweden.
4. 2013 - XV Conference of Ukrainian Scientific Society of Parasitologists, Chernivtsi, Ukraine.
5. 2013 - 8th European Congress on Tropical Medicine and International Health & 5th Conference of the Scandinavian-Baltic Society for Parasitology, Copenhagen, Denmark.
6. 2011 - IVth Conference of The Scandinavian-Baltic Society for Parasitology (4th CSBSP), Oslo, Norway.
7. 2011 - EUROMAL - 6th European Congress of Malacological Societies, Vitoria-Gasteiz, Spain.
8. 2003 - Ninth international helminthological symposium. *Helminths, helminthoses and environment*, p. 52, Stara Lesna, High Tatras, Slovak Republic.

PARTICIPATION IN THE STUDY PROCESS

Member of the dissertation defence council:

Scientific field: *Natural science* (N000). *Ecology and environmental science* (N 012)

Svetlana Orlovskytė	"Insects inhabiting the trap-nests for hymenoptera and effects of anthropogenic factors on them".	2017.05.05
Eglė Rudaitytė-Lukošienė	"Sarcocystis species richness in members of the family Cervidae".	2020.09.22

Supervision of bachelor and master students:

Janina Greiciūnaitė	Bachelor thesis topic: "Bivalve molluscs of the families Unionidae and Dreissenidae as intermediate hosts of flukes (Trematoda) in Lithuanian water bodies" (Vilnius University)	2013 m.
Jelena Beliajeva	Master thesis topic: "Genetic studies of suckers of the families Allocreadiidae and Gorgoderidae" (Vilnius University)	2016 m.
Augustas Klimavičius	Bachelor thesis topic: "Identification of small mollusk species of Sphaeriidae using DNA markers and scanning electron microscopy" (Vilnius University, Life Science Centre)	2017 m.
Aurelija Miliūtė	Master thesis topic: "Molecular studies of suckers parasitizing northern European freshwater bivalve molluscs and fish" (Vilnius University, Life Science Centre)	2018 m.
Austėja Petkevičiūtė	Bachelor thesis topic: "Application of Molecular Tools in Prospecting for Cryptic Helminth Species and Elucidation of	2019 m.

Their Phylogeny and Life Cycles” (Vilnius Gediminas technical university, Faculty of Fundamental Sciences)

Monika Veckaitė Bachelor thesis topic: “The Application of DNA Sequence Data for the Helminth Biodiversity Studies” (Vilnius Gediminas Technical University, Faculty of Fundamental Sciences) 2021 m.

Other

1. Since 2019, an expert of the Lithuanian Research Council.
2. Since 2017, External Expert for COST Actions.
3. Since 2012 m. Comparative Cytogenetic (<https://compcytogen.pensoft.net>) Subject Editor (Worms, helminthes, molluscs)
4. Database of Trematoda from East and Central Europe (http://helminths.ekoi.lt/index_en.htm).
5. Patent: **Stunžėnas, V.** 1998. Use of the RNA chosen instead of a protein in production of bioactive substances or for specific immunity control. International Application Publisher Under The Patent Cooperation Treaty (PCT). WO9837900, 1-13.
6. 1998 m. Lithuanian Innovation Center Award "The best biotech innovation" .