

Curriculum vitae

2024 November

PERSONAL INFORMATION

Edvardas Golovinas

Vilnius University Life Sciences Centre, Institute of Biotechnology. Sauletekio ave. 7, 10257, Vilnius, Lithuania.
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Date of birth 1991-06-09

EDUCATION

2017-10–2024-02

PhD in Biochemistry

Vilnius University, Vilnius (Lithuania)

Thesis: Structural and biochemical studies of an argonaute and its associated protein from *Archaeoglobus fulgidus*, <https://doi.org/10.15388/vu.thesis.589>

Academic consultants: Dr Mindaugas Zaremba, Dr Elena Manakova

2014-09–2016-06

Master of Biochemistry

Vilnius University, Vilnius (Lithuania)

Thesis: Study of intermolecular interactions in a cholesterol-phospholipid monolayer using sum-frequency generation spectroscopy

Supervisor: Dr Gediminas Niaura

2010-09–2014-06

Bachelor of Bioengineering

Vilnius Gediminas Technical University (Vilnius Tech), Vilnius (Lithuania)

Thesis: Study of amino acid adsorption at air/water interface using sum-frequency generation

Supervisor: Dr Gediminas Niaura

WORK EXPERIENCE

2024-07–present

Researcher

Vilnius University, Institute of Biotechnology, Department of Protein-DNA Interactions

2023-05–present

Junior research fellow

Vilnius University, Institute of Biotechnology, Department of Protein-DNA Interactions

2023-2026 Research Council of Lithuania research groups project "Interactions of prokaryotic Argonaute proteins with other antiphage defence systems", P-MIP-23-211.

2024-01–2024-06

Research biologist

Vilnius University, Institute of Biotechnology, Department of Protein-DNA Interactions

2017-09–2023-12

Various research positions in projects adjacent to PhD studies

Vilnius University Life Sciences Centre, EMBL partnership institute

Biochemical studies of bacterial defence systems against foreign nucleic acids, EMBL partnership institute at VU LSC, project No. 01.2.2-CPVA-V-716-01-0001.

2020-2023 Research Council of Lithuania research groups project "Structural and functional studies of split prokaryotic Argonaute proteins", S-MIP-20-37.

2018-2022 Research Council of Lithuania global grant project "Molecular mechanisms of novel bacterial antiviral defence systems", 09.3.3-LMT-K-712-01-0126.

2017-2020 Research Council of Lithuania research groups project "Structural and functional studies of prokaryotic Argonaute proteins", S-MIP-17-61.

2017-01–2017-09 **Biotechnologist**
Northway Biotechpharma, Vilnius (Lithuania)

2015-10–2016-12 **Engineer**
Centre for Physical Sciences and Technology, Vilnius (Lithuania)

2015-02–2015-06 **Engineer**
Centre for Physical Sciences and Technology, Vilnius (Lithuania)

2013-02–2013-04 **Technician**
Centre for Physical Sciences and Technology, Vilnius (Lithuania)

2011-09–2014-01 **Laboratory technician**
Vilnius Gediminas Technical University, Vilnius (Lithuania)

INTERNSHIPS

2015-03-2015-05 **Intern**
Vilnius University Institute of Biochemistry, Vilnius (Lithuania)
Funded by the Research Council of Lithuania

2014-10–2014-12 **Intern**
Centre for Physical Sciences and Technology, Vilnius (Lithuania)
Funded by the Research Council of Lithuania

2013-06–2013-08 **Intern**
Vilnius University Institute of Biotechnology, Vilnius (Lithuania)
Funded by the Research Council of Lithuania

2012-10–2013-01 **Intern**
Centre for Physical Sciences and Technology, Vilnius (Lithuania)
Funded by the Research Council of Lithuania

2012-06–2012-08 **Intern**
Centre for Physical Sciences and Technology, Vilnius (Lithuania)
Funded by the Research Council of Lithuania

OTHER SKILLS

2023-10-02–04 **EMBO Project Management for Scientists Course**
EMBO Solutions GmbH

2023-06-05 **Radiation safety licence - responsible**
CJSC “Kita kompetencija”
Licence for persons responsible for radiation safety in business entities working with non-medical open radioactive sources. Exp. 2028-06-05. Supersedes licence to work with non-medical open radioactive sources.

2022-11-10 **EMBO Research integrity workshop**
Life Sciences Center, Vilnius University, Lithuania

2018-10-26 **Radiation safety licence - responsible**

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CJSC “Kita kompetencija”

Licence for persons responsible for radiation safety in business entities working with non-medical open radioactive sources. Exp. 2023-10-26.

2018-06-01

Radiation safety licence - working

CJSC “Kita kompetencija”

Licence to work with non-medical open radioactive sources. Exp. 2023-06-01.

RESEARCH DISSEMINATION

Publications

- E. Manakova, Č. Venclovas, M. Zaremba, **E. Golovinas**, R. Pocevičiūtė, G. Sasnauskas, A. Šilanskas, D. Rutkauskas, M. Jankunec, E. Zagorskaitė, E. Jurgelaitis, A. Grybauskas, The Missing Part: The *Archaeoglobus fulgidus* Argonaute Forms a Functional Heterodimer with an N-L1-L2 Domain Protein, *Nucleic Acids Research*, 52, 2530–2545 (2024) <https://doi.org/10.1093/nar/gkad1241>.
- E. Manakova, **E. Golovinas**, R. Pocevičiūtė, G. Sasnauskas, A. Grybauskas, S. Gražulis & M. Zaremba, Structural Basis for Sequence-Specific Recognition of Guide and Target Strands by the *Archaeoglobus fulgidus* Argonaute Protein, *Scientific Reports* 13, 6123 (2023) <https://doi.org/10.1038/s41598-023-32600-w>.
- M. Zaremba, D. Dakinevičienė, **E. Golovinas**, E. Zagorskaitė, E. Stankūnas, A. Lopatina, R. Sorek, E. Manakova, A. Rukšėnaitė, A. Šilanskas, S. Ašmontas, A. Grybauskas, U. Tylenyte, E. Jurgelaitis, R. Grigaitis, K. Timinskas, Č. Venclovas, V. Šikšnys, Short Prokaryotic Argonautes Provide Defence Against Incoming Mobile Genetic Elements through NAD⁺ Depletion, *Nature Microbiology* 7, 1857–1869 (2022) <https://doi.org/10.1038/s41564-022-01239-0>.
- **E. Golovinas**, D. Rutkauskas, E. Manakova, M. Jankunec, A. Šilanskas, G. Sasnauskas, M. Zaremba, Prokaryotic Argonaute from *Archaeoglobus fulgidus* Interacts with DNA as a Homodimer, *Scientific Reports* 11, 4518 (2021). <https://doi.org/10.1038/s41598-021-83889-4>.

Conferences

- EMBO | EMBL Symposium: The Non-Coding Genome, poster presentation, RNA-guided DNA Binding Specificity of a Prokaryotic Argonaute Protein from *Archaeoglobus fulgidus*, **E. Golovinas**, E. Manakova, G. Sasnauskas, S. Gražulis, V. Šikšnys and M. Zaremba. Virtual, October 13-15, 2021.
- EMBO | EMBL Symposium: The Complex Life of RNA, poster presentation, Prokaryotic Argonaute from *Archaeoglobus fulgidus* Interacts with DNA as a Homodimer, **E. Golovinas**, D. Rutkauskas, E. Manakova, M. Jankunec, A. Šilanskas, G. Sasnauskas, M. Zaremba. Virtual, October 7-9, 2020.
- International conference FEBS3+ 2019, poster presentation, Specificity of the Argonaute Protein from *Archaeoglobus fulgidus* to the 5'-end of the Guide, M. Zaremba, E. Manakova, **E. Golovinas**, S. Gražulis, V. Šikšnys, Riga, Latvia, June 17-19, 2019.
- International Conference for Students of Physics and Natural Sciences “Open Readings 2019”, poster presentation, Specificity of the Argonaute Protein from *Archaeoglobus fulgidus* to the 5'-end of the Guide, M. Zaremba, E. Manakova, **E. Golovinas**, S. Gražulis, V. Šikšnys, Vilnius, Lithuania, March 19-22, 2019.
- International Conference of Life Sciences “The COINS 2019”, poster presentation, Specificity of the Argonaute Protein from *Archaeoglobus fulgidus* to the 5'-end of the Guide, M. Zaremba, E. Manakova, **E. Golovinas**, S. Gražulis, V. Šikšnys, Vilnius, Lithuania, February 26-28, 2019.
- International Conference for Students of Physics and Natural Sciences “Open Readings 2015”, oral presentation, Study of the effects of Lipid Monolayer Composition and Phase on Interfacial Water Structure by Sum-Frequency Spectroscopy, **E. Golovinas**, L. Abariūtė, G. Valinčius, G. Niaura, Vilnius, March 24–27, 2015.
- International Conference of Lithuanian Society of Chemistry “Chemistry & Chemical Technology 2016”, poster presentation, Study of Temperature Influence on Molecular Interactions in Cholesterol Using Raman Spectroscopy, **E. Golovinas**, G. Niaura, G. Valinčius, Vilnius, April 28-29, 2016.
- International Conference of Natural and Life Sciences “The COINS 2015”, oral presentation, Study of Lipid Raft Formation in Cholesterol-Lipid Monolayers Using Sum Frequency Generation Spectroscopy, Vilnius, March 3–7, 2015.
- International Conference of Lithuanian Chemical Society “Chemistry & Chemical Technology

2015", poster presentation, Study of Molecular Interactions in Cholesterol-Phospholipid Monolayer Using Sum Frequency Generation Spectroscopy, **E. Golovinas**, L. Abariūtė, G. Valinčius, G. Niaura, Vilnius, January 23, 2015.

- 11th International Conference of Lithuania's Chemists, poster presentation, Analysis of Structure of Self-Assembled Monolayers on a Gold Electrode Using Sum-frequency Generation Spectroscopy, **E. Golovinas**, I. Ignatjev, M. Mickevičius, Vilnius, September 27, 2013.