

Curriculum vitae

Giedrė Tamulaitienė

Research Professor

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Gender

Female

Date and place of birth

May 18, 1975, Vilnius, Lithuania.

Scientific degrees

2002-2007	Vilnius University, Institute of Biotechnology Vilnius, Lithuania - PhD, Biochemistry <i>Crystallographic and Functional Investigations of Type II Restriction Endonucleases Eco57I and SdaI</i>
1997-1999	Vilnius University, Lithuania. - Master degree, Biochemistry <i>Determination of sequence specificity of methyltransferases expressed in vivo in H. pylori</i>
1993-1997	Vilnius University, Lithuania. - Bachelor degree, Biochemistry <i>Screening for novel specific restriction endonucleases and characterization of new restriction endonucleases BseGI, BseMI and MbiI</i>

Professional positions:

2025-present	Research Professor, Laboratory of Protein-DNA Interactions Institute of Biotechnology, Life Sciences Center, Vilnius University,
2011-2025	Senior Research Scientist, Laboratory of Protein-DNA Interactions Institute of Biotechnology, Life Sciences Center, Vilnius University,
2007-2011	Research Scientist Laboratory of Protein-DNA Interactions Institute of Biotechnology,
2006-2007	Junior Research Scientist Laboratory of Protein-DNA Interactions Institute of Biotechnology,
2002-2006	PhD student, supervisor Dr. S.Grazulis Laboratory of Protein-DNA Interactions Institute of Biotechnology,
1999-2002	Research Assistant Laboratory of the Nucleic Acid Metabolizing Enzymes Institute of Biotechnology,

Major research interests:

Protein structure and function, structural biology, prokaryotic antiviral defense systems, restriction endonucleases, CRISPR-Cas, Thoeris, signaling systems in prokaryotes, NAD⁺ related compounds, CARF/SAVED, TIR, SIR2, Macro domains.

Grants

2024-2027	Research Council of Lithuania, Researcher teams' project Nr. S-MIP-24-84 „Structural and functional studies of bacterial antiviral defense systems with TIR/SIR2 domain“.
2021-2024	Research Council of Lithuania, Researcher teams' project Nr. S-MIP-21-6 „Structural and functional studies of Thoeris bacterial antiphage defense system“.
2017-2020	Research Council of Lithuania, Researcher teams' project Nr. S-MIP-17-47 „Research and practical applications of a type IF CRISPR-Cas system“.
2013-2015	Research Council of Lithuania, Researcher teams' project Nr. MIP-41/2013 „Structural and functional studies of restriction enzyme family“.
2011-2012	Research Council of Lithuania, Researcher teams' project Nr. MIP-90/2011 „Phage T4 praimosome“.
2008	UAB Fermentas and Lithuanian Science and Studies Foundation; „Screening of crystallization conditions of thermophytic polymerase“

Awards and distinctions

2024	Vilnius University Rector's Science award
2024	Vilnius University „Best publication of the year 2023“
2021	Vilnius University „Best publication of the year 2020“
2012	Research Council of Lithuania fellowship „Promoting gender equality in science (LYMOS)“ 1.2.1 action.
2008	Lithuanian Society of Young Researchers award for best PhD thesis in Lithuania of 2007
2006	FEBS travel grant for 31 st FEBS Congress (Turkey)
2006	IUCr travel grant to attend BioCry2006 Course (Portugal)
2005,2006	Doctoral Research Fellowship from the Lithuanian State Science and Studies Foundation, Lithuania.
2005	MAXINF2 (European Macromolecular Crystallography Infrastructure Cooperation Network) travel grant to attend MM4MX Course (United Kingdom)
2002	EMBO travel grant to attend EMBO Course (France).

Teaching

2005-2025	Student summer and spring/autumn practice for students from Vilnius University (VU) and Vilnius Gediminas Technical University
2007-2008	supervisor of G. Kostiuk, VU, biochemistry bachelor thesis.
2008-2009	supervisor of V. Jovaisaitė, VU, biochemistry bachelor thesis.
2008-2010	supervisor of G. Kostiuk, VU, biochemistry master thesis.
2010-2011	supervisor of I. Ramonaite, VU, biochemistry bachelor thesis.
2011-2020	supervisor of I. Ramonaite, VU, biochemistry master thesis.
2014-2016	supervisor of M. Mikutenaite, VU, genetics bachelor thesis.
2015-2017	supervisor of D. Tuminauskaite, VU, biochemistry bachelor thesis.
2017-2019	supervisor of D. Tuminauskaite, VU, biochemistry master thesis.
2017-2020	supervisor of A. Rimšaite, VU, biochemistry bachelor thesis.
2019-2021	supervisor of D. Sabonis, VU, biochemistry bachelor thesis.
2020-2022	supervisor of D. Vilutis, VU, biochemistry bachelor thesis.
2021-2023	supervisor of D. Sabonis, VU, biochemistry master thesis.
2022-2024	supervisor of D. Vilutis, VU, biochemistry master thesis.
2022-2024	supervisor of U. Andrijauskaitė, VU, biochemistry bachelor thesis.
2016 -	Teaching part of Molecular biology course (lectures and seminars) for IV year biochemistry students, VU

Other activities

2025-2027	Member of the Admission-Attestation Commission of the Vilnius University Life Sciences Center for the three-year term
2024-2025	Participation in the meetings in Lithuania and Germany for establishment of cooperation between the Baltic countries and DESY (Deutsches Elektronen-Synchrotron) in the area of structural biology

Courses and workshops

2009 FSB/BCO protein crystallography course „Practical and theoretical aspects of datacollection and dataprocessing“, University of Oulu, Oulu, Finland

2008 EMBO course "Computational Aspects of the Protein Target Selection, Protein Production Management and Structure Analysis Pipeline"; EMBL Hinxton Cambridge, UK

2006 Biocrys2006 "Fundamentals of modern methods in biocrystallography", Instituto de Tecnologia Química e Biológica; Oeiras; Portugal

2005 Practical Course on Training in methods for Macromolecular Crystallography M2M-5: From Measurement to Model", EMBL/DESY, Hamburg, Germany

2005 MM4MX course ("Macromolecular Modeling for Macromolecular Crystallographers"), Diamond Light Source, Chilton, Didcot, UK

2004 EMBO course "Automated Macromolecular Structure Solution", The Netherlands Cancer Institute, Amsterdam, Netherlands

2002 EMBO practical course "Crystallization of Macromolecular Complexes", EMBL/Grenoble Outstation, Grenoble, France

Visits

2002-2019 EMBL/DESY, Hamburg, MAX IV, Lund: data collection at the synchrotron (1-2 weeks/year)

2002,2006,2007 International Institute of Molecular and Cell Biology, Warsaw, Poland, data collection and crystallization with Dr. M. Bochtler (1 week)

2001 Center of Biocrystallographic Research, Institute of Bioorganic Chemistry, Poznan, Poland, data collection with Prof. M. Jaskólski (1 week)

Conferences

2025 European Crystallographic Meeting, ECM35, Poznan, Poland. Invited talk „Structural insights into the bacterial antiviral defense system Thoeris“.

2025 WENNER-GREN FOUNDATIONS symposium “Phage-bacteria interactions: the molecular battle for control of the central dogma”, Stockholm, Sweden. Invited talk „Type III CRISPR-Cas effectors interfering with transcription and translation“.

2025 49th FEBS Congress, Istanbul, Turkey. Invited talk „Molecular insights into the immune mechanism of bacterial antiviral defense system Thoeris“.

2024 The iNext-Discovery Foresight Meeting, Karkow, Poland. Oral presentation “Structural studies of Thoeris bacterial antiviral system”

2024 The 2024 Symposium on the Immune System of Bacteria in Harvard Medical School, Boston, USA. Invited talk “Type II Thoeris system produces a new type signaling molecule”.

2023 EMBO 2023 Symposium „Immune System of Bacteria“ Rehovot, Israel. Oral presentation „Functional and structural studies of Thoeris bacterial antiviral system“

2022 The Biochemistry Global Summit, IUBMB– FEBS–PABMB Congress, Lisbon, Portugal. Poster presentation “Crystal structures of TIR-domain proteins from Thoeris bacterial antiviral system”.

2021 EMBL Symposia „New Approaches and Concepts in Microbiology“ Heidelberg, Germany (virtual). Poster presentation: „Crystal structure of a TIR-domain protein from Thoeris bacterial antiviral system“

2018 „CRISPR 2018“ Vilnius, Lithuania. Poster presentations: (1) „Structure and Function of Cas6 from *S. thermophilus* Type IIIA system“; (2) „Influence of spacer length for DNA interference in a type I-F CRISPR-Cas system“.

2015 „7th NEB meeting on DNA Restriction and modification“ Gdansk, Poland. Poster presentation: „Crystal Structure and DNA Cleavage Mechanism of Restriction Endonuclease BsaWI.“

2014 “The FEBS EMBO 2014 Conference“, Paris, France. Poster presentation: “From monomer to tetramer: crystal structures of related restriction endonucleases AgeI and BsaWI.”

2012 FASEB conference „Nucleic Acid Enzymes“, Snowmass Village, Colorado, USA. Poster presentation „HE+HE=RE: crystal structure of Type IIS restriction endonuclease MnlI“.

2012 37th FEBS Congress „From single molecules to systems biology“, Sevilla, Spain. Poster presentation: „Protein-protein interactions in phage T4 primosome.“

2012 2nd ARIP European Conference on Antimicrobial Resistance and Infection Prevention, Vilnius, Lithuania.

2010 6th New England Biolabs Meeting on Restriction and Modification. Bremen, Germany, poster presentation: „DNA recognition by AgeI“.

2006 31st FEBS Congress ”Molecules in Health and Disease“; FEBS; Istanbul; Turkey. Poster presentation ”Novel Domain Architecture of SdAI Restriction Endonuclease“