

## CURRICULUM VITAE

Name: Vladimír Pevala, PhD.

Nationality: Slovak

Address: Institute of Molecular Biology  
Department of Biochemistry and Protein Structure  
Slovak Academy of Sciences  
Dubravska cesta 21  
845 51 Bratislava 45  
Slovakia

Telephone: +421 2 5930 7442

E-Mail: [vladimir.pevala@savba.sk](mailto:vladimir.pevala@savba.sk)

Researcher unique identifier: <http://orcid.org/0000-0001-5110-8837>

ResearcherID: M-8513-2015



### Education:

- 1996 - 2001 Graduate study at the **Department of Biochemistry, Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia**  
Main subjects: Biochemistry, Molecular biology and Organic chemistry  
Thesis: Morphologic and metabolic changes in *Schizosaccharomyces pombe* induced by mitochondrial inhibitors and expression of mammalian proapoptotic protein Bax.  
Supervisor: Prof. Jordan Kolarov, PhD
- 2001 - 2004 Postgraduate study at the **Department of Biochemistry, Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia**  
Thesis: The role of mitochondria in apoptosis like cell death of yeast *S. pombe*  
Supervisor: Prof. Jordan Kolarov, PhD, Defense: April 21<sup>st</sup>, 2010
- 2002 3-month Socrates/Erazmus study stay at **Department of biochemistry and biophysics, Stockholm University, Sweden** (supervisor prof. Elzbieta Glaser). Studies of protein-protein interactions of components of the human mitochondrial protein import machinery using yeast two-hybrid system
- 2002 FEBS advanced Course N°02-11: Basic Methods in Yeast Genetics and Molecular Biology, **Université Louis-Pasteur, Strasbourg, France**
- 2003 4-month visit at **Department of biochemistry and biophysics, Stockholm University, Sweden** (supervisor prof. Elzbieta Glaser). Possible connections between mitochondrial protein import machinery and apoptosis.
- 2006 FEBS advanced Course N°06-06: Frontiers in Molecular Biochemistry of Mitochondria, **Warsaw, Poland**
- 2007 Advanced Course in Cell Biology 2007: Apoptotic processes in yeast and mammalian cells - common and unique features, **Charles University, Medical Faculty, Hradec Králové, Czech Republic**
- 2007 Summer school of Bioinformatics, **Bratislava, Slovakia**
- 2010 The Bioinformatics Roadshow, EMBL-EBI Training program, IMB SAV, **Bratislava, Slovakia**
- 2011 EMBO Practical Course: Electron Microscopy and Stereology in Cell Biology, **Strasbourg, France**
- 2012 EMBO Practical Course: Cryo-Electron Microscopy and 3D Image Processing, **EMBL Heidelberg, Germany**
- 2012 EMBO Practical Course: Protein expression, purification and characterization (PEPC8), **EMBL Hamburg, Germany**

- 2013 EMBO Practical Course: Small angle neutron and X-ray scattering from proteins in solution, **Grenoble, France**
- 2014 The 1st FEBS-INSTRUCT practical crystallization course: Advanced methods in macromolecular crystallization VI, **Nove Hradý, Czech republic**
- 2016 EMBO Practical Course on Characterization of post-translational modifications (pc16-24), **Odense, Denmark**

### Work Experience:

- 2001 July - September: Researcher at the **Department of Biochemistry, Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia**
- 2005 - 2008 Researcher at the **Department of Biochemistry, Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia**
- 2008 - 2024 Researcher and deputy manager at the **Department of Biochemistry and Protein Structure, Institute of Molecular Biology, Slovak Academy of Sciences, Bratislava, Slovakia**
- 2025 - group leader at the **Department of Biochemistry and Protein Structure, Institute of Molecular Biology, Slovak Academy of Sciences, Bratislava, Slovakia**

### Grants:

- The effect of pathologic mutations and post-translational modifications on the functions of mitochondrial processing peptidase essential for transport to mitochondria**, Grant Nr. APVV-23-0407, duration: 07/2024-6/2028, researcher
- Interaction of Mmi1/TCTP protein with mitochondria**, Grant Nr. SK-CZ-RD-21-0104, duration: 07/2022-6/2025, principal investigator for IMB SAS
- The role of mitochondrial protease Lon and phosphorylation of mitochondrial nucleoid proteins in the homeostasis and maintenance of mtDNA**, Grant Nr. VEGA 2/0069/23, duration: 01/2023-12/2026, deputy of principal investigator
- Interaction of proteases, chaperones and kinases in mitochondria in stress caused by pathological conditions**, Grant Nr. APVV-19-0298, duration: 07/2020-6/2024, researcher
- Building learning and research capacities in the structural and functional analysis of biomolecules for the needs of biomedicine and biotechnology**, Interreg SK-AT project (ITMS 305011X666), duration: 05/2019-04/2022, deputy of principal investigator for IMB SAS
- Isolation and advanced characterization of new probiotic microorganisms with potential for use in biomedicine and biotechnology**, Grant Nr. VEGA 1/0519/18, duration: 01/2018-12/2021, principal investigator for IMB SAS
- Factors that influence mitochondrial nucleoid dynamics**, Grant Nr. VEGA 2/0075/18, duration: 01/2018-12/2021, deputy of principal investigator
- The role of organelle interactions in lipid homeostasis**, Grant Nr. APVV-15-0654, duration: 07/2016 - 6/2020, principal investigator for IMB SAS
- Post-translation modifications in mitochondria and their role in pathological processes**, Grant Nr. APVV-15-0375, duration: 07/2016 - 6/2020, researcher
- Immune modulation by cytomegalovirus and its immunotherapeutic potential**, Grant Nr. APVV-14-0839, duration: 07/2015-6/2019, researcher
- ATP-dependent proteases and mitochondrial homeostasis**, Grant Nr. VEGA 2/0113/14, duration: 01/2014-12/2017, deputy of principal investigator
- Developing a competency center for research and development in molecular medicine**, ITMS 26240220071, duration: 10/2011-11/2014, researcher
- Proteins complexes in mitochondrial nucleoid**, Grant Nr. VEGA 2/0122/11, duration: 01/2011-12/2013, deputy of principal investigator
- Molecular architecture, dynamics and evolution of chromosomes in yeast mitochondrial**, Grant Nr. APVV-

0123-10, duration: 05/2011-10/2014, researcher

**Lon protease and mtDNA binding proteins**, Grant Nr. VEGA 2/0141/08, duration: 01/2008-12/2010, researcher

**Molecular mechanisms implicated in the control of mitochondrial integrity in eukaryotic cells**, Grant Nr. APVV-0024-07, duration: 06/2008-12/2010, researcher

**Evolutionary aspects of apoptosis: characterisation of yeast orthologs in mammalian apoptotic proteins**, Grant Nr. VEGA 1/4325/07, duration: 01/2007-12/2009, researcher

**Yeast *S. pombe* as a model organism for study the function of Bcl-2 proteins family in yeast apoptosis**, Grant of Comenius University Nr. 207/UK/2004, principal investigator

**Yeast *S. pombe* as a model organism for study the function of mammalian apoptotic proteins of Bcl-2 family**, Grant of Comenius University Nr. 154/UK/2003, principal investigator

**Phenotypic changes of cell *S. pombe* induced by senescence and apoptosis after expression proapoptotic protein Bax**, Grant of Comenius University Nr. 139/UK/2002, principal investigator

### Honors & awards:

- 1<sup>st</sup> place in I. Czech - Slovak conference of diploma thesis's students of biochemistry and molecular biology specialization: Phenotypic changes of *Schizosaccharomyces pombe* cells after expression of mammalian proapoptotic protein Bax. **Department of biochemistry, Faculty of Natural Sciences, Masaryk University, Brno, Czech Republic, 2001**
- Comenius University Rector's award for outstanding diploma thesis, 2001
- **Slovak Academy of Sciences award for building infrastructure for science** for the project: Building the first laboratory for automated protein crystallization in Slovakia within the joint Interreg Slovakia-Austria project in cooperation with the University of Vienna, 2022

### Teaching activities:

Department of Biochemistry, Faculty of Natural Sciences, Comenius University, Slovakia

- Basic practical course of biochemistry
- Advanced practical course of biochemistry and molecular biology 1, 2

Supervisor of undergraduate students: Luboš Ambro (2009), Eva Malíková (2012), Andrea Kováčová (2016), Mária Ksenzuliaková (2016), Barbora Keresztesová (2017), Monika Jaššová (2018), Barbora Bučková (2019), Martina Kubovová (2020), Michaela Borovičková (2023), Martin Labuda (2024), Barbora Benčíčová (2025)

Supervisor of graduate students: Barbora Keresztesová (2021), Martin Labuda (present)

**Society membership:** Slovak Society for Biochemistry and Molecular Biology (IUBMB, FEBS)

Member of the Commission for Biological Safety, Ministry of the Environment of the Slovak Republic

**Research skills:** fluorescent and electron microscopy, *in vivo* and *in vitro* protein-protein interaction techniques (yeast two-hybrid system, pull-down, overlay), proteins techniques (isolation, purification, overexpression, FPLC, chromatography, electrophoresis and Western blot, *in vitro* translation, crystallization), thermofluor, nanoDSF, MST (thermophoresis), DLS, SAXS, DNA and RNA techniques (isolation, electrophoresis, PFGE, Southern and Northern blot, PCR, RT-PCR, EMSA, *in vitro* mutagenesis), mitochondrial techniques (preparation, measure of respiration,  $\Delta\psi$ ), microbiology techniques (bacteria, yeast)

### Further Skills:

**Work:** - managing and preparation of the project from EU structural funds to establish the structural biology center (The Center for structural and functional analysis of biomolecules) and corresponding public procurement

- Data collections at Macromolecular X-ray Crystallography and SAXS beamlines in DESY Hamburg, Germany

**IT knowledge:** hardware and software (MS Office, Windows, Adobe Photoshop and Illustrator, Origin, Vector NTI, EndNote, ImageJ, ATLAS)

**Languages:** English (fluent, written and spoken), German (basic)

**Driver's license:** B category (since 1996)

**Interests and activities:** photography, computers, sports (tennis, horse riding, iaido, hiking, diving, skating, swimming), music, movies, theater, travelling

### **List of the publications:**

1. Vojtová J., Čapek M., Willeit S., Groušl T., Chvalová V., Kutejová E., **Pevala V.**, Shivaya Valášek L., Rinnerthaler M. (2024). A fully automated morphological analysis of yeast mitochondria from wide-field fluorescence images. *Scientific Reports* **14**: 30144, 10.1038/s41598-024-81241-0
2. Kunová N., Ondrovičová G., Bauer J.A., Krajčovičová V., Pinkas M., Stojkovičová B., Havalová H., Lukáčová V., Kohútová L., Košťan J., Martináková L., Barath P., Nováček J., Zoll S., Kereiče S.\*, Kutejová E.\*, **Pevala V.\*** (2024). Polyphosphate and tyrosine phosphorylation in the N-terminal domain of the human mitochondrial Lon protease disrupts its functions. *Scientific Reports* **14**(1), 9923, 10.1038/s41598-024-60030-9, \* corresponding authors
3. Meskova K, Martonova K, Hrasnova P, Sinska K, Skrabanova M, Fialova L, Njemoga S, Cehlar O, Parmar O, Kolenko P, **Pevala V.** and Skrabana R. (2023). Cost-effective protein production in CHO cells following polyethylenimine-mediated gene delivery, showcased on the production and crystallization of antibody Fabs. *Antibodies* **12**(3), 51, 10.3390/antib12030051
4. Šťastný D., L. Petrisková, D. Tahotná, J. Bauer, L. Pokorná, R. Holič, M. Valachovič, **V. Pevala**, S. Cockcroft, P. Griač (2023). Yeast Sec14-like lipid transfer proteins Pdr16 and Pdr17 bind and transfer lanosterol in addition to phosphatidylinositol. *FEBS Letters* **597**(4): 504-514, 10.1002/1873-3468.14558
5. Kunová N., Havalová H., Ondrovičová G., Stojkovičová B., Bauer J.A., Bauerová-Hlinková V., **Pevala V.**, Kutejová E. (2022). Mitochondrial processing peptidases - structure, function and the role in human diseases. *International Journal of Molecular Sciences* **23**(3), 1297; 10.3390/ijms23031297
6. Havalová H., Ondrovičová G., Keresztesová B., Jacob A. Bauer, **Pevala V.**, Kutejová E., Kunová N. (2021). Mitochondrial HSP70 Chaperone System – the Influence of Post-translational Modifications and Involvement in Human Diseases. *International Journal of Molecular Sciences* **22**(15):8077, 10.3390/ijms22158077
7. Frankovsky J., Keresztesová B., Bellová J., Kunová N., Čanigová N., Hanakova K., Bauer J.A., Ondrovičová G., Lukáčová V., Siváková B., Zdráhal Z., **Pevala V.**, Procházková K., Nosek J., Baráth P., Kutejová E., Tomáška L. (2021). The yeast mitochondrial succinylome: Implications for regulation of mitochondrial nucleoids. *JBC* **297**(4), 101155, 10.1016/j.jbc.2021.101155
8. Kotrasová V., Keresztesová B., Ondrovičová G., Bauer J.A., Havalová H., **Pevala V.**, Kutejová E., Kunová N. (2021). Mitochondrial Kinases and the Role of Mitochondrial Protein Phosphorylation in Health and Disease. *Life* **11**(2), 82; DOI: 10.3390/life11020082
9. Vozáriková V., Kunová N., Bauer J.A., Frankovský J., Kotrasová V., Procházková K., Džugasová V., Kutejová E., **Pevala V.**, Nosek J., Tomáška L. (2020). Mitochondrial HMG-box containing proteins: From biochemical properties to the roles in human diseases. *Biomolecules* **10**, 1193; doi:10.3390/biom10081193
10. Pevalová Z.#, **Pevala V.#**, Blunsom N.J., Tahotná D., Kotrasová V., Holič R., Pokorná L., Bauer J., Kutejová E., Cockcroft S., Griač P. (2019). Yeast phosphatidylinositol transfer protein Pdr17 does not require high affinity phosphatidylinositol binding for its cellular function. *Biochimica et Biophysica Acta (BBA) - Molecular and Cell Biology of Lipids* **10**: 1412-1421, DOI: 10.1016/j.bbalip.2019.07.005, # equally contributed to the work
11. Kunová N., Ondrovičová G., Bauer J., Bellová J., Ambro L., Martináková L., Kotrasová V., Kutejová E.\*, **Pevala V.\*** (2017). The role of Lon-mediated proteolysis in the dynamics of mitochondrial nucleic acid-protein complexes. *Sci. Rep.* **7**, 631 (10.1038/s41598-017-00632-8) \* corresponding authors

12. **Pevala V.\***, Truban D., Bauer J.A., Košťan J., Kunová N., Bellová J., Brandstetter M., Marini V., Krejčí L., Tomáška L., Nosek J.\*, Kutejová E.\* (2016). Structure and DNA-binding properties of Mgm101 protein from yeast with linear mitochondrial genome. *Nucleic Acids Research* **44**(5): 2227-2239, \* corresponding authors
13. Kereiče S., Kováčik L., Bednár J., **Pevala V.**, Ambro L., Bellová J., Kunová N., Ondrovičová G., Kutejová E., and Raška I. (2016). The N-terminal domain plays a crucial role in the structure of a full-length human mitochondrial Lon protease. *Sci. Rep.* **6**, 33631 (10.1038/srep33631)
14. Halgasova N., Solteszova B., **Pevala V.**, Kostan J., Kutejova E., Bukovska G. (2015). A RepA-like protein from bacteriophage BFK20 is a multifunctional protein with primase, polymerase, NTPase and helicase activities. *Virus Research* **210**: 178–187
15. Bauer J.A., Ondrovičová G., Najmanová L., **Pevala V.**, Kameník Z., Košťan J., Janata J., Kutejová E. (2014). Structure and Possible Mechanism of the CcbJ Methyltransferase from *Streptomyces caelestis*. *Acta Cryst. D70* (4): 943-957
16. Ambro L.\*, **Pevala V.\***, Ondrovičová G., Bellová J., Kunová N., Kutejová E., Bauer J.A. (2014). Mutations to a glycine loop in the catalytic site of human Lon changes its protease, peptidase and ATPase activities. *FEBS Journal* **281**: 1784–1797, \* equally contributed to the work
17. Holič R., Šimová Z., Ashlin T., **Pevala V.**, Poloncová K., Tahotná D., Kutejová E., Cockcroft S., Griač P. (2014). Phosphatidylinositol binding of *Saccharomyces cerevisiae* Pdr16p represents an essential feature of this lipid transfer protein to provide protection against azole antifungals. *BBA Molecular and Cell Biology of Lipids* **1841**(10): 1483–1490
18. Kereiče S., Kováčik L., **Pevala V.**, Ambro L., Bellová J., Kutejová E., Raška I. (2014). Three-dimensional reconstruction of the S885A mutant of the human mitochondrial Lon protease. *Folia Biologica* **60**, Suppl. 1: 62-65
19. Borko L., Kostan J., **Pevala V.**, Gasperík J., Hostinova E., Urbanikova L., Zahradnikova A., Djinović-Carugo K., Bauerova-Hlinkova V., Sevcik J. (2013). Human cardiac ryanodine receptor: preparation, crystallization and preliminary X-ray analysis of the N-terminal region. *Protein & Peptide Letters* **20**(11):1211-1216
20. Ambro L., **Pevala V.**, Bauer J.A., Kutejová E. (2012). The influence of ATP-dependent proteases on a variety of nucleoid-associated processes. *J Struct Biol.* **179**(2):181-92
21. Leksa V., Mrvová K., Ondrovičová G., Lakatošová S., Pfisterer K., Binder B., Donner C., **Pevala V.**, Schiller H.B., Zwirzitz A., Kutejová E., Stockinger H. (2012). Dissecting mannose 6-phosphate/insulin-like growth factor 2 receptor complexes that control activation and uptake of plasminogen in cells. *JBC* **287**(27): 22450-22462
22. Laco J., Zeman I., **Pevala V.**, Polčic P., Kolarov J. (2010). Adenine nucleotide transport via Sal1 carrier compensates for the essential function of the mitochondrial ADP/ATP carrier. *FEMS Yeast Research* **10** (3): 290-296
23. **Pevala V.**, Kolarov J., Polčic P. (2007). Alterations in Mitochondrial Morphology of *Schizosaccharomyces pombe* Induced by Cell-Death Promoting Agents. *Folia Microbiologica* **52** (4): 381-390

**Total number of citations: 300**

**List of invited lectures:**

- **Pevala V.** (2011). Yeast apoptosis and proteolysis in mitochondrial biogenesis. *Institute for Genetics, Universität zu Köln, Cologne, Germany*
- **Pevala V.**, Fričová D., Kunová N., Košťan J., Bellová J., Brandstetter M., Bauer J.A., Marini V., Krejčí L., Tomáška L., Nosek J., Kutejová E. (2015). The structure and DNA-binding properties of Mgm101 from a yeast *Candida parapsilosis* with a linear mitochondrial genome. **ISF Workshop on MITOCHONDRIA: Function and Dysfunction**, February 12.-20., 2015, Kibbutz Ein-Gedi, Dead-Sea, Israel

- **Pevala, V.**, Fričová, D., Bellová, J., Kunová, N., Košťan, J., Krejčí, L., Tomáška, Ľ., Nosek, J., Kutejová, E. (2014). The mitochondrial nucleoid and DNA-binding protein Mgm101. *Our proteins 2014 - Structure and function*, April 15.- 16., 2014, Bratislava

### **List of the conferences:**

1. BENČIČOVÁ B. - HAVALOVÁ, H. - KUNOVÁ, N. - ONDROVIČOVÁ, G. - KOHÚTOVÁ, L. - BELLOVÁ, J. - BARÁTH, P. - LABUDA M. - MARTINÁKOVÁ, L. - GROUSL, T. - KUTEJOVÁ, E. - VOJTOVÁ, J. - **PEVALA, V.** Could phosphorylation regulate the interaction of yeast antiapoptotic protein Mmi1 with mitochondria? *ACY : 49th Annual Conference on Yeasts. – Smolenice, Slovakia, 2025*
2. MULLER, S. - RIVERA L. - UHART, M. - BARRERA, E. - BUSTOS, D.M. - PEVALA, V. - ŠKRABANA, R. Exploring B-Carbolines as Allosteric Modulators of L4-3-3 Proteins: A Comprehensive Approach from Virtual Screening to Crystallography. *HTCC6 - Advanced macromolecular crystallography workshop - Zagreb, Croatia, 2024*
3. KUNOVÁ, N. - HAVALOVÁ, H. - ONDROVIČOVÁ, G. - KOHÚTOVÁ, L. - BARÁTH, P. - MARTINÁKOVÁ, L. - GROUSL, T. - KUTEJOVÁ, E. - VOJTOVÁ, J. - PEVALA, V. The story of a yeast antiapoptotic protein Mmi1 in the interaction with mitochondria. *ACY : 48th Annual Conference on Yeasts. – Smolenice, Slovakia, 2024*
4. VOJTOVÁ, J. - GROUSL, T. - CAPEK, K. - EILLEIT, S. - KUTEJOVÁ, E. - PEVALA, V. Fully automated approach to analyze yeast mitochondrial morphology from wide-field fluorescence images. *ACY : 48th Annual Conference on Yeasts - Smolenice, Slovakia, 2024*
5. KUNOVÁ, N. - ONDROVIČOVÁ, G. - BAUER, J. - KRAJČOVIČOVÁ, V. - PINKAS, M. - STOJKOVIČOVÁ, B. - HAVALOVÁ, H. - LUKÁČOVÁ, V. - KOHÚTOVÁ, L. - KOŠŤAN, J. - MARTINÁKOVÁ, L. - BARÁTH, P. - NOVÁČEK, J. - KEREICHE, S. - KUTEJOVÁ, E. - PEVALA, V. Polyphosphate and tyrosine phosphorylation in the N-terminal domain of the human mitochondrial Lon protease disrupts its functions. *EMBO Workshop: Molecular biology of mitochondrial gene maintenance and expression - Jozefow, Poland 2024*
6. ŠŤASTNÝ, D. - PETRISKOVÁ, L. - TAHOTNÁ, D. - BAUER, J. - POKORNÁ, L. - HOLIČ, R. - VALACHOVIČ, M. - PEVALA, V. - COCKCROFT, S. - GRIAC, P. Sec14p homologues Pdr16p and Pdr17p bind and transfer lanosterol as their second ligand. *47th Annual Conference on Yeasts : 47th ACY, Smolenice, Slovakia, May 16 - 19, 2023*
7. VOJTOVÁ, J. - CAPEK, K. - GROUSL, T. - RINNETHALER, M. - SIMECEK, M. - KUTEJOVÁ, E. - PEVALA, V. - VALASEK, V. - HASEK, J. Application of a deep learning neural network for evaluation of morphological changes of mitochondria in yeast to study the effect of Mmi1 protein on mitochondria after oxidative stress. *ACY : 47th Annual Conference on Yeasts – Smolenice, Slovakia, 2023*
8. ONDROVIČOVÁ, G. - KUNOVÁ, N. - KEREICHE, S. - BAUER, J. - KOTRASOVÁ, V. - STOJKOVIČOVÁ, B. - HAVALOVÁ, H. - MARTINÁKOVÁ, L. - LUKÁČOVÁ, V. - KOHÚTOVÁ, L. - BARÁTH, P. - PINKAS, M. - NOVÁČEK, J. - PEVALA, V. - KUTEJOVÁ, E. Phosphorylation of Lon protease - The effect on function and structure. *Materials Structure in Chemistry, Biology, Physics and Technology, 2023, vol. 29, no. 2, p. 143. ISSN 1211-5894*
9. KUNOVÁ, N. - HAVALOVÁ, H. - ONDROVIČOVÁ, G. - MARTINÁKOVÁ, L. - GROUSL, T. - KUTEJOVÁ, E. - VOJTOVÁ, J. - PEVALA, V. The story of a yeast antiapoptotic protein Mmi1 in the interaction with mitochondria. *47th Annual Conference on Yeasts : 47th ACY, May 16 - 19, 2023, Smolenice, Slovakia*
10. KUNOVÁ, N. - ONDROVIČOVÁ, G. - KEREICHE, S. - PINKAS, M. - BAUER, J. - LUKÁČOVÁ, V. - HAVALOVÁ, H. - BARÁTH, P. - PEVALA, V. - KUTEJOVÁ, E. Phosphorylation on in the N-terminal domain affects the kinetics not the structure of human mitochondrial LON protease. *EMBO Workshop: Protein Quality Control - Srebreno, Croatia, 2023*
11. PEVALA, V. - STOJKOVIČOVÁ, B. - ONDROVIČOVÁ, G. - BELLOVÁ, J. - KUNOVÁ, N. - HAVALOVÁ, H. - TOMÁŠKA, Ľ. - BARÁTH, P. - NOSEK, J. - KUTEJOVÁ, E. The story of yeast Lon protease in the mitochondrial DNA maintenance and assembly of respiratory chain complexes. *EMBO Workshop: Protein Quality Control - Srebreno, Croatia, 2023*

12. KUNOVÁ, N. - ONDROVIČOVÁ, G. - KEREICHE, S. - PINKAS, M. - BAUER, J. - LUKÁČOVÁ, V. - STOJKOVIČOVÁ, B. - KRAJČOVIČOVÁ, V. - HAVALOVÁ, H. - PEVALA, V. - BARÁTH, P. - NOVÁČEK, J. - KUTEJOVÁ, E. Phosphorylation of human mitochondrial Lon protease disrupts its functions. Cell Symposia: Multifaceted Mitochondria – Seville, Spain, 2022
13. KUTEJOVÁ, E. - KUNOVÁ, N. - ONDROVIČOVÁ, G. - STOJKOVIČOVÁ, B. - FRANKOVSKÝ, J. - KEREICHE, S. - LUKÁČOVÁ, V. - KRAJČOVIČOVÁ, V. - HAVALOVÁ, H. - BAUER, J. - PEVALA, V. - BARÁTH, P. - TOMÁŠKA, Ľ. Lon protease – the essential component of mitochondrial homeostasis. Chemistry towards Biology 10 Instruct - Bratislava, Slovakia, 2022
14. PEVALA, V. - STOJKOVIČOVÁ, B. - ONDROVIČOVÁ, G. - BELLOVÁ, J. - LUKÁČOVÁ, V. - KUNOVÁ, N. - HODOROVÁ, V. - HAVALOVÁ, H. - MARTINÁKOVÁ, L. - PROCHÁZKOVÁ, K. - BREJOVÁ, B. - TOMÁŠKA, Ľ. - HORVÁTH, A. - BARÁTH, P. - NOSEK, J. - KUTEJOVÁ, E. The story of yeast Lon protease in the mitochondrial DNA maintenance and assembly of respiratory chain complexes. ISF Workshop: Mitochondria Past & Present: Evolution, Proteostasis, Dynamics and Disease, 13-16 November, 2022, Kibbutz Ein Gedi, Dead Sea, Israel
15. KUTEJOVÁ, E. - KUNOVÁ, N. - ONDROVIČOVÁ, G. - STOJKOVIČOVÁ, B. - FRANKOVSKÝ, J. - KEREICHE, S. - LUKÁČOVÁ, V. - KRAJČOVIČOVÁ, V. - HAVALOVÁ, H. - MARTINÁKOVÁ, L. - BAUER, J. - BARÁTH, P. - TOMÁŠKA, Ľ. - PEVALA, V. Effects of post-translational modifications on mitochondrial nucleoid components Abf2 and Lon protease. ISF Workshop: Mitochondria Past & Present: Evolution, Proteostasis, Dynamics and Disease, 13-16 November, 2022, Kibbutz Ein Gedi, Dead Sea, Israel
16. PEVALA, V. - ONDROVIČOVÁ, G. - KUNOVÁ, N. - STOJKOVIČOVÁ, B. - MARTINÁKOVÁ, L. - HAVALOVÁ, H. - BAUEROVÁ, V. - BAUER, J. - KOŠŤAN, J. - DJINOVIĆ-CARUGO, K. - KUTEJOVÁ, E. A new Slovak center for research and teaching activities in structural biology – Interreg V-A Slovakia – Austria project StruBioMol. Chemistry towards Biology 10 Instruct - Bratislava, Slovakia, 2022
17. FRANKOVSKÝ, J. - STOJKOVIČOVÁ, B. - BELLOVÁ, J. - KUNOVÁ, N. - ČANIGOVÁ, N. - BAUER, J. - ONDROVIČOVÁ, G. - LUKÁČOVÁ, V. - SIVÁKOVÁ, B. - ZDRÁHAL, Z. - PROCHÁZKOVÁ, K. - PEVALA, V. - BARÁTH, P. - KUTEJOVÁ, E. - NOSEK, J. - TOMÁŠKA, Ľ. The yeast mitochondrial succinylome: Implications for regulation of mitochondrial nucleoids. EMBO Workshop: Molecular biology of mitochondrial gene maintenance and expression - Bro, Sweden, 2022
18. FRANKOVSKÝ, J. - STOJKOVIČOVÁ, B. - BELLOVÁ, J. - KUNOVÁ, N. - ČANIGOVÁ, N. - HANAKOVA, K. - BAUER, J. - ONDROVIČOVÁ, G. - LUKÁČOVÁ, V. - VOZÁRIKOVÁ, V. - SIVÁKOVÁ, B. - ZDRÁHAL, Z. - PROCHÁZKOVÁ, K. - PEVALA, V. - NOSEK, J. - BARÁTH, P. - KUTEJOVÁ, E. - TOMÁŠKA, L. The yeast mitochondrial succinylome: Implications for regulation of mitochondrial nucleoids. Yeast : Genetics Meeting - Los Angeles, USA, 2022
19. KUNOVÁ, N. - ONDROVIČOVÁ, G. - KOTRASOVÁ, V. - KERESZTESOVÁ, B. - HAVALOVÁ, H. - BAUER, J. - KUTEJOVÁ, E. - PEVALA, V. The phosphorylation of human Lon protease a key component of protein quality control in mitochondria. 26. Annual Congress of Czech and Slovak Societies for Biochemistry and Molecular Biology with cooperation of Austrian and German Biochemical Section - Praha, CR, 2021
20. **Pevala V.**, Ondrovičová G., Kotrasová V., Keresztesová B., Kunová N., Martináková L., Pavlovič J., Bauerová V., Bauer J., Košťan J., Djinović-Carugo K., Kutejová, E. Building a center for research and teaching activities in structural biology for biomedicine and biotechnology – Interreg V-A Slovakia – Austria project StruBioMol. **INSTRUCT ULTRA, 3rd Structural biology meeting**, Bratislava, Slovakia, 2019
21. Kunová, N., Ondrovičová, G., Bauer, J., Bellová, J., Ambro, L., Martináková, L., Kotrasová, K., Keresztesová, B., Kereiche, S., Kováčik, L., Kutejová, E. **Pevala, V.** The structure of a human mitochondrial Lon protease and its role in the dynamics of mitochondrial nucleic-acid complexes. **First symposium – Integrative Structural Biology**, Lund, Sweden, 2018
22. Pevalová Z., **Pevala V.**, Blunsom N.J., Tahotná D., Holič. R., Kotrasová V., Keresztesová B., Kunová N., Bauer J.A., Košťan J., Kutejová E., Cockcroft S., Griač P. The function and structure of yeast phosphatidylinositol transfer protein Pdr17. **INSTRUCT ULTRA, 2nd Structural biology meeting**, Bratislava, Slovakia, 2018

23. Kunová, N., Ondrovičová, G., Bauer, J., Bellová, J., Ambro, L., Martináková, L., Kotrasová, K., Keresztesová, B., Kereiche, S., Kováčik, L., Kutejová, E. **Pevala, V.** The structure of a human mitochondrial Lon protease and its role in the dynamics of mitochondrial nucleic-acid complexes. **Emerging Concepts in Mitochondria Biology**, 2018, Rehovot, Weizmann Institute of Science, Israel
24. Kunova, N., **Pevala, V.**, Ondrovicova, G., Bauer, J., Kotrasova, V., Kutejova, E. Effect of nucleic acid-protein complex formation on Lon-mediated proteolysis in mitochondria. **44th Annual Conference on Yeast**, Smolenice, Slovakia, 2017
25. Kunova, N., Ondrovicova, G., Bauer, J., Bellova, J., Ambro, L., Martikanova, K., Kotrasova, V., Kutejova, E., **Pevala, V.** The role of Lon-mediated proteolysis in the dynamics of mitochondrial nucleic-acid complexes. **Instruct Biennial Structural Biology Conference**, Brno, Czech Republic, 2017
26. Kunova, N., **Pevala, V.**, Ondrovicova, G., Bauer, J., Kotrasova, V., Kutejova, E.: Effect of Nucleic Acid-Protein Complex Formation on Lon-mediated Proteolysis in Mitochondria. **EMBO/FEBS Course: Mitochondria in life, death and disease**, Brindisi, Italy, 2017
27. **Pevala, V.**, Kereiche, S., Kovacik, L., Kunova, N., Ondrovicova, G., Bauer, J., Ambro, L., Bellova, J., Raska, I., Kutejova, E. The N-terminal domain plays a crucial role in the structure of a full-length human mitochondrial Lon protease. **Instruct Biennial Structural Biology Conference**, Brno, Czech Republic, 2017
28. **Pevala, V.**, Kunova, N., Ondrovicova, G., Bauer, J., Ambro, L., Bellova, J., Martinakova, L., Kotrasova, V., Keresztesova, B., Kutejova, E. The mitochondrial DNA binding proteins. **INSTRUCT ULTRA, Structural biology meeting**, Bratislava, Slovakia, 2017
29. Kutejova, E., Ondrovicova, G., Kunova, N., Kotrasova, V., Keresztesova, B., Ambro, L., Bellova, J., Martinakova, L., **Pevala, V.** Mitochondrial ATP-dependent protease - structure and function. **INSTRUCT ULTRA, Structural biology meeting**, Bratislava, Slovakia, 2017
30. Griac, P., Holic, R., Simova, Z., Tahotna, D., Poloncova, K., **Pevala, V.** Phosphatidylinositol transfer proteins and their role in eukaryotic cell: study in yeast. **XXV. Biochemicky sjezd**, Praha, Czech Republic, 2016
31. Nemcovic, M., Laposova, K., **Pevala, V.**, Ondrovicova, G., Kutejova, E., Kudelova, M., Sedy, J.R., Zajonc, D.M., Nemcovicova, I.: Molecular and structural characterization of the immune modulatory protein complex: A novel bidirectional NK activating ligand CD160 in complex with herpesvirus entry mediator HVEM. **XXV. Biochemicky sjezd**, Praha, Czech Republic, 2016
32. **Pevala V.**, Fričová D., Kunová N., Košťan J., Bellová J., Brandstetter M., Bauer J.A., Marini V., Krejčí L., Tomáška L., Nosek J., Kutejová E. The structure and DNA-binding properties of Mgm101 from a yeast *Candida parapsilosis* with a linear mitochondrial genome. **ISF Workshop on MITOCHONDRIA: Function and Dysfunction**, February 12.-20., 2015, Kibbutz Ein-Gedi, Dead-Sea, Israel
33. Andreoli F., Bauer J., **Pevala V.**, Santoro A., Bellavista E., Biondi F., Varchi G., Bulteau A.L., Kutejova E., Franceschi C., Del Rio A. Indole-based inhibitors of the mitochondrial human Lon protease. **247th ACS National Meeting**, March 16.-20., 2014, Dallas, TX, USA
34. **Pevala V.**, Fričová D., Bellová J., Kunová N., Košťan J., Krejčí L., Tomáška L., Nosek J., Kutejová E. The potential role of Mgm101 from *Candida parapsilosis* in the maintenance of mitochondrial telomeres. **Gordon Research Conference, Mitochondria and Chloroplast**, July 06. - 11., 2014, Il Ciocco Hotel, Lucca (Barga), Italy
35. Kunová N., **Pevala V.**, Ambro Ľ., Ondrovičová G., Bellová J., Kutejová E., Bauer J.A. (2014). A glycine-rich loop influences protease and peptidase activities of the human Lon protease. **Gordon Research Conference, Mitochondria and Chloroplast**, July 06. - 11., 2014, Il Ciocco Hotel, Lucca (Barga), Italy
36. **Pevala, V.**, Fričová, D., Bellová, J., Kunová, N., Košťan, J., Krejčí, L., Tomáška, Ľ., Nosek, J., Kutejová, E. (2014). The mitochondrial nucleoid and DNA-binding protein Mgm101 (2014). **Our proteins 2014 - Structure and function**, April 15.- 16., 2014, Bratislava

37. **Pevala V.**, Fričová D., Bellová J., Kunová N., Košťan J., Krejčí L., Tomáška L., Nosek J., Kutejová E. The potential role of Mgm101 from *Candida parapsilosis* in the maintenance of mitochondrial telomeres. Jun 20.- 27., 2014, **1st FEBS-INSTRUCT crystallization course - Advanced methods in Macromolecular crystallization VI**, Nové Hradky, Czech republic
38. Kereiče S., Kováčik L., **Pevala V.**, Bellová J., Raška I., Eva Kutejová. Three-dimensional reconstruction of the S885A mutant of the human mitochondrial Lon protease (2014). **18th International Microscopy Congress**, September 07.- 12., 2014, Prague, Czech republic
39. Šimová Z., Holič R., Cockroft S., **Pevala V.**, Poloncová K., Tahotná D., Griač P. (2014) Phosphatidylinositol binding of the yeast Pdr16p is essential in response to azole treatment. **41<sup>st</sup> Annual Conference on Yeasts**, 20.- 23. May, 2014, Smolenice, Slovakia
40. **Pevala V.**, Fričová D., Bellová J., Kunová N., Košťan J., Krejčí L., Tomáška L., Nosek J., Kutejová E. The potential role of Mgm101 from *Candida parapsilosis* in the maintenance of mitochondrial telomeres. **41<sup>st</sup> Annual Conference on Yeasts**, 20.-23. May, 2014, Smolenice, Slovakia
41. Kunová N., Bellová J., **Pevala V.**, Kutejová E. (2014) Mitochondrial nucleoid proteins as novel substrates for Lon-mediated proteolysis in *Saccharomyces cerevisiae*. **41<sup>st</sup> Annual Conference on Yeasts**, 20.-23. May, 2014, Smolenice, Slovakia
42. Šimová Z., Holič R., Cockroft S., **Pevala V.**, Poloncová K., Tahotná D., Griač P. (2014). Phosphatidylinositol binding of yeast lipid transfer protein Pdr16 is essential for its function in response to azole treatment, **XXIV. Biochemical congress**, September 18.- 21., 2014, Bratislava
43. Chovanec M., Ward T.A., Dudášová Z., Sarkar S., Bhide M.R., **Pevala V.**, Kutejová E., McHugh P.J. Mgm101 Acts in Fanconi-Like Pathway of Interstrand Crosslink Repair in Yeast. **FEBS Workshop: Nucleotide excision repair and interstrand crosslink repair - from molecules to man**, June 9. - 13. 2013, Smolenice, Slovakia
44. **Pevala V.**, Fričová D., Kunová, N., Gajdošová J., Tomáška L., Nosek J., Krejčí L., Kutejová E. DNA-binding properties of the mitochondrial protein Mgm101 from yeast *Candida parapsilosis*. **30th INTERNATIONAL SPECIALISED SYMPOSIUM ON YEAST - Cell Surface and Organelles in Yeasts: from Basics to Applications**, June 19. - 22. 2013, Stará Lesná, Slovakia
45. Ambro L., **Pevala V.**, Bauer J.A., Ondrovičová G., Kutejová E. Mutation in proteolytic side of human mitochondrial Lon protease uncover the direct connection between proteolytic and ATPase domain. **8th International Conference: Structure and Stability of Biomacromolecules**, September 10.- 13. 2013, Košice, Slovakia
46. Borko L., Kostan J., **Pevala V.**, Gasperík J., Hostinova E., Urbanikova L., Zahradnikova A., Bauerova-Hlinkova V. and Sevcik J. Human cardiac ryanodine receptor: structural study of the N-terminal region. **Discussions in Structural Molecular Biology: Annual Meeting of the Czech Society for Structural Biology**, Nové Hradky, March 14.-16. 2013, Czech republic
47. **Pevala V.**, Ambro L., Ondrovičová G., Bellová J., Kutejová E., Bauer J.A. Glycine loop influences protease and peptidase activities of the human Lon protease. **EMBO workshop: AAA+ proteins: from mechanism and disease to targets**, September 15. - 19. 2013, Neuss, Germany
48. **Pevala V.**, Fričová D., Kunová, N., Gajdošová J., Višacká K., Tomáška L., Nosek J., Krejčí L., Kutejová E. Localization and biochemical characteristics of Mgm101 homologue from *Candida parapsilosis*. **26<sup>th</sup> International Conference on Yeast Genetics and Molecular Biology**, August 29 - September 3, 2013, Frankfurt, Germany
49. **Pevala V.**, Ambro L., Ondrovičová G., Kutejová E., Bauer J.A. Changes in the proteolytic domain of human Lon influence several of the activities of this protease. **4th EMBO Meeting**, September 22.-25., 2012, Nice, France
50. **Pevala V.**, Ondrovičová G., Ambro L., Šedo O., Zdráhal Z., Kutejová E., Bauer J.A. Protease and Peptidase Activity of the Mitochondrial ATP-dependent Protease Lon can be separated. **9th International Conference on AAA**

**Proteins**, November 6.-10. 2011, Kumamoto, Japan

51. **Pevala V.** DNA-binding properties of the yeast mitochondrial protein Mgm101. **Central European Meeting on Genome Stability and Dynamics**, May 13, 2011, Comenius University, Bratislava, Slovakia
52. Ambro L., Bauer J.A., Ondrovičová G., **Pevala V.**, Kutejová E. Human Lon protease: regulation of two distinct activities within one active site. **7th International Conference: Structure and Stability of Biomacromolecules**, September 6.- 9. 2011, Košice, Slovakia
53. Bauer J.A., Ondrovičová G., **Pevala V.**, Najmanová L., Kameník Z., Janata J., Kutejová E. Crystal structure of the CcbJ Methyltransferase from *Streptomyces caelestis* [1]. **XXII Congress and General Assembly of the International Union of Crystallography**. August 22. - 30. 2011, Madrid, Spain
54. **Pevala V.**, Fričová D., Chovanec M., Tomáška L., Nosek J., Krejčí L., Kutejová E. DNA-binding properties of the yeast mitochondrial protein Mgm101. **39th Annual Yeast Conference**, May 3. - 6. 2011, Smolenice, Slovakia
55. Ondrovičová G., **Pevala V.**, Ambro L., Kutejová E. Lon protease and its role in mitochondrial nucleoids. **39th Annual Yeast Conference**, May 3. - 6. 2011, Smolenice, Slovakia
56. Kutejová E., **Pevala V.**, Ondrovičová G., Bauer J.A., Ambro L., García-Nafria J., Janata J., Matušková A. & Wilson K.S. Several aspects of the role of the proteolytic domain of human Lon protease in degradation process. **Mitochondria: Function and Dysfunction**, November 21. - 24., 2010, Kibbutz Ein Gedi, Israel
57. **Pevala V.**, Bauer J.A., García-Nafria J., Ondrovičová G., Ambro L., Blagova E., Levdikov V.M., Wilkinson A.J., Wilson K.S. & Kutejová E. Hexamer formation triggers a switch from an inactive to an active conformation in human mitochondrial Lon protease. **22nd Biochemical congress**, September 08. - 12., 2010, Martin, Slovakia
58. **Pevala V.**, Bauer J.A., García-Nafria J., Ondrovičová G., Ambro L., Blagova E., Levdikov V.M., Wilkinson A.J., Wilson K.S. & Kutejová E. Hexamer formation triggers a switch from an inactive to an active conformation in human mitochondrial Lon protease. **Gordon Research Conference, Mitochondria and Chloroplast**, July 11. - 16., 2010, Il Ciocco Hotel, Lucca (Barga), Italy
59. Ambro L., **Pevala V.**, Bauer J.A., Ondrovičová G. & Kutejová E. Influence of point mutations on the activity of the human mitochondrial Lon protease. **22nd Bioenergetics meeting**, June 23.-25., 2010, Kunzak, Czech republic
60. Ondrovičová G., Bauer, J., **Pevala, V.**, Ambro, I., Augustinová, E., Kutejová, E. Lon protease - dynamic protein with high flexibility and diverse functions. In SSB 2009: **6th International Conference Structure and Stability of Biomacromolecules**, September 9 - 11, 2009, Košice, Slovakia
61. **Pevala V.** & Kolarov J. The cell death in fission yeast, prevented with Bcl-x<sub>L</sub> protein, is accompanied with changes of mitochondrial morphology and physiology. **34th Annual Yeast Conference**, May 10.-12. 2006, Smolenice, Slovakia
62. Peycheva E., **Pevala V.**, Kolarov J. & Miloshev G. DNA fragmentation during apoptosis in yeast *Schizosaccharomyces pombe*. **International Science Conference Schedule Events**, June 1. - 2. 2006, Stara Zagora, Bulgaria
63. **Pevala V.** & Kolarov J. Apoptosis-like death of *Schizosaccharomyces pombe* induced by hydrogen peroxide or acetic acid is accompanied with mitochondrial fragmentation and it is prevented by Bcl-x<sub>L</sub> expression. **XXII<sup>nd</sup> International Conference on Yeast Genetics and Molecular Biology**, August 7.-12. 2005, Bratislava, Slovakia, *Yeast* **22**, No.S1
64. **Pevala V.** & Kolarov J. Mitochondrial oxidative phosphorylation is essential for Bcl-x<sub>L</sub> protection against cell death in fission yeast. **3<sup>rd</sup> International Meeting on Yeast Apoptosis**, August 18. - 22. 2004, Salzburg, Austria
65. **Pevala V.** & Kolarov J. The role of mitochondria in the induction and prevention of apoptosis in fission yeast. **3<sup>rd</sup> International Meeting on Yeast Apoptosis**, August 18. - 22. 2004, Salzburg, Austria

66. **Pevala V.** & Kolarov J. Mitochondrial oxidative phosphorylation is essential for Bcl-x<sub>L</sub> protection against cell death in fission yeast. **32<sup>nd</sup> Annual Yeast Conference**, May 12. - 14. 2004, Smolenice, Slovakia
67. **Pevala V.** & Kolarov J. Osmotic Stress and Respiratory Substrates Inhibit Bax Cytotoxicity in *Schizosaccharomyces pombe*. **2<sup>nd</sup> International Meeting on Yeast Apoptosis**, September 17. - 20. 2003, Smolenice, Slovakia
68. Šabová Ľ., Poliaková D., Kiššová I., **Pevala V.**, Kolarov J. Triggering yeast to apoptosis. **The symposium of 19<sup>th</sup> Smyte**, September 14. – 17., 2001, Chania, Crete
69. Šabová Ľ., Poliaková D., Kiššová I., **Pevala V.**, Kolarov J. Triggering yeast to apoptosis. **The satellite symposium of XX<sup>th</sup> International Conference on Yeast Genetics and Molecular Biology**. August 25. - 26. 2001, Prague, Czech Republic, Mitochondrion, Vol.1, No.2
70. Poliaková D., Kiššová I., Šabová Ľ., **Pevala V.**, Kolarov J. Oxygen radicals accumulation and viability of yeast cells expressing Bax and Bcl-X. **XX<sup>th</sup> International Conference on Yeast Genetics and Molecular Biology**. August 26. - 31. 2001, Prague, Czech Republic, Yeast **18**, No.S1

Bratislava, June 20, 2025