# Naďa Labajová

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# **RESEARCH AND WORK EXPERIENCES**

[01.11.2024 – present] **RESEARCHER** 

INSTITUTE OF NEUROIMMUNOLOGY, SAS

Bratislava, Slovakia

 I participate in project focused on development of early detection method for Parkinson's disease from blood samples

[01.07.2023 – 30.11.2023] **FULBRIGHT VISITING SCHOLAR** 

WYSS INSTITUTE AT HARVARD UNIVERSITY and DANA FARBER

CANCER INSTITUTE Boston, USA

- I gained experience in DNA nanotechnology, focusing on its potential in the detection and disease treatment

- I improved my skills in the field of protein expression, purification, and analysis, in working with lipids and nanodiscs, and in electron microscopy

- I also had the opportunity to develop soft skills, especially networking, presenting and teamwork

[01.07.2010 – 31.10.2024] **RESEARCHER** 

INSTITUTE OF MOLECULAR BIOLOGY, SAS Bratislava, Slovakia

- independent researcher (since 07/2023)
- I participated in solving projects in basic research, designing, and conducting experiments in the field of microbial genetics and biochemistry, data evaluation, writing scientific publications
- grants:

• principal investigator of the national grant VEGA "Study and characterization of Min proteins from *Clostridioides difficile*"

(2022-2024)

- CIISB grant, Masaryk University, Czech Republic (2021-2025)
- I acquired skills in the field of protein expression and purification, biochemical methods suitable for characterizing protein-protein interactions and protein-lipid interactions
- I developed my skills in both independent and team work, mentoring skills through the supervision of bachelor and master students and critical thinking

#### [13.05.2019 - 11.08.2019]

#### **EMBO SHORT TERM FELLOWSHIP**

INSTITUTE OF SCIENCE AND TECHNOLOGY AUSTRIA (ISTA) Klosterneuburg, Austria

- project: Dynamics of the Min system from *Clostridioides difficile* and its influence on cell division and sporulation
- I was trained and gained experience in the field of highresolution microscopy, TIRFM and QCM-D and in the application of these methods in the study of protein dynamics
- I also developed my teamwork, perseverance, and problem-solving skills

### [04.03.2013 - PRESENT]

#### TRANSLATOR OF MEDICAL PATENTS

SELF-EMPLOYED Bratislava, Slovakia

- translation of medical patents (more than 80 completed patents)
- translation of leaflets for medical products

#### [01.09.2009 - 31.03.2010]

#### **RESEARCH ASSISTENT**

INSTITUTE FOR CELL AND MOLECULAR BIOSCIENCES, NEWCASTLE UNIVERSITY Newcastle upon Tyne, UK

#### [01.03.2009 - 31.08.2009]

#### MARIA CURIE SHORT TERM FELLOWSHIP

INSTITUTE FOR CELL AND MOLECULAR BIOSCIENCES, NEWCASTLE UNIVERSITY Newcastle upon Tyne, UK

- I participated in a research project focused on the investigation of protein-protein interactions of the essential division proteins of *Bacillus subtilis*
- I gained experience in microbial genetics techniques, biochemical methods for detecting protein-protein interactions and electron microscopy
- I developed my skills in teamwork, intercultural communication, networking, and presentation skills

# **GRANTS AND AWARDS**

2023	Fulbright Slovak Scholar Program fellowship
2022	VEGA grant, Research Agency of the Ministry of Education, Science, Research
	and Sport of the Slovak Republic
2021	CIISB grant, Masaryk University, Czech Republic
2020	Honourable mention L'Oréal-UNESCO For Women in Science
2019	EMBO Short Term Fellowship
2018	SAIA Austria-Slovakia Action short term fellowship
2011	Schwarz fellowship for post-doctorands, Slovak Academy of Sciences
2011	Award of the President of the Slovak Republic
2010	Korner fellowship, UK
2009	Short-term Maria Curie Fellowship

# **EDUCATION**

[30.08.2004 – 11.06.2010]	<b>PhD. in Molecular Biology</b> Faculty of Natural Sciences, Comenius University Bratislava, Slovakia
[01.09.2002 – 30.06.2004]	MSc. in Biotechnology Faculty of Natural Sciences, Comenius University Bratislava, Slovakia
[01.09.1998 – 30.06.2002]	<b>Bc. in Biology</b> Faculty of Natural Sciences, Comenius University Bratislava, Slovakia

## **LANGUAGES**

**Mother tongue: SLOVAK** 

Other languages:

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Presentation	Conversation	
<b>ENGLISH</b>	C2	C2	C1	C1	C1
<b>GERMAN</b>	B1	A2	A2	A2	A2
CZECH	C2	C2	C2	C2	C2

#### **OTHER SKILLS**

Microsoft Office, Microsoft Word, Microsoft Excel, Zoom, Teams, GraphPad, Fiji, ImageJ, Corel, Illustrator, Python basics Driver's licence B (active driver)

#### **HOBBIES**

Sci-fi books and movies, yoga, playing piano, singing

#### **PUBLICATIONS**

- 1. <u>Labajová N</u>, Baranova N, Jurásek M, Vácha R, Loose M, Barák I: Cardiolipin-containing lipid membranes attract the bacterial cell division protein DivIVA. Int J Mol Sci. 2021 Aug 3; 22(15): 8350, doi: 10.3390/ijms22158350
- 2. Barák I, Muchová K, <u>Labajová N</u>: Asymmetric cell division during *Bacillus subtilis* sporulation. Future Microbiol. 2019 Mar, doi: 10.2217/fmb-2018-0338
- 3. Valenčíková R, Krascsenitsová E, <u>Labajová N</u>, Makroczyová J, Barák I: Clostridial DivIVA and MinD interact in the absence of MinJ. Anaerobe. 2018 Apr; 50: 22-31. doi: 10.1016/j.anaerobe.2018.01.013
- 4. Makroczyová J, Jamroškovič J, Krascsenitsová E, <u>Labajová N</u>, Barák I: Oscillating behavior of *Clostridium difficile* Min proteins in Bacillus subtilis. Microbiology open. 2016 Jan 27. doi: 10.1002/mbo3.337
- 5. Jamroškovič J\*, <u>Pavlendová N</u>\*, Muchová K, Wilkinson AJ, Barák I: An oscillating Min system in *Bacillus subtilis* influences asymmetrical septation during sporulation. Microbiology. 2012 Aug;158(Pt 8): 1972-81. doi: 10.1099/mic.0.059295-0
- 6. Gündoğdu ME\*, Kawai Y\*, <u>Pavlendova N</u>\*, Ogasawara N, Errington J, Scheffers DJ, Hamoen LW: Large ring polymers align FtsZ polymers for normal septum formation. EMBO J. 2011 Feb 2;30(3): 617-26. doi: 10.1038/emboj.2010.345
- 7. <u>Pavlendová N</u>, Muchová K, Barák I: Expression of Escherichia coli Min system in *Bacillus subtilis* and its effect on cell division. FEMS Microbiol Lett. 2010 Jan; 302(1): 58-68. doi: 10.1111/j.1574-6968.2009.01832.x
- 8. Barák I, Muchová K, Wilkinson AJ, O'Toole PJ, <u>Pavlendová N</u>: Lipid spirals in *Bacillus subtilis* and their role in cell division. Mol Microbiol. 2008 Jun; 68(5): 1315-27. doi: 10.1111/j.1365-2958.2008.06236.x
- 9. <u>Pavlendová N</u>, Muchová K, Barák I: Chromosome segregation in *Bacillus subtilis*. Folia Microbiol (Praha). 2007; 52(6): 563-72. doi: 10.1007/BF02932184

<sup>\*</sup>These authors contributed equally.