

# Volha Ramaniuk, MSc

Born in Vysokaye, Belarus, Brest region

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Laboratory of Microbial Genetics and Gene Expression / 121 /

## Current scientific focus

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**Bacterial transcription and its regulation** – RNA polymerase, its interacting partners and mode of action during transcription initiation; characterization and properties of  $\sigma$  factors from *Bacillus subtilis*.

## Education:

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**2012 – present**      Doctoral studies, Charles University in Prague, Faculty of Science / Czech Republic  
Workplace – Laboratory of Microbial Genetics and Gene Expression, Institute of Microbiology, Czech Academy of Sciences. Thesis: Factors interacting with bacterial RNA polymerase and their effect on transcription regulation. Supervisor: Libor Krásný, Ph.D. ([krasny@biomed.cas.cz](mailto:krasny@biomed.cas.cz)).

**2009 – 2012**      Master of Science in Microbiology, Charles University in Prague, Faculty of Science / Czech Republic  
Master's thesis at the Laboratory of Microbial proteomics, Institute of Microbiology, Czech Academy of Sciences. Thesis: *Mycobacterium smegmatis* growth on agar plates and agar plates covered with cellophane – morphological and proteomic study. Supervisor: RNDr. Jaroslav Weiser, Ph.D. ([weiser@biomed.cas.cz](mailto:weiser@biomed.cas.cz)).



**2002 – 2007**      Master of Science in Genetics, Brest State University named after A. S. Pushkin, Faculty of Science / Belarus  
Master's thesis at the Department of Genetics and Zoology, Faculty of Sciences, Brest State University named after A. S. Pushkin, Belarus. Thesis: Effect of different fodder plants on yields of silk from *Antheraea pernyi*. Supervisor: Elena Klimets, Ph.D.



## Experience:

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I have expertise in the following biochemical and microbiological techniques: cloning, DNA and RNA purification, recombinant protein expression and purification, *in vitro* transcription with radioactive labels, PCR techniques, samples preparation for NG sequencing, 5' RACE, western and northern blotting, EMSA, samples preparation for 2D electrophoresis, and cultivation of bacteria.

<b>2015 – 2018</b>	Academic English course (1h per week)
<b>2016</b>	Workshops Scientific writing and Presentation skills, by Charles University
<b>2012</b>	2-week course “Advances in Molecular Biology and Genetics”, by Czech Academy of Sciences
<b>2007 – 2009</b>	Biology teacher at a secondary school (Vysokaye, Brest region, Belarus)

## **Publications:**

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**Ramaniuk O.**, Převorovský M., Pospíšil J., Vítovská D., Kofroňová O., Benada O., Schwarz M., Šanderová H., Hnilicová J. and Krásný L.  $\sigma^I$  from *Bacillus subtilis*: Impact on Gene Expression, and Characterization of  $\sigma^I$ -dependent Transcription that Requires New Types of Promoters with Extended -35 and -10 Elements. J Bacteriol. 2018 Jun 18. pii: JB.00251-18. doi: 10.1128/JB.00251-18. [Epub ahead of print] doi: 10.1128/JB.00251-18

**Ramaniuk O.**, Černý M., Krásný L., Vohradský J. Kinetic modelling and meta-analysis of the *B. subtilis* SigA regulatory network during spore germination and outgrowth. Biochim Biophys Acta. 2017 Aug;1860(8):894-904. doi: 10.1016/j.bbagr.2017.06.003. pub 2017 Jun 22.

Wiedermannová J., Sudzinová P., Kovaľ T., Rabatinová A., Šanderová H., **Ramaniuk O.**, Rittich Š., Dohnálek J., Fu Z., Halada P., Lewis P., Krásný L. Characterization of HelD, an interacting partner of RNA polymerase from *Bacillus subtilis*“. Nucleic Acids Res. 2014 Apr;42(8):5151-63. doi: 10.1093/nar/gku113. Epub 2014 Feb 11.

Šíková M., Janoušková M., **Ramaniuk O.**, Páleníková P., Pospíšil J., Bartl P., Suder A., Pajer P., Kubičková P., Pavliš O., Hradilová M., Vítovská D., Šanderová H., Převorovský M., Hnilicová J., Krásný L. Ms1 RNA increases the amount of RNA polymerase in *Mycobacterium smegmatis*. Mol Microbiol. 2018 Nov 14. doi: 10.1111/mmi.14159. [Epub ahead of print]

## **Grants and Fellowships:**

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<b>2015 – 2017</b>	Charles University Science foundation Grant No 322815. Topic: Regulation of transition of the <i>Bacillus subtilis</i> cells into stationary phase.
<b>2010 – 2011</b>	Visegrad Fund fellowship – one year funding of Master studies at Charles University in Prague

## **Language skills:**

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Russian and Belarussian (mother tongues), English – advanced, Czech – advanced, Polish – upper-intermediate, German – beginner