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Education and employment:

09/2023 - now **Junior Group Leader** at Charles University, Czech Republic

2012-2023 **postdoctoral reearcher** at Laboratory of Molecular Genetics of Bacteria, Institute of Microbiology AS CR, Prague, Czech Republic

2019 *third maternity leave*

2015-2016 *second maternity leave*

2013-2014 *first maternity leave*

2007-2011: **PhD**, supervisor: David Staněk, PhD, Laboratory of RNA Biology, Institute of Molecular Genetics AS CR, Prague, Czech Republic
PhD thesis: Regulation of pre-mRNA splicing in the context of cell nucleus

2001-2007 **MSc. in molecular biology**, Faculty of Science, Charles University
Master thesis: Characterisation of nuclear myosin I nucleocytoplasmatic transport, supervisor: Pavel Hozák, PhD, Institute of Molecular Genetics AS CR, Czech Republic

Education activities: Currently supervising 2 PhD, 1 MSc. and 1 Bc students, teaching in MSc course Od genomu k proteomům (1/11, 2013 until now), Fyziologie bakterií II (6/12 from 2024), Faculty of Science, Charles University. Occasional lectures for National Institute of Public Health, Prague.

Awards and grants:

2023-2025 „Novel regulatory RNAs interacting with the transcription machinery in bacteria“, Czech Science Foundation (GACR) standard project 23-05622S

2020-2022 „The RNA polymerase amount in mycobacteria - how it is regulated and how it affects the cell“, Czech Science Foundation (GACR) standard project 20-07473S

2012-2017 „Molecular mechanisms of bacterial survival in harsh conditions“, Czech Science Foundation (GACR) postdoctoral project 13-27150P

2011 Josef Hlávka Award for the best students and graduates of Prague public universities, Technical University Brno and young talented researchers of the Academy of Sciences of the Czech Republic

Lectures:

EMBO Workshop Non-Coding RNA Medicine (Poznan, Poland, 2023)

Highly virulent agents and their vectors – 7th biological workshop organized by Ministry of Defence & Armed Forces of the Czech Republic (Komorní Hrádek, Czech Republic, 2022)

21st International Conference on Bacilli and Gram-Positive Bacteria (Prague, 2022)

27th and 29th Congress of the Czechoslovak Society for Microbiology (Prague 2016, Brno 2022)

International experience, courses:

02/2015 - EMBL Advanced Course „*Analysis and Integration of Transcriptome and Proteome Data*“, Heidelberg, Germany

09-12/2011 - **EMBO Short Term Fellowship** stay in Eric Thompson lab at Sars International Centre for Marine Molecular Biology, Norway, study on regulation of alternative splicing by chromatin modifications during the development of a model organism *Oikopleura dioica*

07/2009 - EMBO Practical Course "*Single-molecule manipulation and analysis of DNA-protein interactions*", Institut Jacques Monod, Paris, France

07-08/2008 - „*Eukaryotic Gene Expression*“ practical course, Cold Spring Harbor Laboratory, USA, funded by Boehringer Ingelheim travel grant

10/2007 - **visiting scientist** at Dept of Cellular Biochemistry, Max Planck Institute for Biophysical Chemistry, Göttingen, Germany

08-12/2006 - EEA Financial Mechanism/Norwegian Financial Mechanism fellowship – **visiting scientist** at Department of Molecular Biology, Universitet i Bergen and in Tom Becker's lab at Sars International Centre for Marine Molecular Biology, Norway

6 most important publications (Total 15), Cited > 440, H-index: 11 (WoS- 20. 3. 2024)

Hausnerová VV, Shoman M, Kumar D, Schwarz M, Modrák M, Matějčková JJ, Mikesková E, Neva S, Herrmannová A, Šíková M, Halada P, Novotná I, Pajer P, Valášek LS, Převorovský M, Krásný L, **Hnilicová J**. *RIP-seq reveals RNAs that interact with RNA polymerase and primary sigma factors in bacteria*. **Nucleic Acids Res**. 2024 Feb 13:gkae081 (**corresponding author**)

Vaňková Hausnerová V, Marvalová O, Šíková M, Shoman M, Havelková J, Kambová M, Janoušková M, Kumar D, Halada P, Schwarz M, Krásný L, **Hnilicová J**, Pánek J. *Ms1 RNA interacts with the RNA polymerase core in Streptomyces coelicolor and was identified in majority of Actinobacteria using a linguistic gene synteny search*. **Front Microbiol**, 2022 May 11;13:848536. (**shared corresponding author**)

Kouba T, Koval' T, Sudzinová P, Pospíšil J, Brezovská B, **Hnilicová J**, Šanderová H, Janoušková M, Šíková M, Halada P, Sýkora M, Barvík I, Nováček J, Trundová M, Dušková J, Skálová T, Chon U, Murakami KS, Dohnálek J, Krásný L. *Mycobacterial HelD is a nucleic acids-clearing factor for RNA polymerase* **Nat Commun**. 2020 Dec 18;11(1):6419.

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**. 2019 111(2):354-372. (**shared corresponding author**)

Kouba T, Pospíšil J, **Hnilicová J**, Šanderová H, Barvík I, Krásný L. *The Core and Holoenzyme Forms of RNA Polymerase from Mycobacterium smegmatis*. **J Bacteriol**. 2019 Jan 28;201(4):e00583-18.

Hnilicová J, Jirát Matějčková J, Šíková M, Pospíšil J, Halada P, Pánek J, Krásný L. *Ms1, a novel sRNA interacting with the RNA polymerase core in mycobacteria*. **Nucleic Acids Res** 2014 42(18):11763-76.

We created the webpage <http://msmegseq.elixir-czech.cz/> with an integrated genome browser for visualisation of our NGS data.