

## Kamil Růžička – Curriculum Vitae

**First name:** Kamil  
**Last name:** Růžička  
**Born:** 23rd September 1979 in Hlinsko, Czech Republic  
**Nationality:** Czech

**University:** 1998 – 2003: Charles University, Faculty of Natural Sciences, Prague, Czech Republic (Eva Zažímalová lab)  
**PhD:** 2003 – 2007: Centre for Plant Molecular Biology, University Tübingen, Germany (Jiří Friml/Eva Benková labs)  
**Postdoc:** 2008: Institute for Plant Systems Biology, University of Ghent, Belgium (Eva Benková lab)  
2008 – 2011: Institute of Biotechnology, University of Helsinki, Finland (Ykä Helariutta lab)  
**Senior researcher:** 2012 – 2018: Central European Institute of Technology, Laboratory of Molecular Plant Physiology, Masaryk University Brno, Czech Republic (Jan Hejátko lab)  
**Group leader:** since 2017: Institute of Experimental Botany, Academy of Sciences of the Czech Republic (Lab of Hormonal Regulations in Plants, head: Jan Petrášek)

**Group web site:** <https://lhr.ueb.cas.cz/research/rna-processing-group/>

### **Awards:**

Růžička et al. 2017 - WOS Highly Cited Paper  
Růžička et al. 2009 - WOS Highly Cited Paper (in relevant 10-years period)  
Růžička et al. 2007 - WOS Highly Cited Paper (in relevant 10-years period)  
Růžička et al. 2017 - f1000 recommended

### **Main external scientific collaborators in the past 5 years or ongoing:**

Ykä Helariutta, Mikko Frilander, Ari-Pekka Mähönen (University of Helsinki, FI), Jozef Mravec (University of Copenhagen, DK), Geert De Jaeger (VIB Gent, BE), Jiří Friml (IST Klosterneuburg, AT), Mary O'Connell, Zbyněk Zdráhal (CEITEC Masaryk University, Brno, CZ), Rainer Waadt (University of Münster, DE), Zofia Szweykowska-Kulińska, Artur Jarmolowski (Adam Mickiewicz University of Poznań, PL), Maria Kalyna (BOKU, Vienna, AT)

### **Key research papers:**

**Zemlyanskaya EA, Zemlianski V, Pěňčík A, Kelley D, Helariutta Y, Novák O, Růžička K. 2023.** N6-adenosine methylation of mRNA integrates multilevel auxin response and ground tissue development in Arabidopsis. *Development (Cambridge, England)*: dev.201775.  
**Timofeyenko K, Kanavalau D, Alexiou P, Kalyna M, Růžička K. 2023.** Catsnap: a user-friendly algorithm for determining the conservation of protein variants reveals extensive parallelisms in the evolution of alternative splicing. *New Phytologist* **238**: 1722–1732.  
**Kashkan I, Hrtyan M, Retzer K, Humpolíčková J, Jayasree A, Filepová R, Vondráková Z, Simon S, Rombaut D, Jacobs TB, ..., Růžička K. 2022.** Mutually opposing activity of PIN7

splicing isoforms is required for auxin-mediated tropic responses in *Arabidopsis thaliana*. *New Phytologist* **233**: 329–343.

**Růžička K, Zhang M, Campilho A, Bodi Z, Kashif M, Saleh M, Eeckhout D, El-Showk S, Li H, Zhong S, Helariutta Y, Fray RG. 2017.** Identification of Factors Required for m6A mRNA Methylation in *Arabidopsis* Reveals a Role for the Conserved E3 Ubiquitin Ligase HAKAI. *New Phytologist* **215**: 157–172.

**Růžička K, Strader LC, Bailly A, Yang H, Blakeslee J, Langowski L, Nejedlá E, Fujita H, Itoh H, Syono K, Friml J. 2010.** *Arabidopsis* PIS1 encodes the ABCG37 transporter of auxinic compounds including the auxin precursor indole-3-butyric acid. *Proceedings of the National Academy of Sciences of the United States of America* **107**: 10749–10753.

**Růžička K, Simásková M, Duclercq J, Petrásek J, Zázimalová E, Simon S, Friml J, Van Montagu MCE, Benková E. 2009.** Cytokinin regulates root meristem activity via modulation of the polar auxin transport. *Proceedings of the National Academy of Sciences of the United States of America* **106**: 4284–4289.

**Růžička K, Ljung K, Vanneste S, Podhorská R, Beekman T, Friml J, Benková E. 2007.** Ethylene regulates root growth through effects on auxin biosynthesis and transport-dependent auxin distribution. *The Plant Cell* **19**: 2197–2212.

#### **Review papers:**

**Hrtyan M, Šliková E, Hejátko J, Růžička K. 2015.** RNA processing in auxin and cytokinin pathways. *Journal of Experimental Botany* **66**: 4897–4912.

**Kashkan I, Timofeyenko K, Růžička K. 2022.** How alternative splicing changes the properties of plant proteins. *Quantitative Plant Biology* **3**: e14.

**Růžička K, Ursache R, Hejátko J, Helariutta Y. 2015.** Xylem development – from the cradle to the grave. *New Phytologist* **207**: 519–535.