Szilard Kovacs

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Work: Temesvári krt. 62, 6726 Szeged (Hungary)

EDUCATION AND TRAINING

PhD
University of Szeged [2022]

MSc
University of Szeged [2014]

WORK EXPERIENCE

Research associate
Biological Research Centre, Szeged (BRC Szeged) [2022 – Current]

Analysis the regulation of the *NSP2* gene required for rhizobial symbiotic interactions

Junior research associate
Biological Research Centre, Szeged (BRC Szeged) [2017 – 2022]

Analysis the function of the NSP1/NSP2 transcriptional regulator complex

PhD student
Biological Research Centre, Szeged (BRC Szeged) [2014 – 2017]

Identification and characterization of symbiotic plant genes in *Medicago truncatula*

LANGUAGE SKILLS

Mother tongue(s): **Hungarian**

Other language(s): **English**

TECHNICAL SKILLS AND METHODS

General technics
Microbial works, Maintain plant materials, Generate transgenic plants, DNA and Protein isolation

Molecular biology
PCR technics, Traditional cloning methods, Invitrogen Gateway cloning method

Biochemical methods
Polyacrylamide gel electrophoresis (SDS-page and native gel), Production and purification of proteins in E. coli, Detecting protein-protein interactions (Y2H and BiFC) and protein-DNA interactions (EMSA, Y1H and ChIP)

Microscopy
Histochemical stainings and light microscopy, protein localization and confocal microscopy

Digital skills
MS-office, Endnote, Photoshop, Lightroom, Vector NTI, BLAST search and sequence analyis

AWARDS

Straub young scientist award

[2017 – 2018]

Young scientist fellowship (MTA)

[2018 – 2022]

Award of the Dr. Rollin Hotchkiss Foundation

[2022]

Publication prize

Qualitas Biologica Foundation

[2023]

Ph.D. Dissertation Prize

PUBLICATIONS

Cumulative Impact Factors: 20.9

Kovacs, S., Fodor, L., Domonkos, A., Ayaydin, F., Laczi, K., Rakhely, G., and Kalo, P. (2021). Amino Acid Polymorphisms in the VHIID Conserved Motif of Nodulation Signaling Pathways 2 Distinctly Modulate Symbiotic Signaling and Nodule Morphogenesis in Medicago truncatula. Front Plant Sci 12, 709857. doi: 10.3389/fpls.2021.709857

Kovacs, S., Kiss, E., Jenei, S., Feher-Juhasz, E., Kereszt, A., and Endre, G. (2022). The Medicago truncatula IEF gene is crucial for the progression of bacterial infection during symbiosis. Mol Plant Microbe Interact. doi: 10.1094/MPMI-11-21-0279-R

Domonkos, A., Kovacs, S., Gombar, A., Kiss, E., Horvath, B., Kovats, G.Z., Farkas, A., Toth, M.T., Ayaydin, F., Boka, K., Fodor, L., Ratet, P., Kereszt, A., Endre, G., and Kalo, P. (2017). NAD1 Controls Defense-Like Responses in Medicago truncatula Symbiotic Nitrogen Fixing Nodules Following Rhizobial Colonization in a BacA-Independent Manner. Genes (Basel) 8. doi: 10.3390/ genes8120387

Ting, W., Benedikta, B., Kovacs, S., Kereszt, A. (2022). Varietas delectat: exploring natural variations in nitrogen-fixing symbiosis research. Front Plant Sci

Toth, V.R., Endre, G., Kovacs, S., Presing, M., and Horvath, H. (2017). Morphological and Genetic Variability of Myriophyllum spicatum in Different Shallow Water Bodies of Hungary. Wetlands 37, 351-362. doi: 10.1007/s13157-016-0875-z