

Prof. dr hab. Łukasz Stępień

Institute of Plant Genetics, PAS, Plant-Pathogen Interaction Team

ACADEMIC AND RESEARCH CAREER

M.Sc. (biotechnology), University of Life Sciences, Poznań, 1999

Ph.D. (agricultural sciences), Institute of Plant Genetics PAS, 2005

Habilitation (agricultural sciences), Institute of Plant Genetics, PAS, 2014

Professor (agricultural sciences), 2019

MAJOR RESEARCH PROJECTS

1. Ministry of Science and Higher Education project NN310 732440: *FUM* genes polymorphism in different *Fusarium* species and its relation to fumonisin biosynthesis. 2011-2014, PI.
2. NCN OPUS1 project 2011/01/B/NZ8/00162: Impact of the host plant extract on mycotoxin biosynthesis, transcriptional and metabolic activity of the pathogenic *Fusarium proliferatum* isolates. 2011-2015, PI.
3. NCN OPUS8 project, 2014/15/B/NZ9/01544: Genetic basis of cyclic peptide biosynthesis by entomopathogenic and phytopathogenic Hypocreales fungi. 2015-2018, PI.
4. NCN OPUS9 project, 2015/17/B/NZ9/03577: Plant bioactive molecules inducing stress response in pathogenic fungus *Fusarium proliferatum*. 2016-2019, PI
5. NCN OPUS13 project, 2017/25/B/NZ9/01210: Functions of *Fusarium*-produced lytic enzymes and mycotoxins in pathogenesis and of metabolites responsible for plant defense response. 2018-2022, PI.
6. NCN OPUS22 project, 2021/43/B/NZ9/02701: Specificity of the regulation of *Fusarium*-asparagus interaction by host metabolites and hormones produced during infection process. 2022-2026, PI.

RESEARCH VISITS

Chair of Agronomy and Plant Breeding, Technical University Munich, Freising, Germany, three short stays in 2003, 2004 and 2005

Institute of Epidemiology and Resistance, Aschersleben, Germany, short stay in 2006

Institute of Sciences of Food Production ISPA, CNR, Bari, Italy, two short stays in 2006 and 2008

Technical University of Denmark, Department of Systems Biology, Lyngby, Denmark, short stay in 2014

PUBLICATIONS (5 MAJOR PUBLICATIONS, LAST 5 YEARS)

Gálvez L., Urbaniak M., Waśkiewicz A., Stępień Ł., Palmero D. 2017. *Fusarium proliferatum* - causal agent of garlic bulb rot in Spain: genetic variability and mycotoxin production. *Food Microbiology* 67: 41-48.

Czembor E., Waśkiewicz A., Piechota U., Puchta M., Czembor J.H., Stępień Ł. 2019. Differences in ear rot resistance and *Fusarium verticillioides*-produced fumonisin contamination between Polish currently and historically used maize inbred lines. *Frontiers in Microbiology* 10: 449.

Urbaniak M., Waśkiewicz A., Koczyk G., Błaszczuk L., Stępień Ł. 2020. Divergence of beauvericin synthase gene among *Fusarium* and *Trichoderma* species. *Journal of Fungi*, 6: 288.

Stępień Ł., Lalak-Kańczugowska J. 2021. Signaling pathways involved in virulence and stress response of plant pathogenic *Fusarium* species. *Fungal Biology Reviews*, 35, 27-39.

Manawasinghe I.S., Phillips A.J.L., Xu J., Balasuriya A., Hyde K.D., Stępień Ł., Harishchandra D.L., Karunarathna A., Yan J., Weerasinghe J., Mei L., Dong Z., Cheewangkoon R. 2021. Defining a species in plant pathology: beyond the species level. *Fungal Diversity*, 109:267-282.

Perincherry L., Urbaniak M., Pawłowicz I., Kotowska K., Waśkiewicz A., Stępień Ł. 2021. Dynamics of *Fusarium* Mycotoxins and Lytic Enzymes during Pea Plants' Infection. *International Journal of Molecular Sciences*, 22, 9888.