CV Klára Panzarová

Dr Klára Panzarová, PSI (Photon Systems Instruments), Ltd., Drásov, 66424 Drásov, Czech Republic.
panzarova@psi.cz. Tel: +42 (0)608 560 682

Education & professional positions

2002-2004	MSc in Ecotoxicology, Masaryk University, Brno, Czech Republic
2004-2005	Research fellow, Institute of Plant Sciences, ETH Zürich, Switzerland
2005-2010	PhD, Dept. of Plant Sciences, ETH Zürich, Switzerland
2010-2012	PostDoc, Dept. of Plant Sciences, ETH Zürich, Switzerland
2012 – 2014	Senior Scientist, R&D Dept., PSI (Photon Systens Instruments), Ltd., Czech Republic
2014-present	Chief Scientist for Technical Support, PSI, Ltd., Czech Republic

Current research interests & achievements

Klára Panzarová (Šimková) obtained her PhD titel at ETH Zurich in Switzerland in group of Prof. Klaus Apel, where she focused on understanding regulatory mechanisms of retrograde signalling. She has strong background in plant physiology and molecular biology. Currently her professional interest is in focusing on non-invasive multi-dimensional analysis of plant perfomance in automated high-throughput manner and investigation of novel technologies for image-based plant monitoring. She is appointed as chief scientist for technical support in PSI (Photon Systems Instruments, spol. s r.o.) where she is currently also head of the PSI Research Center.

During past few years she worked in the team that developped complete solutions for multi-dimensional image-based monitoring of plant growth and performance, PlantScreen™ Systems. These systems are using various techniques on small and large scale level for simultaneous quantification of plant photosynthetic capacity, plant growth and morphological characteristics, plant biochemical characteristics and plant surface temperature. PlantScreen™ Systems have implemented range of commercial and customized in-house developped sensors to ensure high precission, sensitivity and integration capacity into the phenotyping systems, which can be operated in fully automated manner including data acquisition, processing and management.

Very recently PSI Research Center was opened, which integrates all of the above mentioned sensors in automated phenotyping platforms designed either for phenotyping small-size plants such as Arabidopsis and young cereal seedlings in controlled environment or platform for phenotyping of large plants of adult corn type in greenhouse environment.

Keywords

High- throughput automated plant phenotyping, plant stress physiology, plant performance

Recent relevant publications:

1. Rouphael Y, Spíchal L, **Panzarová K**, Casa R and Colla G (2018) High-Throughput Plant Phenotyping for Developing Novel Biostimulants: From Lab to Field or From Field to Lab? Front. Plant Sci. 9:1197.
2. Awlia Mariam, Nigro Arianna, Fajkus Jiri, Schmockel Sandra, Negrao Sonia, Santelia Diana, Trtilek Martin, Tester Mark, Julkowska Magdalena, **Panzarova Klara** (2016). High-throughput non-destructive phenotyping of traits that contribute to salinity tolerance in Arabidopsis thaliana. Frontiers in Plant Science (7).
3. The Enzyme-Like Domain of Arabidopsis Nuclear beta-Amylases Is Critical for DNA Sequence Recognition and Transcriptional Activation. Soyk, S; **Simkova, K**; Zurcher, E; Luginbuhl, L; Brand, LH; Vaughan, CK; Wanke, D; Zeeman, SC. Plant Cell. 2014 Apr; 26 (4): 1746-1763
4. Arabidopsis Topoisomerase VI is required for the selective activation of genes regulated by singlet oxygen. **Simkova K**, Pawlak P, Baruah A, Hennig L, Alexandre C, Apel K, Laloi C. (2012). PNAS, 109 (40)
5. Crosstalk between the $^1O_2$-dependent signaling pathway and retrograde signaling activated in chloroplast division mutants of Arabidopsis. **Simkova K**, Gacek K, Baruah A, Apel K, Laloi C. (2012). Plant J., 69 (4): 701-712
6. β-amylase-like proteins function as transcription factors in Arabidopsis, controlling shoot growth and development. Reinhold H, Soyk S, **Simkova K**, Hostettler C, Marafino J, Mainiero S, Vaughan CK, Monroe JD, Zeeman SC. Plant Cell. 2011 Apr;23 (4):1391-403.