

Arabidopsis and Pseudomonas - one flew over the plant immunity

Arabidopsis thaliana is small flowering plant used as a major model by plant experimental biologists. *Pseudomonas syringae* is a rod-shaped Gram-negative bacterium whose strains infect a variety of plants including *A. thaliana*. Depending on combination of genotype of the plant and the pathogen strain, these infections have different outcomes. *P. syringae* enters the host tissues through wounds or stomata, and lives and divides in the intercellular space. Typical symptoms of infection are water-soaked patches on leaves, which later turn into necrosis. In resistant plants *P. syringae* triggers the hypersensitive response (HR), a very fast defense-associated plant cell death which prevents the spread of pathogen.

In the last several decades, thanks to the good knowledge of these two organism (including their genomes), scientist were able to discover precise mechanisms of their interaction and identify many important gene/protein participants involved in pathogen perception, signaling, defense related endocytosis, exocytosis, transcription, protein degradation etc.

Much less is known about mechanisms of interaction of plants with wealth of other bacteria. But it is of great importance since these organisms strongly influence many essential plant functions, so that we should consider plant with its 'microflora' as the one entity.

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Curriculum vitae

Born September 30th, 1969, Belgrade (former Yugoslavia, now Republic of Serbia).

1988-1994: undergraduate study, Belgrade University, Faculty of Natural Sciences, Department of Molecular Biology, graduated in experimental biomedicine; Diploma thesis: The Nucleotide Sequence of The Major Early Region of The Bacteriophage B103 Genome (experimental work performed on Institute of Molecular Genetics, Czech Academy of Sciences, Prague, in cooperation with Institute of Chemical Technology, Faculty of Food and Biochemical Technology)

1996 –1999: graduate study, PhD thesis: Phage B103: Complete Genomic Sequence and Evolutionary Relationship to Other Phages; Laboratory of Gene Structure and Expression, Institute of Molecular Genetics, Czech Academy of Sciences, Prague

1996 – 2002: On maternity leave

2002 - 2005: Laboratory of plant virology, Institute of Experimental Botany, Czech Academy of Sciences, Prague. Work on DNA manipulations, sequencing, evaluation of sequence data, bacterial expression of plant virus proteins, transient expression in plants

2005-2006: scientific stay on Plant System Biology, VIB, Ghent University, Belgium; work on yeast-two-hybrid and tandem-affinity purification with proteins involved in plant cell death pathways

Since 2007: Laboratory of Cell Biology, team of Dr. V. Žárský, focusing on the role of the tethering complex exocyst in plant cell polarity and plant cell defence against pathogens; part time on the Department of Experimental Plant Biology, Charles University, Laboratory of Cell Morphogenesis