Infection with tobacco mosaic virus (TMV) of tobacco plants with the N gene results in salicylic acid (SA)-mediated expression of the Pr-1a gene and other defense-related genes. One- and/or Myb1 in the induction of Pr-1a gene expression. Agroinfiltration of tobacco with Agrobacterium tumefaciens elicited expression of the endogenous Pr-1a gene and expression of a Pr-1a promoter / GUS-fusion in the T-DNA vector. Mutations in the WI and Wr sites in the Pr-1a / GUS fusion revealed that NtWRKY12 is also involved in expression of the Pr-1a gene induced by bacterial elicitors.

PS 14-676 TRANSCRIPTOME ANALYSIS OF ARBUCULAR MYCORRHIZAL ROOTS TARGETED TO THE PRE-PENETRATION APPARATUS
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Limited information on changes in the gene expression profile during early interaction with arbuscular mycorrhizal (AM) fungi is available, mainly due to the fact that infection is not synchronized and plant markers for early stages have not been identified. We recently described the pre-penetration apparatus (PPA), organised in epidermal cells upon appressorium contact and responsible for the assembly of a trans-cellular tunnel to host the fungus (Genre et al., 2005). Here we used the PPA as a marker for cell responsiveness to fungal contact to investigate gene expression at this stage minimizing transcript dilution. PPA's were identified by confocal microscopy in root organ cultures of *M. truncatula* expressing GFP:HDEL, colonized by the AM fungus *Gigaspora margarita*. A PPA-targeted suppressive-subtractive cDNA library was built by subtracting cDNAs from root segments producing PPAs with cDNAs from comparable control root segments. The cDNAs obtained were cloned and sequenced, and led to the identification of 107 putative interaction-specific genes. The expression of a subset of 15 genes, selected by reverse Northern dot blot screening of the cDNA fragments expressed in the PPA phase, and five additional genes was analyzed by real-time RT PCR and compared with an infection stage 48 hours after PPA formation. Comparison of the expression profile of wild-type and the mycorrhiza-defective dmi3-1 mutant of *M. truncatula* after inoculation with *G. margarita* revealed that an expansin-like gene, expressed in wild type (WT) epidermis during PPA development, can be regarded as a marker for early AM interaction, whereas a putative Avr9/Cf9 rapidly elicited gene, is up-regulated in this mutant, suggesting novel regulatory roles for the DMI3 protein in the early AM interaction.

PS 14-677 MODULATION OF GLUTAMINE SYNTHETASE, ASPARAGINE SYNTHETASE AND SUCROSE SYNTHASE EXPRESSION AND ACTIVITY BY NO IN MEDICAGO TRUNCATULA – SINORHIZOBIUM MELILOTI FUNCTIONAL NODULES
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In legume-rhizobium symbiosis, the set up of nitrogen fixation processes is characterized by a dramatic increase in energy and carbon metabolism. Sucreose, issued from photosynthesis, is actively transported into fixating nodule cells, metabolized by glycolysis, and directed, for one part, to the respiration and, for another part, to the anaplerotic pathway. Anaplerotic pathway