

The interplay between *Agrobacterium* and the host plant – From the perspective of the host

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Agrobacterium species deliver native as well as constructed T-DNAs into the genome of various plant species. Plant cells harbouring a native T-DNA undergo substantial reprogramming and give rise to crown gall disease. Constructed T-DNAs are used as a biological tool to manipulate the plant genome for studying gene functions and improving plant performance. In both cases, the interacting partners, the *Agrobacterium* and the plant cell, need to communicate and respond to signals emanating from each other. Our focus is the response of the host plant to *Agrobacterium* in *Agrobacterium-mediated tumorigenesis*. We analyse the changes in the methylome, transcriptome and the metabolome as well as solute content to assess the morphological and physiological changes that occur during *Agrobacterium* infection and crown gall development.

At this meeting, I will present our findings that pathogen defence signalling is largely dampened in the first hours after infection before the T-DNA is integrated. I will also show that after T-DNA integration and during crown gall development, the host plant activates biotic and abiotic stress responses, thereby controlling the degree of transformation and crown gall growth.