

New Insights into the *Xanthomonas citri* - Orange Interaction

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*Xanthomonas citri* is the causal agent of citrus canker, a disease characterized by hyperplastic lesions on the surface of the host epidermis. The molecular mechanism by which *X. citri* induces pustules formation is not entirely clear, nevertheless, it is known that members of the PthA/AvrBs3 family of effector proteins are required to elicit cankers on citrus. In this talk, we will show the interaction between variants of PthAs from *X. citri* and various sweet orange proteins involved in protein folding/processing, nuclear import and transcriptional control, which is consistent with the role of PthAs as transcriptional factors. Interestingly, the specificity of the interactions appears to depend on the internal repetitive domain of the PthA proteins. We will present evidence for the existence of a new host chaperone complex implicated in folding/processing of PthAs, as they are thought to enter the host cell in an unfolded state. Additionally, a comparison of the transcriptional profiles of orange plants infected with virulent and avirulent strains of the citrus canker bacterium will be discussed. Significantly, some citrus genes immediately induced by *X. citri* present a TATA box-like sequence in their promoters that are remarkably similar to the recently described upa-boxes bound by AvrBs3 in pepper. EMSA assays nevertheless showed unspecific binding of PthA proteins to DNA.