

10.10

Lflg22, a Pathogen-Associated Molecular Pattern (PAMP) of *Candidatus Liberibacter asiaticus*, initiated differential PAMP-Triggered Immunity (PTI) in Grapefruit and Sun Chu Sha

Shi, Q.¹, Febres, V.J.^{1,2}, Khalaf, A.^{1,2}, and Moore, G.A.^{1,2}

¹Horticultural Sciences Department, University of Florida, Gainesville, FL

²Plant Molecular and Cellular Biology Program, University of Florida, Gainesville, FL

‘Duncan’ Grapefruit (*Citrus paradisi* Macf.) and ‘Sun Chu Sha’ mandarin (*C. reticulata* Blanco) represent two citrus genotypes that have different levels of tolerance to citrus greening or huanglongbing (HLB), a bacterial disease caused by *Candidatus Liberibacter* sp. In this study, the response of the two genotypes to the conserved 22 amino acid domain of the Liberibacter flagellin (Lflg22), a Pathogen-Associated Molecular Pattern (PAMP), were compared. The expression levels of citrus defense-associated genes including AZI1, EDS1, NDR1, SGT1, RAR1, PAL1, ICS1, PAL1, NPR1, NPR2, NPR3, PR1 and RdRp in response to Lflg22 were analyzed. The HLB moderately tolerant Sun Chu Sha showed a stronger response to Lflg22 than the HLB-sensitive grapefruit. These results suggest that differences in the levels of PAMP-triggered Immunity (PTI) between the two genotypes are associated with the observed levels of HLB tolerance. Interestingly, although the *Ca. L. asiaticus* flagellin gene has been shown to be functional, no flagellum has been observed in this bacterium.