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GENE EXPRESSION IN SWEET ORANGE (*Citrus sinensis*) TREATED WITH ACIBENZOLAR-S-METHYL AND INOCULATED WITH *Candidatus* Liberibacter Asiaticus¹/Análise da expressão de genes de plantas de laranja doce (*C. sinensis* L. (Osbeck)) tratadas com Acibenzolar-S-Metílico (ASM) e inoculadas com *Candidatus* Liberibacter asiaticus. DAROLT, J.C.²; FASSINI, C.G.³; DI PIERO, R.M.⁴; WULFF, N.A.^{3,2}Sao Paulo State University “Júlio de Mesquita Filho”, Araraquara, Sao Paulo – Brazil/³Fund for Citrus Protection (Fundecitrus) –Araraquara, Sao Paulo–Brazil/⁴Institute of Agricultural Sciences, Federal University of Santa Catarina, Florianópolis, Santa Catarina-Brazil. E-mail: josicdarolt@gmail.com

Huanglongbing (HLB) has caused high losses to citriculture worldwide, since there are no resistant varieties to this disease and due to fruit drop and eradication programs where HLB is quarantine. The management of HLB is dependent of adoption of practices with regional coverage, based on the three-pronged system. The use of resistance inducers as an additional tool to the management is plausible provided the efficacy of the treatment. In this way, we evaluated the effect of the Acibenzolar-S-methyl (ASM) inducer over HLB. Three experiments were conducted where *Ca. L. asiaticus* was graft-inoculated in young sweet orange trees. ASM (2.66 mg.mL⁻¹) were sprayed on the plants every 20 days, five times per experiment. ASM treatment were applied in graft-inoculated and control plants. Graft but untreated and mock were additional controls. The expression of genes related to jasmonic acid (JA) and salicylic acid (SA) pathways were evaluated at the same time intervals. We observed a delay in the detection of *Ca. L. asiaticus* in the plant canopy of ASM-treated plants when compared to the untreated. Plants sprayed with ASM over expressed the gene for the carboxymethyl transferase of jasmonic acid (JMT) and carboxymethyl transferase of salicylic acid (BSMT1), responsible by the methylation of JA and SA, respectively. We concluded that ASM changes the metabolism related to plants defense, while decreasing Las infection in the canopy of grafted-plants. However, more studies related to defense genes activated during sweet orange/*Ca. L. asiaticus*/ASM treatment is needed.

Keywords: Huanglongbing; Resistance inducers; Signaling pathways.