

Induction of Peroxidase as a Disease Resistance Response in Resistant (*Hibiscus trionum*) and Susceptible (*Althea armeniaca*) Species in the Family Malvaceae

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The pathogen-induced biosynthesis of peroxidase (PO) in resistant and susceptible wild species of Malvaceae was studied. Specifically, *Hibiscus trionum* was found to be resistant to the wilt pathogen *Verticillium dahliae*, and *Althea armeniaca* was susceptible. After inoculation with *V. dahliae*, PO activity increased more rapidly in the resistant plant: increased activity in *H. trionum* was noted within 1 h after inoculation, remained high for 5 h, and decreased after 18 h. After 5 days, the levels did not differ from the control. In the susceptible *A. armeniaca*, PO activity did not differ statistically from the control even after 18 h, but was significantly higher after 5 days. Electrophoretic analysis of inoculated tissue extracts showed the occurrence of two new isoforms in *H. trionum* after inoculation; new isoforms did not occur in *A. armeniaca*. A chitin affinity chromatography column showed the presence of a chitin-binding peroxidase isozyme in healthy *H. trionum* that increased dramatically after inoculation. Two chitin-binding peroxidase isozymes were observed in healthy *A. armeniaca*: one (R_f 0.26) did not increase and the other (R_f 0.89) evinced only a small increase after inoculation.

KEY WORDS: *Althea armeniaca*; chitin; *Hibiscus trionum*; peroxidase isozymes; resistance; *Verticillium dahliae*.

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