

Abstract

Harpin is a bacterial hypersensitive response (HR) elicitor. The effect of postharvest dipping with different concentrations of harpin was studied in Hami melons (cv. 8601). A concentration at 90 mg/L was the most effective treatment for reducing decay severity caused by *Alternaria alternata*, *Fusarium semitectum* and *Trichothecium roseum*. Higher concentration (120 and 200 mg/L) failed to promote better resistance against decay-causing agent and to cause phytotoxicity. Harpin did not demonstrate any fungicide effect in vitro and suppressed lesion diameter in treated melons, indicating that disease resistance was induced. Efficacy of suppression against *T. roseum* lasted 8 days in harpin treated fruit. The protection of harpin was associated with the activation of peroxidase (POD) and chitinase (CHT); however, no significant induction of β -1,3-glucanase (GLU) activity was observed. POD and CHT were induced for at least 10 and 8 days in harpin treated melons, respectively.