

MECHANISMS MODULATING FUNGAL ATTACK TO AVOCADO FRUITS BY POSTHARVEST PATHOGENS AND NEW APPROACHES FOR THEIR CONTROL

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Regarding pathogen, fruits and vegetables evolved an impressive array of defensive tools. At the same time, pathogens developed mechanisms to reduce fruit and vegetable resistance mechanisms in what must have been an evolutionary game. Observations indicate that postharvest host-pathogen interactions in avocado fruits are characterized by the following: i. multiple factors of fruit response affecting the resistance; ii. specific fungal factors modulating pathogenicity. Modulation of fungal pathogenicity can be obtained by activating the signal transduction mechanism, metabolizing inhibitory factors and changing the ambient pH where colonization takes place. Avocado fruit ambient pH and other nutritional factors are important since they determine the ability of the pathogen to successfully colonize and invade the targeted host, with the aid of secreted pathogenicity factors. Since pH is a critical consideration in the attack strategy of postharvest pathogens, they have developed environmental sensing mechanisms, enabling them to tailor in ambient conditions, by acidification and alkalinization, to best fit their offensive arsenal. What are the mechanisms used by the pathogen and how could them be modulated to affect fungal colonization? Recent achievements in the resistance of avocado fruits to fungal attack and in the mechanism of *Colletotrichum* pathogenicity will be summarized, and their use as new approach for postharvest disease control will be discussed.