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On
*RECENT TRENDS IN
BIOLOGICAL SCIENCES*
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ABSTRACTS**



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A-39**Phytochemical and Antioxidant Dynamics of the Soursop Fruit (*Annona muricata* L.) in Response to *Colletotrichum* spp.**

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Tirupattur District, Tamilnadu.**Abstract**

This work evaluates the effect of the pathogens *Colletotrichum siamense* and *C. gloeosporioides* on the response of soursop fruits. Bioactive compounds (total phenols, flavonoids, anthraquinones, coumarins, steroids, terpenoids, alkaloids, and saponins) were evaluated qualitatively in soursop pulp. Positive phytochemicals and antioxidant activity (DPPH•, ABTS•+, and FRAP) were quantified at day zero, one, three, and five. Fruits treated with *C. gloeosporioides* showed higher disease severity ($P < 0.05$). Early fruit response (day one) was observed with both pathogens, increased the concentration of saponins and repressed the production of quercetin 3-O-glucoside ($P < 0.05$). Likewise, *C. siamense* decreased total soluble phenols and flavonoids and increased antiradical activity DPPH•. Besides, *C. gloeosporioides* decreased the levels of kaempferol 3-O-rutinoside and ferulic acid ($P < 0.05$). Regarding the late response (day three), both pathogens decreased the concentration of saponins and increased flavonoids and phytosterols ($P < 0.05$). Nevertheless, *C. siamense* increased the levels of total soluble phenols, p-coumaric acid, kaempferol, and antiradical activity FRAP ($P < 0.05$). Also, *C. gloeosporioides* repressed the production of quercetin 3-O-glucoside at day five ($P < 0.05$). Soursop fruits had a response to the attack of *Colletotrichum* during ripening at physicochemical and oxidative levels, which is associated with the production of compounds related to the development inhibition of pathogens. Even so, soursop fruits showed higher susceptibility to *C. gloeosporioides* and higher sensitivity to the attack of *C. siamense*.

Key Words: *C. siamense*, p-coumaric acid, kaempferol, *Colletotrichum siamense*.