

Antifungal Activity of Bioactive Metabolites of Fungal Agents Isolated from Tangerine Skin

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The resistance of fungi to fungicides is one of the topical issues and the research axis in full swing. The search for new metabolites of biotechnological interest (pharmaceutical, agri-food, industrial and agricultural applications) is more and more requested. Bioactive natural compounds produced by microorganisms have been promising potential usefulness in safety and human health concerns.

In order to search for new natural and biological antifungal substances to control some pathogenic moulds we screened from the skin of decaying Tangerine in spring water, *Aspergillus nidulans*. The antagonistic effect on medium (MEA) of this antagonist against *Aspergillus*, *Fusarium*, *Alternaria* and *Candida* showed *in vitro* a remote inhibition of the growth of the phytopathogen *Alternaria alternata* with an order of 65%. The best performing isolates were used for the production and extraction of secondary metabolites. Extracts of *Aspergillus nidulans*, were found effective against *Alternaria alternata*. In the present study following bioassay, ethanol and methanol extracts were more effective than acetone extract against *Alternaria alternata*. Treatment of tomato fruits by supernatant of *Aspergillus nidulans* significantly reduced by 62% postharvest decay caused by *Alternaria alternata*. *Aspergillus nidulans* could be a potential biological agent for the protection of tomato against post harvest disease.

Keywords: *Alternaria alternata* ; *Aspergillus nidulans* ; Biological control.