ELICITATION OF THE DEFENCE MECHANISMS AT PLANT CASE OF *CUCUMIS MELO*

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ABSTRACT

The judicious use of elicitors could reduce the amount of pesticide necessary to protect crops and preservation of the environment. This strategy, frequently called "stimulation of natural defenses" arouses more and more interest in the phytosanitary field.

The objectives of this work were 1) to research the natural elicitor molecules of the defence mechanisms in planta at the melon plant (*Cucumis melo* L.), 2) to compare the release of the defence mechanisms at the melon plant in the case of an abiotic elicitation and in the case of a treatment with fruit extracts. Two unripe carob varieties extracts, Lahlou and Tounsi, were used in this study, supposed having simulative properties of natural defences at plants (SND). The studied pathological system was "*Cucumis melo* / *prick*".

To understand the signaling pathways involved in the defence mechanisms, these works were performed:

• Analysis of the enzymatic activities relating to the stress (the peroxidase (POD) and the catalase).

• Determination of total phenolic and soluble protein.

The main results were expressed by precocity and intensity of enzymatic activities because of the treatment with two carob varieties extracts. Indeed, the induced defence mechanisms would be assimilated to the systemic resistance acquired (SRA) due to the increase of the total phenolic contents and POD. In addition, the phenomenon of priming was generally observed in the site of the second elicitation.