



The effect of biotic and abiotic elicitors on Dianthalexin production from the callus of *Dianthus caryophyllus*

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Abstract: Biotic (*Fusarium oxysporum*) and abiotic (salicylic acid) as an elicitors were examined on the induction of phytoalexin (Dianthalexin) from carnation (*Dianthus caryophyllus*) callus from leaf. MS medium with BA in concentrations (0.0, 0.5, 1.0, 1.5, 2.0 or 2.5) mg/l and 2,4-D (0.0, 1.0, 2.0, 3.0, 4.0 or 5.0) mg/l which use for callus induction, fungal solution in (0.0, 2.0 or 4.0) ml/l and (0.0, 1.0 or 2.0) mg/l of salicylic acid were added to medium. Alcoholic extraction of callus tissues was analyzed by high-performance liquid chromatography (HPLC). The results showed that the dianthalexin highest level (58.29) µg/ml on MS medium with 1.0 mg/L BA and 2,4-D and fungal elicitor was used at 1.0 ml/l in three days period followed salicylic acid (58.19) µg/ml after six days incubation period.

Keywords: Phytoalexin, elicitors, *Fusarium oxysporum*, callus induction.

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