

Production of lignans in callus culture of *Linum glaucum* Boiss. and Noë

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Background and Aims: Medicinal plants are sources of important therapeutic aid for alleviating human ailments. Callus culture can also be used as an alternative to whole plant for the production of secondary metabolites. In this study, the influence of plant growth regulators, explant type and light condition on the callus culture of *Linum glaucum* Boiss. & Noë was investigated.

Methods: The callus culture of *L. glaucum* Boiss. & Noë was initiated and established from different explants of seeds (root, hypocotyl and cotyledon) in MS media with four different ratios of plant growth regulators: kinetin (1mg/L) alone and in combination of three type of auxins, 2,4-D, IAA and NAA (0.5mg/L) under light and dark conditions. A factorial randomized design with 3 replicates was used for data analysis.

Results: In this research projects, the best callus induction (100%) was recorded on media supplemented with kinetin and NAA in light condition. The callus growth (Callus fresh weight) also was affected by media and light. The best growth rates of callus (189mg) were found in media supplemented with kinetin alone at light condition. Methanol extracts were obtained from in vitro cultured *L. glaucum* and the lignins was detected by TLC.

Keywords: *Linum glaucum* Boiss. & Noë; Callus; Lignans