In vitro callogenesis from seedling leaves of mahogany (*Swietenia macrophylla* King)

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Mahogany (*Swietenia macrophylla* King) (Meliaceae family) has a highly valuable wood and is exploited in natural forests. In order to avoid this exploitation, researches about its vegetative propagation are carried out in vitro. This study aimed to induce somatic embryogenesis from leaf segments. Explants were inoculated in MS culture medium (Murashige and Skoog, 1962) supplemented with 1, 10, 20 or 30 µM BAP (6-benzylaminopurine) combined with 5 µM NAA (naphthalene acetic acid); growth regulators were not used in the control treatment. The explants were cultivated in Petri dishes containing 25 ml of culture medium, sealed with PVC plastic film and kept in a growth chamber at 25 °C ± 2 °C with a 16 h photoperiod under an irradiance of 0.73 µmol.m-2.s-1. After 120 days, calluses were formed on the explants and half of them were transferred to the same culture media. The other half was transferred to a second medium, containing the sa me salts and vitamins as the first medium, but supplemented with 0.5, 5, 10 or 15 µM BAP combined with 2.5 µM NAA and was cultured under the same conditions. After 120 days in the first medium, the highest percentage of explants forming callus (69.17%) was obtained on medium containing 5 µM NAA combined with 10 µM BAP. On control medium, the explants did not form callus and oxidation was present in all of them. After 150 days in the second medium, the formation of calluses with embryogenic characteristics was more frequent on medium supplemented with 5 µM NAA and 10 µM BAP (46.44%) and 2.5 µM NAA with 5 µM BAP (35.78%). In conclusion, high concentrations of NAA and BAP allowed the formation of embryogenic callus from leaf explants. However, there is a need for additional information about the callus anatomy and biochemistry in order to prove their embryogenic characteristic

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