Modulation of phenolic compounds production in *Bauhinia forficata* Link cell culture in presence of methyl jasmonate and salicylic acid

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Bauhinia forficata have been widely used in the treatment of diabetes by poor populations in developing countries; the bioactive compounds are found in their leaves. The aim of this work was to establish a protocol to obtain cells of *B. forficata* and to produce phenolic compounds with hipoglycaemic activities. Maximum response to callogenesis induction (77%) was developed using leaves as explants on MS medium, supplemented with 1 mg/L 2,4-diclorophenoxiacetic acid (2,4-D) and 1 mg/L kinetin plus sucrose at 3% (w/v). The cell suspension culture was established by transferring an inoculum of fresh callus (2 g) to 40 mL of liquid MS medium. The effects of methyl jasmonate (MeJA) and salicylic acid (AS), at 1 μmol/L, in the cell culture was evaluated by monitoring phenolic compounds through colorimetric method, both in the extra and intra cellular medium, at 0, 3, 6, 9 and 12 days. In the intracellular fractions, after 6 days of induction, MeJA and AS demonstrated the highest effect: 126 and 133%, respectively. The best time of induction in the extracellular medium was 9 days for MeJA (9.7%) and 6 days for AS (115%). In addition, the activity of phenylalanine ammonia lyase (PAL) and tyrosine ammonia lyase (TAL) increased with MeJA and AS at 6 and 9 days. Conclusions: (*i*) the conditions used are effective to obtain cells in suspension from *B. forficata*, (*ii*) MeJA or AS are useful elicitors of phenolic compounds.

Keywords: *Bauhinia forficate;* PAL, phenolic compounds
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