

## Antioxidant and hepatoprotective effects of *Eucalyptus maculata*.

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**BACKGROUND:** Since phenolic compounds have been reported as effective antioxidants, this study was designed to assess the hepatoprotective and antioxidant activities of the chloroformic extract of the resinous exudate and its phenolic constituents obtained from the stems of *Eucalyptus maculata*.

**MATERIAL/METHODS:** The chloroformic extract and pure phenolic isolates were evaluated for their antioxidant and hepatoprotective properties in mice and rats based on biochemical changes in serum and tissues as well as pathological changes in the liver and spleen. **RESULTS:** Acetaminophen (ACP) at a dose of 1 g/kg body weight produced 100% mortality in mice, while pretreatment of animals with the chloroformic extract (125 and 250 mg/kg) protected against the mortalities by 66%. Pretreatment of rats with either the chloroformic extract (250 mg/kg) or any of the pure isolates (20 mg/kg) significantly reduced the increase in serum level of aspartate aminotransferase (AST), alanine aminotransferase (ALT), and alkaline phosphatase (ALP) produced by ACP (640 mg/kg). Pretreatment of animals with the chloroformic extract or its isolates also protected against ascorbic acid depletion in serum and kidney tissues induced by oral administration of paraquat (PQ) without modifying the serum level of glutathione (GSH) and glycogen content in liver tissue. **CONCLUSIONS:** The phenolic content of the chloroformic extract and the pure isolates produced an antioxidant activity which may be due to the formation of stable phenoxyl radical in addition to its effect through vitamin C.