

Cytotoxic activity of acyl phloroglucinols isolated from the juvenile leaves of *Eucalyptus cinerea* F. Muell. ex Benth. cultivated in Egypt

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A worldwide increasing interest is continuously directed towards searching for cheap tumour inhibitors or cytotoxic compounds from plant origin that might help in chemotherapy and /or chemoprevention of different types of cancer. *Eucalyptus cinerea* F. Muell. ex Benth. (Silver Dollar Gum, Argyle Apple and Mealy Stingybark) belongs to the family Myrtaceae. Two acyl phloroglucinol compounds namely; Sideroxydonal B (CM₁) and macrocarpal A (CM₂) were isolated from the Chloroform: Methanol extract (80:20) of the juvenile leaves of *Eucalyptus cinerea* F. Muell. ex Benth. cultivated in Egypt. Identification of the isolated compounds was established on the basis of physico-chemical properties and 1D and 2D NMR spectroscopy. The two compounds are isolated for the first time from this species. The isolated compounds were tested against three human cancer cell lines; HEP2, CAco and MCF7. Both CM₁ and CM₂ compounds showed moderate to potent cytotoxic activity against the three tested human cancer cell lines with IC₅₀ 7.2, 4, 4.4 and 14.8, 11.4 and 7.8 µg/ml against HEP2, CAco and MCF7 respectively. Results evidenced that CM₁ was more potent than CM₂ as a cytotoxic agent against two of the tested cell lines CAco and MCF7 (IC₅₀ = 4 & 4.4 µg/ml, respectively).

Keywords: *Eucalyptus cinerea* F. Muell. ex Benth, cytotoxic acyl phloroglucinol, Sideroxydonal B and macrocarpal A.