

Cytotoxic Terpenes from the Stems of Bark of *Echinacea Angustifolia* DC Collected from Girei, Adamawa State, Nigeria

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Abstract : From the Stems of Bark of *Echinacea angustifolia* DC three known triterpenes 3a,5,5b,8,8,11a-hexamethyl-1-(prop-1-en-2-yl)icosahydro-1H-cyclopenta[a]chrysene-9-yl acetate (lupeol acetate), 4,4,6a,6b,8a,10,11,14b,octamethyl-1,1,2,3,4,4a,5,6,6a,6b,7,8,8a, 9,10, 11,12,12a,14,14a,14b-icosahydricen-3-yl acetate (derivative of β -amyrin and 9-hydroxy-1-isopropenyl-5a,5b,8,8,11a-pentamethyl-icosahydro-cyclopenta[a]chrysene-3a-carboxylic acid (betulinic acid), labelled as Ea-7-38, Ea-9-10 and Ea-12-85) were isolated and characterized. All isolates were tested for their cytotoxicities against *Artemia salina* (brine shrimp larvae). Compound Ea-12-85 exhibited potent cytotoxic activity against the *Artemia salina*, Ea-7-38, Ea-9-10 were found to be non-toxic in the cytotoxicity test. The result of the study has justified the claim of the traditional medicine practitioners in Girei for the treatment of complicated malaria disease using the stem bark of *E. angustifolia* DC.

Keywords : cytotoxic, terpenes, *Echinacea angustifolia*, brine shrimp, *artemia salina*

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