



# Cytotoxic cardenolides from the latex of *Calotropis procera*.

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## Abstract:

Three new cardenolides (3, 9 and 10), along with eight known ones, were isolated from the latex of *Calotropis procera*. The structural determination was accomplished by the 1D- and 2D-NMR spectra as well as HRESIMS analysis. The growth inhibitory activity of the latex and its sub-fractions as well as isolated compounds was evaluated against human A549 and Hela cell lines. The results exhibited that latex had strong growth inhibitory activity with IC<sub>50</sub>s of (3.37 μM, A-549) and (6.45 μM, Hela). Among the four extracts (hexane, chloroform, ethyl acetate and aqueous), chloroform extract displayed the highest potential cytotoxic activity, with IC<sub>50</sub>s of (0.985 μM, A-549) and (1.471 μM, Hela). All the isolated compounds displayed various degrees of cytotoxic activity and the highest activity was observed by calactin (1) with IC<sub>50</sub>s values of (0.036 μM, A-549) and (0.083 μM, Hela). None of these isolated compounds exhibited good antimicrobial activity evaluated by determination of their MICs using the broth microdilution method against various infectious pathogens. The structure-activity relationships for cytotoxic activity were also discussed.

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