

## ABSTRACT

From the leaves of Kenyan medicinal plant *Bersama abyssinica* Subspecies *abyssinica*, four previously undescribed compounds namely, three bufadienolides, 10 $\beta$ -formylpaulliniogenin B, 10 $\beta$ -formyl paulliniogenin A and 1 $\beta$ -acetoxy-3 $\beta$ ,5 $\beta$ -dihydroxy-15-methoxy-16,19-dioxobufa-14(15),20,22-trienolide, and a phenolic compound 2,6,4'-trihydroxybenzophenone-4-O-(6''-cinnamoyl)- $\beta$ -D-glucoside were isolated together with four known compounds. The structural elucidation of the compounds was based on 1D and 2D NMR spectroscopy and HRMS data analyses. The relative configurations were defined by NOESY correlations. Cytotoxic activities on L929 and KB3.1 cell lines of the isolated compounds were investigated using MTT assay. The 1 $\beta$ -acetoxy-3 $\beta$ ,5 $\beta$ -dihydroxy-15-methoxy-16,19-dioxobufa-14(15),20,22-trienolide showed significant cytotoxic activity against KB3.1 cell lines with IC<sub>50</sub> of  $3.9 \pm 0.99 \mu\text{M}$ .

**Keywords:** *Bersama abyssinica*; Bufadienolides; Cytotoxicity; KB3.1 cell lines; Melianthaceae.