Brevifoliasaponin with Adjuvant Activity from *Calliandra brevifolia*

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A new complex triterpenoid saponin, brevifoliasaponin, was isolated from leaves of *Calliandra brevifolia* Benth. (Leguminosae) by using chromatographic methods. Its structure was established as 3-[(*O*-α-L-arabinopyranosyl-(1 → 2)-*O*-α-L-arabinopyranosyl-(1 → 6)-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl)oxy]-16-hydroxy-(3β,16α)-olean-12-en-28-oic acid *O*-β-D-xylopyranosyl-(1 → 3)-*O*-β-D-xylopyranosyl-(1→4)-*O*-[β-D-glucopyranosyl-(1 → 3)]-*O*-6-deoxy-α-L-mannopyranosyl-(1 → 2)-6-*O*-[(2*E*,6*S*)-6-[[2-*O*-[(2*E*,6*S*)-6-[[2-*O*-[(2*E*,6*S*)-2,6-dimethy-l1-oxo-6-(β-D-xylopyranosyloxy)-2,7-octadienyl]-β-D-xylopyranosyl]oxy]-2,6-dimethyl-1-oxo-2,7-octadienyl]-β-D-xylopyranosyl]oxy]-2,6-dimethyl-1-oxo-2,7-octadienyl]-β-D-glucopyranosyl ester. Its structural elucidation was performed using detailed analyses of ^{1}H and ^{13}C NMR spectra including 2D-NMR spectroscopic techniques and chemical conversions. The hemolytic activity of the saponin was evaluated using *in vitro* assays, and its adjuvant potential on the cellular immune response against ovalbumin antigen was investigated using *in vivo* assays.

Key words: *Calliandra brevifolia*, Leguminosae, Brevifoliasaponin, Complex Triterpenoid Saponin, Ovalbumin, Adjuvant Activity