Bidesmosidic oleanane saponins from Xerospermum noronhianum

Abstract

Three new oleanane-type triterpenoid saponins, 3-O-(α-L-rhamnopyranosyl(12)-β-D-fucopyranosyl)-28-O-{[α-L-rhamnopyranosyl(12)] [β-D-fucopyranosyl(16)]-β-D-glucopyranosyl} oleanolic acid (1), 3-O-[α-L-rhamnopyranosyl(13)-β-D-fucopyranosyl]-28-O-[α-L-rhamnopyranosyl(14)-β-D-glucopyranosyl] oleanolic acid (2), and 3-O-[α-L-rhamnopyranosyl(12)-{3′,4′-diacetoxy-β-D-fucopyranosyl}]-28-O-[α-L-rhamnopyranosyl(12)-β-D-glucopyranosyl] oleanolic acid (3) have been isolated from the stems of Xerospermum noronhianum. The structures of the saponins were determined as a series of bidesmosidic oleanane saponins based on spectral evidence. The anticholinesterase activity of the saponins 1–3 was also evaluated.

Keyword: Xerospermum noronhianum; Saponins; Oleanane; Bidesmosides