

Abstract

Three new pentacyclic triterpenoids: (20R)-3-oxolupan-30-al (1), (20S)-3-oxolupan-30-al (2) and (20R)-28-hydroxylupen-30-al-3-one (3), along with (20S)-3beta-hydroxylupan-30-al (4), the latter previously described as a constituent of an epimeric mixture, were isolated from *Acacia mellifera*. In addition, the known metabolites 30-hydroxylup-20-(29)-en-3-one (5), 30-hydroxylup-20-(29)-en-3beta-ol (6), atranorin, methyl 2,4-dihydroxy-3,6 dimethyl benzoate, sitosterol-3beta-O-glucoside and linoleic acid were found in the analyzed plant species for the first time. The structures of the new metabolites were elucidated by extensive spectroscopic analyses and their relative stereochemistry was determined by NOESY experiments. The new metabolite 3 exhibited significant cytotoxic activity against the NSCLC-N6 cell line, derived from a human non-small-cell bronchopulmonary carcinoma.