Cleistenolide and cleistodienol: Novel bioactive constituents of Cleistochlamys kirkii

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Abstract

(-)-5-Acetoxy-6-(1-benzoyloxy-2-acetoxyethyl)-pyr-3-en-2-one (cleistenolide) and (-)-2, 6-diacetoxy-5-hydroxy-cyclohex-3-enylidenemethyl benzoate (cleistodienol) were isolated as novel antimicrobial and cytotoxic constituents of Cleistochlamys kirkii (Annonaceae), together with (Z)-(+)-5-(2, 3-dihydroxy-propylidene)-5H-furan-2-one and its acetyl and benzoyl derivatives, (-)-1, 6-desoxy-β-senepoxide, pinocembrin and polycarpol. Structural determination was achieved based on spectroscopic and other physical data. The structure of cleistenolide was confirmed by single crystal X-ray crystallographic analysis.

Keywords: