

Natural Product Research

Cycloartanol and Sutherlandioside C peracetate from *Sutherlandia frutescens* and their immune potentiating effects

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Abstract

A novel cycloartanol (1) and an acylated Sutherlandioside D (2) together with two known cycloartane derivatives, Sutherlandioside B (3) and Sutherlandioside A (4), were isolated from the aerial parts of *Sutherlandia frutescens*. The structures of these compounds were established by a combination of 1- and 2-D NMR techniques and further confirmed by high resolution ToF mass spectrometry (HRToFMS). Preliminary biological studies were also conducted to assess the activity of different plant extracts, fractions and compounds on cytokine expression. Compounds 1 and 2 prompted an increase in IL-6 expression while compound 4 showed a reduced IL-6 expression compared to the controls. Compound 1 is an effective suppressor of IL-10 expression. The plant compounds inhibited the expression of the two cytokines, IL-10 and TNF α . The results of the assays suggested that some components in the plant extract influence the immune system by suppressing the expression of IL-6, IL-10 and TNF α .