

Sesquiterpene Lactones from *Dimerostemma* Species (Asteraceae) and *in vitro* Potential Anti-Inflammatory Activities

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Two Brazilian species of *Dimerostemma* (Asteraceae) were chemically investigated. Two known sesquiterpene lactones (STLs), a germacrolide and an eudesmanolide, were isolated from *D. episcopale* while *D. brasilianum* afforded the new germacranolide $1\beta,5\beta,10\alpha$ -trihydroxy- 8α -angeloyloxy-germacra-3,11(13)-dien- $6\alpha,12$ -olide in addition to a known one. Structure identification based on NMR and MS analyses. $1\beta,10\alpha,4\alpha,5\beta$ -Diepoxy- 8α -angeloyloxy-costunolide isolated from *D. brasilianum* was studied for its anti-inflammatory activity. This STL completely inhibited DNA binding of the transcription factor NF- κ B at a concentration of $5\text{ }\mu\text{M}$ and $10\text{ }\mu\text{M}$ in Jurkat T and Raw 264.7 cells, respectively. Elastase release from human neutrophils was reduced to 50% at a concentrations of $23\text{ }\mu\text{M}$ after stimulation with PAF and of $27\text{ }\mu\text{M}$ after stimulation with fMLP without showing cytotoxic effects. Additionally, elastase was also directly inhibited.

Key words: *Dimerostemma*, Germacranolides, Anti-Inflammatory Activity