Structure-Activity Relationships of Aromadendranes in Uterus-Relaxant Activity

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Aromadendranes belong to a class of sesquiterpenes present in higher plant essential oils and marine animals. Although the biological activities include antifungal, antibacterial, antiviral, plant growth regulatory, antifeedant, repellent and cytotoxic, there is only one precedent for spasmyloytic effects. In a previous report we have shown that the aromadendrene molecule known as spathulenol, isolated from Lepechinia caulescens, efficiently relaxes rat uterus rings and therefore in the present work we describe structure-activity relationships of thirteen aromadendranes, most of them having the trans-fused perhydroazulene skeleton, with spasmyloytic activity.

Key words: Aromadendranes, Structure-Activity Relationships, Uterus-Relaxant Activity