Hypotensive Activity of Terpenes Found in Essential Oils

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The cardiovascular activity of essential oils has been reported. Some studies showed that the main chemical components of these oils contribute to their pharmacological activity. Therefore, the cardiovascular activity of four monoterpenes and one sesquiterpene was evaluated in the present work. In non-anaesthetized normotensive rats, (+)-*Ŭ*-pinene, (–)-*ƀ*-pinene, (±)-citronellol and (±)-linalool (1, 5, 10, and 20 mg/kg, i.v.) induced hypotension [maximal effect: (–35 ± 3)%, (–46 ± 4)%, (–48 ± 2)% and (–40 ± 2)%, respectively; $n = 6$] and tachycardia [maximal effect: (13 ± 4)%, (16 ± 7)%, (21 ± 1)% and (19 ± 3)%, respectively; $n = 6$] while (–)-*Ŭ*-bisabolol (1, 5, 10, and 20 mg/kg, i.v.) induced hypotension [maximal effect: (–47 ± 8)%, $n = 6$] and bradycardia [maximal effect: (–57 ± 3)%]. In conclusion, these results demonstrated that all terpenes tested had hypotensive activity in rats and that the pharmacological effect of the terpene alcohols was more effective than that of the terpene hydrocarbons.

Key words: Essential Oils, Terpenes, Cardiovascular Activity