Sedative Effect of Monoterpene Alcohols in Mice: A Preliminary Screening

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Many essential oils and monoterpenes are used therapeutically as relaxing drugs and tranquilizers. In this study, ten structurally related monoterpene alcohols, present in many essential oils, were evaluated in mice to investigate their pharmacological potential in the central nervous system. Isopulegol (1), neoisopulegol (2), (±)-isopinocampheol (3), (-)-myrtenol (4), (-)-cis-myrtanol (5), (+)-p-menth-1-en-9-ol (6) and (\pm) -neomenthol (8) exhibited a depressant effect in the pentobarbital-induced sleep test, indicating a sedative property. (-)-Menthol (7), (+)-dihydrocarveol (9), and (\pm) -isoborneol (10) were ineffective in this test. The results show that these psychoactive monoterpenes have the profile of sedative drugs, and this pharmacological effect is influenced by the structural characteristics of the molecules.