

Antinociceptive Activity and Preliminary Structure-Activity Relationship of Chalcone-Like Compounds

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Chalcones belong to a class of α,β -unsaturated aromatic ketones which occur abundantly in nature, especially in plants. They are promising and interesting compounds due to their vast applications in pharmaceuticals, agriculture and industry. Several studies have shown that these compounds exert important biological activities in different experimental models. The present work deals with the antinociceptive activity, evaluated against the writhing test, of three series of chalcone-like compounds obtained by the Claisen-Schmidt condensation, using different aldehydes and substituted acetophenones. The results reveal that the compounds synthesized show a significant antinociceptive effect compared with nonsteroidal drugs such as aspirin, paracetamol and diclofenac. They also show that the electronic demand of the substituents is the dominant factor of the biological activity.

Key words: Chalcones, Claisen-Schmidt Reaction, Antinociceptive Activity