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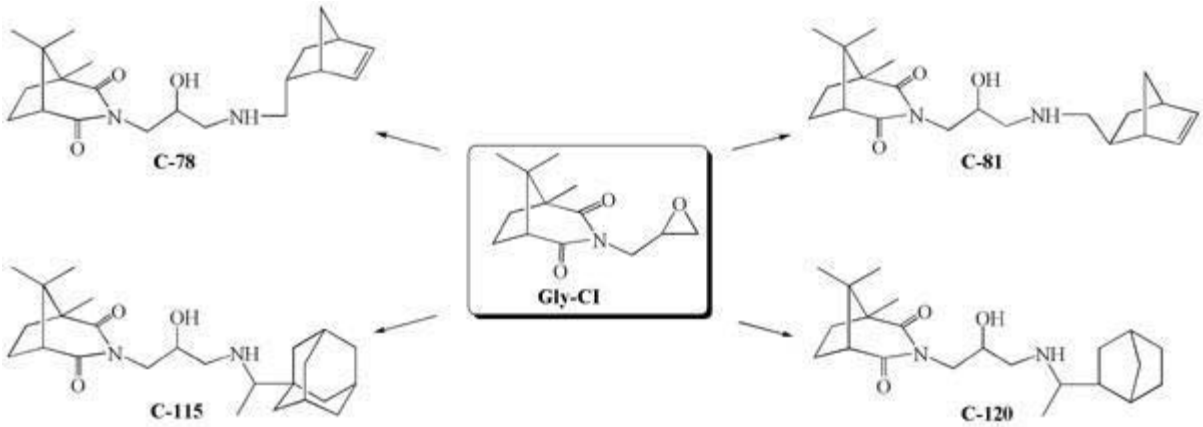
ANALGESIC AND ANTICONVULSIVE ACTIVITY NEW COMPOUNDS WITH NORBORNENE AND ADAMANTANE FRAGMENTS

H.T. Zlenko[1], L.I. Kasyan[2], V.A. Palchikov[2], H.A. Golodaeva[3], M.I. Stefanik[1]
[1]Dnepropetrovsk State Medical Academy, [2]Organic Chemistry, Oles Gonchar Dnepropetrovsk National University, Dnepropetrovsk, [3]Volodimir Vinnichenko Kirovograd State Pedagogical University, Kirovograd, Ukraine

Introduction: The present work deals with analgesic and anticonvulsive activity of four novel aminoalcohols C-81, C-78, C-115 and C-120 synthesized on basic glycidylcamphorimide (Gly-CI), exo- and endo-aminomethylnorbornenes, aminoethyladamantan (remantadin) and aminoethylnorbornan (deitiforin).



[Figure]

Aims: Synthesis cage-like compounds with excellent analgesic and anticonvulsive activity.
Methods: Experiments have been carried out on both genders adult white mice at the dozes of 1/10 LD50. Investigated substances were entered intraperitoneally. Preparations have been entered as a water suspension on TWEEN-40. Acute toxicity of compounds (LD50) has been measured by Litchfield & Wilcoxon method in Prozorovsky V.B. modification and amounts 370-1196 mg/kg.
Results: The most toxic compound is aminoalcohol C-115 with adamantane fragment. Investigation of analgesic activity has been carried out by determination of pain threshold by thermal irritation method (hot plate) at 55°C. Anticonvulsive activity has been studied by corazole spasm test. The activity has been calculated in percentage in relation to control group of animals.
Conclusions: All aminoalcohols have shown analgesic and (except for compound C-81) anticonvulsive activity. For exo-aminoalcohol C-81 the most intense activity are analgesic (195.0%) and for endo-isomer C-78 - anticonvulsive activity (213.3 %). Compounds C-115 and C-120 shows medium analgesic (67.1 and 58.5%) and anticonvulsive activity (13.4 and 67.5%).

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