

Materials and methods. The experiments were performed on 14 cats 2-4 kg body weight anesthetized with 30% urethane solution (500 mg/kg) and chloralose (50 mg/kg) administered intraperitoneally, followed by blood pressure and heart rate monitoring at different intervals of time.

Results. The 0.2 mg/kg propranolol solution was administered intravenously with effect assessment at 2 and 5 minutes, followed by 5 minutes intravenous administration of isoprenaline solution 0.005 mg/kg, then 2 mg/kg benzturon dissolved in 1,5 ml physiological saline solution with effect recording at certain time intervals. Isoprenaline was injected to demonstrate β -adrenoceptor blockade by propranolol. Subsequent intravenous injection of benzturon resulted in a decrease in blood pressure at the 60th minute.

Conclusions. Benzturon in the dose of 2 mg/kg exerts hypotensive effect on the background of blockade of β -adrenoreceptors.

Key words. Benzturon, blood pressure, heart rate

235. OBTAINING AND BIOLOGICAL EVALUATION OF α -TOCOPHEROL ESTER TYPE PRODUCTS

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Introduction. More and more scientific evidence criticizes free radicals for the occurrence of numerous and serious conditions such as liver cirrhosis, atherosclerosis, various types of cancers, diabetes etc. For this reason, the role of antioxidants, in defending the body from damage caused by different types of radicals, is crucial. Although molecular oxygen plays a particularly important role in sustaining life on this planet through its involvement in many physiological processes (photosynthesis, aerobic respiration), it is also toxic, especially when converted to the superoxide (O_2^-), anion included into the group of reactive oxygen species. Thus, in this context, the development of new antioxidant compounds capable of neutralizing reactive oxygen species, is essential.

Aim of the study. The present study aims to evaluate the antioxidant action of some derivatives obtained by esterification of aryl-propionic acids with α -tocopherol.

Materials and methods. The ester-type prodrugs of tocopherol were obtained by reacting it with derivatives of the aryl-propionic acid class (ibuprofen and ketoprofen) in absolute ethyl alcohol medium. The resulting compounds (TOC-IBF and TOC-KTF) were physically and chemically characterized and their structure was confirmed by IR spectroscopy. Antioxidant potential was assessed by two spectrophotometric methods: total antioxidant capacity and reducing power.

Results. Following optimization of the synthesis method, the compounds were obtained in good yields. IR spectra, recorded in the range of 500-4000 cm^{-1} , revealed the group vibrations characteristic of the structural elements specific to each compound: the ester group, the aromatic ring and the basic structure of the tocopherol. The structural modulation of the aryl-propionic acids has positively influenced the antioxidant properties, the action of the synthesized compounds being comparable to that of tocopherol.

Conclusions. The results obtained in this study support the antioxidant potential of synthesized compounds and their applications in various diseases mediated by reactive oxygen species (ROS).

Key words: α -tocopherol ester, prodrugs, antioxidant action

236. USE OF PROFETUR IN ACUTE ARTERIAL HYPOTENSION CAUSED BY ACE INHIBITORS