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 benzituron 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 benzituron resulted in a decrease in blood pressure at the 60th minute.
Conclusions. Benzituron in the dose of 2 mg/kg exerts hypotensive effect on the background of blockade of β-adrenoreceptors.
Key words. Benzyturon, 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 (O2-), 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

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Introduction. ACE inhibitors are well known to improve outcomes in the prevention of acute myocardial infarction, lowering the morbidity and mortality in congestive heart failure, and to attenuate renal dysfunction. On the other hand they can induce severe refractory hypotension during general anesthesia or in case of overdose. Profetur is a new alkylisothiourea derivative with potent antihypotensive vasoconstrictive action. The substance has a long lasting action after single dose administration, both in normal conditions and on the background of blockade action of different antihypertensive drugs. This characterizes profetur as a promising drug for the use in the treatment of acute arterial hypotension caused by ACE inhibitors.
Aim of the study. Evaluation of the possibility of using of the new antihypotensive vasoconstrictive isothiourea derivative profetur for the correction of hemodynamic disorders observed in acute arterial hypotension caused by ACE inhibitors.
Material and methods. Experiments were performed on rats anaesthetized by sodium thiopental (30-50 mg/kg, i/p). Acute arterial hypotension was modeled by intravenous administration of the ACE inhibitor enalapril (2 mg/kg). In order to correct hemodynamic disorders, profetur was administered intravenously in the dose of 20 mg/kg. Antihypotensive action was assessed by determining changes in blood pressure, heart rate and respiration in the initial state, after 2 and 15 minutes on the background of enalapril, and within 60 minutes after the administration of profetur.
Results. Enalapril administration was accompanied by a decrease in blood pressure by 32.5%, an increase in heart rate by 4.6% and respiratory rate by 33.5%. With a single intravenous administration of profetur, blood pressure was significantly increased and stabilized (106±21,1-114,7±20,6 mmHg) during the whole duration of the experiments. Recovery of blood pressure was accompanied by a decrease in heart rate and respiration. Changes of these parameters indicate that the profetur, normalizing blood pressure, eliminated hemodynamic disorders caused by enalapril.
Conclusions. In acute arterial hypotension caused by enalapril, profetur preserves its vasoconstrictive action and contributes to abolishment of the disturbances of the systemic hemodynamics and hypoxia seen with the use of the ACE inhibitor.
Key words: profetur, enalapril, hypotension, antihypotensive drugs

237. HEPATOPROTECTIVE PRODUCTS ACCORDING TO STATE MEDICINE NOMENCLATURE FROM REPUBLIC OF MOLDOVA

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Introduction. The acute and chronic hepatites remains to be the main problem for the humanity and also for R. Moldova, that´s why the evaluation of drugs with hepatoprotective action is esential, both from a medical and social point of view and also from an economic point of view. Hepatoprotective products are constituents capable of protecting the liver from the destructiv action of endogenous and exogenous factors.
Aim of the study. Our main goal is to select all the hepatoprotective products that were recorded in R. Moldova, analyzing them according to the State Medicine Nomenclature(SMN).