

SYNTHESIS AND INVESTIGATION OF PROPERTIES IN A RANGE OF 2-HYDROXY-4-OXO-7-METHYL-4H-PYRIDO [1,2- α] PYRIMIDINE-3- CARBOXYLIC ACID DERIVATIVES

Nemer Nouredine Mohammad Ali, Abu Shark A. I., Bezugly P. O.

Scientific supervisor: associate professor Abu Shark A. I.

National University of Pharmacy, Kharkiv, Ukraine

amjad1977a@gmail.com

Introduction. Chemicals that are derivatives of pyrido [1,2- α] pyrimidine of major interest to the pharmaceutical and medical practice through a wide range of activities, including antimicrobial, antiviral and diuretic. The problem of identifying new classes of biologically active substances and create on their basis of highly efficient and safe medicines do not lose their relevance for quite a long time. Chemicals that have in their structure fused heterocyclic system pyrido [1,2- α] pyrimidine, recently attracted considerable attention chemists and pharmacologists synthetics through interesting pharmacological properties. Previously synthesized amides of 2-hydroxy-4-oxo-4H-pyrido [1,2- α] pyrimidine-3-carboxylic acid, in experiments on animals have shown anti-tuberculosis and diuretic properties. With this in mind, alkylamides of 2-hydroxy-4-oxo-7-methyl-4H-pyrido [1,2- α] pyrimidine-3-carboxylic acid are targets of great interest for further study.

Aim. The aim of this work was the synthesis of potential biologically active substances – alkylamides of 7 methylsubstituted 2-hydroxy-4-oxo-4H-pyrido [1,2- α] pyrimidine-3-carboxylic acid derivatives. The synthesized group of compounds to study for their biological types of activity.

Materials and methods. The melting point was determined by capillary Kofler on the block. ¹H NMR spectra were recorded on a device Varian Mercury-VX-200 (200 MHz), Solvent - DMSO - d₆, internal standard - tetramethylsilane (TMS). The chemical shifts are in the scale δ (ppm) correspond to calculated elemental analysis.

Results. According to the research using computer program PASS, the newly synthesized compounds are promising targets for further study of their biological activity. As it was shown by the data of the forecast, the mentioned above group of compounds have the potential antispasmodic, analgesic activity.

Conclusions. By the interaction of ethyl ester with 7-methylsubstituted of 2-hydroxy-4-oxo-4H-pyrido [1,2- α] pyrimidine-3-carboxylic acid derivatives with the corresponding alkylamine have synthesized a number of alkylamides of 7 methyl substituted of 2-hydroxy-4-oxo-4H -pyrido [1,2- α] pyrimidine-3-carboxylic acid derivatives with perspective types of biological activity. The structure of all the synthesized compounds has been confirmed by elemental analysis and ¹H NMR spectra.