study of antifungal activity we prepared a series of two-fold serial dilutions of studied xanthine derivatives in Mueller-Hinton broth at volume of 1 ml. After this, we added 0.1 ml of a fungi suspension (106mk / ml) to each tube. Minimal inhibition concentration was determined by the absence of visible growth *in vitro*, the minimum fungicidal concentration - by the absence of growth after sowing. As the solvent we used dimethylsulfoxide. Concentration of Initial solutions were 1 mg/ml. As standard tests we used *Candida albicans*. The standard drug "Nystatin" was used as compare control. As result of provided experiment we found, that almost all tested xanthine derivatives showed antifungal activity and some of them were more active than "Nystatin". Obtained data also allowed to found some dependence at "structure – activity" relations.

SYNTHESIS AND INVESTIGATION OF SOME DERIVATIVES OF 3-(3-METHYLXANTHINE-8-YL)PROPANOIC ACID

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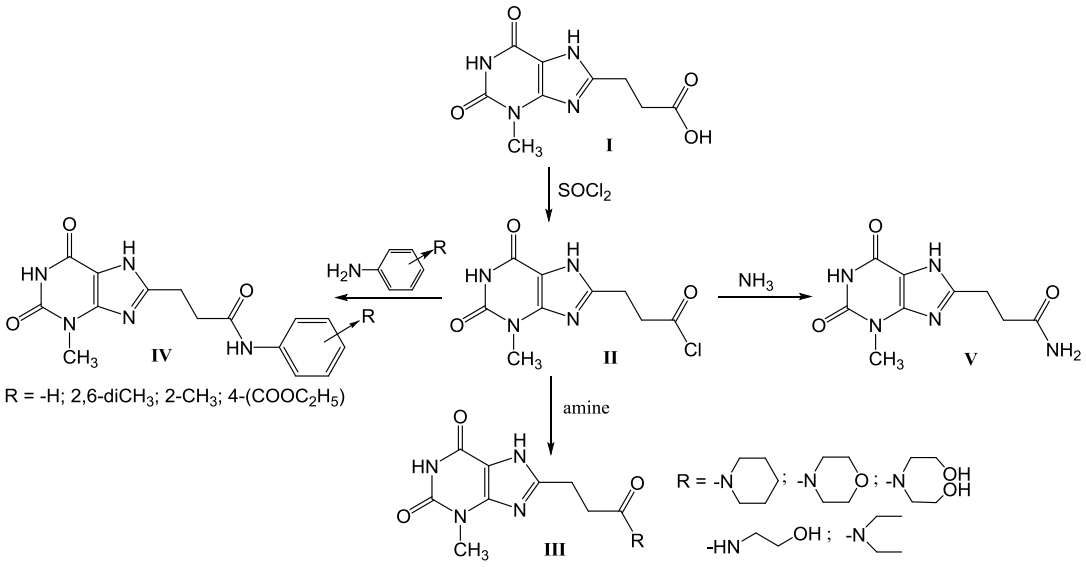
In order to obtain new potentially biologically active compounds, we developed a method for the synthesis of 3- (3-methylxanthinyl-8)propanoic acid, based on which a synthesis of some amides of the aliphatic and aromatic series was carried out. By heating the suspension of 3-(3-methylxanthine-8-yl)propanoic acid (I) in excess thionyl chloride without solvent for 5 hours, the corresponding chloric anhydride (II) was obtained. Heating of the chloric anhydride with the amines taken as solvents gave the corresponding amides (III). The reaction of substituted anilines with 3-(3-methylxanthine-8-yl)propanoic acid chloride in anhydrous acetic acid is realized by the formation of aromatic amides (IV). The reaction of the chloric anhydride and 20% ammonia solution results in the formation of the acid amide (V).



Obtained data gives us the possibility to suppose that synthesized compounds have high diuretic activity in comparison with hypothiazide. Structures of synthesized compounds were confirmed by IR-, NMR-spectroscopy and mass-spectrometry.