# SYNTHESIS AND BIOLOGICAL ACTIVITY OF 8-SUBSTITUED 1H-PURINE-2,6(3H,7H)-DIONE

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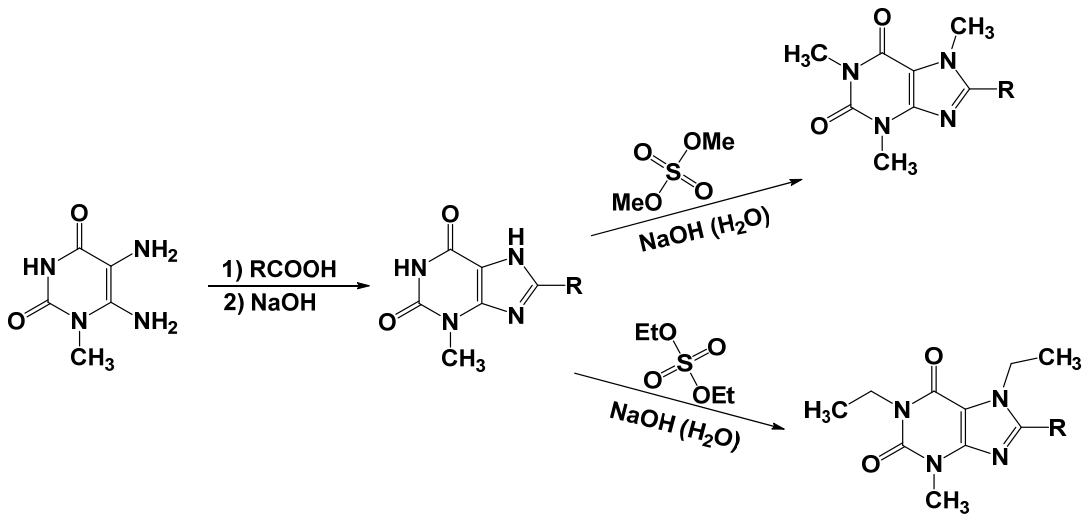
Modern medicine needs high-effective and low-toxic diuretic, neuropropic, cardiovascular drugs. Nowadays there are lots of purine and purine-2,6-dione derivatives used in clinical medicine (purinetol, atriance, fludarabine, cladribine, thioguanine etc.).

Some of our previous structure-affinity activity studies were interested with chemical modifications in a group of compounds containing aliphatic 3-methylpurine-2,6-diones with insertion of different pharmacophores.

To continue our research with 8-R-purine-2,6-dione derivatives we designed and synthesized some analogs of the previously evaluated series. To extend structure-activity relationships, we studied the methylation and ethylation reaction of 8-R-purine-2,6-dione derivatives with DMSO excess in sodium hydroxide medium. Herein, we report on the synthesis of the new $N_1$-; $N_7$-$CH_3$ та $N_1$-; $N_7$-$C_2H_5$-derivatives of purine-2,6-dione.




**R = Alk, Ar, ArAlk**

Structures of synthesized compounds were confirmed by IR-, NMR-spectroscopy and mass-spectrometry.

The primary pharmacological screening showed that obtained compounds reveal diuretic and analgesic activities.