

## Synthesis and some transformations of 1-methyl-1H-[1,4]thiazin-[4,3-f] purine-2,4,6 (3H, 7H, 9H)-trione

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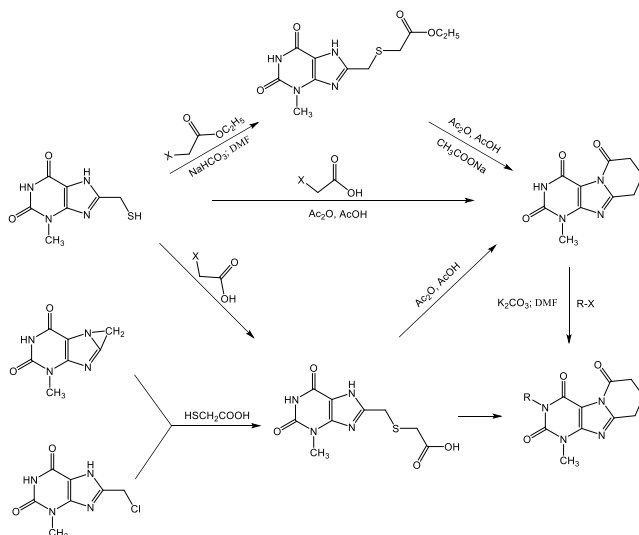
Preparations based on natural and synthetic purines and xanthenes have been included in the arsenal of the most frequently used antitumor drugs (6-mercaptopurine), bronchodilator (euphyllin, plaitin), antiaggregational (pentoxifylline), antiviral (acyclovir), nootropic (ethophylline) and other activities.

Continuing research in this direction, we carried out the synthesis in the series 2 - ((3-methyl-2,6-dioxo-2,3,6,7-tetrahydro-1H-purin-8-yl) methylthio) acetic acid and its ethyl ester, and also a transition to 1-methyl-1H-[1,4]thiazino [4,3-f] purine-2,4,6 (3H, 7H, 9H) -trione and its derivative was carried out (**Scheme 1**).<sup>1,2</sup>

The obtained substances possess neurotropic, hypotensive and broncholytic activity.

The structure of the obtained compounds was established using modern physicochemical methods of analysis-IR, PMR spectroscopy and mass spectrometry.

Studies in this area are continuing.



Scheme 1.

### References:

1. Crystallographic and docking studies of purine nucleoside phosphorylase from *Mycobacterium tuberculosis* / R. G. Ducati, L. A. Basso, D. S. Santos, W. F. de Azevedo Jr. // *Bioorg. Med. Chem.* – 2010. – Vol. 18. – P. 4769-4774.
2. Synthesis and immunobiological activity of base substituted 2-amino-3-(purin-9-yl)propanoic acid derivatives / P. Doláková, A. Holý, Z. Zídek [et al.] // *Bioorg. Med. Chem.* – 2005. – Vol. 13. – P. 2349–2354.

