

# SYNTHESIS OF N'-ARYLIDENE-6-OXO-4,4-DIPHENYL-5,6-DIHYDRO-4H-THIENO[3,4-C]PYRROLE-1-CARBOHYDRAZIDES AS NEW PROMISING BIOLOGICALLY ACTIVE SUBSTANCES

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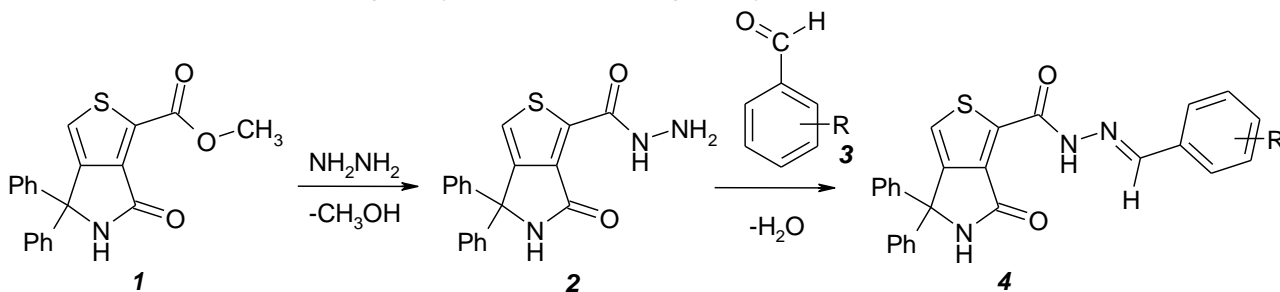
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**Introduction.** Previously, we have worked out an efficient procedure to synthesize esters of 6-oxo-4,4-diphenyl-5,6-dihydro-4H-thieno[3,4-c]pyrrole-1-carboxylic acid by means of acidochromal cyclocondensation of benzylic acid amides. The formers comprise the novel heterocyclic system and this fact gives a great opportunity to investigate biological properties of such acids and their derivatives. It was established that abovementioned esters are effective antihypoxic and psychostimulating agents. In continuation of these researches, we decided to modify the ester group of the fused heterocycles to extend the series of thieno[3,4-c]pyrroles and to determination of “structure-bioactivity” relations. One of the effective methods for modifying of an ester group is synthesis of hydrazides.

**Aim.** Our research was focused on the synthesis of 6-oxo-4,4-diphenyl-5,6-dihydro-4H-thieno[3,4-c]pyrrole-1-carboxylic acid hydrazide and its further interaction with aromatic aldehydes.

**Materials and methods.** We used a common methods of organic synthesis. Also we used  $^1\text{H}$  NMR spectroscopy to confirm the structure of the synthesized compounds.

**Results and discussion.** Initial hydrazide **2** was obtained by treating of methyl ester 6-oxo-4,4-diphenyl-5,6-dihydro-4H-thieno[3,4-c]pyrrole-1-carboxylic acid **1** with hydrazine hydrate. Interaction of hydrazide **2** with various aromatic aldehydes **3** allowed to obtain the target hydrazones **4** in good yields.



**Conclusion.** Thus, we significantly increased the number of potentially biologically active substances belonging to N'-arylidene-6-oxo-4,4-diphenyl-5,6-dihydro-4H-thieno[3,4-c]pyrrole-1-carbohydrazides. Structure synthesized compounds was proved by modern physico-chemical methods.