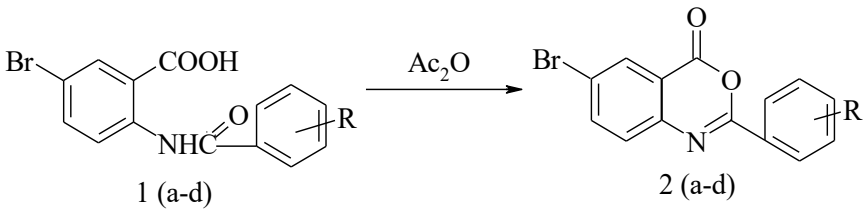
Scheme 1



1 (a-d) 2 (a-d)

де: а) R=2,4-Cl; б) R=2-Cl, 5-Br;
в) R=2-Cl, 3-NO_2; г) R=2-Cl,3,5-NO_2;
d) R=2-Cl, 3,5-Br.

the structure of synthesized compounds is confirmed by data of elemental analysis, IR-, PMR-spectroscopy and chromatography in a thin layer of sorbent.

Investigation of antimicrobial activity was performed by two-fold serial dilutions in vitro.

Results and discussion. The resulting compounds (2 (a-d) have a crystalline structure, high dispersion, insoluble in water, alkaline solutions (as opposed to starting acids), in hexanes, soluble in most organic solvents.

Synthesized compounds (2 a-d) were studied for the presence of bacteriostatic, fungistatic activity. The results of microbiological screening indicate that 6-bromo-2-(R-phenyl)-3,1-benzoxazinone-4 exhibit bacteriostatic activity against gram-positive and gram-negative microorganisms at a concentration of 15.6-250 mg/ml. The fungistatic action of synthesized compounds to Candida albicans, Candida triandis, Candida tropicalis is between 31.2-250 mg/ml.

Conclusions. Synthesis of 6-bromo-2-(R-phenyl)-3,1-benzoxazinones-4 was carried out. Were detected compounds with bacteriostatic and fungistatic activity according to the results of pharmacological studies.

SYNTHESIS AND ALKYLATION OF 3-(2-HYDROXY-2,2-DIPHENYLACETYLAMINO)-4-OXO-2-THIOXO-1,2,3,4-TETRAHYDROQUINAZOLINES

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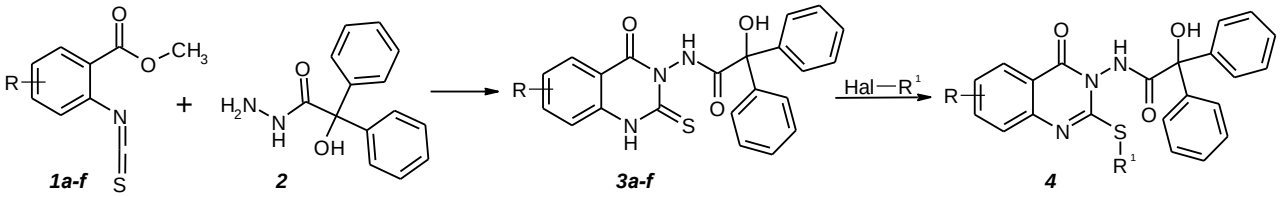
Introduction. Recently creation of new bioactive molecules containing in their structure two pharmacophore units with the same or close bioactivity has become actual direction of medicinal chemistry. This is due to higher affinity of such type molecules to biotargets. Benzylic acid derivatives turned out to be highly active substances with neurotropic activity. At the same time 2-thioxo-2,3-dihydro-1*H*-quinazolin-4-one core is also prospective pharmacophore for searching of drugs with the same activity.

Aim. The purpose of the research was to combine the benzylic acid residue and the fragment of quinazolin-2-one into the same molecule and to study alkylation for the latter.

Materials and methods. 2-Carbmethoxyphenylisothiocyanates and benzylic acid hydrazide were used as starting compounds. The standard methods of synthetic organic chemistry were applied. ^{1}H NMR, IR spectroscopy as well as liquid chromatography – mass spectrometry were used to prove the products structure.

Results and discussion. Interaction of substituted 2-carbmethoxyphenylisothiocyanates 1a-f with benzylic acid hydrazide (2) in ethanol under reflux led to 2-hydroxy-N-(4-oxo-2-thioxo-1,4-dihydro-2*H*-quinazolin-3-yl)-2,2-diphenylacetamides 3a-f.



1a-f 2 3a-f 4

R=H (a); 4-F(b); 5-Cl (c); 4,5-di-OCH_3 (d); 4,5-O-CH_2-O (e); 4-$COOCH_3$ (f)
R^1=Alk; Bn; $CH_2CONHAlk$; $CH_2CONHAr$

Despite the presence of several nucleophilic centers in the molecule of 3 alkylation of the latter by alkyl halides led to S-alkyl derivatives 4 in high yields and this reaction could be used for preparation of a variety of functional derivatives of biological significance.

Conclusions. Series of novel 2-hydroxy-N-(4-oxo-2-thioxo-1,4-dihydro-2*H*-quinazolin-3-yl)-2,2-diphenylacetamides was synthesized and alkylation reaction for the latter was investigated.

SYNTHESIS OF 2-(9*H*-FLUOREN-9-ILIDENE)HYDRAZONO-5,5-DIMETHYL-4-OXOHEXANAMIDES AND EVALUATION OF THEIR ANALGESIC ACTIVITY

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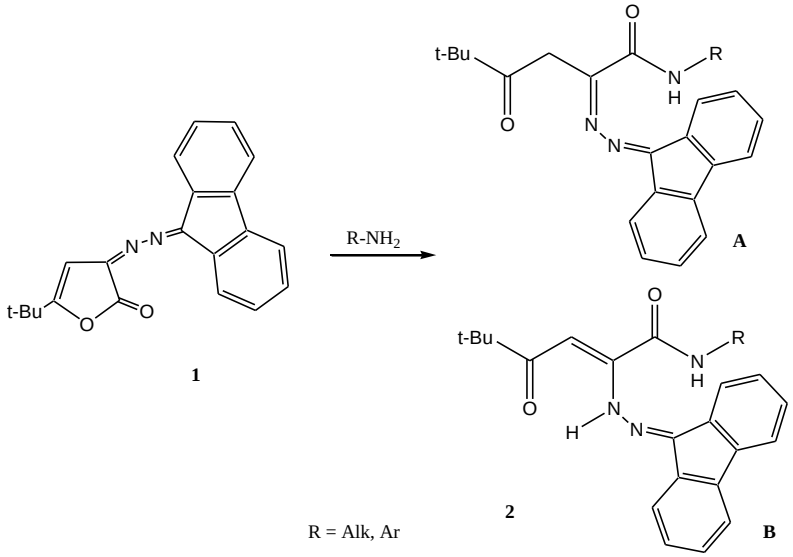
Introduction. Nowadays the search for new biologically active substances is actual in medical science. Functional derivatives of acylpyruvic acids possess broad spectrum of biological activity and low toxicity. At present, 3-hydrazono(imino)-3*H*-furan-2-ones are widely used for the preparation of biologically active acyclic and heterocyclic derivatives of acylpyruvic acids. We proposed a method for the synthesis of 2-(9*H*-fluoren-9-ylidene)hydrazono)-5,5-dimethyl-4-oxohexanamides by the decyclization of 3-(9*H*-fluoren-9-ylidene)hydrazono-5-*tert*-butylfuran-2(3*H*)-one under the action of primary amines.

Aim. Preparation of new derivatives of acylpyruvic acids and evaluation of their analgesic activity.

Materials and methods. The starting material is 3-(9*H*-fluoren-9-ylidene) hydrazono-5-*tert*-butylfuran-2(3*H*)-one, which was synthesized according to known procedures. The structure of obtained compounds is confirmed by the data of IR, NMR ^{1}H and ^{13}C spectroscopy.

Results and discussion. The starting 3-(9*H*-fluoren-9-ylidene) hydrazono-5-*tert*-butylfuran-2(3*H*)-one was reacted with various acyclic and aromatic primary amines.



All synthesized compounds were tested for analgesic activity by hot plate method.

Conclusions. We have obtained new 2-(9*H*-fluoren-9-ylidene)hydrazono-5,5-dimethyl-4-oxohexanamides, which previously not described in the literature. Substances with a pronounced analgesic effect were detected.