SYNTHESIS AND BIOLOGICAL ACTIVITY OF SPIRO[BENZO[H]QUINAZOLINE-5,1'-CYCLOHEPTANE]- 4(6H)-ONE DERIVATIVES

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As a result of the interaction of ethyl 4'-amino-1'H-spiro[cycloheptane-1,2'-naphthalene]-3'-carboxylate [1] and benzoyl isothiocyanate, followed by cyclization of the resulting thiourea, 2-thioxo-2,3-dihydro-1H-spiro[benzo[h]quinazoline-5,1'-cycloheptan]-4(6H)-one (2). Condensation of the latter with halides of various structures are synthesized 2-thiosubstituted 3H-spiro[benzo[h]quinazoline-5,1'-cycloheptan]-4(6H)-ones (3), 2,2'-(methylenebis(sulfanediyl))bis(3H-spiro[benzo[h]quinazoline-5,1'-cycloheptan]-4(6H)-one) (4), 9,10-dihydrospiro[benzo[h]thiazolo[2,3-b]quinazoline-6,1'-cycloheptan]-7(5H)-ones (5) and 10,11-dihydro-5H-spiro[benzo[h][1,3]thiazino[2,3-b]quinazoline-6,1'-cycloheptan]-7(9H)-one (6).

Studied antitumor properties against sarcoma 180 and antibacterial properties of the synthesized compounds. Gram-positive (*Staphylococcus aureus* 209p, *Bacillus subtilis* ATCC 6633) and gram-negative microorganisms (*Sh. Flexneri* 6858, *E. coli* 0-55) were used as test objects.

References

- [1] A. I. Markosyan, A. S. Ayvazyan, S. H. Gabrielyan, S. S. Mamyán. Chem J. Armenia. 2019, v. 72 (4), p. 469-482.