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БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

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SYNTHESIS OF HYBRID HETEROCYCLIC SYSTEMS ON THE BASE OF 8-HYDROXYQUINOLINE

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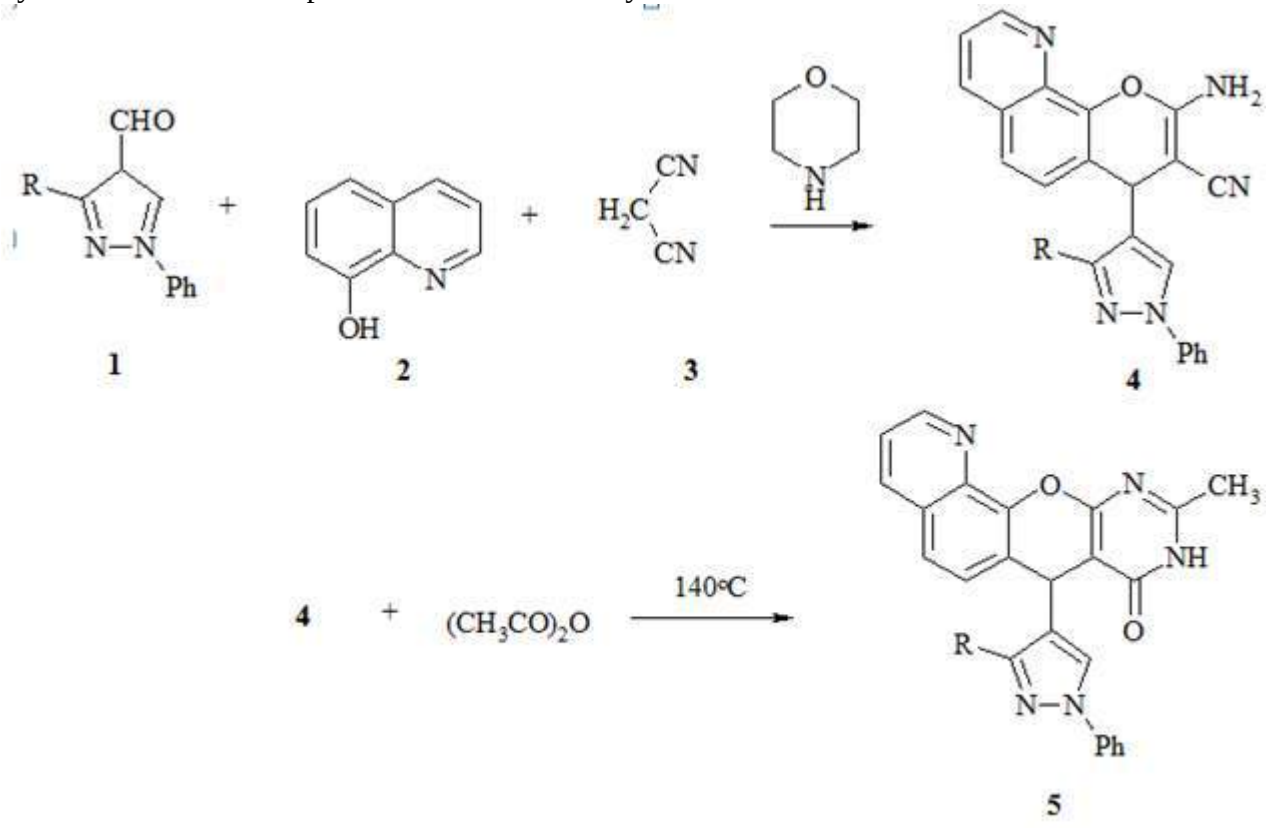
Introduction. 8-Hyroxyquinoline has a number of promising properties. It is well known due to its use in analytical chemistry for the quantitative determination of cations of many metals, 8-hydroxyquinoline complexes with Al^{3+} possess highly effective luminescent properties. Medicinal products have been created on the base of 8-hydroxyquinoline, in particular, a highly effective antibiotic - 5-nitro-8-hydroxyquinoline.

The aim of the study. The aim of the research is developing of the synthesis of hybrid condensed heterocyclic systems with a pyrazole fragment 4 with the help of three-component condensation of 4-pyrazolecarbaldehydes **1** with 8-hydroxyquinoline and malonodinitrile.

Materials and methods. A new class of hybrid heterocyclic systems 5 has been synthesized by condensation of compounds 4 with acetic anhydride.



1, **4**, **5**: C_6H_5, 3-pirydyl, 4-$CH_3C_6H_4$, 4-ClC_6H_4, 4-$CH_3C_6H_4$, 2-thienyl, $COOC_2H_5$

The structure of the synthesized compounds has been reliably confirmed by IR, NMR^{1}H and chromato-mass spectra.

Results. It has been established that compounds 4 with high outputs are condensed into heterocyclic systems 5 with acetic anhydride during 6-hour boiling.

Conclusions. The synthesis of hybrid condensed heterocyclic systems with a pyrazole fragment 4 can be performed by three-component condensation of 4-pyrazolecarbaldehydes 1 with 8-hydroxyquinoline and malonodinitrile.