

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



МАТЕРІАЛИ

**104-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
06, 08, 13 лютого 2023 року**

Конференція внесена до Реєстру заходів безперервного професійного розвитку,
які проводитимуться у 2023 році №5500074

Чернівці – 2023

СЕКЦІЯ 5
АКТУАЛЬНІ ПИТАННЯ БІОЛОГІЧНОЇ ТА ФАРМАЦЕВТИЧНОЇ ХІМІЇ

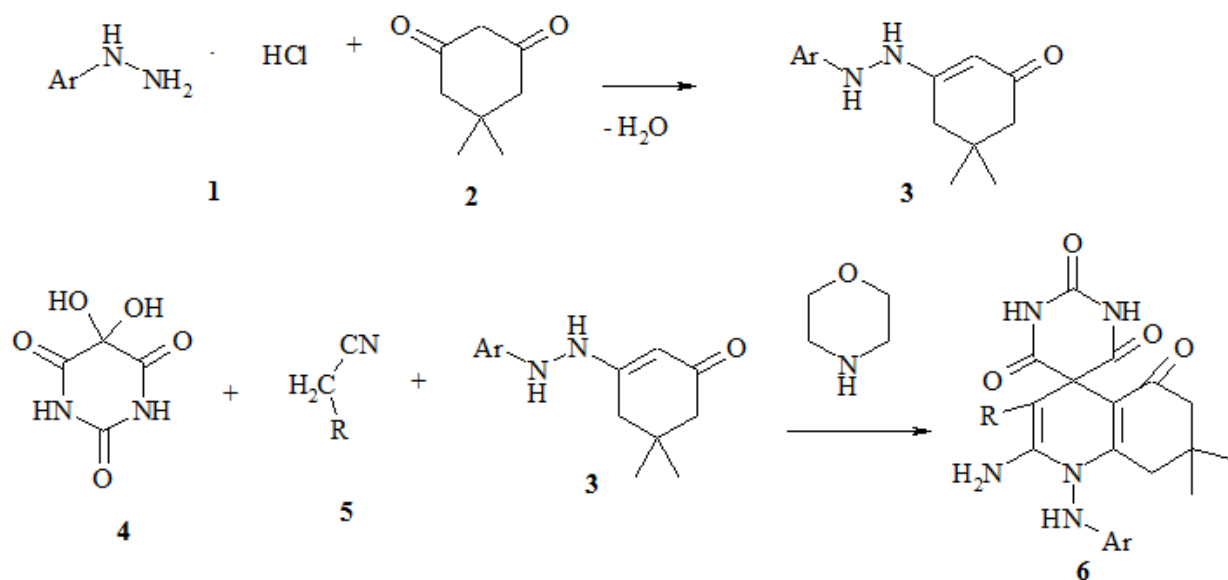
Barus M.M.

ALLOXAN SPIRODERIVATIVES SYNTHESIS
Department of Medical and Pharmaceutical Chemistry
Bukovinian State Medical University

Introduction. Derivatives of barbituric acid have proven themselves as highly effective hypnotic drugs, it is also known that pyrimidine derivatives have a wide spectrum of biological activity. On the other hand, preparations with a broad pharmacological effect have been created on the base of natural and synthetic quinoline compounds.

The aim of the study. We had the task of developing an approach to the synthesis of polycyclic spirans, the molecules of which would include fragments of barbituric acid and tetrahydroquinoline.

Materials and methods. The final stage of the synthesis of the target spirans **6** included the three-component condensation of alloxan hydrate, cyclohexenone enhydrazines, and malononitrile or cyanoacetic acid ethyl ester in the presence of a catalytic amount of morpholine. The scheme of the synthesis of target spirans **5** has the following form:



1, 3, 6: Ar: C₆H₅, 4-CH₃C₆H₄, 2-CH₃C₆H₄, 4-BrC₆H₄, 3-ClC₆H₄, 2-ClC₆H₄.
5, 6: R=CN, COOEt.

The structure of the synthesized compounds was reliably confirmed by IR, NMR¹H and chromato-mass spectra.

Results. We have developed an approach to the synthesis of polycyclic spirans, the molecules of which would include fragments of barbituric acid and tetrahydroquinoline.

Conclusions. We have developed an approach to the synthesis of polycyclic spirans, the molecules of which would include fragments of barbituric acid and tetrahydroquinoline.