

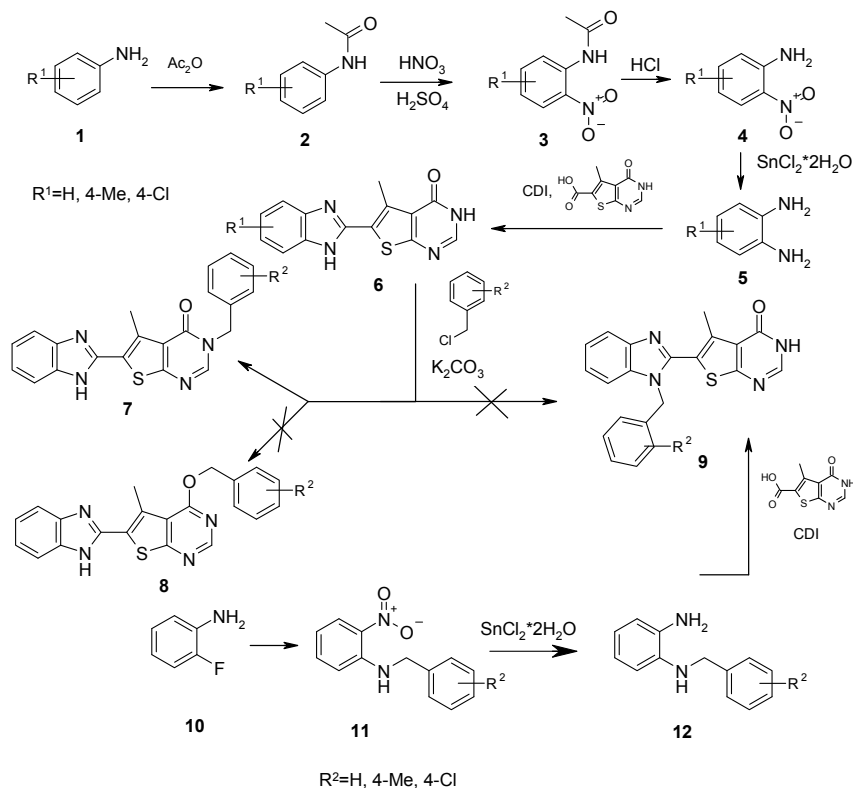
SYNTHESIS OF THE OF 6-(1H-BENZIMIDZOL-2-YL)-5-METHYL-THIENO[2,3-D]PYRIMIDIN-4(3H)-ONE DERIVATIVES AND THEIR ALKYLATION STUDY

Krolenko K. Yu., Vlasov S.V., Kovalenko S.M., Chernykh V.P.

National University of Pharmacy, Kharkiv, Ukraine

sergiy.vlasov@gmail.com

The derivatives of thieno[2,3-d]pyrimidine-4(3H)-ones are well known due to their pharmacological properties, which are extensively studied last years. Among the derivatives of benzimidazole there are many biologically active compounds together with the substances, which are already well known for the pharmaceutical market. Thus we combined these two pharmacophores into a novel heterocyclic system and studied the ways of its alkylation.



The synthesis has been performed according to the scheme; the compounds **6** have been obtained by interaction of *ortho*-phenylenediamines **5** with 5-methyl-4-oxo-3,4-dihydrothieno[2,3-d]pyrimidine-6-carboxylic acid imidazolide. The regioselectivity of alkylation reaction for compound **6** has been assigned by NOESY spectra. For isomeric alternative product **9**, which in the NOESY-experimental conditions may behave similarly to O-alkylated product **8**, the alternative synthesis has been performed. It was established that product **9** and compound **8** are different.