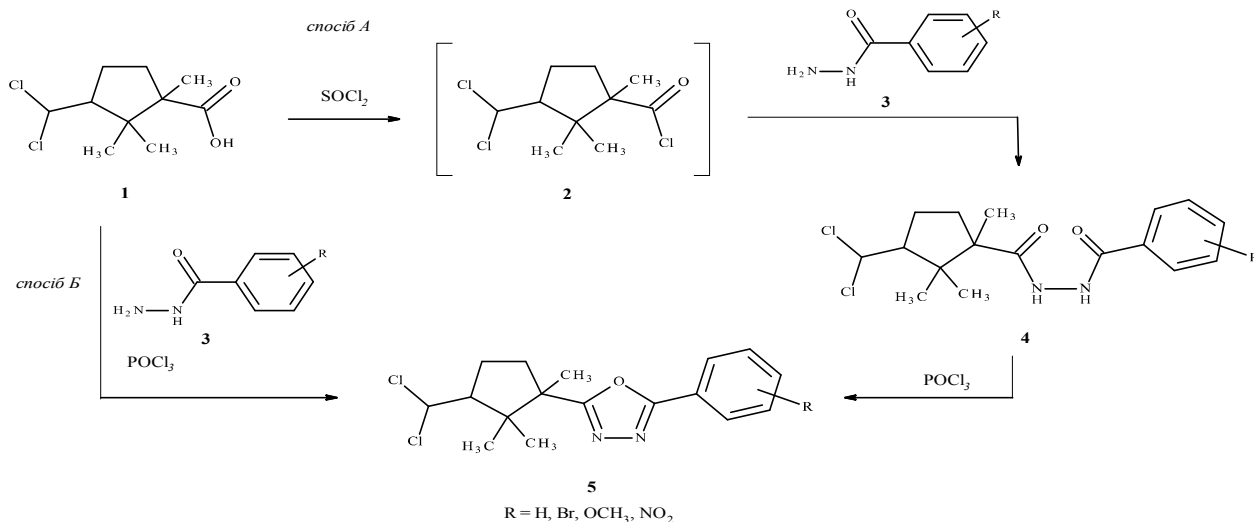


оксадіазолів **5** (спосіб А). Даний спосіб є добре відомим підходом до формування оксадіазольного циклу і широко представлений в науковій літературі. Оксадіазоли **5** також були отримані в одну стадію, починаючи з кислоти **1** (спосіб Б). Як було з'ясовано, цей шлях дає більш високі виходи, ніж стадійна процедура способу А.

Схема 1



Висновки. Синтезовані 2-[(1S,3R),(1R,3S)-3-(дихлорметил)-1,2,2-триметилциклопентил]-5-(R-феніл)-1,3,4-оксадіазоли **5** прогнозовано мають привабливий фармакологічний профіль з точки зору безпечності та виявлення цікавих видів активності, зокрема протимікробної (протитуберкульозної) та протипухлинної, тому можуть вважатися кандидатами для проведення тестування *in vitro*.

PROGNOSIS OF ALLERGENIC, CARDIOTOXIC AND HEPATOTOXIC ACTION OF SUBSTITUTED 5-NITRO-9-HYDRAZINOACRIDINES

Mohylna H. V.

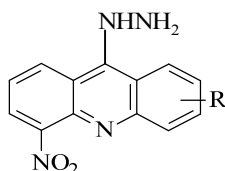
Scientific supervisor: Yeromina H. O.

National University of Pharmacy, Kharkiv, Ukraine

annerem2012@gmail.com

Introduction. Nitrogen-containing heterocyclic compounds play an important role in the modern pharmaceutical industry. This is due to the significant biological potential of these compounds. A wide range of biological activity of acridine derivatives (antiprotozoal, anticancer, antibacterial, etc.) and the availability of sources for their preparation determine the prospects of using compounds of this class to create modified derivatives based on them and, as a result, medicines. Derivatives of acridine have already established themselves both in the agricultural sector and in veterinary medicine and pharmacy.

Aim. The purpose of our research was to predict allergenic, cardiotoxic and hepatotoxic action of substituted 5-nitro-9-hydrazinoacridine derivatives of general formula:



1-3,

where 1. R=H; 2. R=2-OCH₃; 3. R=2-Cl

Materials and methods. The objects of our research – 5-nitro-9-hydrazinoacridine derivatives, which were synthesized at the department of medical chemistry of National University of Pharmacy.

Results and discussion. The prognosis was carried out using free online software pkCSM developed by the University of Cambridge. According to the results obtained the 5-nitro-9-hydrazinoacridine derivatives do not cause skin sensitization, are not hERG I inhibitor and are hERG II inhibitor. This indicates that the investigated substances probably are not allergenic and may be cardiotoxic with probability 50%. Results of computer prognosis showed that 5-nitro-9-hydrazinoacridine 1 are not hepatotoxic substance. Introduction in the 2 position of acridine cycle chlor or methoxy substituent leads to hepatotoxicity.

Conclusions. So, investigated 5-nitro-9-hydrazinoacridine derivatives are interesting objects for further research.

THE EFFECT OF THE COMBINED USE OF VITAMINS C AND D ON THE MICROSCOPIC COMPOSITION OF RATS' URINE

Pohuliai A. O., Lytkin D. V., Podolsky I. M.

National University of Pharmacy, Kharkiv, Ukraine

illya.podolsky@nuph.edu.ua

Introduction. The year 2019 witnessed the advent of a new severe acute respiratory syndrome coronavirus (SARS-CoV-2) that causes coronavirus disease 19 (COVID-19). The COVID-19 pandemic has spurred renewed interest in vitamin D to address viral replication and hyperinflammation that have a major role in the pathogenesis of severe COVID-19. The beneficial effects of vitamin D in COVID-19 were attributed to be mediated through its multiple actions on the immune system. Calciferol is known to enhance the production of various anti-microbial peptides by the immune cells and modulates the immune system according to the internal milieu. It reduces the dysregulated production of self-damaging pro-inflammatory cytokines and promotes the expression of anti-inflammatory cytokines by immune cells. The dynamic role of vitamin D can be of immense value in the context of immune dysfunction observed in COVID-19 patients with cytokine storm and acute respiratory distress syndrome.

Ascorbic acid represents an appealing option for clinicians to utilize in the context of the global COVID-19 pandemic due to its proposed clinical efficacy, relative safety, and low cost. Due to its known antioxidant effects and role in enhancing immune function, vitamin C was assumed to have a beneficial impact on COVID-19. This is mainly *via* supporting lymphocyte activity, stimulating interferon- α production, reducing inflammation, and improving endothelial function.