

DATA ON THE ANTMICROBIAL ACTIVITY OF THIENOPYRIMIDINES

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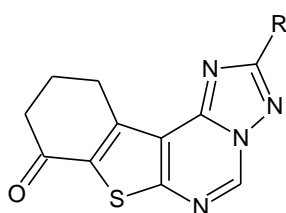
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Introduction. Bacterial infections are the cause of a large number of diseases of the respiratory tract, gastrointestinal tract and other organs and systems. Postoperative infectious diseases are also dangerous, which interfere with the patient's recovery and greatly complicate the course of the underlying disease. Antibiotics are used to effectively combat bacterial infections, but unfortunately, their irrational use reduces the effectiveness of drugs of this group due to the formation of antibiotic resistance by bacteria. One potential way to overcome resistance is to develop and find new classes of antibiotics. Thienopyrimidines, which are able to block the synthesis of proteins in the bacterial cell, belong to this group.

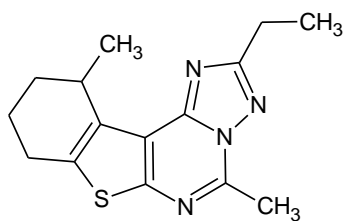
Aim. Based on the analysis of new relevant literature data on the antimicrobial activity of thienopyrimidine derivatives, find out the feasibility of finding new molecules with this type of activity.

Materials and methods. Methods of literature search, data analysis and the formation of conclusions based on them.

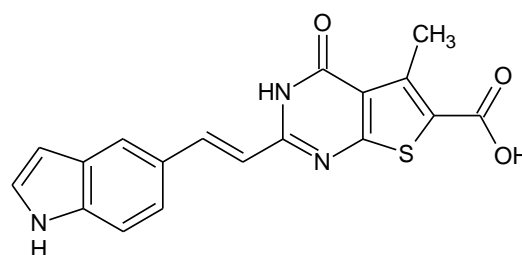
Results and discussion. The analysis of literature data showed that many compounds with antimicrobial activity were found among thienopyrimidine derivatives. Tetracyclic thienopyrimidine derivatives with triazole **1** showed promising antibacterial activity, also showing good antibacterial activity against *B. subtilis*. Compound **2** (R = methyl and R1 = ethyl) was found to be the most active with MICs of 5 and 8 μM , respectively, against the bacteria *S. aureus* ATCC 29213 and *E. coli* ATCC 25922. Compound **3** is an inhibitor of *N*-acetyltransferases of bacterial sugars and inhibits the growth of *C. jejuni* in low concentrations.



1



2



3

Conclusions. Based on the analysis of literature data, it was established that thienopyrimidine derivatives exhibit antibacterial activity, and in some cases at low concentrations, therefore, the study of compounds with this heterocyclic system for antimicrobial activity is expedient.