

STRATEGY OF SEARCH FOR POTENTIAL ANTIMICROBIAL COMPOUNDS AMONG MAGNESIUM AND ALUMINIUM SALTS OF NITROSUBSTITUTED OF N-PHENYLANTHRANILIC ACIDS

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Recently, a number of publications devoted to the problem of medical complications in the treatment of viral and bacterial diseases of different etiologies. Mainly this associated with the appearance of strains of microorganisms specific resistant to medicines which are presented in a wide range in the pharmaceutical market.

One of the alternative ways to eliminate those described deficiencies is introduction to the structure of substance some biometals, such as copper, magnesium, calcium, zinc, aluminum and others.

Research of many years, carried out by scientist's community of medical and biological departments of National University of Pharmacy, has shown a promising of receiving of potential antimicrobial agents based on derivatives of N-phenylanthranilic acids, which included various pharmacophores. Proposed pharmacophores in many cases exhibit optimization, synergy and expand the range of pharmacological effects of both compounds. This allows us to offer this approach to resolving the issue of possible treatment viral and bacterial diseases.

Based on the experience of previous studies, we have synthesized magnesium and aluminum salts of 5-nitro- and 3,5-dinitro-N-phenylanthranilic acids.

The synthesized compounds was identified with the methods of H¹-, IR-, UV-spectroscopy and thin layer chromatography.

The level of microbiological activity was determined by two-time serial dilutions in meat's broth of neutral medium using the daily culture of these microorganisms: *Staphylococcus aureus* ATCC 25923, *Bacterium subtilis* ATCC 66337, *Echerichia coli* ATCC 25912, *Pseudomonas aeruginosa* ATCC 78857. As reference preparation using the solutions of ethacridine lactate of different concentrations.

Also for obtained compounds was determined an acute toxicity (DL₅₀) by the method of intraperitoneal injection.

The synthesized compounds revealed antimicrobial activity at a concentration of 15.6 - 62.5 mg/ml.

The toxicity of which in experiment was over 2000 mg/kg, and for toxicological classification relating to low-toxic compounds.