A significant increase of anti-H antibody titers in mice challenged with the virulent A/WSN/1/33(H1N1) strain and treated with Taurosid Sx1 was seen on the day 4, compare with the control group (128.0±20.0* versus 40.0±0.0 in control). Oral administration of Taurosid Sx1 also stimulated antibody titers of antibody against IV type B hemagglutinin of DS on the day 4 (100.0±10.0* versus 40.0±0.0 in control). Use of the saponin did not influence significantly on the anti-H3 antibody production.

This study has shown that oral administration of 200 μg/mouse/day Taurosid Sx1 within 3 day after virulent IV challenge or GRIPPOL® vaccination selectively stimulates development of antibodies specific to IV type B hemagglutinin and anti-H1 antibodies generated by both virus infection and vaccination.

### 10.6 ANTIBACTERIAL ACTIVITY OF SYNTHESIZED COMPOUNDS FROM DIFFERENT CLASSES OF CHEMICALS

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The main problem in bacteriology is a constant increase of antibiotic-resistant strains of bacteria. Therefore, the purpose of our work is the study of new developed chemicals.

We investigated the antibacterial effect of three groups of compounds derived from synthetic and natural substances: 2 groups are based on fluoroquinolonic acid (30 substances) and derivatives of 1,2,4-triazoles (25 substances). The third compound (CH-II) is synthesized from 30 substances and derivatives of 1.2,4-triazoles (25 substances) and derivatives of 1,2,4-triazoles (25 substances). The compound CH-II has good bactericidal properties and high antimicrobial activity.

Several substances from the first group of compounds showed very good results with reference strains: MIC for all representatives of Enterobacteriales was less than 0.1 mg/l, for Staphylococcus spp. less than 0.5 mg/l, E. faecalis 2 mg/l, M. catarrhalis 0.1 mg/l, C. diphtheriae 1 mg/l. All reference and hospital strains were sensitive to this group.

Several substances from the second group of compounds also showed good results: MIC for different representatives of Enterobacteriales was different, but did not exceed 0.3 mg/l, for Staphylococcus spp. less than 0.5 mg/l, E. faecalis 4 mg/l, M. catarrhalis 0.2 mg/l, C. diphtheriae 2 mg/l. For all reference strains, the results were in the sensitivity zone. The best results among hospital strains were obtained on Grampositive bacteria: they were all sensitive.

The compound CH-II has good bactericidal properties. However, its MIC for all bacteria is slightly higher and is within the limits of intermediate values. This does not preclude the recognition of CH-II as an effective compound, since it is theoretically and practically (in toxicological researches) shown to be harmless when using the concentrations obtained.

Thus, the new groups of compounds obtained have a good antibacterial activity at MIC and can in the future take a worthy place among drugs with antibacterial action.