

42. Anti-Influenza Activity of the N-Benzylaminomethansulphonic Acid

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The influenza virus causes the greatest number of acute respiratory viral infections, which can lead to an exacerbation of chronic systemic diseases, to emergence of bacterial complications, to a significant deterioration of public health. But the majority of human isolates of influenza viruses rapidly become resistant to remantadine, oseltamivir. So, the creation of new effective anti-influenza agents is urgent task of medical science.

The purpose of this study is to research antiviral activity derivative of the N-benzylaminomethanesulphonic acid (BnAMSA) compared reference drug (Tamiflu).

Methods of the compound activity studies in vitro on the tissue culture of chorio-allantoic covers of 10-12-days chicken embryos (CAC) were used. We have studied the influence of BnAMSA to extracellular virus A/PR/8/34 (H1N1) and on the fabric's ability to maintain its reproduction after BnAMSA treatment. We also studied the effect of the substance on the reproduction of the viruses A/PR/8/34 (H1N1) and A/Hong Kong/1/68 (H3N2) in the cell culture CAC.

BnAMSA had not neither efficacy against extracellular virus A/PR/8/34/ nor influence on the fabric's ability to maintain its reproduction. BnAMSA inhibited reproduction of A/Hong Kong/1/68 on 4,08 log₁₀ TID₅₀ and A/PR/8/34 on 1,67 log₁₀ TID₅₀ as compared to control. Tamiflu demonstrated 4,07 and 4,07 log₁₀ TID₅₀ respectively.

So, BnAMSA demonstrated antiviral activity against influenza virus A/Hong Kong/1/68 on the level of Tamiflu. Level of inhibition reproduction of influenza virus A/PR/8/34 of BnAMSA was lower than level Tamiflu. Results of this study show that N-benzylaminomethansulphonic acid is promising compounds for searching and design of effective antivirals.