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SELECTIVE INHIBITORY EFFECT OF RIBAVIRINE (VIRAZOLE) ON THE REPRODUCTION STRAINS OF HSV-1 WITH DRUG RESISTANCE. G.A.Galegov, V.M. Shobukhov and E. Grammaticova. The D.I.Ivanovsky Institute of Virology, Russian Academy of Medical Sciences, Moscow, 123098 Russia.

The strains HSV-1 resistant to ACG, Gancyclovir, IDU, BVDU, Ara-T, PAA, PFA and Ara-A were obtained in Vero cells. For the first time we obtained resistant strain to new nucleotide analogue-9 (4-Hydrophosphoryl-2-oxabutyl)-guanine. We passaged HSV-1 in vitro at presence of Ribavirine (14 passages) and could not obtain the strain of the virus with lowered sensibility to it. ED_{50}= 64 μM and was constant. That concentration was nontoxic for Verd and KB cells. Ribavirine is a single nucleoside to obtain to which the resistant strain HSV-1 is impossible. The strain HSV-1 simultaneously resistant to ACG, IDU, BVDU, Ara-T, PAA, PFA was obtained. However this strain possessed invariable sensibility to Ribavirine (ED_{50}=66 μM). These results show that Ribavirine may be universal inhibitor of HSV reproduction. Some important papers on isolation of resistant to ACG HSV strains from AIDS patients were published. These HSV strains have TK^- defect. Therefore it is necessary in these conditions to use Ribavirine peros for treatment and simultaneously Foscarnet to use locally (in vitro ED_{50}=102 μM). The combinations in vitro of Ribavirine and Foscarnet result in synergistic effect. In the combination of Ribavirine 5.0 is lowered; Foscarnet 4 times is lowered.

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Inhibition of Influenza Virus Infections in Mice by the Phenolic Biopolymer SP303. R. W. Sidwell, D. B. Barnard, A. P. Gessaman, B. J. Moscone, and J. H. Huffman . Inst. for Antiviral Res., Utah State Univ., Logan, UT, USA.

The naturally occurring 2100 MW phenolic biopolymer SP303 exhibited a moderate *in vitro* inhibition of influenza A/NWS/33 (H1N1), A/Japan/305/57 (H2N2), A/Port Chalmers/1/73 (H3N2) and B/Hong Kong/5/72 viruses, with 50% effective doses of 7.5 to 13 μg/ml. The compound has been subjected to a series of evaluations against experimentally induced influenza A virus infections in mice. Intraperitoneal (i.p.) treatment with doses ranging from 3 to 10 mg/kg/day given once daily for 8 days increased mean survival times, inhibited lung consolidation and slowed the suppression of arterial oxygen saturation (SaO_2) in the animals. Efficacy was more apparent when the SP303 therapy began prior to virus exposure. One-hour treatments with a small particle aerosol of SP303 given twice daily for 3 days appeared more efficacious, with increases in survivors, increases in mean survival time, decreases in lung consolidation, and less suppression of SaO_2 occurring.

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