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Efficacy of RD3-0028 aerosol treatment against respiratory syncytial virus infection in immunosuppressed mice.

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It was appreciated that RD3-0028, a benzoditiin structure compound, had antiviral activity against respiratory syncytial virus (RSV) in cell culture. To determine *in vivo* effect of RD3-0028, we used mouse model infections with RSV. Cyclophosphamide-treated, immunosuppressed mice were inoculated intranasally, and then, the lungs of each mouse were removed on day 4. Virus titer in lungs of RD3-0028 treated mice were compared to virus titers in lungs of virus inoculated, untreated control mice. In an effort to increase the therapeutic effectiveness of this compound, RD3-0028 was administrated by aerosol to RSV-infected mice using a nose-only exposure system. Aerosols generated from reservoirs containing RD3-0028 (7 mg/ml) given 2 hours twice daily for 3 days, protected significantly mice from RSV ($p< 0.01$). The present study demonstrates the effectiveness of aerosol administration of RD3-0028 reducing the pulmonary titer of RSV in infected mice.

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COMBINATED ANTIVIRAL EFFECT OF BC_{30} AND MY-13. ,A.Uzunova/ N.Markova and M. Naidenova, Institute of microbiol, ,Bulg. Acad. Sci., Sofia , Bulgaria

There has been established significant antiviral effect of the combination of BC_{30} and MY-13 (inhibitors from bacterial origin) on the reproduction of influenza A (Aichi) and RSvirus in cell cultures Hep_2 and in experimental infection in white mices by simultaneously application . The results are presenting on the basis of decreasing of haemagglutination and infectious activity and lethality with 50 % of the treated mices in comparison with untreated. In all cases the character of the antiviral effect is aditive , in one of the caves is sinergic , but in all ceses is more strongly expressed than the effect of the separate antivirals

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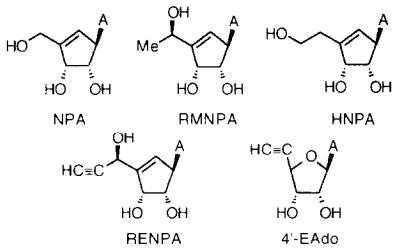
S-Adenosylhomocysteine Hydrolase Inhibitors as Potent Anti-RNA Viral Agents. **A. Matsuda,[a] S. Shuto,[a] T. Obara,[b] S. Shigeta,[c] and E. De Clercq.[d]** Faculty of Pharmaceutical Sciences, Hokkaido University,[a] Sapporo 060, Japan, Institute for Life Science Research, Asahi Chemical Industry Co. Ltd. Ohito,[b] Sizuoka 410-23, Japan, Department of Microbiology, Fukushima Medical College,[c] Fukushima 960-12, Japan, and Rega Institute Katholieke Universiteit,[d] Lueven, Belgium.

S-Adenosylhomocysteine hydrolase (AdoHcy hydrolase) has been recognized as an good target for broad-spectrum antiviral agents. Neplanocin A (NPA), one of the most potent AdoHcy hydrolase inhibitors, has broad-spectrum antiviral activity. However, NPA itself is apparently cytotoxic to host cells. We describe the design, synthesis, and antiviral activity of less-cytotoxic NPA analogues (RMNPA, HNPA, and RENPA) as well as 4'-EAdo.



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An Application of MTT-colorimetric Assay for the Screening of Anti-adenovirus Agents.

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Adenoviruses (ADVs) are causative agents for many mucosal infections. We established a simple, reproducible, and sensitive MTT-colorimetric assay for screening of anti-ADV compounds. MKN-28 cells, derived from a well-differentiated adenocarcinoma of stomach, were used for ADV infection as well as for testing anti-ADV activities of various antiviral compounds. One laboratory strain and four clinical isolates of ADV type 11 were examined for susceptibility to these antiviral agents. Our results suggested that S-2242 was the most effective inhibitor against ADV-11. S-2242, an inhibitor of DNA polymerase has previously been shown to be effective against herpes simplex virus replication (Neyts et al. 1994 Antimicrob. Agents Chemother. 38:2170). The results also indicated that the MTT-colorimetric assay using MKN-28 cells was a useful method to screen antiviral agents against ADV replication.