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Adenovirus Type 5 Replication Is Inhibited By S-HPMPC In The NZ Rabbit Ocular Model, YJ Gordon, E Romanowski, T Araullo-Cruz & E de Clercq*, The Eye & Ear Institute of Pittsburgh, USA, * Rega Institute for Medical Research, Katholieke Universiteit, Leuven, Belgium.

Currently, there is no clinically-effective antiviral for the prevention or treatment of ocular adenoviral infections. Using a paired-eye, masked design, we tested the antiviral efficacy of topical 0.1% S-HPMPC in the NZ rabbit ocular model following topical & intrastromal inoculation with 100ul (4×10^5 pfu/eye) of AD5 McEwen, a clinical isolate. Prevention studies involved pre-rx (6 x day) one day prior to inoculation and continuing for 4 additional days. Compared to the control eyes, the pre-rx'd eyes revealed a significant 1 log reduction in the peak viral eye titers 5 days post-rx ($P < .005$), & a reduction in the duration of viral shedding (2.0 vs. 6.3 days $P < .0001$). Rebound increase in AD titers was detected in 5/21 (24%) of eyes following cessation of rx. Therapeutic studies initiated rx (QID) 24 hours AFTER the establishment of infection, & continued for 5 days. Compared to the control eyes, the rx'd eyes showed a 1 log reduction in peak eye titers 5 days p.i. ($P < .02$), & a significant reduction in duration of shedding (5.0 vs. 6.4 days $P < .03$). Rebound (increasing AD titers) was again demonstrated in 5/10 (50%) of eyes after rx was stopped. Our results suggest that topical S-HPMPC may have therapeutic potential in the rx of ocular adenoviral infections, & further studies are indicated.

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A Two Day Cytoprotection and Cytotoxicity Assay for Rapid anti-HIV Drug Screening. S.W. Snyder and O.S. Weislow, Anti-AIDS Virus Drug Screening Laboratory, Program Resources, Inc., NCI-FCRDC, Frederick, MD; T.C. Owen, Dept. of Chemistry, Univ. of South Florida, Tampa, FL.

Substantial time, effort, and money is being spend to discover novel anti-HIV substances from natural sources; *e.g.*, marine and terrestrial flora and fauna. The National Cancer Institute, NIH currently employs a 6-day bioassay-guided purification procedure for natural products using the CEM-SS cell line and the XTT/PMS metabolic indicator system. In support of this effort, we have developed methodology for a 2-day cell-based cytotoxicity and cytoprotection assay for screening natural products against HIV using the MT2 cell line and soluble derivatives of MTT. The results of 2-day assay are compared to those of our standard 6-day XTT assay using the following criteria: IC_{50}, EC_{50}, and TI for certain compounds known to provide cytoprotection against HIV including AZT, DDC, and dextran sulfate.