

RB Tumor Suppressor Gene : A Potential Target of Interferons in HPV Infected Cells SK Tying, I Arany and P Rady, Departments of Microbiology and Dermatology, University of Texas Medical Branch, Galveston, Texas 77555-1019, U.S.A.

An increase in TGF-beta1, IFN-beta and RB mRNA levels, but a significant decrease in cdc2 kinase expression were found in condylomas or in oncogenic HPV-containing cell lines after in vivo or in vitro interferon (IFN) treatment. Immunodetection by Western blot demonstrated a higher proportion of unphosphorylated pRB in those treated cells, compared to the non-treated counterparts. These results suggest that IFNs both in vivo and in vitro could interact with the RB tumor suppressor gene through an inhibitory cytokine pathway exerting their antiviral/antiproliferative effects on those HPV infected cells.

Trental as a Wide-spectrum Inhibitor of Virus Activity

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Trental is a well-known cardiovascular spasmolytic drug, used for arterial and arteriovenous blood circulation disturbances. Study of trental by virologic screening detected its antiviral activity. In vitro the preparation had marked inhibitory effect against herpes simplex virus (HSV), including acyclovir-resistant strain, human immunodeficiency virus, rotavirus, variolavaccine virus, including methysazone-resistant strain and tick-borne encephalitis virus (TBEV). The preparation possessed little toxicity for cells in culture and high chemotherapeutic index (CI). Trental antiviral properties against HSV and TBEV were proved in vivo on the models of herpetic meningoencephalitis and tick-borne encephalitis of mice. Protective effect was 66,6-75% and 66-100%, respectively, CI - 100. The experimental data obtained prove the prospect of trental as antiviral, and dictate the necessity of its clinical study.