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A Comparison of Immunomodulator Effects on Infections Induced by the Friend Retrovirus Complex in Genetically Defined Mice. R. W. Sidwell, J. D. Morrey, K. Okleberry, R. P. Warren, R. Burger, and M. I. Johnston. AIDS Research Program, Utah State Univ., Logan, UT USA and Div. of AIDS, NIAID, Bethesda, MD, USA.

Infection with the Friend virus complex (FV) in (B10.A x A/WySn)F_1 mice containing the Rfv-$3^{r/s}$ genotype in the presence of H-$2^{a/a}$ results in several disease manifestations analogous to those seen in patients with HIV disease, including reduced levels of infectious virus correlating with high levels of specific antibody, reduction of T cell populations and increase in B cells. A variety of immunomodulators were evaluated for efficacy in this animal model, with the order of activity, as expressed by inhibition of the infection, as: Imexon > MVE-2 > recombinant human interferon α > AS-101 > AM-3 = oxamisole > bropirimine. Infection parameters inhibited included splenomegaly, cell-free spleen and plasma virus titers, splenic infectious centers, splenic viral RNA, and mean day to death. Immunologic parameters studied were enumeration of splenic T and B cell populations, interleukin-1 production, natural killer (NK) cell activity, and T cell function. Imexon used at 110 and 55 mg/kg/day, administered i.p. once daily for 13 days beginning 24 hr after virus inoculation reduced all infection parameters. T cell function was increased by the high dose of imexon; splenic B cell numbers were significantly reduced. These data suggest several immunomodulators as possible candidates for study against HIV, especially for experiments in combination with HIV-inhibitory antiviral drugs.
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PROTECTIVE EFFET OF TREHALOSE DIMYCOLATE ON ENCEPHALOMYOCARDITIS VIRUS-INDUCED DISEASE IN MICE. B. Mabboux*, M. Geniteau-Legendre*, I. Poilane*, J. Cotte-Laffitte*, C. Labarre*, J.F Petit** and A.M. Quéro*.
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Trehalose-6,6'- dimycolate (cord factor, TDM) a glycolipid component of the cell wall of Mycobacterium was investigated for antiviral activity. Swiss mice inoculated intraperitonally (I.P.) with aqueous suspension of TDM (200 µg/ mouse) were protected ($p<0.01$) from death by encephalomyocarditis (EMC) virus inoculated I.P. 4 days later. Virus titers determined in brain homogenates at days 2,3,4 and 7 post-infection were always lower in TDM-treated mice than in control mice. Maximal difference occured at day 7 (control: $1x10^7$ i.p./ml, TDM: 8.5×10^3 i.p./ml). In order to investigate this protective effect of TDM, Interferon α/β produced after EMC infection was titrated in brain, serum and peritoneal fluid of control and treated mice. No enhanced Interferon production could be detected in mice pretreated with TDM. Viral growth kinetic of EMC virus in cultures of peritoneal macrophages of TDM-treated mice was studied 4, 24, 48 and 72 hours after virus inoculation (m.o.i.=1). Virus titers decreased rapidly in macrophages cultures from treated mice but not in those of control mice (control: $5.2x10^4$ i.p./ml, TDM: $2.1x10^2$i.p./ml at 72 hours post-infection). These data show that TDM enhances the resistance of mice to EMC virus infection. Interferon does not seem to be implicated in this action. TDM induces in vivo an antiviral activity in cultures of peritoneal macrophages which may account for the protective effect of TDM on encephalomyocarditis.