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BCG AS A VEHICLE FOR CREATION OF RECOMBINANT VIRAL LIVE-VACCINES. V.M.Lazarenko, O.F.Preskriakova, A.A.Korneev, M.A.Korneev, V.M.Ruchko, A.A.Makhlay, A.G.Khomenko
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Recently, a few groups scientists have developed two different systems for propagating foreign DNA in mycobacteria - a multicopy plasmid system for extrachromosomal replication and expression of the foreign DNA, and a system which uses the attachment site and integrase gene of mycobacteriophage or IS-like elements to achieve site-specific integration foreign DNA into the mycobacterial chromosome. These approaches have been used to express antigens from 20 viral, bacterial, and parasitic pathogens in recombinant BCG (bacille Calmett-Guerin). These results establish the molecular and immunological basis for a novel live vaccine vehicle that may prove useful in stimulating humoral and cell-mediated immune responses to a wide variety of viral antigens. Many question remain, particularly those involving the relationship between recognition viral antigens and protective immunity, whose protective epitopes require conformatious or modification (glycosylation and assembly), possibility of revaccination, and administration as an oral vaccine. Approaches to generation E.coli-mycobacteria spp. shuttle vectors and expression viral antigens in mycobacterial cells is discussed.

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Antiviral Activity of Unithiolum as the Result of Disulphide Bonds Cracking.

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Disulphide bonds have an extreme significance in the virus-cell interaction. They are stabilizing elements as for proteins incorporated in the viral surface and as well for receptor proteins of plasmatic membranes of sensitive cells. It seems quite logical to suppose that the disulphide bonds crackihg has the antiviral effect. We have discovered the antiviral activity of unithiolum preparation (known also as dimercaprolum). This preparation hinders the influenza viruses reproduction of A and B type in the tissue culture showing virus neutralizing activity. The unithiolum preparation effectively protects the animals during the experimental influenza even for the toxic form of infection. We have also shown that the unithiolum preparation reduces the herpes simplex virus reproduction in tissue culture and statistically reliably reduces the number of lethal cases and increases the life longitude of white mice after intranasal infection. The experimental results clearly show the possibility of the preparations cracking the disulphide bonds use as the wide spectrum antiviral preparation.