OF BRAZILIAN RED PROPOLIS AGAINST BOVINE HERPESVIRUS

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The search for new active natural products to prevent or to complement treatment of infectious diseases can improve the quality of food of animal origin. Propolis is a resinous material collected by bees from various plant species and your composition is extremely complex. Propolis has various biological properties, including antibacterial, antifungal and antiviral. The chemical composition and beneficial properties of propolis vary depending on the plant source and geographic origin. The aim of present study was to investigate the antiviral mechanism of ethanolic extract from Brazilian red propolis (BRP) against bovine herpesvirus type 1 (BoHV-1). The propolis was collected in Alagoas State and its ethanolic extract was analyzed by direct insertion electrospray ionization mass spectrometry (ESI-MS) fingerprinting in the negative ion mode. The cytotoxicity of BRP was evaluated in MDBK cells with determination of the maximum nontoxic concentration. Antiviral activity was analyzed with addition of red propolis extract in monolayers and after 1 hour it was inoculated logarithmical dilutions of virus. To evaluate the inhibitory effect in initial stage of virus infection, cells at 4 C were inoculated with logarithmical dilutions of virus and incubated during 30 minutes. Then, the BRP was added to cells and incubated at 37 C. The virucidal activity was tested with incubation of extract and virus mixture for 1 h at 37 C and subsequently inoculation at cells. In all bioassays, controls without BRP and/or virus were made. The activities were calculated as the difference between the treated and control virus titer and expressed by viral inhibition index (VII) and percentage inhibition (PI). Statistical analysis was performed using the Tukey test. The main ion observed in this extract corresponded to the deprotonated mass of prenylated benzophenones of formula C38 H49 O6. The BRP extract at 250 ug/mL exhibited antiviral activity with VII of 1.58 and 97% PI and virus inactivation with VII of 1.76 and 96% PI. The BRP also presented inhibition of adsorption/penetration step of virus infection with VII of 4.5 and 99% PI. The results demonstrated that Brazilian red propolis exhibited a positive effect against BoHV-1 encouraging further evaluation for therapeutic potential.

VV1044 - ABSENCE OF PRRSV ANTIBODIES AND ANTIGEN IN SERA AND ORAL FLUIDS SAMPLES FROM BRAZILIAN SWINE HERDS

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