

***IN VITRO* EVALUATION OF ANTIVIRAL PROPERTIES OF EDIBLE BIRD NEST EXTRACT AGAINST FELINE INFECTIOUS PERITONITIS VIRUS**

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Abstract

An *in vitro* study was carried out to evaluate the antiviral properties of edible bird nest extract (BNE) against feline infectious peritonitis virus (FIPV). Cytotoxicity assay was conducted towards BNE test material in Crandell Feline Kidney (CrFK) cells using MTT assay to determine the 50% cytotoxic concentration (CC₅₀) values. For antiviral test, three treatments were used to determine the antiviral inhibition effect by BNE extract. Co-treatment [(V+E) +C] was done by mixing the virus(V) and extract(E) together before inoculating into cells(C). Pre-treatment [(E+C) +V], involved treatment of extract before inoculation of the cells with virus. Post-treatment [(V+C) +E] was done by inoculating the virus first into the cells before inoculation of extract. Ten-fold dilutions of BNE were used to determine the CC₅₀ until 8th doubling dilutions. The FIPV dose was fixed for 100TCID₅₀. Cytotoxicity assay showed that all concentrations could be used for antiviral assay except for the stock solution. The results also showed that the extract was non-toxic to the cells. For antiviral assay, all treatments showed inhibitory effects on virus multiplication in the cells where pre-treatment showed the highest effect compared to the other two treatments. However, the finding was not statistically significant from the control treatment groups (P<0.05).

Keywords: bird nest extract, FIPV, CC₅₀, TCID₅₀, antiviral assay, MTT assay, inhibitory effect