Abstract

THE SURVIVAL RATE OF THE BOVINE TURBINATE AND HUMAN EMBRYONIC KIDNEY CELLS *IN VITRO* AS CELL LINES OF BOVINE VIRAL DIARRHEA VIRUS

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Bovine viral diarrhea virus (BVDV) represents a disease which is caused by a positive strand RNA virus, currently classified under the genus Pestivirus in the family Flaviviridae. This familia includes border disease virus, hog cholera virus and dengue hemorrhagic fever. Based on the ability to induce the cytopathic effect onto cell cultures, this virus is divided into two biotipes, non-cytopathic (NCP-BVDV) and cytopathic (CP-BVDV). The clinical signs depend on the animal condition that is either pregnant or non-pregnant. In individuals within dairy cattle, BVDV infection characterized by a drop in milk production and body weight, abortion and repeat breeding. In most infection, infected cattle can become the carrier to other susceptible animals. Detection of BVDV *in vitro* generally applied a modern immunology technique with IPMA (immunoperoxidase monolayer assay) by using monolayer cell of the bovine turbinate cell (BT cell) and human embryonic kidney cell (293 cell). In the present study, 35 samples of BT and 293 cells, respectively which have been kept in liquid nitrogen tank for 10 years were tested for their survival rate. Research results showed that 293 cell repeatedly propagates in the culture, but BT cell died in the culture. The 293 cell appears to be clear, globular shape and confluent in the bottom of the flask.

Key words : IPMA, BT cell, 293 cell