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**Successful propagation of Alkhumra (misnamed as Alkhurma) virus in C6/36 mosquito cells.**

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**Abstract**

Epidemiological data suggest that Alkhumra (misnamed as Alkhurma) virus (ALKV) is transmitted from livestock animals to humans by direct contact with animals or by the mosquito bites, but not by ticks. To assess the ability of the virus to replicate in mosquito cells, serum and plasma of seven acutely febrile patients with clinically suspected ALKV infection reported in Najran, Saudi Arabia in 2009 were inoculated onto *Aedes albopictus* mosquito cells (C6/36) and directly examined with ALKV-RNA-specific real time RT-PCR as well as indirect immunofluorescence assay (IFA) using ALKV-specific polyclonal antibodies. The isolated virus was titrated in the mammalian rhesus monkey kidney cells (LLC-MK2). Five of the seven specimens were RT-PCR- and culture-positive demonstrating cytopathic effects in the form of cell rounding and aggregation appearing on day 3 post inoculation with syncytia eventually appearing on day 8 post inoculation. Identification of ALKV-RNA in the cell culture was confirmed with RT-PCR and IFA. The virus titre was  $3.2 \times 10^6$  tissue culture infective dose 50 (TCID<sub>50</sub>) per mL. Three more viral passages were successfully made in the C6/36 cells. This is the first description of propagation of ALKV in mosquito cells.