A PRELIMINARY REPORT ON THE ISOLATION OF 
BOVINE MALIGNANT CATARRHAL FEVER 
VIRUS IN IRAN (*)

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An outbreak of malignant catarrhal fever occurred among dairy cattle 
and calves of varying ages on a farm near Teheran in January 1970. Sixty per 
cent of the animals were seriously affected and nine per cent died. Blindness, 
purulent nasal discharge and lacrimation were the most common symptoms. 
Some pregnant cows aborted. Laboratory tests proved that neither brucellosis 
nor vibriosis was the cause of abortion.

An acutely ill cow slaughtered, and mesenteric lymph nodes and part 
of the spleen removed under aseptic conditions, and ground in a sterile mortar. 
A 10 per cent suspension was prepared with VM3 (Schwöbel & Siedentopf, 1961) 
containing 100 I. U. of penicillin and 100 mg. streptomycin per ml. The sus­ 
pension was then centrifuged at 2500 r.p.m. for 10 min. Supernatant fluid was 
diluted 1/5 and 1/10 and each dilution inoculated in 1 ml. amounts into five tubes 
of primary calf kidney cells. After an adsorption period of four hours, the inocu­ 
lum was discarded and replaced by 2 ml. of fresh VM3. The infected cultures 
together with five non-inoculated control tubes were kept at 37°C. and checked 
daily for appearance of cytopathic effect (CPE) up to 10 days. During this period 
the cells did not show any CPE. They were then frozen at −20°C., thawed the 
following day and inoculated into ten new calf kidney monolayers. Slight CPE 
was observed in infected cultures on the eighth day. The isolate was passed 
three more times in calf kidney and once in calf thyroid cells.

Virus neutralisation tests were conducted, using the fifth tissue culture 
passages of the isolate, with specific bovine malignant catarrhal fever immune 
serum having a log 10 SN50 titre of >102.0, which was generously supplied by 
Professor W. Plowright, East African Research Institute, Muguga, Kenya.

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The virus was neutralised in the presence of BMCF serum, while control cultures with normal cattle sera showed distinctive CPE.

Reference