

EASTERN EQUINE ENCEPHALOMYELITIS VIRUS STRAINS ISOLATED IN CUBA

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Antigenic differences were demonstrated by kinetic haemagglutination inhibition (HI) test among Eastern equine encephalomyelitis (EEE) virus strains isolated in separated geographic regions. This enabled to establish the North and South American serotypes (2). In the present study, the EEE virus strains isolated in Cuba were compared with those coming from North (NA) and South America (SA).

Antigens for haemagglutination (HA) and HI tests were prepared by the sucrose acetone extraction method (3). The strains compared are listed in the Table. Immune ascitic fluid to NJO strain was obtained from Dr. Ch. Calisher (CDC, Fort Collins, U.S.A.); immune ascitic fluid to strain BeAn 5122 was supplied by Dr. R. Shope (Yale University School of Medicine, New Haven, Ct., U.S.A.). The ascitic fluids diluted 1 : 40 to 1 : 5120 were mixed with 2, 4, 8, 16 and 32 HA units of each antigen and kept at 4 °C for 30 min, 1, 2, 4 and 18 hr. At intervals, 0.4 ml of red blood cell suspension was added to each mixture in wells. The system was further incubated for 45 min and HI determined.

The results of 30 min and 1 hr incubation showed that the strains isolated from *Equus caballus* and *Capromys pilorides* were closely related to the NA serotype. In contrast, the strain isolated from the bird was found more related with the BeAn 5122 strain isolated in Brasil. The former 2 EEE strains isolated in Cuba appeared antigenically related to the NA prototype strain when tested with NJO antibodies. BeAn antibodies did not distinguish between the strain isolated from a bird in Cuba and the BeAn antigen. While antibodies to NJO strain inhibited all strains from Cuba, the BeAn antibodies better inhibited the 180 strain isolated from a bird trapped in Cuba.

It is of interest that the epizootic EEE virus isolated from horse brain in Cuba as well as the 319 strain were of NA serotype. In U.S. both serotypes were found (1, 3), but SA EEE virus serotypes were also isolated from birds only. It may be assumed that in semitropical areas of Cuba natural foci of EEE virus NA serotype could exist, while the EEE virus SA serotype may be introduced by migrant birds.

Designation of the strain	Supplied by	Place of isolation	Host	Sero-type
NJO	Calisher	N.J.(U.S.A.)	<i>Culliseta melanura</i>	NA
BeAn 5122	Shope	Belem (Brasil)	Monkey (sentinel)	SA
180	Fernandez	Cuba	Bird (<i>Eudocimus albus</i>)	SA
319	Fernandez	Cuba	<i>Capromys pilorides</i>	NA
C 110	Fernandez	Cuba	<i>Equus caballus</i>	NA

NA = North American; SA = South American

References

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