

Virus Name: Entebbe bat

Abbreviation: ENTV

Status: Possible Arbovirus
SALS Level: 3
Antigenic Group: Ungrouped
Taxonomic status: *Flavivirus*
Other Information: None.

Select Agent:
SALS Basis: IE

HEPA Filtration:

Section I - Full Virus Name and Prototype Number

Full Virus Name: Entebbe bat
Prototype Number: IL-30
Information from: J.P. Woodall
* **Date:** 2/3/1985
Address: YARU, Yale University School of Medicine, New Haven, Connecticut 06510, USA
*
Reviewed by editor

Section II - Original Source

Isolated by: Lumsden, et al. (1) **at:** Entebbe, Uganda
Genus and species: Bat (*Tadarida (Chaerephon) limbata*); (pool of 40) **Sentinel X**
Age/Stage: Ad, juvenile **Sex:** M

Isolated From	Isolation detail
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Signs and symptoms of illness: None
Arthropod engorged: depleted **gravid**
Time held alive before inoculation:
Collection date: 7/4/1957 **Method:** Hand captured
Place collected: Entebbe, Uganda
Latitude: 0° 3' " N **Longitude:** 32° 27' " E
Macrohabitat: Lakeshore with small-holdings and swamp forest
Microhabitat: Roof of East African Virus Research Institute
Method of storage until inoculated: 4dC
Footnotes:

Section III - Method of Isolation and Validity

Inoculation Date:
Animal: nb mice **Embryonated egg:** **Tissue Culture:**
(Details in Section VI - Biologic Char.)
Route inoculated: ic and ip **Reisolation:** No
Other reasons: Different from all other arboviruses and mouse viruses in laboratory
Homologous antibody formation by source animal (See Section II): Not tested
Test used: HI CF NT
Other:
Footnotes:

Section IV - Virus Properties

Physicochemical:

RNA: DNA: Single Strand: Double Strand:
Pieces: Infectivity: Sedimentation coefficient(s): /strong>
Percentage wt. of virion protein , lipid carbohydrate
Virion polypeptides:
Number: Details:
Non-virion polypeptides:
Number: Details:
Virion density: Sedimentation coefficient:
Nucleocapsid density Sedimentation coefficient:

Stability of infectivity (effects) pH

Lipid solvent:
(ether) 1:1 After treatment titer 3:1 dex Control titer 7.0 dex
(chloroform) After treatment titer Control titer
Detergent:
(deoxycholate) After treatment titer Control titer
Other (formalin, radiation):

Virion morphology:

Shape Dimensions
Mean (nm) range (nm) how measured
Surface projections, envelope
Nucleocapsid dimensions, symmetry

Morphogenesis:

Site of constituent formation in cell
Site of virion assembly
Inclusion bodies
Other

Hemagglutination:

Hemagglutination Yes Antigen source SMB ext. by acetone-ether; sucrose-acetone + prot; fluorocarbon
Erythrocytes Goose pH range 6.2-7.0 pH optimum 6.6-6.8
Temperature optimum range Room temperature
Remarks Some preparations are unstable on overnight incubation in the cold
Serologic methods recommended HI, CF, NT
Footnotes: Some preparations are unstable on overnight incubation in the cold

Section V - Antigenic Relationship And Lack of Relationship To Other Viruses

For list of antisera tested by NT, see Reference [1] ; only Group B antisera gave any cross-reaction. Easily separable from Rio Bravo by NT [1] .
Unpublished HI results are:

Antisera to	Antigen						
	ENT	Ntaya	WN	UGS	YF	Zika	Banzi
ENT	5 *	5	4	0	0	0	1
Ntaya	10+	10	10	6	7	4	5
West Nile	7	6	8	3	2	1	3
Uganda S	5	5	5	6	1	0	4
Yellow fever	4	3	3	0	4	0	0
Zika	1	4	3	0	0	8	2

Antisera	Antigen		
	ENT	Dakar bat	BP 111
ENT	4	0	0
MML	7	4	2
Dakar bat	6	8	2
BP 111	3	3	9

* Number of dilutions with HI activity; initial dilution of 1:10 = 1, 1:20 = 2, etc.; 0 = <10.

References: BP 111 [2] , Dakar bat [3] , MML [4] . For further information on antigenic relationships, see References [8] and [9] .

Section VI - Biologic Characteristics

Virus source (all VERTEBRATE isolates): Salivary gland (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS): Newborn mice

Susceptibility of Cell Culture Systems:

Cell system (a)	Virus passage history (b)	Evidence of Infection							Growth Without CPE +/- (g)
		CPE			PLAQUES				
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)		
BHK-21 (CL)	MB 2	5-7	2+ - 3+	7.5** (6)					
Vero (CL)	P-2				16	2 mm	6.8** (7)		
LLC-MK2 (CL)					4	2 mm	8.4 (7)		

** Expressed in dex

Section VII - Natural Host Range

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Man		0/20 NT	Uganda
Tadarida (C.) limbata (syn. T. (C.) pumila)	1/13 pools (335 bats)	46/49 HI	Entebbe, Uganda (5)
T. (Mops) condylura		13/56 HI	Uganda (5)
Bats		1/20 NT	Uganda

Section VIII - Susceptibility To Experimental Infection (Record Viremia)

Experimental host and age	Passage history and strain	Inoculation Route- Dose	Evidence of infection	AST (days)	Titer log10/ml
Mice (nb)		ic 0.02	Death	4	9.5
Mice (nb)		ip 0.02	Death	5	9.5
Mice (nb)		sc			
Mice (wn)		ic 0.03	Paralysis and death	9	8.5
Mice (wn)		ip 0.1	Antibody		

Resistance of mice to ip inoc. begins to appear between day 14 and 16 of life and is almost complete by day 20.

