

Virus Name: Venkatapuram

Abbreviation: VKTV

Status: Possible Arbovirus

SALS Level: 2

Antigenic Group: Ungrouped

Taxonomic status: *Not listed*

Other Information: None.

Select Agent:

SALS Basis: S

HEPA Filtration:

Section I - Full Virus Name and Prototype Number

Full Virus Name:

Venkatapuram

Prototype Number:

IG 2464

Information from: Virus Research Centre (VRC) **Date:**

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10/16/1984

Address: 20A Wellesley Road, P.O. Box No. 11, Poona 1, India

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Reviewed by editor

Section II - Original Source

Isolated by: VRC (1)

at: Vellore, South India

Genus and species: Culex vishnui, pool of 100 mosquitoes **Sentinel** X

Age/Stage: Adult **Sex:** F

Isolated From	Isolation detail
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Signs and symptoms of illness:

Arthropod engorged depleted gravid

Time held alive before inoculation:

Collection date: 12/31/1955 **Method:** Aspiration of indoor resting mosquitoes

Place collected: Venkatapuram, N. Arcot District, Madras, India

Latitude: 12° 57' " N

Longitude: 79° 12' " E

Macrohabitat: Cattle shed

Microhabitat:

Method of storage until inoculated: Kept alive until processed

Footnotes:

Section III - Method of Isolation and Validity

Inoculation Date: 1/1/1956

Animal: nb mice

Embryonated egg:

Tissue Culture:

(Details in Section VI - Biologic Char.)

Route inoculated: Intracerebral

Reisolation: No

Other reasons: This strain does not resemble any other virus handled at the VRC at that time.

Homologous antibody formation by source animal (See Section II):

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)	After treatment titer	Control titer
(chloroform)	After treatment titer <0.5 dex LD50	Control titer 6.0 dex LD50
Detergent:		
(deoxycholate) 1:1000	After treatment titer 2.5 log LD50	Control titer 5.4 dex LD50
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	No	Antigen source SMB, liver, serum; infected yolk sac (Sucrose-acetone (brain, liver, and infected yolk sac): acetone (serum).
Erthrocytes	Goose**	pH range 5.4-7.6
Temperature optimum		pH optimum
Remarks	CF reactivity of brain, liver, muscle and yolk sac sucrose-acetone preparations had not exceeded 1:4. ** And human group 'O'.	
Serologic methods recommended		
Footnotes:	CF reactivity of brain, liver, muscle and yolk sac sucrose-acetone preparations had not exceeded 1:4. ** And human group 'O'.	

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

A five injection mouse serum of IG 2464 was negative in CF testing with Nyando, Jurona, Bwamba (UG SE493), Congo-related (UG SE65), Palyam, Candiru, Piry, Pacui, Acara, Mossuril, Anopheles A, Lukuni, Sicilian, Wanowrie, Hart Park, VSV-Indiana, Nyamanini, Mapputta, Navarro, Tete, Wad Medani, Tacaribe, Anopheles B, Lebombo, Colorado tick fever, VSV-NJ, Witwatersrand, Irituia, Ganjam, Bwamba, Koongol, Quaranfil, Chenuda, Tacaiuma. Potent CF antigen for G 2464 was not produced, thus no homologous CF titer was determined. (This information from the WHO International Reference Centre.)

Section VI - Biologic Characteristics

Virus source (all VERTEBRATE isolates): Pooled liver, spleen, brain (LV); liver (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						
		CPE			PLAQUES			Growth Without CPE +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
Chick embryo (PC)	P-26		No CPE					
MKTC (PC)			No CPE					
BS-C-1 (CL)			No CPE					
Vero (CL)					3	1.0 mm	6.3 (a) (2)	
LLC-MK2 (CL)					3	1.0 mm	6.3 (a) (2)	

(a) 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
Culex vishnui	1/10		Venkatapuram, Vellore, N. Arcot District, India

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)	SM 18	ic 0.02	Hind leg paralyses, death	5.5	7.1
mice (nb)		ip 0.03	None		
mice (nb)		sc			
mice (nb)		ic 0.03	None		
mice (nb)		ip 0.2	None		
Chick embryo (7day)	P 26	ys 0.1	Death	4	8.9

