

<b>Virus Name: Sathuperi</b>		<b>Abbreviation: SATV</b>
Status <b>Possible Arbovirus</b>	Select Agent <b>No</b>	SALS Level <b>2</b>
SALS Basis <b>Results of SALS surveys and information from the Catalogue.</b>		
Other Information		
Antigenic Group <b>Simbu</b>		

**SECTION I - Full Virus Name and Prototype Number**

Prototype Strain Number / Designation <b>IG10310</b>	Accession Number	Original Date Submitted <b>12/5/1984</b>
Family <b>Bunyaviridae</b>	Genus <b>Bunyavirus</b>	
Information From <b>Dr. T.H. Work</b>	Address <b>Univ. of California Medical Center, Los Angeles, California 90024</b>	
Information Footnote <b>Reviewed by editor</b>		

**Section II - Original Source**

Isolated By (name) <b>Virus Research Centre (1)</b>	Isolated at Institute <b>Vellore, Madras, India</b>	
Host Genus <b>Culex vishnui, pool of 203 mosquitoes</b>	Species	Host Age/Stage <b>Adult</b>
Sex <b>Female</b>		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method <b>Sucking tube applied to outdoor resting mosquitoes</b>	Collection Date <b>2/6/1957</b>	
Place Collected (Minimum of City, State, Country) <b>Sathuperi Village, No. Arcot, Madras, India</b>		
Latitude <b>15° N</b>	Longitude <b>75° E</b>	
Macrohabitat <b>Plantation of sugar cane and banana</b>	Microhabitat <b>Dry shade of maturing crops</b>	Method of Storage until Inoculated <b>Held alive in tube</b>
Footnotes		



**Morphogenesis**

Site of Constituent Formation in Cell

Site of Virion Assembly

Site of Virion Accumulation

Inclusion Bodies

Other

**Hemagglutination**

Hemagglutination

Antigen Source

Erythrocytes (species used)

**Yes****SMB ext. by sucrose-acetone**

pH Range

pH Optimum

**6.0**

Temperature Range

Temperature Optimum

**37dC**

Remarks

**HA with strain G11155 in newborn mouse passage give 6 units at 1:8 dilution**

Serologic Methods Recommended

**CF, NT**

Footnotes

**HA with strain G11155 in newborn mouse passage give 6 units at 1:8 dilution**

Serum Antigen	CF Tests			
	Antibody to:			
	Sathuperi (G10310)	Simbu	Oropouche	Sathuperi (G11155)
Sathuperi (G10310)	32/512	16/256	0/0	64/512
Simbu	4/64	32/64	16/2	2/128
Oropouche	2/16	2/16	32/64	2/2
Sathuperi (G11155)	32/>1024	16/>1024	4/2	64/>1024

Antigen titer/antibody titer; 0/0 = <2/<2.

Immunologically unrelated to Getah, EEE, VEE, Sindbis, chikungunya, JBE, dengue, RSSE, yellow fever, Marituba, Oriboca, Caraparu, Apeu, Bunyamwera, Wyeomyia, Guama, Catu, Quarafil, Chenuda, Bwamba, Anopheles A, Turlock, Sicilian sandfly, and Manzanilla by complement-fixation test.

Significant cross-reactions in CF test between Sabo, Sango, Shamonda, Shuni, and Sathuperi. Sathuperi and Shamonda closely related by immunodiffusion test [4].

More recent serologic studies indicate that Sathuperi virus belongs in the Simbu complex of the Simbu serogroup. Douglas virus, a newer member of the Simbu serogroup, was shown to be a subtype of Sathuperi virus [5].

**Section VI - Biologic Characteristics**

Virus Source (all VERTEBRATE isolates)  
**Blood (LV)**

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

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)	
Vero (CL)	SM 3				6	3 mm	7.6* (3)	
LLC-MK2 (CL)					5	2 mm	6.4 (3)	

\* Expressed in dex

**Section VII - Natural Host Range (Additional text can be added below table)**

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Man	None	None/44	India
Mosquito Culex vishnui	2		Madras, India
Cattle	2		Ibadan, Nigeria (2)
Culicoides spp. (pool, fed)	1		

**Section VIII - Susceptibility to Experimental Infection (include 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	Sickness and death	6.2	6.1
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)		ic 0.03	Sickness and death	7.3	
Mice (wn)		ip			

**Section IX - Experimental Arthropod Infection and Transmission**

Arthropod species & virus source(a)	Method of Infection log10/ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log10/ml (e)		
	Feeding	Injected	Days	°C	Host	Ratio	Whole	Organ	System

**Section X - Histopathology**

Character of lesions (specify host)

Inclusion Bodies

Intranuclear

Organs/Tissues Affected

Category of tropism

**Section XI - Human Disease**

In Nature	Residual	Death
Subclinical	Overt Disease	
Clinical Manifestations		
Number of Cases	Category (i.e. febrile illness, etc.)	

**Section XII - Geographic Distribution**

Known (Virus detected) <b>India, Nigeria</b>
Suspected (Antibody only detected)

**Section XIII - References**

1. Dandawate, C.N., et al. 1969. Indian J. Med. Res. 57:1420-1426. 2. Causey, O.R., et al. 1972. Ann. Trop. Med. Parasitol. 66:357-362. 3. Stim, T.B. 1969. J. Gen. Virol. 5:329-338. 4. David-West, T.S. 1972. Indian J. Med. Res. 60:191-199. 5. Kinney, R.M. and Calisher, C.H. 1981. Am. J. Trop. Med. Hyg. 30:1307-1318.
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**Remarks**

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