Virus Name: Kasba		Abbreviation: KASV
Status **Possible Arbovirus**	Select Agent **No**	SALS Level **2**

SALS Basis
Results of SALS surveys and information from the Catalogue.

Other Information

Antigenic Group

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
IG 15534

Accession Number

Original Date Submitted
11/16/1984

Family
Reoviridae

Genus
Orbivirus

Information From
Director, Virus Research Centre, Poona

Address
20-A, Wellesley Road, P.O. Box 11, Poona 1, India

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
C.N. Dandawate (1)

Isolated at Institute
Vellore, South India

Host Genus
Culex "vishnui"

Species

Host Age/Stage
Adult

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Sucking tube applied to outdoor resting mosquitoes

Collection Date
7/19/1957

Place Collected (Minimum of City, State, Country)
Sathuperi, North Arcot Dist., Tamil Nadu, India

Latitude
12° 54' N

Longitude
79° 7' E

Macrohabitat
Plantation of sugarcane and banana

Microhabitat
Dry shade of maturing crops

Method of Storage until Inoculated
Alive in tubes

Footnotes

Section III - Method of Isolation

Inoculation Date
7/20/1957

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
No

Other Reasons
Altogether a new virus

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical

Pieces (number of genome segments)	Infectivity	Sedimentation Coefficients(s) (S)
Percentage wt, of Virion Protein	Lipid	Carbohydrate
Virion Polypeptides: Number	Details	
Non-virion Polypeptides: Number	Details	
Virion Density	Sedimentation Coefficients(s) (S)	
Nucleocapsid Density	Sedimentation Coefficients(s) (S)	

Stability of Infectivity (effects)

pH (infective range)

Lipid Solvent (ether - % used to test)	After Treatment Titer **4.4 dex**	Control Titer **5.5 dex**
Lipid Solvent (chloroform)	After Treatment Titer **4.3 dex**	Control Titer **5.2 dex**
Lipid Solvent (deoxycholate) **1:200**	After Treatment Titer **4.7 dex**	Control Titer **5.2 dex**

Other (formalin, radiation)

Virion Morphology

Shape	Dimensions	
Mean nm	Range nm	
Measurement Method	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry

Morphogenesis

Site of Constituent Formation in Cell	Site of Virion Assembly	Site of Virion Accumulation
Inclusion Bodies	Other	

Hemagglutination

Hemaggiutination	Antigen Source	Erythrocytes (species used)
No	**SMB ext. by sucrose-acetone with and without protamine**	**Goose**
pH Range	pH Optimum	
5.7-7.6		
Temperature Range	Temperature Optimum	
27d		

Remarks
SMB ext. by acetone-ether, also tested for HA

Serologic Methods Recommended
CF and NT

Footnotes
SMB ext. by acetone-ether, also tested for HA

Section V - Antigenic Relationship and Lack of Relationship to Other Viruses

By CF G15534 antigen did not react with (homologous titer in parenthesis) hyperimmune sera against Sindbis (256), chikungunya (256), Japanese encephalitis (512), West Nile (256), dengue 2 (256), Kyasanur Forest disease (256), Venkatapuram (128), Ganjam (256), Umbre (>64), Sathuperi (16), Minnal (32), Kaisodi (64), Arkonam (128), Wanowrie (128), Wad Medani (256), Bhanja (256), Batai (256), bluetongue (128), AHS (>64), HEV (256), Chandipura (>64), Blalgodu (>64).
CF tests carried out by Dr. R.E. Shope at YARU indicated that there was no reaction with immune ascitic fluids against Colorado tick fever, Eubenangee, Corriparta, Kemerovo, Chenuda, Wad Medani, Tribec, Lebombo, EHD and Changuinola.
Related by CF to Palyam (G5287) and Vellore (68886) viruses but distinct by neutralization test.

Antigenic relationship among Palyam, Kasba and Vellore viruses.

Antigen	Immune Sera					
	Palyam		Kasba		Vellore	
	CF	NT	CF	NT	CF	NT
Palyam	256/64 [a]	>2.7 [b]	256/32	0.9	128/64	0.6
Kasba	128/16	1.4	256/64	>4.0	128/64	1.2
Vellore	128/16	0.7	128/32	1.0	128/64	>2.7

[a] Serum titre/antigen titre

[b] Log neutralization index in dex

Another virus, B8112 from Australia, has been found to be related to these viruses by CF test; neutralization tests indicate that virus B8112 was related but not identical to Vellore virus (information from Dr. Shope).

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice

Cell system (a)	Virus passage history (b)	Evidence of Infection							
		CPE			PLAQUES			Growth Without CPE	
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	+/- (g)	
Monkey kidney (PC)			No CPE					-	
Chick embryo (PC)			No CPE					-	
Rat embryo (PC)			No CPE					-	
Vero (CL)			CPE						
PS (CL)			CPE			Plaques (5)			
Aedes albopictus(CL)			No CPE					+	

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
Culex "vishnui"	1/5,553 pools (738,291 mosq.)		Vellore, Tamil Nadu, India

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)	SM 14	ic 0.02	Sickness and death		7.4
Mice (nb)		ip 0.03	Irregular mortality		
Mice (nb)		sc			
Mice (wn)		ic 0.03	Occasional sickness		
Mice (wn)		ip 0.2	None		
guinea pig (ad)		ip 0.5	CF and N antibodies detected		

Section IX - Experimental Arthropod Infection and Transmission

Arthropod species & virus source(a)	Method of Infection log10/ml (b)		Incubation period (c)		Transmision by bite (d)		Assay of arthropod, log10/ml (e)		
	Feeding	Injected	Days	°C	Host	Ratio	Whole	Organ	System
Aedes albopictus	Following intrathoracic inoculation of a 10-2 dilution, multiplication detected between 4-19 days. Virus titers ranged from 0.5-3.7 dex/0.02 (4).								

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)
India

Suspected (Antibody only detected)

Section XIII - References

1. Dandawate, C.N., et al. 1969. Ind. J. Med. Res. 57:1420-26.
2. Dandawate, C.N. 1974. Ind. J. Med. Res. 62:317-325.
3. Dandawate, C.N. 1974. Ind. J. Med. Res. 62:326-331.
4. Director, Virus Res. Centre, Poona. Personal communication. 1970.
5. Cogate, S.S. 1976. Ind. J. Med. Res. 64:83-86.

Remarks