Virus Name: Kammavanpettai	Abbreviation: KMPV

Status
Possible Arbovirus

Select Agent
No

SALS Level
2

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

Other Information

Antigenic Group
Ungrouped

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
VRC 66413

Accession Number

Original Date Submitted
11/12/1984

Family
Not listed

Genus
Not listed

Information From
Arbovirus Res Off., Microbiology Dept.

Address
Christian Med. College (CMC) Hosp., Vellore-4, N. Arcot, Tamil Nadu, India

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
D.E. Carey (1)

Isolated at Institute
Virus Res. Cent., Poona - CMC, Vellore

Host Genus
Sturnus pagodarum (Gmelin)

Species

Host Age/Stage
Adult

Sex
Not Answered

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Mist net

Collection Date
3/3/1963

Place Collected (Minimum of City, State, Country)
Kammavanpettai, Vellore Tk., N. Arcot, India

Latitude
12° 55' N

Longitude
79° 8' E

Macrohabitat
Throughout India except in arid and also humid evergreen parts West Pakistan, Ceylon (3)

Microhabitat
Gardens, grasslands, towns, villages, frequently on grazing cattle (Ibid).

Method of Storage until Inoculated
Inoculated on day of collection

Footnotes

Section III - Method of Isolation

Inoculation Date
3/4/1963

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Not tried

Other Reasons
This is the first isolation of this agent.

Homologous Antibody Formation by Source Animal
Not tested

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)
total sensitivity to pH 3.0 (4)

Lipid Solvent (ether - % used to test)	After Treatment Titer	Control Titer
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate) **1%**	After Treatment Titer **<2.3 dex**	Control Titer **4.3 dex**

Other (formalin, radiation)

Virion Morphology

Shape **Reoviridae-like (4)**	Dimensions **61-65 nm**	
Mean **63 nm**nm	Range nm	
Measurement Method **EM (4)**	Surface Projections/Envelope **No 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**	**Goose****
pH Range **6.0-7.0**	pH Optimum	
Temperature Range **22dC, 37dC**	Temperature Optimum	

Remarks
SMB tr. by alk. aqueous extraction with and without protamine treatment, also tested for HA ** Others used for detection of HA included human O, chicken, guinea pig, mouse, rat, and sheep.

Serologic Methods Recommended

Footnotes
SMB tr. by alk. aqueous extraction with and without protamine treatment, also tested for HA ** Others used for detection of HA included human O, chicken, guinea pig, mouse, rat, and sheep.

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

In complement-fixation tests performed in Vellore, non-reactive with hyperimmune mouse sera to the group A virus, Sindbis; group B viruses, dengue, West Nile, Japanese encephalitis; other arboviruses, including Chittoor (Bunyamwera), Sathuperi (Simbu) and Umbre (Turlock); psittacosis; and several agents isolated previously in Vellore and believed to be arboviruses though not at the time identified or grouped.
In complement-fixation tests carried out in the laboratories of the Yale Arbovirus Research Unit, New Haven, non-reactive with grouping hyperimmune mouse ascitic fluids of arbovirus groups A, B, C, Guama, Bunyamwera, Simbu, California, Anopheles A, Anopheles B, Turlock, Capim, Tacaribe, VSV, Quaranfil, Kaisodi and Qalyub. In addition, hyperimmune mouse ascitic fluid of Kammavanpettai was non-reactive when tested with nearly all arbovirus antigens in the Yale Arbovirus Research Unit's collection.

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)	

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
Sturnus pagodarum (bird)	1/44		Vellore, Tamil Nadu, India
Man	Nil	0/30 CF	

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	100% mortality		
Mice (nb)		ip	Mortality ratio 2/7		
Mice (nb)		sc			
Mice (wn)		ic	No illness		
Mice (wn)		ip	No illness		
Mice (nb)	SM 14	ic	Death		>6.0

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

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. Carey, D.E., et al. 1971. Indian J. Med. Res. 59:1708-1711.
2. Carey, D.E., et al. 1968. Indian J. Med. Res. 56:1340-1352.
3. Salim Ali, The Book of Indian Birds. 7th Ed. Bombay Natural History Society. Bombay, India. c. 1964.
4. Zeller, H. et al. 1989. Ill. Arch. Virol. Submitted.

Remarks