

Virus Name: Maprik		Abbreviation: MPKV
Status Probable Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Mapputta		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation MK 7532	Accession Number	Original Date Submitted 10/10/1984
Family Bunyaviridae	Genus Bunyavirus-like	
Information From Ian D. Marshall	Address Dept. of Microbiology, JCSMR, Aust. Nat. Univ., Canberra, AS	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) I.D. Marshall and G.M. Woodroffe	Isolated at Institute Canberra	
Host Genus Aedes funereus complex	Species	Host Age/Stage
Sex Not Answered		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method Mechanical aspirator at resting sites	Collection Date 5/13/1966	
Place Collected (Minimum of City, State, Country) Near Maprik, New Guinea		
Latitude 3° 37' S	Longitude 142° 55' E	
Macrohabitat Southern foothills, Prince Alexander Range, tropical rain for	Microhabitat Base of Sago palms	Method of Storage until Inoculated Liquid nitrogen and Revco at -70dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
5/31/1966

Animal (Details will be in Section 6)
nb mice

Route Inoculated ic and sc	Reisolation Yes
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Other Reasons
Antigenically distinct from known Australian arboviruses

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	Control Titer
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate) 1:200	After Treatment Titer <2.0 dex	Control Titer 4.3 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

Hemagglutination Antigen Source Erythrocytes (species used)
No **SMB ext. by sucrose-acetone** **Gander**

pH Range pH Optimum

Temperature Range Temperature Optimum

Remarks

Serologic Methods Recommended
CF, NT

Footnotes

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

No haemagglutinin. Mapputta group relationship by CF. Following CF and neut. tests carried out at YARU by Dr. Gwen M. Woodroffe.

Immune Ascitic Fluid or Antigens/ Viruses	Maprik (MK 7532) Antigen				Maprik (MK 7532) Antiserum			
	CF		NT		CF		NT	
	Ht/Ho	Index	Ht/Ho ¹	Ht/Ho ²	Ht/Ho	Index	Ht/Ho ¹	Ht/Ho ²
Mapputta	32/512	1/16	<0.3/3.0	1.0/5.4	128/512	1/4	<1.3/3.3	0.5/5.0
MRM 186								
Trubanaman	128/1024	1/8	<0.3/2.9	0.1/4.6	64/512	1/8	<0.4/3.3	0.2/5.0
MRM 3630								

¹ LNI in dex, determined in suckling mice

² LNI in dex, determined on Vero monolayers

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							Growth Without CPE +/- (g)		
		CPE			PLAQUES						
		Day (c)	Extent (d)	Titer TC50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)				
Chick embryo (PC)	SMB 2					Small hazy plaques					
PS (CL)						Small clear plaques					
BHK-21 (CL)						Indistinct plaques					
Vero (CL)						Small plaques					

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
Aedes funereus complex	1/885		Sepik District, New Guinea
Mansonia papuensis	1/2,277		
Ficalbia modesta and flavens	1/675		
Other Culicines	3/7,560		
Anopheles spp. (engorged)	1		

No. tested = no. of given species identified during month of isolation.

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)	SMB 2	ic 0.02	Death	5	7.7
Mice (nb)		ip 0.03	Death	6	6.7
Mice (nb)		sc			
Mice (wn)		ic 0.03	Antibodies		
Mice (wn)		ip 0.03	Antibodies		

