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	Accession Number	Original Date Submitted
MK 7532		10/10/1984

Family	Genus
Bunyaviridae	**Bunyavirus-like**

Information From	Address
Ian D. Marshall	**Dept. of Microbiology, JCSMR, Aust. Nat. Univ., Canberra, AS**

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)	Isolated at Institute	
I.D. Marshall and G.M. Woodroofe	**Canberra**	
Host Genus **Aedes funereus complex**	Species	Host Age/Stage

Sex
Not Answered

Isolated From	Isolation Details
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	Longitude	
3° 37' S	**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

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

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

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							
		CPE			PLAQUES			Growth Without CPE	
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	+/- (g)	
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		

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 aegypti	Adults intrathoracically inoculated (2.0 log10 PFU/mosquito). After 10 days, 3.2 log10 PFU/mosquito; after 22 days, 4.2 log10 PFU/mosquito. Successful transmission by bite to 1/4 infant mice on day 10.								

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)
Sepik District, New Guinea

Suspected (Antibody only detected)

Remarks