

Virus Name: Termeil		Abbreviation: TERV
Status Probable Arbovirus	Select Agent No	SALS Level 3
SALS Basis Insufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.		
Other Information		
Antigenic Group Ungrouped		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation BP8090	Accession Number	Original Date Submitted 9/22/1984
Family Not listed	Genus Not listed	
Information From I.D. Marshall and G.M. Woodroffe	Address Dept. Microbiol., JC SMR, Australian National University, Box 334, Canberra A.C.T. 2601, Australia	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) I.D. Marshall and G.M. Woodroffe (1)	Isolated at Institute Canberra	
Host Genus Aedes camptorhynchus	Species	Host Age/Stage Adult
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod Depleted	
Time Held Alive before Inoculation		
Collection Method Aspirator	Collection Date 4/28/1972	
Place Collected (Minimum of City, State, Country) Termeil State Forest, N.S.W., Australia		
Latitude 35° 30' S	Longitude 150° 15' E	
Macrohabitat Coastal sclerophyl forest	Microhabitat Eucalyptus-Acacia-heath association on sandy clay ridge 0.5 miles from sea	Method of Storage until Inoculated Liquid N2 and Revco at -70dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
7/25/1972

Animal (Details will be in Section 6)
nb mice

Route Inoculated Intracerebral	Reisolation Yes
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Other Reasons
First isolate of this 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)
3.6 = 7 dex; pH 7.2 = 7.4 dex; pH 9.0 = 7.4 dex

Lipid Solvent (ether - % used to test) 50% final	After Treatment Titer 3.5 dex	Control Titer 7.4 dex
Lipid Solvent (chloroform) 50% final	After Treatment Titer <3.0 dex	Control Titer 7.4 dex
Lipid Solvent (deoxycholate) 1:200	After Treatment Titer <3.0 dex	Control Titer 7.5 dex
Other (formalin, radiation)		

Virion Morphology

Shape Bunyavirus-like	Dimensions 78-108 nm	
Mean nm	Range nm	
Measurement Method	Surface Projections/Envelope observed	Nucleocapsid Dimensions, Symmetry

Morphogenesis

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

Hemagglutination

Hemagglutination No	Antigen Source SMB ext. by sucrose-acetone	Erythrocytes (species used) Gander
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pH Range 5.8-7.4	pH Optimum
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Temperature Range 37C	Temperature Optimum
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Remarks

Serologic Methods Recommended
CF, NT

Footnotes

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

Termeil virus reacted weakly by IFA with Inkoo and Keystone viruses and by CF with Jamestown Canyon virus (all of the CAL group) [2]. Termeil virus was placed in the Bunyamwera Supergroup, unassigned [2].

Immune ascitic fluid and/or newborn mouse brain antigen failed to react with:

- | | |
|-----|---|
| 23 | Australian and New Guinean arboviruses (JCSMR and QIMR) |
| 33 | arbovirus group ascitic fluids (tested by G.M.W. at YARU) |
| 202 | individual arbovirus CF antigens (tested by G.M.W. at YARU) |
| 6 | mouse and other viruses (tested by G.M.W. at YARU) |

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (M)

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)	SMB 3				5	1 mm	6.7**	

** 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
Aedes camptorhynchus	2/182		Termeil State Forest, New South Wales, Australia
Aedes vigilax	1/193		
Culex annulirostris	2/5		

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 3	ic 0.02	Paralysis and death	10	6.8
Mice (nb)	BP8090	ip 0.03	Paralysis and death	10	6.4
Mice (nb)		sc			
Mice (wn)		ic 0.02	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)		Transmission by bite (d)		Assay of arthropod, log10/ml (e)		
	Feeding	Injected	Days	°C	Host	Ratio	Whole	Organ	System
Aedes aegypti		3.8 PFU	0	27, 65%			<0.7		ic nb mouse
SMB 3			1	RH			<0.7		
			7		nb mouse	2/8	3.2		

Section X - Histopathology

Character of lesions (specify host)		
<u>Inclusion Bodies</u>	<u>Intranuclear</u>	
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) Australia
Suspected (Antibody only detected)

Section XIII - References

1. Marshall, I.D. et al. 1980. Aust. J. Exp. Biol. Med. Sci. 58:91-102. 2. Zeller, H. et al. 1989. II. Arch. Virol. Submitted.

Remarks
