Virus Name: Paroo River	Abbreviation: PRV

Status
Possible Arbovirus

Select Agent
No

SALS Level
3

SALS Basis
Isufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.

Other Information

Antigenic Group
Ungrouoped

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
GG668

Accession Number

Original Date Submitted
9/22/1984

Family
Reoviridae

Genus
Oribvirus

Information From
I.D. Marshall and G.M. Woodroofe

Address
Dept. Microbiology, JCSMR, Australian National University, Box 334, Canberra A.C.T. 2601

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
I.D. Marshall and G.M. Woodroofe

Isolated at Institute
Canberra

Host Genus
Culex annulirostris

Species

Host Age/Stage
Adult

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod
Depleted

Time Held Alive before Inoculation
Nil

Collection Method
Light trap and CO2

Collection Date
4/5/1973

Place Collected (Minimum of City, State, Country)
Wanaaring, Paroo River, N.S.W., Australia

Latitude
29° 40' S

Longitude
144° 10' E

Macrohabitat
Paroo River flood plain, Wanaaring Common

Microhabitat
River red gum, coarse grass and weed on sand

Method of Storage until Inoculated
Liquid nitrogen, Revco at -70dC

Footnotes

Section III - Method of Isolation

Inoculation Date
5/10/1974

Animal (Details will be in Section 6)
nb mice

Route Inoculated
ic-sc

Reisolation
Not tried

Other Reasons
Antigenically distinct from other viruses in this laboratory. Subsequently isolated elsewhere in SE Australia

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 **<1.8 dex**	Control Titer **5.4 dex**

Other (formalin, radiation)

Virion Morphology

Shape **Orbivirus-like (1)**	Dimensions	
Mean nm	Range nm	
Measurement Method **By electron microscopy (1)**	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**	**Gander**
pH Range **5.75-7.2**	pH Optimum	
Temperature Range **37C**	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF, NT

Footnotes

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

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)

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)	
Vero (CL)	SMB				6-10	No plaques			
BHK-21 (CL)	0 to 6				6-10	No plaques			
Aedes albopictus(CL)	SMB 6		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 annulirostris	1/1,575		Wanaaring, Paroo River, NW New South Wales, Australia, April 1973
5 other mosquito species	0/1,218		Wanaaring, Paroo River, NW New South Wales, Australia, April 1973
Culex annulirostris	2/5,564		Gol Gol swamp, Murray Valley New South Wales, Feb. 1974
7 other mosquito species	0/119		Gol Gol swamp, Murray Valley New South Wales, Feb. 1974
Culex annulirostris	4/90,872		Barmah State Forest Murray Valley Victoria, AS, Feb. 1974
10 other mosquito species	0/1,363		Barmah State Forest Murray Valley Victoria, AS, Feb. 1974
Culex annulirostris	3/14,675		Barrenbox Swamp, Murrumbidgee Irrigation Area, 25 miles west of Griffith, N.S.W. February 1974
7 other mosquito species	0/136		Barrenbox Swamp, Murrumbidgee Irrigation Area, 25 miles west of Griffith, N.S.W. February 1974
Culex annulirostris	1/9,413		Lake Poomah, Murray Valley, N.S.W. 22 miles north of Swan Hill, Victoria, Feb.1974
6 other mosquito species	0/175		Lake Poomah, Murray Valley, N.S.W. 22 miles north of Swan Hill, Victoria, Feb.1974
Culex annulirostris	1/222		Darling River, SouthwesternN.S.W. 40 miles north of Wentworth, Feb. 1976
1 other mosquito species	0/7		Darling River, SouthwesternN.S.W. 40 miles north of Wentworth, Feb. 1976
Culex annulirostris	1/6,515		Barmah State Forest, Murray Valley, Victoria, Feb. 1976.
5 other mosquito species	0/656		Barmah State Forest, Murray Valley, Victoria, Feb. 1976.
Culex annulirostris	1/1,924		Wandoona, 40 miles west of Moree, northern N.S.W., April, 1978
7 other mosquito species	0/603		Wandoona, 40 miles west of Moree, northern N.S.W., April, 1978

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)	6 nb mouse pass.	ic 0.02	Paralysis and death	9	5.6
Mice (nb)	GG668	ip 0.03	Antibody		<1.5
Mice (nb)		sc			
Mice (wn)		ic 0.02	Antibody		
Mice (wn)		ip 0.03	Antibody		

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		2.6 LD50	0	28			<0.7		ic nb mice. Range of LD50 in 3 individually treated mosquitoes at each time period
1:5 nb mouse brain suspension strain GG668, Pass. 8.			1				<0.7-1.7		
			7				3.1->3.7		
			14				0.7-2.3		

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)
Australia

Suspected (Antibody only detected)

Section XIII - References

1. Shope, R.E. Director, YARU. Personal communication, 1977.

Remarks