Virus Name: Gadgets Gully		Abbreviation: GGYV
Status **Possible Arbovirus**	Select Agent **No**	SALS Level
SALS Basis		
Other Information		
Antigenic Group **B**		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation	Accession Number	Original Date Submitted
CSIRO 122		11/13/1984
Family **Flaviviridae**	Genus **Flavivirus**	
Information From **T.D. St. George and R.L. Doherty**	Address **CSIRO, Long Pocket Laboratories, Indooroopilly, Queensland; and Queensland Institute of Medical Research, Herston, 4006 Queensland Austrilia**	
Information Footnote		

Section II - Original Source

Isolated By (name)	Isolated at Institute	
T.D. St. George	**CSIRO, Long Pocket Laboratories**	
Host Genus **Ixodes (Ceratixodes) uriae**	Species	Host Age/Stage **Nymphal**
Sex **Not Answered**		
Isolated From	Isolation Details	
Signs and Symptoms of Illness	Arthropod **Depleted**	
Time Held Alive before Inoculation **3 months**		
Collection Method **Collected by hand**	Collection Date **12/20/1976**	
Place Collected (Minimum of City, State, Country) **Macquarie Island, Southern Ocean, Australia**		
Latitude **54° 30' S**	Longitude **159° 0' E**	
Macrohabitat **Penguin rookeries**	Microhabitat **Under rocks, debris or in tussock grass**	Method of Storage until Inoculated **Held alive at ambient temperature for 3 months, then at -70dC**
Footnotes		

Section III - Method of Isolation

Inoculation Date
4/21/1977

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation

Other Reasons
First isolate of this virus at laboratory; 6 other strains isolated in 1976, 1977

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical
RNA, Single Strand

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)	After Treatment Titer	Control Titer

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	Antigen Source	Erythrocytes (species used)
Yes	**SMB ext. by sucrose-acetone**	**Goose**
pH Range	pH Optimum	
6.4-7.3	**6.8**	
Temperature Range	Temperature Optimum	
Remarks		
Serologic Methods Recommended		
CF, HI, NT		
Footnotes		

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

Negative by CF with antisera against Saumarez Reef, MVE, West Nile, Kokobera, Kunjin, Edge Hill, Alfuy, Sepik, St. Louis encephalitis and dengue (types 1 to 4).
Gadgets Gully antiserum negative by neutralization against the following viruses: Banzi, dengue 2, dengue 4, Edge Hill, Kadam, Kyasanur Forest disease, Kokobera, Kunjin, MVE, Saboya, Sepik, St. Louis encephalitis, Usutu and yellow fever viruses.
Confirmed as flavivirus by CF and indirect immunofluorescence at YARU. Related to the tick-borne flavivirus, Central European tick-borne encephalitis, by CF but distinct by neutralization.
A comparision of CSIRO 122 virus with a range of tick-borne flaviviruses by complement fixation.

	Serum					
Antigen	**CSIRO 122**	**CETBE**	**TYU**	**LGT**	**ZIKA**	**WN**
CSIRO 122	512/256	32/32 *	4/2	32+/32+	8/32	16/16
CETBE **	32/64	256/256				
OMSK	4/16+					
Tyuleniy			32+/32+			
Langat	16/32+			32+/32+		
Louping ill	8/16					
Zika	8/4				32+/32+	
West Nile						32+/32+
Tembusu	8/4					

* Serum titre/antigen titre

** Central European tick-borne encephalitis

Neutralization test by ic route in mice using antisera against CSIRO 122 and Central European tick-borne encephalitis (CETBE) viruses.

	VIRUS			
	CSIRO 122		CETBE	
	Dex		Dex	
Serum	ICLD50	LNI	ICLD50	LNI
CSIRO 122	3.9	2.7	6.7	-0.4
CETBE	5.5	1.1	3.7	2.6
Control	6.6		6.3	

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice and BHK-21 cell cultures

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)	
BHK-21 (CL)	BHK 2	4	100%						
Vero (CL)		6	No CPE	None	-				

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
Ixodes uriae	9/201 pools		Macquarie Island, Australia

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 3	ic 0.02	Paralysis, death	5	
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)		ic			
Mice (wn)		ip			

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)
Macquarie Island, Australia

Suspected (Antibody only detected)

Section XIII - References

1. St. George, T.D., et al. 1985. Am. J. Trop. Med. Hyg. 34:406-412.

Remarks