

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

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation MK 6357	Accession Number	Original Date Submitted 10/29/1984
Family Reoviridae	Genus Orbivirus	
Information From Ian D. Marshall	Address Dept. of Microbiology, JCSMR, Aust. Nat. Univ., Canberra, Australia	
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 Mixed Culicine mosquitoes (presumably on bait)	Species	Host Age/Stage Adult
Sex Not Answered		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod Engorged	
Time Held Alive before Inoculation		
Collection Method "Trinidad 10" trap baited with 6 laboratory mice	Collection Date 11/26/1965	
Place Collected (Minimum of City, State, Country) Near Japanaut Village, Sepik River, New Guinea		
Latitude 4° 6' S	Longitude 143° 5' E	
Macrohabitat Levee bank and flood plain C.200' above sea level	Microhabitat Forest with many small streams and pig wallows. Trap C.6' above ground	Method of Storage until Inoculated Liquid nitrogen and Revco at -70dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
2/14/1969

Animal (Details will be in Section 6)
nb mice (Tissue Culture)

Route Inoculated
ic and sc

Reisolation
No

Other Reasons
Antigenically unrelated to other viruses in this school.

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)
Inactivated at pH 3.0 at 4C/3 hours (1)

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 4.3 dex	Control Titer 4.3 dex
Other (formalin, radiation)		

Virion Morphology

Shape Spherical; orbivirus-like	Dimensions About 80 nm diameter	
Mean nm	Range nm	
Measurement Method Thin-section electron microscopy (2)	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry Densely staining core - 30 nm

Morphogenesis

Site of Constituent Formation in Cell

Site of Virion Assembly

Site of Virion Accumulation

Budding not observed

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

Footnotes

No cross reaction by CF with any arbovirus in Canberra laboratories. Characterization completed by Yale Arbovirus Research Unit.

1. Trace reaction in CF with Japanaut (MK 6357) antigen and pooled ascitic fluid containing Palyam, Eubenangee and Corriparta antibodies.
2. No relationship by CF to 197 arbovirus antigens, including the following

Orbviviruses:	Acado	IbAr 22619
	Bluetongue	Irituia
	Changuinola	Kemerovo
	Chenuda	Lemombo
	Colorado tick fever	Mitchell River (MRM 10434)
	Corriparta	Mono Lake
	DakArB 1327	Orungo
	EHD	Tribec
	Eubenangee	Wad Medani
		Warrego (CH 9935)

Homologous titre = 64. Tests at 1:4 dilution of ascitic fluids.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice and chick embryo cell cultures

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)			
Chick embryo (PC)						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
Pool of mixed Culicine mosquitoes	1 *		Sepik District, New Guinea
Syconycteris crassa (bat)	1/6		

* 6 other apparent isolates (2 from mosquitoes and 4 from blood of bat, snake and birds) were recovered in the laboratory at about the same time, but failure to reisolate from any source renders validity doubtful. First isolate was from blood of Syconycteris crassa.

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 5	ic 0.02	Death	4-9	8.0
Mice (nb)		ip 0.03	Occasional deaths	>18	<3.0
Mice (nb)		sc			
Mice (wn)		ic 0.03	Antibodies only		
Mice (wn)		ip 0.03	Antibodies only		

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	Adult mosquitoes infected by intrathoracic inoculation (virus titer = <1.3 log10/mosq.). At day 8, 2/3 mosquitoes tested were infected; virus titer = 1.7 log10/mosq. At day 14, 3/3 mosquitoes were infected. Virus titer ranged from 1.7-2.6 log10/mosq. At day 21, 1/3 was infected (2.8 log10/mosq.). There was no transmission by bite on days 8 and 14.								

Section X - Histopathology

Character of lesions (specify host)

Inclusion BodiesIntranuclear

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)

Section XIII - References

1. Marshall, I.D. Personal communication. 1973.
2. Lipman, M., YARU. Personal communication.

Remarks