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. Woodroofe

Isolated at Institute
Canberra

Host Genus
Mixed Culicine mosquitoes (presumably on bait)

Species

Host Age/Stage
Adult

Sex
Not Answered

Isolated From

Isolation Details

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; orbovirus-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 **Budding not observed**	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**		
Footnotes		

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

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		
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	+/- (g)		
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)		Transmision 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 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)

Section XIII - References

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

Remarks