Virus Name: Peaton	Abbreviation: PEAV

Status
Probable Arbovirus

Select Agent
No

SALS Level
3

SALS Basis
Disease is sheep, cattle, or horses.

Other Information

Antigenic Group
Simbu

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
CSIRO 110

Accession Number

Original Date Submitted
9/6/1984

Family
Bunyaviridae

Genus
Bunyavirus

Information From
T.D. St. George

Address
CSIRO Long Pocket Laboratories, Private Bag No. 3, P.O., Indooroopilly, Qld., Australia 4068

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
St. George, et al (1)

Isolated at Institute
Peachester, Queensland

Host Genus
Culicoides brevitarsis, pool of 100 insects

Species

Host Age/Stage

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod
Depleted

Time Held Alive before Inoculation

Collection Method
Truck trap

Collection Date
12/6/1976

Place Collected (Minimum of City, State, Country)
Peachester, Queensland, Australia

Latitude
26° 51' S

Longitude
152° 53' E

Macrohabitat
Open grassland

Microhabitat

Method of Storage until Inoculated
Held at -70dC for reisolation

Footnotes

Section III - Method of Isolation

Inoculation Date
12/7/1976

Animal (Details will be in Section 6)
CBA mouse (Tissue Culture)

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons

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)	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)
No	**SMB and blood ext. by sucrose-acetone**	**Gander**

pH Range	pH Optimum
5.5-7.0	

Temperature Range	Temperature Optimum

Remarks

Serologic Methods Recommended
NT in newborn mice, BHK-21 or Vero cell cultures

Footnotes

Serum Dilution Plaque-Reduction Neutralization Test [2]

Viruses	Titer of Antibody to: AKA	(Yaba-7)	SHA	SABO	Peaton	SAN	AINO
(Yaba-7)	30 *	2560	10				
Shamonda	30		1280			10	
Sabo	50		10	5120	640		
Peaton					10240	910	
Sango					2560	5120	
Aino							5120

* Reciprocal of highest dilution of antibody producing >90% plaque reduction; blank = <10

Complement-Fixation Test [2]

Antigens	Titer of Antibody to: AKA	(Yaba-7)	SHA	SABO	Peaton	SAN	AINO
Akabane	1024	512	128	256	256	64	128
(Yaba-7)	512	2048	128	1024	1024	128	512
Shamonda	512	256	2048	512	1024	64	512
Sabo	2048	1024	512	2048	2048	128	1024
Peaton	512	256	128	256	8192	512	2048
Sango	512	256	256	512	4096	1024	4096
Aino	512	256	256	256	8192	1024	4096

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
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)	Blood or insects	4-6	foci (disappear within 4 days)						
BHK-21 (CL)	Subculture 2-4	2-4	complete	6.0**					

** 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
Culicoides brevitarsis	8/5,34		Southeast Queensland Australia
Cattle (blood)	1		Grafton, N.S.W., AS
Cattle (blood)	1		Camden, N.S.W., AS
Cattle (blood)	1		Tamworth, N.S.W., AS
Sheep	0	9/86 NT	Australia
Horses	0	24/50 NT	
Buffaloes	0	7/18 NT	
Goats	0	7/70 NT	
Pigs	0	3/62 NT	
Deer	0	4/15 NT	

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)	CSIRO 110	ic 0.015	Paralysis, death	3	7.3
Mice (nb)	SMB 4	ip 0.03	Paralysis, death	3	7.0
Mice (nb)		sc			
Mice (wn)		ic 0.03	Nil		
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
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. St. George, T.D., et al. 1980. Aust. J. Biol. Sci. 33:235-244.
2. Kinney, R. and Calisher, C.H. Am. J. Trop. Med. Hyg. 30:1307-1318.

Remarks