

Virus Name: Precarious Point		Abbreviation: PPV
Status Possible Arbovirus	Select Agent No	SALS Level
SALS Basis		
Other Information		
Antigenic Group Uukunieme		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation MI 19334	Accession Number	Original Date Submitted 11/13/1984
Family Bunyaviridae	Genus Uukuvirus	
Information From T.D. St. George	Address CSIRO, Long Pocket Laboratories, P.B. No. 3, Indooroopilly, Queensland 4068, Australia	
Information Footnote		

Section II - Original Source

Isolated By (name) R.L. Doherty	Isolated at Institute Qld. Inst. Med. Research, Brisbane	
Host Genus Ixodes (Ceraticodes) uriae	Species	Host Age/Stage Adult
Sex Not Answered		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod Depleted	
Time Held Alive before Inoculation 3 months		
Collection Method	Collection Date 11/1/1975	
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

Animal (Details will be in Section 6)

nb mice

Route Inoculated

Intracerebral

Reisolation

Other Reasons

First isolate of this virus at laboratory; other strains isolated by CSIRO

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical

RNA

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) 50%	After Treatment Titer 2.0 dex	Control Titer 7.5 dex
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate) 1:1000	After Treatment Titer 2.0 dex	Control Titer 6.1 dex
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

Hemagglutination

Antigen Source

Erythrocytes (species used)

Yes

SMB ext. by sucrose-acetone

Goose

pH Range

pH Optimum

6.0-6.6

Temperature Range

Temperature Optimum

Remarks

Low titre hemagglutinin obtained

Serologic Methods Recommended

CF, NT

Footnotes

Low titre hemagglutinin obtained

MI 19334 was placed in the family Bunyaviridae by electron microscopy performed at YARU.

MI 19334 virus was tested by CF against the following Bunyaviridae serogroups with negative results: Anopheles A, Anopheles B, Bunyamwera, Bwamba, Group C, California, Capim, Gamboa, Guama, Koongol, Olifantsvlei, Patois, Simbu, Tete, Turlock, Sandfly fever, CHF-CON, DGK, Hughes, Nairobi sheep disease, Qalyub, Sakhalin, Bakau, Kaisodi, Mapputta, Yogue and other viruses Belmont, Bhanja, Keterah, Kowanyama, Lone Star, Tataguine, Witwatersrand.

MI 19334 virus was related to but distinct from members of the Uukuniemi serogroup by CF:

Antibody or antigen	MI 19334	
	Antigen	Ascitic Fluid
Uukuniemi (S-23)	64/512 *	32/512
Grand Arbaud (Argas 27)	16/1024	32/512
Manawa (Pak T 462)	8/1024	8/512
EgAn 1825-61	128/1024	64/512
Zaliv Terpeniya (LEIV 21c)	16/32	8/512
Oceanside (RML 38)	8/256	32/512
Murre	256/512	64/512
RML 105355	128/1024	64/512
UK FT/254	16/512	64/512
Fin V-707	64/1025	32/512
Group Uukuniemi	128/	

* Heterologous CF titer/homologous CF titer

Note: Of the named viruses, Oceanside and Murre viruses are unregistered.

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 +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
PS-EK (CL)	SMB 3					Plaques	8.4*	
BHK-21 (CL)	SMB 2	4	100%	5.5*				
Vero (CL)		4	100%	5.5				

* 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
Ixodes uriae	10/201 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)	SMB 3	ic	Paralysis and death		8.3	
Mice (nb)		ip	Paralysis and death		8.1	
Mice (nb)		sc				
Mice (wn)		ic	Paralysis and death		<4.5	
Mice (wn)		ip				

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, SMB 3		X	Persistence but no multiplication						

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.
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Remarks

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