

Virus Name: Upolu		Abbreviation: UPOV
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Upolu		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation C5581	Accession Number	Original Date Submitted 11/2/1984
Family Bunyaviridae	Genus Bunyavirus-like	
Information From R.L. Doherty	Address Queensland Institute of Medical Research, Brisbane	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) Doherty and colleagues	Isolated at Institute QIMR, Brisbane	
Host Genus Ornithodoros capensis Neumann	Species	Host Age/Stage Adult
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method	Collection Date 7/21/1966	
Place Collected (Minimum of City, State, Country) Upolu Cay, Great Barrier Reef, Queensland, AS		
Latitude 16° 40' S	Longitude 146° 0' E	
Macrohabitat Coral atoll, 400 x 70 meters	Microhabitat In sand under succulent vegetation in colony of terns (Sternafuscata and Sterna berghia)	Method of Storage until Inoculated At room temperature, 24 hrs., at 4dC for 72 hrs.; then in Revco at -60dC
Footnotes		

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)
No **SMB, blood ext. by sucrose-acetone** **Goose**

pH Range pH Optimum
6.0-7.6

Temperature Range Temperature Optimum
37dC

Remarks

Serologic Methods Recommended
CF

Footnotes

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

Brisbane studies:

No relation demonstrated by neutralization or complement-fixation tests between C5581 and the following viruses: Murray Valley encephalitis, Kunjin, Kokobera, Edge Hill, Stratford, Alfuy, Ross River, Getah, Sindbis, Koongol, Wongal, Corriparta, Mapputta, Kowanyama, Eubenangee, Trubanaman, MRM4059, Japanese B encephalitis, dengue types 1,2,3,4, Bebaru, mouse hepatitis, lymphocytic choriomeningitis, psittacosis.

Yale Arbovirus Research Unit studies (Casals, personal communication): antiserum to C5581 failed to react by CF test to the following: Bandia, Bhanja, Chenuda, Colorado tick fever, DGK, Dugbe, Farallon, Ganjam, Grand Arbaud, Hazara, Johnston Atoll, Kaisodi, Kemerovo, Lanjan, Lipovnik, Mutucare, Nyamanini, Manawa, Pak T 487, Qalyub, Quaranfil, Sawgrass, Silverwater, Soldado, Thogoto, Tribec, URB-TM-1381, Uukuniemi, Wad Medani, Wanowrie, Hughes, Thailand tick no. 39 (Nyamanini).

Upolu virus antigenically related by CF, immunofluorescence and NT to the presently unregistered Aransas Bay virus. The latter also was isolated from *Ornithodoros capensis* ticks [4].

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
heart and liver pools (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
newborn mice

Cell system (a)	Virus passage history (b)	Evidence of Infection							Growth Without CPE +/- (g)
		CPE			PLAQUES				
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)		
PS (CL)	SMB 4		CPE			Plaques	6.4*		

* Expressed in dex

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Ornithodoros capensis	1/c.1000		Upolu Reef, Queensland, AS
Man		0/149 NT	N. and W. Queensland, AS
Birds		0/57 NT	N. Queensland, AS
Cattle		1/36 NT	Mitchell River, AS
Cattle		0/55 NT	SE Queensland; Innisfail, AS
Kangaroo		1/48 NT	W. Queensland, AS

Negative NT results with sera from following species collected between 1958 and 1969 in various areas of Queensland (2): horse, 55; sheep, 36; pig, 35; goat, 8; kangaroo, 4; wallaby, 69; bandicoot, 39; rat spp., 44; Pteropus sp, 5; bat, 8; and domestic fowl, 59.

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. Doherty, R.L., et al. 1969. Aust. J. Sci. 31:363-364. 2. Doherty, R.L., et al. 1970. Trans. R. Soc. Trop. Med. Hyg. 64:748-753. 3. Carley, J.G., et al. 1973. J. Med. Ent. 10:244-249. 4. Yunker, C.E., et al. 1979. J. Med. Ent. 16:453-460.

Remarks

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