Virus Name: Lake Clarendon	Abbreviation: LCV

Status
Possible Arbovirus

Select Agent
No

SALS Level

SALS Basis

Other Information

Antigenic Group
Ungrouped

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
CSIRO 704

Accession Number

Original Date Submitted
4/22/1984

Family
Reoviridae

Genus
Not listed

Information From
T.D. St. George and D.H. Cybinski

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

Information Footnote

Section II - Original Source

Isolated By (name)
H. Zakrzewski

Isolated at Institute
Long Pocket Laboratories

Host Genus
Argas robertsi

Species

Host Age/Stage
Adult/nymph

Sex
Not Answered

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod
Depleted

Time Held Alive before Inoculation
2 days

Collection Method

Collection Date
1/3/1981

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

Latitude
27° 34' S

Longitude
152° 17' E

Macrohabitat
Edge of swamp

Microhabitat
Egret nestlings and under bark of Melaleuca trees

Method of Storage until Inoculated
Atmospheric temperature (18-30dC)

Footnotes

Section III - Method of Isolation

Inoculation Date
1/5/1981

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

Route Inoculated

Reisolation
Not tried

Other Reasons

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) **20%**	After Treatment Titer **3.0 dex**	Control Titer **4.5 dex**
Lipid Solvent (chloroform) **10%**	After Treatment Titer **4.0 dex**	Control Titer **4.5 dex**
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer

Other (formalin, radiation)

Virion Morphology

Shape **Spherical particles**	Dimensions **65-75 nm, 57-61 nm (2)**	
Mean **59 nm (2)**nm	Range nm	
Measurement Method **Electron microscopy; EM (2)**	Surface Projections/Envelope **No 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 ext. by sucrose-acetone**	**Goose**
pH Range **6.0-7.3**	pH Optimum	
Temperature Range	Temperature Optimum	

Remarks

Serologic Methods Recommended
NT, CF, IFA

Footnotes

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

Negative by indirect immunofluorescence tests to bovine ephemeral fever, bluetongue, epizootic hemorrhagic disease of deer and Palyam group viruses; and in neutralization tests to Akabane, Aino, Douglas, Peaton, Tinaroo, Kao Shuan, Tibrogargan, Eubenangee, bluetongue and Ibaraki viruses. CSIRO 704 antigen did not react in CF tests with 30 polyvalent or grouping fluids and 181 specific antisera including 28 Togaviridae, 42 Bunyaviridae, 51 Reoviridae, 35 Rhabdoviridae, and 25 other viruses. CSIRO 704 ascitic fluid failed to fix complement with 76 antigens (11 togaviruses; 14 bunyaviruses; 7 orbiviruses; 26 rhabdoviruses; 18 other viruses).

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice

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)	BHK 1	4	70-80%	3.0*					
Vero (CL)	BHK 3	4	30%	3.0					

* 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
Cattle egrets (Bubulcus ibis coromandus)		29/37 NT	SE Queensland, Australia
Argas robertsi	8/8Z * pools		

* Each pool contained 10 adult ticks or nymphs.

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)	MB 1	ic	Paralysis and death	10	4.0
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)		ic			
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

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)
Queensland, Australia

Suspected (Antibody only detected)

Section XIII - References

1. St. George, T.D., et al. 1984. Aust. J. Biol. Sci. 37:85-89.
2. Zeller, H. et al. 1989. III. Arch. Virol. Submitted.

Remarks