Virus Name: Corriparta	Abbreviation: CORV

Status
Probable Arbovirus

Select Agent
No

SALS Level
2

SALS Basis
Results of SALS surveys and information from the Catalogue.

Other Information

Antigenic Group
Corriparta

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
MRM1

Accession Number

Original Date Submitted
2/5/1985

Family
Reoviridae

Genus
Orbivirus

Information From
R.L. Doherty

Address
Queensland Institute of Medical Research, Herston N9, Brisbane, Queensland, AS

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
Doherty, et al. (1)

Isolated at Institute
Brisbane

Host Genus
Culex annulirostris

Species

Host Age/Stage
Adult

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Aspirated from man

Collection Date
3/30/1960

Place Collected (Minimum of City, State, Country)
Mitchell River Mission, North Queensland, Australia

Latitude
15° 30' S

Longitude
141° 40' E

Macrohabitat
Low-lying plain bordering Gulf of Carpentaria, open forest- grassland

Microhabitat
On bank of creek on edge of aboriginal mission

Method of Storage until Inoculated
Dry ice and Revco

Footnotes

Section III - Method of Isolation

Inoculation Date
4/22/1960

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons
Other isolations in the same area

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) **MRM1: 50%****	After Treatment Titer **<2.0 dex**	Control Titer **6.5 dex**
Lipid Solvent (chloroform) **MRM62: 1/200****	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer **2.5 dex**	Control Titer **5.2 dex**

Other (formalin, radiation)

Virion Morphology

Shape **Spherical orbivirus-like particles**	Dimensions **57 nm**	
Mean nm	Range nm	
Measurement Method **Electron microscopy (2)**	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry **Surface subunit structure similar**

to bluetongue v

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, blood, liver or carcass ext.by sucrose-acetone; acetone-ether**	**Goose**
pH Range	pH Optimum	
Temperature Range	Temperature Optimum	

Remarks
*** Not sensitive to 5-iodo or 5-fluoro-2-deoxyuridine (2). ** Neither ether nor SDC sensitivity could be demonstrated with MRM1 in low passage levels. See also Reference 2. Sensitive to trypsin, chymotrypsin, and lecithinase-C (2).**

Serologic Methods Recommended
CF, NT

Footnotes
*** Not sensitive to 5-iodo or 5-fluoro-2-deoxyuridine (2). ** Neither ether nor SDC sensitivity could be demonstrated with MRM1 in low passage levels. See also Reference 2. Sensitive to trypsin, chymotrypsin, and lecithinase-C (2).**

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

No relationship demonstrated by neutralization or CF test to Sindbis, Getah, Bebaru, MVE, Kunjin, Kokobera, Edge Hill, Stratford, Koongol, Wongal or Mapputta. At YARU [7] , Corriparta has been extensively compared by CF to other viruses, including 25 individual serotypes with bluetongue-like physical and morphological properties. A relationship has been demonstrated only to the Acado virus from Ehtiopia.
In addition to Corriparta virus, the COR serogroup presently consists of Acado and Jacareacanga viruses. For information on antigenic relationships, see registration cards for latter two viruses.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Heart (LV)

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)	
PS (CL)						Plaques (2)			
Vero (CL)	P-10				9	1 mm	7.0(a) (6)		
LLC-MK2 (CL)						No plaques (6)			
BHK-21 (CL)			CPE (8)						
VSW (CL)			CPE (8)						

(a) 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
Culex annulirostris	6/6,703		Mitchell River, North Queensland, AS; 1960
Charadrius melanops	1/9		Mitchell River, Australia; 1965-66(3)

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 0.01	Death	6.0	7.7
Mice (nb)		ip 0.03	No illness or death		
Mice (nb)		sc			
Mice (wn)		ic 0.03	No illness or death		
Mice (wn)		ip 0.03	Antibody production		

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
Culex quinquefasciatus	Adult mosquitoes intrathoracically inoculated; virus content of mosquitoes titrated in mice: 5.3/mosquito at 8 days (2.8 at 12 hours) (2) Adult mosquitoes exposed to virus by membrane feeding; virus content of mosquitoes titrated in mice: <1.87/mosquito days 1-30 (2.5 after feeding).								

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. Doherty, R.L., et al. 1963. Aust. J. Exp. Biol. Med. Sci. 41:17-40.
2. Carley, J.G. and Standfast, H.A. 1969. Am. J. Epidem. 89:583-592.
3. Whitehead, R.H., et al. 1968. Trans. R. Soc. Trop. Med. Hyg. 62:439.
4. Doherty, R.L. 1967. Aust. Paediat. J. 3:213-218.
5. Doherty, R.L., et al. 1970. Trans. R. Soc. Trop. Med. Hyg. 64:748-758.
6. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
7. Shope, R.E. Personal communication. 1971.
8. Queensland Inst. Med. Res., Brisbane, AS. 1971. Unpublished observations.

Remarks