Virus Name: Cocal	Abbreviation: COCV

Status
Arbovirus

Select Agent
No

SALS Level
3

SALS Basis
Disease is sheep, cattle, or horses.

Other Information

Antigenic Group
Vesicular Stomatitis

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
TRVL 40233

Accession Number

Original Date Submitted
2/24/1985

Family
Rhabdovirus

Genus
Vesiculovirus

Information From
Trinidad Regional Virus Laboratory

Address
P.O. Box 164, Port of Spain, Trinidad

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
TRVL (1)

Isolated at Institute
Port of Spain, Trinidad

Host Genus
Gigantolaelaps sp. (249 mites)

Species

Host Age/Stage
Ad + immature

Sex
Not Answered

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Off of 11 trapped Oryzomys laticeps velutinus

Collection Date
9/25/1961

Place Collected (Minimum of City, State, Country)
Nariva County, Trinidad

Latitude
10° 24' N

Longitude
61° 3' W

Macrohabitat
Bush Bush Forest, Nariva Swamp, Eastern Trinidad

Microhabitat
Semi-evergreen seasonal forest

Method of Storage until Inoculated
Stored while alive in Revco at -55dC until ground and inoculated

Footnotes

Section III - Method of Isolation

Inoculation Date
10/30/1961

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons
No virus of this type previously encountered

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 **2.6 dex**	Control Titer **>7.0 dex**
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer

Other (formalin, radiation)

Virion Morphology

Shape **Identical to VSI (9)**	Dimensions **60 x 200 nm**	
Mean nm	Range nm	
Measurement Method **Electron microscopy (2)**	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 **No**	Antigen Source	Erythrocytes (species used)
pH Range	pH Optimum	
Temperature Range	Temperature Optimum	

Remarks
Morphologically indistinguishable from VSV (9)

Serologic Methods Recommended
CF and NT

Footnotes
Morphologically indistinguishable from VSV (9)

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

Cocal virus has been shown by both CF and NT to be related to but not identical with the prototype strain of VS-Indiana [1] . The same tests failed to demonstrate relationship to VS-New Jersey. It appears to be identical with BeAr 39377 isolated in Belem, Brazil. For relationship to other strains of VS-Indiana see registration card.
Because of its antigenic relationship and similar size and shape to VS- Indiana, it has been placed in the VSV group [3] . As far as it is known, it is not related to any viruses not included in this group. For a list of those with which it has been compared, see Reference [1] .

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
CNS, heart, liver, spleen, and kidney pool (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)
HeLa (CL)	MB 5		CPE	7.5** (8)				
KB cells(CL)	SMB 6	24 hours	CPE	5.5				
Chick embryo(PC)		24 hours	CPE	6.5				
BHK-21 (CL)						Plaques (7)		
Monkey kidney(PC)						Plaques (7)		

** 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
Man		0/75 NT	Trinidad
Equines	1		Argentina (11)
Equines		8/114 NT	Trinidad
Pigs		0/30 NT	
Sentinel mice	1/1700 litters		Bush Bush Forest Nariva Swamp Trinidad
Heteromys anomalus	1/400	35/273 NT	
Oryzomys spp.		72/256 NT	
Zygodontomys brevicauda		58/313 NT	
Culex (Mel) portesi	1/23000		Bush Bush Forest Nariwa Swamp Trinidad (6)
Gigantolaelaps sp.	1/4000		
Gigantolaelaps sp.	1		Belem Brazil (1 4)
Ameiva ameiva atrigularis		0/30 NT	Bush Bush Forest

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)		ic 0.02	Death	2-3	7.0
Mice (nb)		ip 0.03	Death	3-5	6.2
Mice (nb)		sc			
Mice (wn)		ic 0.03	Death	3-5	7.0
Mice (wn)		ip 0.2	Death	4-10	3.2
embryonated eggs		al.c. 0.1	Death		7.5
		am.s. 0.1	Death		8.2
		ys 0.5	Death		8.2
guinea pigs			Vesicluar lesions on all		
		7 dex LD50	four foot pads; antibodies		
Zygodontomys	MB 8	sc,ip,in	Paralysis, virus recovery		
Myotis l.lucifugus		sc	Long-term viremia (10)		

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		Infected by inoc., 5 serial passages of sg virus and transmission by bite (1).							
Trichoprosopon digitatum		Infected by inoc., 2 serial passages of sg virus and transmission by bite (1).							

Anopheles quadrimaculatus, Culex quinquefasciatus and Aedes aegytpi: virus multiplication and serially maintained by inoculation. (3)

Aedes aegypti which were allowed to feed on infected bats in turn transmitted virus to suckling mice (10).

Section X - Histopathology

Character of lesions (specify host)
Mice: distinctive, with destruction of cells of ependymal canal of spinal medulla, and pronounced karyorrhexis (L.B.Dias)

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)
Trinidad, Brazil,Argentina

Suspected (Antibody only detected)

Section XIII - References

1. Jonkers, A.H., et al. 1964. Am. J. Vet. Res. 25:236-242.
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8. Buckley, S.M. 1964. Proc. Soc. Exp. Biol. Med. 116:354-358.
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Remarks