Virus Name: Cotia	Abbreviation: COTV

Status
Not Arbovirus

Select Agent
No

SALS Level
2

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

Other Information

Antigenic Group
Ungrouped

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
SpAn 232

Accession Number

Original Date Submitted
2/13/1985

Family
Poxviridae

Genus

Information From
Dr. Oscar de Souza Lopes

Address
Instituto Adolfo Lutz, Caixa Postal 7027, S. Paulo, Brazil

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
Inst. Adolfo Lutz (1)

Isolated at Institute
Cotia County, S. Paulo

Host Genus
Swiss white mice, sentinel

Species

Host Age/Stage
3 days

Sex
Not Answered

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Exposure during 48 hours in the forest

Collection Date
3/31/1961

Place Collected (Minimum of City, State, Country)
Cotia, S. Paulo, Brazil

Latitude
22° S

Longitude
43° W

Macrohabitat
Rural in a state forest reserve

Microhabitat
At ground level in the shade

Method of Storage until Inoculated
-70dC in an electrical freezer

Footnotes

Section III - Method of Isolation

Inoculation Date
3/21/1961

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Not tried

Other Reasons
Several isolations during hot-wet season only from sentinel mice; no isolations from other field stations.

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	Control Titer
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate) **1:1000**	After Treatment Titer **3.0 dex**	Control Titer **5.5 dex**

Other (formalin, radiation)

Virion Morphology

Shape **Identical to that of poxviruses (2)**	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

Hemaggiutination	Antigen Source	Erythrocytes (species used)
No	**SMB; liver; serum ext. by sucrose-acetone**	**Goose**
pH Range	pH Optimum	
Temperature Range	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF, NT, IFA, gel immunoprecipitation

Footnotes

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

Antigens and Immune sera showed lack of relationship in CF tests with:

Group A:	Mayaro, EEE, WEE, VEE, Aura, Una, Pixuna, Mucambo, Getah, Ndumu.
Group B:	SLE, Ilheus, YF Asibi, Bussuquara, Uganda S, Zika, dengue, dengue 2, Spondweni, Wesselsbron, JE, West Nile, Ntaya, Modoc, Langat.
Group C:	Marituba, Oriboca, Caraparu.
Group Bunyamwera:	Cache Valley, Kairi, Guaroa, Sororoca, Tucunduba, Bunyamwera, Ilesha.
Group California:	Tahyna, Melao, trivittatus.
Group Guama:	Guama, Catu, Moju.
Group Simbu:	Simbu, Ingwavuma, Oropouche, Sathuperi, Akabane.
Capim Group:	Group serum received from Belem Virus Laboratory.
Group Bakau:	Bakau, Ketapang.
Group Phlebotomus Fever:	Naples Phlebotomus fever, Sicilian Phlebotomus fever, Chagres, Icoaraci.
Minor groups and ungrouped viruses:	Bwamba, Quaranfil, Chenuda, Wanowrie, Anopheles B, Triniti, Aruac, Wongal, Wad Medani, Hart Park, Witwatersrand, Tacaribe, Mossuril, Tsuruse, K-622, epizootic hemorrhagic deer disease-New Jersey, CTF, Panama BT 535, SAAr 2526, Ig 3151, VS-New Jersey, TRVL 42336, Lebombo, Tete, Navarro, Mapputta, Nodamura, Palyam.

Antigens and immune sera showed lack of relationship in HI tests with: Mayaro, EEE, WEE, VEE, Aura, Pixuna, Mucambo, Una, YF Asibi, Ilheus, Ntaya, SLE, Bussuquara, Oriboca, Marituba, Caraparu, Guama, Catu, Tacaiuma, Cache Valley, Guaroa, Icoaraci, Turlock, Anhanga.
No serological relationship to myxomatosis virus.

A virus previously registered as Embu virus has been found to be a strain of Cotia virus (August 1971).

Serologically related to BeAn 58058 isolated from blood of Oryzomys in Para, Brazil, but behaves differently in tissue culture [3] .

Many strains related to Cotia by CF but separable have been isolated from several genera of mosquitoes in French Guiana [4] .

Cotia shares antigens with vaccinia virus by gel precipitation and immunofluorescent staining. No cross-neutralization between Cotia and vaccinia viruses, and Cotia antiserum did not neutralize other representative poxvirus group members [9] .

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
CNS (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)	
Chick embryo (PC)	SPAn 232					Plaques (6)			
BHK-21 (CL)	BeAn 58058		CPE (6)						
GMK (CL)			CPE (6)						
Vero (CL)	P-7				9	1 mm	6.3* (7)		
LLC-MK2 (CL)					6	2 mm	3.7 (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 (blood)	1		French Guiana (8)
Sentinel mice groups	42/211		Cotia County, Sao Paulo Brazil
Aedes serratus	1		Cotia Station, Brazil
Psorophora ferox	1		Casa Grande Station, Brazil
Coquilletidia venezuelensis	1		French Guiana; 1971 (8)
Limatus pseudomethisticus	1		
Lutzomyia sp.	1		
Culex sp.	1		
Culex portesi	2		

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)	P-3	ic 0.02	Death	3.0	
Mice (nb)		ip 0.05	Death	4.0	
Mice (nb)		sc			
Mice (wn)		ic 0.03	Antibody		
Mice (wn)		ip 0.20	Antibody		
rabbit		intradermal	Faint local reaction		
chick embryo		CAM	Pocks (different from variola, vaccinia or herpes viruses)		

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 **Reported**	Death
Subclinical	Overt Disease	

Clinical Manifestations

Number of Cases — Category (i.e. febrile illness, etc.)

Section XII - Geographic Distribution

Known (Virus detected)
Brazil, French Guiana

Suspected (Antibody only detected)

Section XIII - References

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Remarks