

<b>Virus Name: Cotia</b>		<b>Abbreviation: COTV</b>
Status <b>Not Arbovirus</b>	Select Agent <b>No</b>	SALS Level <b>2</b>
SALS Basis <b>Results of SALS surveys and information from the Catalogue.</b>		
Other Information		
Antigenic Group <b>Ungrouped</b>		

**SECTION I - Full Virus Name and Prototype Number**

Prototype Strain Number / Designation <b>SpAn 232</b>	Accession Number	Original Date Submitted <b>2/13/1985</b>
Family <b>Poxviridae</b>	Genus	
Information From <b>Dr. Oscar de Souza Lopes</b>	Address <b>Instituto Adolfo Lutz, Caixa Postal 7027, S. Paulo, Brazil</b>	
Information Footnote <b>Reviewed by editor</b>		

**Section II - Original Source**

Isolated By (name) <b>Inst. Adolfo Lutz (1)</b>	Isolated at Institute <b>Cotia County, S. Paulo</b>	
Host Genus <b>Swiss white mice, sentinel</b>	Species	Host Age/Stage <b>3 days</b>
Sex <b>Not Answered</b>		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method <b>Exposure during 48 hours in the forest</b>	Collection Date <b>3/31/1961</b>	
Place Collected (Minimum of City, State, Country) <b>Cotia, S. Paulo, Brazil</b>		
Latitude <b>22° S</b>	Longitude <b>43° W</b>	
Macrohabitat <b>Rural in a state forest reserve</b>	Microhabitat <b>At ground level in the shade</b>	Method of Storage until Inoculated <b>-70dC in an electrical freezer</b>
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) <b>1:1000</b>	After Treatment Titer <b>3.0 dex</b>	Control Titer <b>5.5 dex</b>
Other (formalin, radiation)		

**Virion Morphology**

Shape <b>Identical to that of poxviruses (2)</b>	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

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**Hemagglutination**

Hemagglutination

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

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, Quarafil, 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, Anhangá.

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 +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
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

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 log <sub>10</sub> /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 log <sub>10</sub> /ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log <sub>10</sub> /ml (e)		
	Feeding	Injected	Days	°C	Host	Ratio	Whole	Organ	System

**Section X - Histopathology**

Character of lesions (specify host)		
<u>Inclusion Bodies</u>	<u>Intranuclear</u>	
Organs/Tissues Affected		
Category of tropism		

**Section XI - Human Disease**

In Nature	Residual <b>Reported</b>	Death
Subclinical	Overt Disease	
Clinical Manifestations		
Number of Cases	Category (i.e. febrile illness, etc.)	

**Section XII - Geographic Distribution**

Known (Virus detected) <b>Brazil, French Guiana</b>
Suspected (Antibody only detected)

**Section XIII - References**

1. Lopes, O., et al. 1965. Am. J. Trop. Med. Hyg. 14:156-157. 2. Murphy, F.A. Personal communication. 3. Woodall, J.P. 1967. Atas Simpos. Biota Amazon, 6:31-63. 4. Serie, C. 1970. Arch. Inst. Pasteur Guyane Fr. No. 527. 5. Serie, C. 1971. Ibid. No. 529. 6. Pinheiro, F.P. Personal communication. 7. Stim, T.B. 1969. J. Gen. Virol. 5:329-338. 8. Serie, C. 1971. Unpublished data. 9. Ueda, Y., et al. 1978. J. Gen. Virol. 40:263-276.
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**Remarks**

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