Virus Name: Mojui dos Campos	Abbreviation: MDCV

Status
Possible Arbovirus

Select Agent
No

SALS Level
3

SALS Basis
Isufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.

Other Information

Antigenic Group
ungrouped

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
BeAn 276121

Accession Number

Original Date Submitted
4/13/1985

Family
unclassified

Genus

Information From
F.P. Pinheiro and Amelia P.A.T. Rosa

Address
Instituto Evandro Chagas, FSESP, Ministry of Health, CP-621, Belem, Para, Brazil

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
F. Pinheiro and Amelia P.A.T. Rosa

Isolated at Institute
Instituto Evandro Chagas

Host Genus
undetermined (bat)

Species

Host Age/Stage
adult

Sex
Female

Isolated From	Isolation Details
Whole Blood	

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
netted

Collection Date
4/12/1975

Place Collected (Minimum of City, State, Country)
Mojui dos Campos, Santarem, Para

Latitude
2° 40' S

Longitude
54° 38' W

Macrohabitat
secondary growth forest

Microhabitat
ground level

Method of Storage until Inoculated
liquid nitrogen and mechanical freezer (-60dC)

Footnotes

Section III - Method of Isolation

Inoculation Date
1/9/1976

Animal (Details will be in Section 6)
nb mice

Route Inoculated
intracerebral

Reisolation
Not tried

Other Reasons

Homologous Antibody Formation by Source Animal
Not tested

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 **5.4 dex**

Other (formalin, radiation)

Virion Morphology

Shape	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)
Yes	**SMB ext. by sucrose-acetone; sonicated and trypsin tr.**	**goose**
pH Range **5.8-7.0**	pH Optimum **6.0**	
Temperature Range **room, 37dC**	Temperature Optimum **room**	

Remarks

Serologic Methods Recommended
CF, HI, and NT

Footnotes

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

Virus strain BeAn 276121 did not react by CF with the following immune fluids: groups A, B, C, Guama, Capim, Bunyamwera, Phlebotomus fever, as well as immune fluids to individual viruses Mirim, Oropouche, Utinga, Melao, Serra do Navio, Belem, Jurona, Tacaiuma, Piry, Cocal, Timbo, Chaco, Turlock, group Changuinola, Amapari, Flexal, Kwatta, Mosqueiro, Marco, Tembe, Cotia-like, Agua Preta, Ieri, Araguari, Inhangapi, Aruac, Triniti, Pacora, Lukuni, mouse encephalomyelitis, Pacui, Acara, rabies, EMC, mouse hepatitis virus, Tamana, BeAn 306770, Sena Madureira, Santarem, Para, Cuiaba, Itupiranga, Mapuera, Xiburema, and herpes simplex virus.
In addition, the antigen did not react by CF with NIH grouping fluids for groups A, B, C, Guama, California, Capim, Bunyamwera, Phlebotomus fever, Tacaribe, Kemerovo, VSV, Simbu, polyvalents 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, Bwamba, Congo, Patois, Quaranfil, Palyam, Anopheles A, and rabies/LCM.
No relationship was found to the following viruses by the HI test: Utinga, Turlock, Icoaraci, Maguari, Oropouche, Ananindeua, Timboteua, Macaua, Guaroa, Belem, Araguari, Marituba, Oriboca, Apeu, Murutucu, Caraparu, Nepuyo, Itaqui, and Tacaiuma.
Only the Bunyamwera grouping fluid inhibited the antigen at 1:20 when it was tested against the NIH grouping immune fluids. Individual antisera to Bunyamwera group viruses found in the Amazon did not inhibit the HA antigen.
At YARU, BeAn 276121 antigen failed to react by CF with the following immune fluids: Olifantsvlei, Botambi, Gamboa, Kaeng Khoi, Minatitlan, Hart Park, Mossuril, group Australia, Charleville, Joinjakaka, La Joya, Mt. Elgon bat, Navarro, New Minto, Connecticut, Isfahan, DakMg802, Lagos bat, Duvenhage, kotokan, Boteke, Burg El Arab, Gomoka, Lebombo, Matariya, Malakal, Minnal, Nkolbisson, Okola, Wanowrie, Witwatersrand, Zinga, Playas, Ilesha, Tlacotalpan, Bunyamwera, Northway, Anhembi, Birao, Batai, Santa Rosa, Tensaw, Lokern, Main Drain, Germiston, Enseada, group Sakhalin, Nariva, Aguacate, Caimito, Cacao, Chilibre, Frijoles, Rio Grande, Itaqui (IVIC-Pan 58869), Barrabqueras, Para, Resistencia, R32992, Antequera, TB4-222, Bahia Grande, 79V5816, 76V23524, Guaratuba, Inini, and Japanaut. BeAn 276121 immune serum failed to react with the following antigens: Arkonam, Puchong, Tataguine, Yogue, and Keterah.

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)	
Vero (CL)	SMB 5	2	4+	>=3.5**	4	2 mm	5.0**		
HEp-2 (CL)		3	4+	>=3.5					
MDCK (CL)			No CPE						

** 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
Bats (blood)	1/227		Mojui dos Campos, Para, Brazil; 1975
Marsupials	0/118		
Rodents (wild)	0/89		
Primates	0/18		
Carnivores	0/6		
Edentates	0/55		
Reptiles	0/6		
Wild birds	0/748		
Rodents (domestic)	0/85		

Birds (domestic)	0/209		
Cats, dogs, pigs	0/164		
Marsupials		0/51 HI	Cachoeira Porteira, Para, Brazil
Rodents		0/72 HI	
Primates		0/17 HI	
Carnivores		0/4 HI	
Edentates		0/2 HI	
Ungulates		0/8 HI	
Reptiles		0/13 HI	
Bat		0/1 HI	
Birds		1/387 HI	

Mojui dos Campos virus was not isolated from 19,398 Culicoides paraensis, 4,310 Culicoides spp., 4,948 Culex quinquefasciatus, 2,281 Wyeomyia spp., 195 Mansoniaspp., 169 Psorophora spp., 257 Limatus spp., and 87 Culex spp. collected in Mojui dos Campos in 1975.

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 2	ic 0.02	illness, death	4.0	
mice (nb)		ip 0.02	irregular deaths		
mice (nb)		sc			
mice (wn)		ic 0.03	illness, death	8.2	
mice (wn)		ip 0.03	antibody		
mice (nb)	SMB 6	ic 0.02	death		7.1

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)

Suspected (Antibody only detected)

Remarks