Virus Name: Cacipacore	Abbreviation: CPCV

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
B

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
BeAn 327600

Accession Number

Original Date Submitted
9/24/1984

Family
Flaviviridae

Genus
Flavivirus

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

Section II - Original Source

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

Isolated at Institute
Instituto Evandro Chagas

Host Genus
Formicarius analis (black-faced ant bird)

Species

Host Age/Stage
Adult

Sex
Male

Isolated From	Isolation Details
Whole Blood	

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Netted

Collection Date
7/28/1997

Place Collected (Minimum of City, State, Country)
Cachoeira Porteira, km.71, Oriximina, Para, Brazil

Latitude
0° 35' S

Longitude
56° 45' W

Macrohabitat
Tropical Rain Forest

Microhabitat
Ground Level

Method of Storage until Inoculated
Liquid nitrogen and mechanical freezer (-60C)

Footnotes

Section III - Method of Isolation

Inoculation Date
11/18/1977

Animal (Details will be in Section 6)
nb mice

Route Inoculated
intracerebral

Reisolation
No

Other Reasons

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 **<=0.5 dex**	Control Titer **4.0 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**	**Goose**
pH Range	pH Optimum	
5.8-7.0	**7.0**	
Temperature Range	Temperature Optimum	
Room, 37C		

Remarks

Serologic Methods Recommended
CF, HI, and NT

Footnotes

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

Serological studies conducted in Brazil demonstrated that Cacipacore virus was a group B arbovirus, and that it was different from other known flaviviruses of the Amazon (see tables below). At YARU, additional CF tests indicated it was in the JE-MVE-WN complex, but different from any of the known members tested [1] . Subsequent addtitional cross-neutralization tests with 63 other flaviviruses showed that Cacipacore virus was distinct from all other flaviviruses. It did not share a close antigenic relationship with any of the flaviviruses, and thus could not be placed in any of the complexes comprising serogroup B [2] .

Complement-Fixation Test

Antigens	BeAn 327600	YF	BSQ	ILH	SLE	ROC	Group B
BeAn 327600	16/>64 [a]	0	0	4/4	4/16	16/4	16/4
Yellow fever	0	64/>64					16/>64
Bussuquara	0		64/>64				32/>64
Ilheus	0			64/>64			64/>64
SLE	4/64				64/>64		>128/64
Rocio	0					>128/64	16/>64

[a] Serum titer/antigen titer: 0 - <4/<4

Neutralization Test (Newborn Mice, ic Route)

Viruses	BeAn 327600	YF	BSQ	ILH	SLE	ROC	Group B
BeAN 327600	4.7 [b]	1.0	0.9	2.1	1.9	2.3	2.8
Yellow fever		4.2					
Bussuquara	0.5		3.5				3.4
Ilheus	<=1.0			5.0			3.7
SLE	0.7				3.0		3.0
Rocio	<=1.9					5.0	<=3.9

[b] LNI in dex

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (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)	
Vero (CL)	P-unk. SM 1				8	Plaques	7.2 [c] (2)		
LLC-MK2 (CL)						No plaques	(2)		
Duck embryo (PC)						No plaques	(2)		

[c] 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
Wild birds (blood)	1/2,812	14/1,310 HI	Cachoeira Porteira area, Para, Brazil, 1976-79
Rodents	0/377	1/156 HI	
Marsupials	0/215	0/78 HI	
Primates	0/206	0/133 HI	
Bats	0/260	0/45 HI	
Carivores	0/13	0/3 HI	
Ungulates	0/37	0/8 HI	
Edentates	0/7	0/4 HI	
Reptiles	0/47	0/20 HI	

Reptiles	0/47	0/20 HI	
Birds		8/790 HI	Porto Trometas, Para, Brazil, 1979-80
Marsupials		0/40 HI	
Rodents		0/75 HI	
Primates		0/34 HI	
Bats		1/95 HI	
Reptiles		0/48 HI	
Edentates		0/7 HI	
Ungulates and carnivores		0/8 HI	
Bats		0/50 HI	Santa Isabel do Para, Brazil, 1979
Bats		0/43 HI	Uruacu and Barro Alto, Para, Brazil, 1980
Rodents, marsupials and primates		0/9 HI	
Birds		2/428 HI	Tome Acu, Para, Brazil, 1978
Birds		1/143 HI	Santa Isabel do Para, Brazil, 1979
Man		2/2,572 HI	Para (several areas), 1977-80
Man		0/246 HI	Amazonas (several areas), 1979
Man		0/622 HI	Goias (several areas), 1980
Man (Xicrin Indians)		0/49 HI	Para, 1978

Cacipacore virus was not isolated from the following arthropods captured in the Cachocira Porteira area, from 1976-79: 382 Sabethes (39 pools), 14,334 other Culicidae (2,252 pools) and 3,015 phlebotomines (58 pools).

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 4	ic 0.02	illness, death	4.0	
"" (nb)		ip 0.02	illness, death	9.8	
"" (nb)		sc			
"" (wn)		ic 0.03	illness, death	6.0	
"" (wn)		ip 0.03	antibody		
"" (nb)	SMB 8	ic 0.02	death		9.1

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)
Para

Suspected (Antibody only detected)

Section XIII - References

1. Shope, R.E. Personal communication. 1981.
2. Calisher, C.H. Persoanl communication. 1982.

Remarks