Virus Name: Amapari	Abbreviation: AMAV

Status
Not Arbovirus

Select Agent
No

SALS Level
2

SALS Basis
Level 2 arenaviruses are not known to cause serious acute disease in man and are not acutely pathogenic for laboratory animals, including primates. Survey experience is sufficient to conclude that laboratory aerosol infection does not occur in the course of routine work with cell cultures and animals not subject to chronic infection. In view of reported high frequency of laboratory aerosol infection that occurred in workers manipulating high concentrations of Pichinde virus, it is strongly recommended that work with high concentrations of Level 2 arenaviruses be done at Level 3.

Other Information

Antigenic Group
Tacaribe

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
BeAn 70563

Accession Number

Original Date Submitted
12/14/1984

Family
Arenaviridae

Genus
Areavirus

Information From
F.P. Pinheiro

Address
Instituto Evandro Chagas, Caixa Postal 232, Belem, Para, Brazil

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
Pinheiro et al.

Isolated at Institute
Belem Virus Laboratory

Host Genus
Neacomys guianae

Species

Host Age/Stage
Young Adult

Sex
Male

Isolated From	Isolation Details
Organs/Tissues	**Pool of spleen, liver, heart, and kidney**

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Hardwood live trap

Collection Date
7/8/1964

Place Collected (Minimum of City, State, Country)
Serra do Navio, T.F. Amapa, Brazil

Latitude
1° N

Longitude
52° W

Macrohabitat
Tropical forest, periodally inundated

Microhabitat
Primary vegetation, ground level, shade

Method of Storage until Inoculated
At -60° C

Footnotes

Section III - Method of Isolation

Inoculation Date
7/20/1964

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Not tried

Other Reasons
13 further strains isolated from Neacomys and Oryzomys

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)	After Treatment Titer	Control Titer

Other (formalin, radiation)

Virion Morphology

Shape	Dimensions **60 - 280 nm**	
Mean nm	Range nm	
Measurement Method **Electron microscopy**	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 ext. by sucrose-acetone**	**Goose**
pH Range **6.0 - 7.0**	pH Optimum	
Temperature Range **Room and 37° C**	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF and NT

Footnotes

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

Immune Sera or Antigens	Amapari Antigen			Amapari Immune Serum		
	CF Ht/Ho	NT Ht/Ho	PNT * Ht/Ho	CF Ht/Ho	NT Ht/Ho	PNT Ht/Ho
Tacaribe	32/256	0.2/2.0	<4/2048	32/128	0.6/1.6	<4/1024
Junin	32/128	0.3/3.0	<4/256	64/128	<0.5/1.6	<4/1024
Machupo			<4/128			<4/1024

NT: LNI in dex

PNT: Plaque neutralization test

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV), heart, liver, spleen, kidney poll (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)
GMK (CL)	SMB 6	CF antigen in fluid.	No CPE	8.5 *				
BHK-21 (CL)			No CPE					
HEp-2 (CL)			No CPE					
Chick embryo (PC)						No plaques		
Vero (CL)						Plaques	c.5.0 *(5)	
Vero (CL)	P-Unk.				2	2mm	7.7 (6)	
LLC-MK2 (CL)					6	2mm	6.3 (6)	
BHK-21 (CL)	SMB 11	4	2+-3+	7.5 (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. tsted Test used	Country and region
Oryzomys capito	124/918	2/18 CF	Serra do Navio,Brazil
Oryzomys goeldii young	5/41		Territorio, Federal do Amapa, Brazil
Neacomys guianae	97/1,095	1/4 CF	
Ectoparasites (Laelopidae)	4/341 pools		Brazil

No isolations made from 3,762 specimens obtained from bats, marsupials, birds, primates or other species of rodents; nor from 24,140 mosquitoes or 792 groups of sentinel mice.

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	Death or br.CF antigen	13.7	4.2
Mice (nb)		ip 0.02	Death or br.CF antigen	18.0	
Mice (nb)		sc			
Mice (wn)		ic 0.02	Antibody formation		
Mice (wn)		ip 0.2	Antibody formation		
Mice (nb)		ic 0.02	Death		6.7
guinea pigs	SMB 5	ip	Antibody		
ID50 as determined by presence of CF antigen in brain					8.4 ic
					<4.2 ip

Section IX - Experimental Arthropod Infection and Transmission

Section X - Histopathology

Character of lesions (specify host)
3/8 nat. infected forest rodents had focal degenerative inflammatory lesions of myocardium (3). SM, ic: choroiditis, glial hyperplasia, vasculitis, perivasculitis with infiltration of lymphocytes in CNS. Mortality and histopath. changes not influenced by thymectomy

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)
Brazil

Suspected (Antibody only detected)

Section XIII - References

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Remarks