

Virus Name: Amapari

Abbreviation: AMAV

Status: Not Arbovirus

SALS Level: 2

Antigenic Group: Tacaribe

Taxonomic status: *Areavirus*

Other Information: None.

Select Agent:

SALS Basis: A5

HEPA Filtration:

Section I - Full Virus Name and Prototype Number

Full Virus Name:

Amapari

Prototype Number:

BeAn 70563

Information from: F.P. Pinheiro

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Date:

12/14/1984

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

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Reviewed by editor

Section II - Original Source

Isolated by: Pinheiro et al.

at: Belem Virus Laboratory

Genus and species: *Neacomys guianae*

Sentinel X

Age/Stage: Young Adult **Sex:** M

Isolated From	Isolation detail
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Signs and symptoms of illness:

Arthropod engorged **depleted** **gravid**

Time held alive before inoculation:

Collection date: 7/8/1964 **Method:** Hardwood live trap

Place collected: Serra do Navio, T.F. Amapa, Brazil

Latitude: 1° ' ' N

Longitude: 52° ' ' W

Macrohabitat: Tropical forest, periodically inundated

Microhabitat: Primary vegetation, ground level, shade

Method of storage until inoculated: At -60° C

Footnotes:

Section III - Method of Isolation and Validity

Inoculation Date: 7/20/1964

Animal: nb mice

Embryonated egg:

Tissue Culture:

(Details in Section VI - Biologic Char.)

Route inoculated: Intracerebral

Reisolation: Not tried

Other reasons: 13 further strains isolated from *Neacomys* and *Oryzomys*

Homologous antibody formation by source animal (See Section II): Not tested

Test used: HI

CF

NT

Other:

Footnotes:

Section IV - Virus Properties

Physicochemical:

RNA: DNA: Single Strand: Double Strand:
Pieces: Infectivity: Sedimentation coefficient(s): /strong>
Percentage wt. of virion protein, lipid carbohydrate
Virion polypeptides:
Number: Details:
Non-virion polypeptides:
Number: Details:
Virion density: Sedimentation coefficient:
Nucleocapsid density Sedimentation coefficient:

Stability of infectivity (effects) pH

Lipid solvent:
(ether) After treatment titer Control titer
(chloroform) After treatment titer Control titer
Detergent:
(deoxycholate) After treatment titer Control titer
Other (formalin, radiation):

Virion morphology:

Shape Dimensions 60 - 280 nm
Mean (nm) range (nm) how measured Electron microscopy
Surface projections, envelope
Nucleocapsid dimensions, symmetry

Morphogenesis:

Site of constituent formation in cell
Site of virion assembly
Inclusion bodies
Other

Hemagglutination:

Hemagglutination No Antigen source SMB ext. by sucrose-acetone
Erythrocytes Goose pH range 6.0 - 7.0 pH optimum
Temperature optimum range Room and 37° C
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	NT	PNT *	CF	NT	PNT
	Ht/Ho	Ht/Ho	Ht/Ho	Ht/Ho	Ht/Ho	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

Susceptibility of Cell Culture Systems:

Cell system (a)	Virus passage history (b)	Evidence of Infection						
		CPE			PLAQUES			Growth Without CPE +/- (g)
		Day (c)	Extent (d)	Titer TCDS0/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
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

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested 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)	4/1 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 (Record 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: 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:

Cytoplasmic:(M) (LV) **Intranuclear: (M)** (LV)

Organs-tissues affected:

Category of tropism:

Section XI - Human Disease

Human disease: **In nature:** (S) (R)

Death: (S) (R)

Residua: (S) (R)

Laboratory infections: Subclinical: (S) (R)

Overt Disease: (S) (R)

Clinical manifestations:

Category: **No. of cases:**

Section XII - Geographic Distribution

Known (virus):

Brazil

Section XIII - References

1. Pinheiro, F.P., et al. 1966. Proc. Soc. Exp. Biol. Med. 122:531-535.
2. Murphy, F.A., et al. 1970. J. Virol. 6:507-518.
3. Dias, L.B. Personal communication.
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5. Webb, P.A. Personal communication.
6. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
7. Karabatsos, N. and Buckley, S.M. 1967. Am. J. Trop. Med. Hyg. 16:99-105.

Section XIV - Remarks
