Virus Name: Bujaru	Abbreviation: BUJV

Status
Possible Arbovirus

Select Agent
No

SALS Level
2

SALS Basis
Results of SALS surveys and information from the Catalogue.

Other Information

Antigenic Group
Phlebotomus Fever

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
BeAn 47693

Accession Number

Original Date Submitted
2/27/1985

Family
Bunyaviridae

Genus
Phlebovirus

Information From
Belem Virus Lab.

Address
Belem Virus Laboratory, Instituto Evandro Chagas, Belem, Para, Brazil

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
Belem Virus Laboratory

Isolated at Institute
Belem, Para, Brazil

Host Genus
Proechimys guyannensis oris

Species

Host Age/Stage
Adult

Sex
Male

Isolated From	Isolation Details
Serum/Plasma	

Signs and Symptoms of Illness
None observed

Arthropod

Time Held Alive before Inoculation

Collection Method
Trapped alive

Collection Date
10/26/1962

Place Collected (Minimum of City, State, Country)
Utinga Forest, Brazil

Latitude
2° S

Longitude
48° W

Macrohabitat
Virgin watershed forest

Microhabitat
Ground level

Method of Storage until Inoculated
Not stored

Footnotes

Section III - Method of Isolation

Inoculation Date
10/26/1962

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Not tried

Other Reasons

Homologous Antibody Formation by Source Animal
Yes

Test(s) Used
HI

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	
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 + sonication**	**Goose**
pH Range	pH Optimum	
6.0-7.0	**6.4**	
Temperature Range	Temperature Optimum	
	37dC	

Remarks
HA antigen very sensitive, may pick up heterologous antibodies at high titer.

Serologic Methods Recommended

Footnotes
HA antigen very sensitive, may pick up heterologous antibodies at high titer.

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

HI (4 units):

	Antigens				
Sera	**Icoaraci**	**Candiru**	**Itaporanga**	**Anhanga**	**Bujaru**
Icoaraci	> 1280	> 640	80	20	160
Candiru	40	> 640	0	0	0
Itaporanga	320	0	> 640	0	0
Anhanga	320	0	0	160	40
Bujaru	80	0	0	0	> 640
Chagres	640	0	0	20	20

0 = <10

All sera were hyperimmune mouse.

For further information on antigenic relationships, see References [4] - [6] .

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Serum (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice and chick embryo cell cultures

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)	
Chick embryo (PC)					4.0	Plaques	5.3* (3)		
Turkey embryo(PC)						Plaques (3)			
Vero (CL)	P-14				3	4 mm	5.5 (2)		
LLC-MK2 (CL)					14	1 mm	4.4 (2)		

* 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
Man		13/53 HI	Labrea, Amazonas, Brazil
Proechimys guyannensis oris	2	139/164 HI	Para, Brazil

NOTE: Oryzomys, Nectomys, Didelphis, Marmosa and Metachirus also found with HI antibody in Para, Brazil. Incidence between 3% and 16%.

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)	P-3	ic 0.02	Death	8.6	
Mice (nb)		ip 0.02	Death	8.8	
Mice (nb)		sc			
Mice (wn)		ic 0.03	Antibody		
Mice (wn)		ip 0.03	Antibody		
hamster(25 days)	SMB 27 (prototype)	ip	HI and CF antibody		

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)
SM: encephalitis only (L.B. Dias)

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

1. Woodall, J.P. 1967. Atas Simpos. Biota Amazon. 6:31-63.
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4. Tesh, R.B., et al. 1975. Am. J. Trop. Med. Hyg. 24:135-144.
5. Tesh, R.B., et al. 1982. Ibid. 31:149-155.
6. Travassos Da Rosa, A.P.A. 1983. Ibid. 32:1164-1171.

Remarks