Virus Name: Guajara	Abbreviation: GJAV

Status
Arbovirus

Select Agent
No

SALS Level
2

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

Other Information

Antigenic Group
Capim

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
BeAn 10615

Accession Number

Original Date Submitted
1/27/1985

Family
Bunyaviridae

Genus
Bunyavirus

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
Swiss mouse, sentinel

Species

Host Age/Stage

Sex
Female

Isolated From	Isolation Details
Whole Blood	

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Tail bleeding

Collection Date
3/18/1959

Place Collected (Minimum of City, State, Country)
Instituto Agronomico do Norte Forest, Brazil

Latitude
2° S

Longitude
48° W

Macrohabitat
Old secondary growth forest

Microhabitat
Near ground under hood

Method of Storage until Inoculated

Footnotes

Section III - Method of Isolation

Inoculation Date
3/20/1959

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 **2.5 dex**	Control Titer **5.5 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	
6.0-6.2	**6.0**	
Temperature Range	Temperature Optimum	
	27dC	

Remarks
Sonication improved titer of Pan MARU 8179 strain (1).

Serologic Methods Recommended
CF, HI, NT

Footnotes
Sonication improved titer of Pan MARU 8179 strain (1).

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

Antigen of Registered Virus				Immune Serum of Registered Virus					
	CF		NT		HI		CF		NT
Immune Sera	Ht/Ho	Ind.	Ht/Ho	Antigen	Ht/Ho	Ind.	Ht/Ho	Ind.	Ht/Ho
Guama	0/256	0	0/3.9	Guama	10/ND		0/128	0	0.9/2.3
Catu	0/256	0	0/3.1	Catu	0/ND		0/128	0	0.8/2.3
Moju	0/64	0	0.8/3.0	Moju	10/ND		0/128	0	0/2.3
An 20525	0/256	0	0/3.0	An 20525	0/ND		0/128	0	0/2.3
Bimiti	0/32	0							
Capim	8/256	1/32	0/2.2	Capim	0/ND		16/128	1/8	0/2.3
An 20076	64/256	1/4	0/2.0	An 20076	0/ND		32/128	1/4	0/2.3
Mirim	0/128	0		Mirimm	0/ND		0/128	0	

All sera are hyperimmune mouse; NT=LNI in dex.

Bimiti serum homologous testing done by the Rockefeller Foundation Virus Laboratories, New York.

SIRACA has antigenically classified Guajara virus as a distinct virus type, and has placed it in the Guajara complex, one of five complexes comprising the Capim serogroup. There is an unregistered virus which represents a variety of Guajara virus [7] .

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)	
Mouse embryo (PC)	P-8				15	Plaques	>6.3* (3)		
GMK (CL)			CPE (3)						
Vero (CL)	Prototype, P-4				9	1 mm	6.2 (4)		
LLC-MK2 (CL)					10	1 mm	6.5 (4)		

* 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
Sentinel mouse	62/16,315		Para and Amapa, Brazil (2)
Sentinel mouse	1		Panama
Proechimys guyannensis	1	18/221 NT	Para, Brazil (2)
Didelphis marsupialis		1/78 NT	Para, Brazil
Metachirus nudicaudatus		1/7 NT	
Marmosa spp.		1/52 NT	
Culex spp.	8		Para, Brazil (2)
Culex portesi	1		Para, Brazil
Limatus flavisetosus	1		

No NT antibody detected in 26 Caluromys philander, 86 Oryzomys capito or 9 Nectomys squamipes in Para, Brazil.

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)		ic 0.02	Death	5.8	7.5
Mice (nb)		ip 0.02	Death, viremia	7.5	
Mice (nb)		sc			
Mice (wn)		ic 0.03	Antibody		
Mice (wn)		ip 0.03	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
Aedes aegypti, Cx quinquefasciatus		Following parenteral inoculation, high virus titer detected in salivary glands after several passages (+ 4.0 dex) (5).							
Culex spp.		Naturally infected, transmitted to mice (6).							

Section X - Histopathology

Character of lesions (specify host)
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; Panama

Suspected (Antibody only detected)

Section XIII - References

1. Ardoin, P., et al. 1969. Am. J. Trop. Med. Hyg. 18:592-598.
2. Woodall, J.P. 1967. Atas Simmpos. Biota Amazon. 6:31-63.
3. Pinheiro, F.P. Personal communication.
4. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
5. Whitman, L. Personal communication.
6. Belem Virus Laboratory. 1966. Unpublished data.
7. Calisher, C.H., et al. 1985. Intervirology. To be submitted.

Remarks