Virus Name: **Guajara** **Abbreviation:** **GJAV**

Status: Arbovirus
SALS Level: 2
Antigenic Group: Capim
Taxonomic status: *Bunyavirus*
Other Information: None.

Select Agent:
SALS Basis: S
HEPA Filtration:

Section I - Full Virus Name and Prototype Number

Full Virus Name:
Guajara

Prototype Number:
BeAn 10615

Information from: Belem Virus Lab
*

Date:
1/27/1985

Address: Belem Virus Laboratory, Instituto Evandro Chagas, Belem, Para, Brazil
*
Reviewed by editor

Section II - Original Source

Isolated by: Belem Virus Laboratory **at:** Belem, Para, Brazil
Genus and species: Swiss mouse, sentinel **Sentinel** X
Age/Stage: **Sex:** F

Isolated From	Isolation detail

Signs and symptoms of illness:
Arthropod engorged depleted gravid
Time held alive before inoculation:
Collection date: 3/18/1959 **Method:** Tail bleeding
Place collected: 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 and Validity

Inoculation Date: 3/20/1959
Animal: nb mice **Embryonated egg:** **Tissue Culture:**
(Details in Section VI - Biologic Char.)
Route inoculated: Intracerebral **Reisolation:** Not tried
Other reasons:
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) 1:1000**After treatment titer** 2.5 dex **Control titer** 5.5 dex
Other (formalin, radiation):

Virion morphology:
Shape **Dimensions**
Mean (nm) **range (nm)** **how meansured**
Surface projections, envelope
Nucleocapsid dimensions, symmetry

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

Hemaggiutination:
HemaggiutinationYes **Antigen source** SMB ext. by sucrose-acetone
Erthrocytes Goose **pH range** 6.0-6.2 **pH optimum** 6.0
Temperature optimum 27dC **range**
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
Susceptibility of Cell Culture Systems:

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

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 (Record 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: Encephalitis only (L.B. Dias)
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; Panama

Section XIII - References

1. Ardoin, P., et al. 1969. Am. J. Trop. Med. Hyg. 18:592-598.
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Section XIV - Remarks