Virus Name: Guaratuba	Abbreviation: GTRV

Status
Probable Arbovirus

Select Agent
No

SALS Level
3

SALS Basis
Isufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.

Other Information

Antigenic Group
Guama

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
APAn 12252

Accession Number

Original Date Submitted
2/7/1985

Family
Bunyaviridae

Genus
Bunyavirus

Information From
Dr. Oscar de Souza Lopes

Address
Instituto Adolfo Lutz, Caixa Postal 7027, Sao Paulo, Brazil

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
Dr. Oscar de Souza Lopes

Isolated at Institute
Guaratuba, Sao Paulo

Host Genus
White mouse, sentinel

Species

Host Age/Stage
Newborn

Sex
Not Answered

Isolated From	Isolation Details
Organs/Tissues	**Brain**

Signs and Symptoms of Illness
At 7th day of observation in laboratory, 2 mice sickened. Virus isolated from both

Arthropod

Time Held Alive before Inoculation

Collection Method
Family exposed during 72 hours in forest

Collection Date
2/27/1969

Place Collected (Minimum of City, State, Country)
Guaratuba, Sao Paulo, Brazil

Latitude
23° 45' S

Longitude
45° 55' W

Macrohabitat
Forest at sea level

Microhabitat
Inside of the forest on the ground

Method of Storage until Inoculated
Electrical deep-freezer at -60dC

Footnotes

Section III - Method of Isolation

Inoculation Date
3/12/1969

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons
Virus different from those existing in the laboratory

Homologous Antibody Formation by Source Animal

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 **2.0 dex**	Control Titer **7.2 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)
No	**SMB, liver; serum ext. by sucrose-acetone; acetone-ether, each+ sonication and/or tryp. tr.**	**Goose**
pH Range	pH Optimum	
6.0-7.0		
Temperature Range	Temperature Optimum	

Remarks
Good CF antigens from brains. Method of choice.

Serologic Methods Recommended
CF, NT

Footnotes
Good CF antigens from brains. Method of choice.

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

Antigen of An 12252			Immune Sera of An 12252		
Immune sera	CF Ht/Ho	NT Ht/Ho	Antigen	CF Ht/Ho	NT Ht/Ho
Mirim	0/128	0/2.5	Mirim	16/64	0.5/2.5
Bertioga	8/128	0/3.5	Bertioga	8/32	1.0/2.5

NT: LNI given in dex

Recently, Guaratuba virus was placed antigenically in the Guama serogroup [1] ; SIRACA has antigenically classified Guaratuba virus as a distinct virus type and placed it in the Bertioga complex, one of five complexes comprising the Guama serogroup [2] .

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV), heart (LV), kidney (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice and hamsters

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)	
Vero (CL)			CPE	5.0*		Plaques (1)			
Duck embryo (PC)						No plaques (1)			

* 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 mice	11		Sao Paulo, Brazil
Sentinel hamsters	2		
Birds:			
Xanthomyias virescens	1		
Arthropods:			
Aedes serratus	1		
Anopheles (Ker) cruzii	1		

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-2	ic 0.02	Paralysis, death	4.0	7.2
Mice (nb)		ip 0.03	Paralysis, death	5.0	
Mice (nb)		sc			
Mice (wn)		ic 0.03	Antibody		
Mice (wn)		ip 0.2	Antibody		
Mice (nb)		sc 0.02	Paralysis, death	8.2	

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)

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. Calisher, C.H., et al. 1983. Am. J. Trop. Med. Hyg. 32:424-431.
2. Calisher, C.H., et al. 1985. To be submitted.

Remarks