Virus Name: Oriximina	Abbreviation: ORXV

Status
Possible 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
Phlebotomus fever

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
BeAr 385309

Accession Number

Original Date Submitted
4/13/1985

Family
Phlebovirus

Genus

Information From
F.P. Pinheiro and Amelia P.A.T. Rosa

Address
Instituto Evandro Chagas, FSESP, Minisrty of Health, CP-621, Belem, Para, Brazil

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
F. Pinheiro and Ameila P.A.T. Rosa

Isolated at Institute
Instituto Evandro Chagas

Host Genus
Lutzomyia spp., pool of 77 (1)

Species

Host Age/Stage
adult

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod
Depleted

Time Held Alive before Inoculation
2-3 hours

Collection Method
light trap

Collection Date
6/26/1980

Place Collected (Minimum of City, State, Country)
lg. Saracazinho, Porto Trombetas, Para

Latitude
1° 27' S

Longitude
56° 23' W

Macrohabitat
tropical rain forest

Microhabitat
ground level

Method of Storage until Inoculated
liquid nitrogen and mechanical freezer (-60dC)

Footnotes

Section III - Method of Isolation

Inoculation Date
8/7/1980

Animal (Details will be in Section 6)
nb mice

Route Inoculated
intracerebral

Reisolation
No

Other Reasons

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 **2.5 dex**	Control Titer **3.5 dex**

Other (formalin, radiation)

Virion Morphology

Shape	Dimensions	
Mean nm	Range nm	
Measurement Method	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry

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Morphogenesis

Site of Constituent Formation in Cell	Site of Virion Assembly	Site of Virion Accumulation
Inclusion Bodies	Other	

Hemagglutination

Hemaggiutination **No**	Antigen Source **SMB ext. by sucrose-acetone + sonication**	Erythrocytes (species used) **goose**
pH Range **5.8-7.0**	pH Optimum	
Temperature Range **room, 37dC**	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF and NT

Footnotes

A CF relationship was demonstrated between BeAr 385309 and four other Phlebotomus fever group agents as noted below:

Complement-Fixation Test

Antigens	Sera: BeAr 385309	ICO	BUJ	ITP	URU	CDU	ITA	ALE	TUA	PAC
BeAr 385309	64/>=64 [a]	0	0	0	0	>=128/>=64	>=128/>=64	8/>=64	32/>=64	0
Icoaraci	0	>=128/>=64								
Bujaru	0		32/>=64							
Itaporanga	0			>=16/>=64						
Urucuri	0				>=128/>=64					
Candiru	16/>=64					>=128/>=64				
Itaituba	8/8						>=128/>=64			
Alenquer	0							64/>=64		
Turuna	0								>=128/>=64	
Pacui	0									>=128/>=64
Anhanga	0									

[a] Serum titer/antigen titer; 0 = <4/<4

Results of NT showed that this virus is readily distinguishable from Candiru, Itaituba, Alenquer, and Turuna viruses.

Neutralization Test (Newborn Mice, ic)

Viruses	Sera: BeAr 385309	ICO	BUJ	ITP	URU	CDU	ITA	ALE	TUA	PAC
BeAr 385309	2.4 [b]	0.0	0.0	0.0	1.1	0.1	0.9	0.6	0.6	0.0
Candiru	0.1					3.5				
Itaituba	0.7						>=5.0			
Alenquer								2.7		
Turuna	0.0								2.1	

[b] LNI in dex

The CF results were confirmed at YARU and it was shown that this virus was ot related to Aguacate, Arumowot, Buenaventura, Cacao, Chilibre, Chagres, Frijoles, Gabek Forest, Gordil, Karimabad, Naples, Rift Valley fever (serum only), Rio Grande, Saint-Floris, Salehabad, Sicilian, Tehera Toscana viruses. It was related to Nique and Punta Toro viruses by CF but differed by PRNT from Turuna, Nique, Itaporanga, Candiru and Punta

viruses.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

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)	
Vero (CL)	SMB 3	3	4+	7.3 [c]	4-5	2-3 mm	6.3 [c]		

[c] 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
Lutzomyia spp. (female)	1/4,640		Porto Trombetas area, Para, Brazil; 1979-80
Lutzomyia spp. (male)	0/3,586		
Culicidae (female)	0/12,201		
Culicidae (male)	0/1,784		

Oriximina virus was not isolated from blood or viscera obtained from the following animals captured in the Porto Trombetas area during 1979-80: 49 marsupials, 60 Proechimys guyannensis, 18 other rodents, 34 primates, 7 Dasypus, 3 carnivores, 5 ungulates, 55 reptiles, 239 bats, and 993 wild birds.

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)	SMB 4	ic 0.02	death	3.5	
mice (nb)		ip 0.02	death	7.5	
mice (nb)		sc			
mice (wn)		ic 0.03	survived, antibodies		
mice (wn)		ip 0.03	survived, antibodies		
mice (nb)	SMB 3	ic 0.02	death		7.1

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)

Suspected (Antibody only detected)

Section XIII - References

1. Travassos da Rosa, A.P.A., et al. 1983. Am. J. Trop. Med. Hyg. 32:1164-1171.

Remarks