

Virus Name: Oriximina		Abbreviation: ORXV
Status Possible Arbovirus	Select Agent No	SALS Level 3
SALS Basis Insufficient 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		
<u>Isolated From</u>	<u>Isolation Details</u>	
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) Ig. 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		

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

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)	
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<u>Stability of Infectivity (effects)</u>		
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)		
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<u>Virion Morphology</u>		
Shape	Dimensions	
Mean nm	Range nm	
Measurement Method	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry
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<u>Morphogenesis</u>		
Site of Constituent Formation in Cell	Site of Virion Assembly	Site of Virion Accumulation
Inclusion Bodies	Other	
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<u>Hemagglutination</u>		
Hemagglutination 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:

Antigens	Complement-Fixation Test									
	BeAr 385309	ICO	BUJ	ITP	URU	Sera				
						CDU	ITA	ALE	TUA	
BeAr 385309	64/ ^a >=64	0	0	0	0	>=128/ ^a >=64	>=128/ ^a >=64	8/ ^a >=64	32/ ^a >=64	0
Icoaraci	0	>=128/ ^a >=64								
Bujaru	0		32/ ^a >=64							
Itaporanga	0			>=16/ ^a >=64						
Urucuri	0				>=128/ ^a >=64					
Candiru	16/ ^a >=64					>=128/ ^a >=64				
Itaituba	8/8						>=128/ ^a >=64			
Alenquer	0							64/ ^a >=64		
Turuna	0								>=128/ ^a >=64	
Pacui	0									>=128/ ^a >=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.

Viruses	Neutralization Test (Newborn Mice, ic)									
	BeAr 385309	ICO	BUJ	ITP	URU	Sera				
						CDU	ITA	ALE	TUA	
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 not 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, Teheran, Toscana viruses. It was related to Nique and Punta Toro viruses by CF but differed by PRNT from Turuna, Nique, Itaporanga, Candiru and Punta

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 +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
Vero (CL)	SMB 3	3	4+	7.3 °	4-5	2-3 mm	6.3 °	

°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 log ₁₀ /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 log ₁₀ /ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log ₁₀ /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

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