

Virus Name: Boraceia		Abbreviation: BORV
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Anopheles B		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation SPAr 395	Accession Number	Original Date Submitted 11/30/1984
Family Bunyaviridae	Genus Bunyavirus	
Information From Dr. O. de Souza Lopes	Address Instituto Adolfo Lutz, C.P. 7027, Sao Paulo, Brazil	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) Instituto A. Lutz (1)	Isolated at Institute Casa Grande, State of Sao Paulo	
Host Genus Anopheles cruzii	Species	Host Age/Stage Adults
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method Light trap (Shannon type)	Collection Date 3/30/1962	
Place Collected (Minimum of City, State, Country) Casa Grande, Sao Paulo, Brazil		
Latitude 24° S	Longitude 46° W	
Macrohabitat Primitive forest on a plateau 600 meters above sea level	Microhabitat In the forest at night	Method of Storage until Inoculated Electrical deep-freezer at -60dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
3/30/1962

Animal (Details will be in Section 6)
nb mice

Route Inoculated Intracerebral	Reisolation No
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Other Reasons
A different virus 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 Member of Bunyavirus genus (4)	
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 6.6 dex
Other (formalin, radiation)		

Virion Morphology

Shape	Dimensions <450 nm	
Mean nm	Range nm	
Measurement Method Millipore filtration	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry

Morphogenesis

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

Hemagglutination Yes	Antigen Source SMB; liver; serum ext. by sucrose-acetone	Erythrocytes (species used) Goose
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pH Range 6.0-7.0	pH Optimum 6.0
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Temperature Range	Temperature Optimum
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Remarks

Good CF antigens from extracted SMB. Workable HA can be produced after sonication of sucrose-acetone ext. SMB antigen.

Serologic Methods Recommended

CF and NT

Footnotes

Good CF antigens from extracted SMB. Workable HA can be produced after sonication of sucrose-acetone ext. SMB antigen.

CF relationship with Anopheles B virus:

Antigen	Sera		
	SPAr 395 2 inj.	SPAr 395 3 inj.	Anopheles B 3 inj
SPAr 395	64/256 *	128/256	16/16
Anopheles B	16/512	16/64	128/512

* Serum titer/antigen titer

NT relationship with Anopheles B virus:

Virus	Serum, 3 injections	
	SPAr 395	Anopheles B
SPAr 395	3.5 **	1.0
Anopheles B	1.5	>3.0

** Results expressed as dex neutralization index

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)	
BHK-21 (CL)	SMB 2	5	CPE	5.0*				
Vero (CL)		3	CPE	5.0				
Vero (CL)	SMB 4				2	3.0 mm	5.4 ^(a)	(2)
LLC-MK2 (CL)					3	2.0 mm	7.7	(2)

^(a) 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
Anopheles cruzii	7		Casa Grande, Boraceia, Brazil
Phoniomyia pilicauda	1		
Man		24% NT	Casa Grande, Brazil(3)

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. Lopes, O. de S., et al. 1966. Proc. Soc. Exp. Biol. Med. 123:502-504.
2. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
3. Lopes, O. de S. and Sacchetta, L. De A. 1974. Am. J. Epidem. 100:410-413.
4. Klimas, R.A., et al. 1981. Am. J. Trop. Med. Hyg. 30:876-887.

Remarks

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