Virus Name: Bozo	Abbreviation: BOZOV

Status
Arbovirus

Select Agent
No

SALS Level

SALS Basis

Other Information

Antigenic Group
Bunyamwera

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
ArB 7343

Accession Number

Original Date Submitted
12/19/1985

Family
Not listed

Genus
Bunyavirus

Information From
J. F. Saluzzo

Address
Institut Pasteur, BP 220, Dakar, Senegal

Information Footnote

Section II - Original Source

Isolated By (name)
M. Huard and M. Germain

Isolated at Institute
Bangui, Central African Republic

Host Genus
Aedes opok, pool of 100 mosquitoes

Species

Host Age/Stage
Adults

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Human bait

Collection Date
11/19/1975

Place Collected (Minimum of City, State, Country)
Forest gallery near Bozo village, Central African Republic

Latitude
5° 10' N

Longitude
18° 30' E

Macrohabitat
Semi-humid Savannah

Microhabitat
Ground level

Method of Storage until Inoculated
REVCO at -70dC

Footnotes

Section III - Method of Isolation

Inoculation Date
12/9/1975

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Not tried

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 **6.2 dex**	Control Titer **9.3 dex**
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer

Other (formalin, radiation)

Virion Morphology

Shape	Dimensions **<220 nm**	
Mean nm	Range nm	
Measurement Method **Millipore filter: After filt. = 7.0 dex; control =**	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 **No**	Antigen Source **SMB ext. by sucrose-acetone**	Erythrocytes (species used) **Goose**
pH Range **6.8 - 6.8**	pH Optimum	
Temperature Range	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF, PRNT

Footnotes

CROSS COMPLEMENT FIXATION TESTS WITH BOZO AND BUNYAMWERA SEROGROUP VIRUSES

Mouse Ascitic Fluid	Antigens			
	Bozo	Bunyamwera	Ilesha	Biaro
Bozo	128/128 *	64/64	64/64	16/32
Bunyamwera	64/128	128/128	32/128	32/32
Ilesha	32/64	32/64	64/64	16/32
Biaro	64/64	64/128	32/64	64/32

* Maximum titer of ascitic fluid/optimum titer of antigen.

PRNT WITH BOZO AND OTHER BUNYAMWERA SEROGROUP VIRUSES

Mouse Ascitic Fluid	Viruses						
	Bozo	Ilesha	Shokwe	Bunyamwera	Biaro	Ngari(ArD28542)	Mboke(Y357)
Bozo	512 **	0	0	0	0	0	0
Ilesha	0	256	0	0	0	0	0
Shokwe	0	0	128	0	0	0	0
Bunyamwera	0	0	0	256	0	0	0
Biaro	0	0	0	0	128	0	0
Ngari(ArD28542)	0	0	0	0	0	256	0
Mboke(Y357)	0	0	0	0	0	0	256

** Highest dilution giving 90% plaque-reduction in Vero cells cultures; 0 = <16.

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 6	3	CPE		3	2 mm	6.2 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
Aedes opok	8		Central African Republic (1973-1982); During a continuous virilogical survey of mosquitoes in the south of semi-humid savannahs near Bozo and Bouboue villages, 433, 496 mosquitoes were collected; 56 strains of Bozo virus were isolated.
Aedes africanus	34		
Aedes africanus group	11		
Culex pruina	2		
Anopheles funestus	1		
Man		21/115 NT	Moist forest, Cent. Afr. Rep.
		7/46 NT	Forest savannah mosaic, Cent. Afr. Rep.
		20/190 NT	Undifferentiated savannah of moist type, Cetn. Afr. Rep.
		0/50 NT	Undifferentiated savannah of dry type
		3/61 NT	Steppe, Cent. Afr. Rep.
Monkey			Serological conversions were observed in sentinal monkeys

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)	SM 5	ic	Illness, death	2	9.3
" (nb)		ip			
" (nb)		sc			
" (wn)		ic	Illness, death	3	7.0
" (wn)		ip	Survived; antibodies		

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	Bozo virus infected Aedes aegypti mosquitoes after intrathoracic inoculation and multiplied to high titer with a maximum the 4th day (titer = 6.7 LD50/1.0) Transmission of Bozo virus to suckling mice by orally infected Aedes aegypti was demonstrated.								

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)
Central African Republic

Suspected (Antibody only detected)

Section XIII - References

1. Saluzzo, J.F. et.al. 1983. Ann. Virol. (Inst. Pasteur) 134E:221-232.

Remarks