Virus Name: Bouboui	Abbreviation: BOUV

Status
Possible Arbovirus

Select Agent
No

SALS Level
2

SALS Basis
Results of SALS surveys and information from the Catalogue.

Other Information

Antigenic Group
B

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
DakArB 490

Accession Number

Original Date Submitted
11/7/1984

Family
Flaviviridae

Genus
Flavivirus

Information From
J.P. Digoutte

Address
Institut Pasteur, BP 923 Bangui, Central African Republic

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
J.P. Digoutte, F.X. Pajot

Isolated at Institute
Institut Pasteur, Bangui (2)

Host Genus
Anopheles paludis

Species

Host Age/Stage
Adult imago

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Collected by hand

Collection Date
11/2/1967

Place Collected (Minimum of City, State, Country)
Bouboui, Central African Republic

Latitude
4° 37' N

Longitude
18° 20' E

Macrohabitat
Tree savannah with gallery forest

Microhabitat
Ground level in a gallery forest near Bouboui

Method of Storage until Inoculated

Footnotes

Section III - Method of Isolation

Inoculation Date
11/4/1967

Animal (Details will be in Section 6)
nb mice

Route Inoculated
ic and ip

Reisolation

Other Reasons
No similar virus in 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) **1:1**	After Treatment Titer **4.2 dex**	Control Titer **8.0 dex**
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate) **0.2%**	After Treatment Titer **2.0 dex**	Control Titer **7.6 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)
Yes	**SMB ext. by sucrose-acetone**	**Goose**
pH Range	pH Optimum	
6.0-6.8	**6.4**	
Temperature Range	Temperature Optimum	
4dC, RT, 37dC	**Room temperature**	

Remarks

Serologic Methods Recommended
CF, NT

Footnotes

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

CF test. Homologous titer = 64/16. BA 490 gave negative results with the following sera from mice:

Group A;	chikungunya, o'nyong-nyong, Semliki Forest, Sindbis, Middelburg, Ndumu.		
Group B;	Ntaya, Wesselsbron, Usutu, West Nile, Dakar bat, Zika, Spondweni, Bukalasa bat, Entebbe bat.		
Bunyamwera group;	Germiston, Ilesha, Olifantsvlei, Shokwe.		
Bwamba group;	Bwamba, Pongola.	Simbu group;	Simbu, Ingwavuma.
California group;	Lumbo.	Nyando group;	Nyando.
Mossuril group;	Mossuril.	Kemerovo group;	Chenuda, Wad Medani.
Quaranfil group;	Quaranfil.	Qalyub group;	Bandia.
Miscellany;	Nyamanini, Thogoto, Lebombo, Tanga, Witwatersrand, Tataguine, Lagos bat.		

BA 490 gave positive results with sera for Uganda S and yellow fever viruses.

Antibody or Antigens/ Viruses	Bouboui Antigen/Virus			Bouboui Ascitic Fluid		
	CF		NT	CF		NT
	Ht/Ho	Ratio	Ht/Ho	Ht/Ho	Ratio	Ht/Ho
Uganda S	16/64	1/4	3.3/4.4	32/256	1/8	2.0/4.1
Yellow fever	16/256	1/16	2.2/>5.0	8/256	1/32	<1.7/3.9

NT: LNI in dex

Results indicate that BA 490 is an hitherto undescribed virus strain related to Uganda S.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV) (5)

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)	
HeLa (CL)	SMB 7		No CPE						
Chick embryo fibroblasts (PC)						No plaques			

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 paludis	1		Cent. Afr. Republic
Aedes africanus	1		
Aedes furcifer taylori	5		Kedougou Senegal(4, 6)
Papio papio (baboon; blood)	1		Kedougou Senegal(4, 5)
Man (acute sera)	0/184		Bangui Cent., Afr. Rep.;1971-73
Mosquitoes (1,710 pools)	0/55,841		
Ticks (231 pools)	0/5,031		Bangui, Cent. Afr. Rep.; 1973
Birds (blood and organs)	0/2,274		Bangui, Cent. Afr. Rep.; 1971-73
Rodents (blood and organs)	0/2,595		
Man		0/3,468 HI [a]	Cent.Afr. Republic(1)
Wild mammals		0/128 HI	Cent.Afr. Republic(3)
Birds		0/118 HI	
Dogs		0/31 HI	
Rodents		0/182 HI	
Man		11/697 HI [b]	Cent. Afr. Rep. 1971-73
		4/362 HI [c]	Zaire 1972

[a] Primary infection pattern

[b] 8/150 in Bossembele, 1971, all in children 12 years or less (titers 20-320); 3/151 in N'Dim, 1973, 10, 12, and 17 years (titers 20-40).

[c] 3/72 in Budjala, ages 1, 13, 17 years (titers 20-40); 1/112 in Libenge, 4 years old (titer 20).

NOTE: HI antibodies positive for Bouboui antigen alone; negative for YF, WN, UGS, Zika, and NTA (A 209)

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 7	ic 0.02	Death	3	9.0
Mice (nb)		ip		8	3.4
Mice (nb)		sc			
Mice (wn)		ic 0.02	Death		
Mice (wn)		ip 0.1	None		

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)
Central African Republic, Senegal, Cameroon (5)

Suspected (Antibody only detected)
Zaire

Section XIII - References

1. Rapports sur le fonctionnement technique de l'Institut Pasteur de Bangui, 1967, 1968, 1969.
2. Digoutte, J.P., et al. 9171. Ann. Inst. Pasteur 120 (1):98-106.
3. Rapport sur le fonctionnement technique de l'Institut Pasteur de Bangui 1970.
4. Robin, Y. Personal communication.
5. Rapport Annuel de l'Institut Pasteur de Dakar. 1974.
6. Rapport Annuel de l'Institut Pasteur de Dakar. 1971-73. p. 58.

Remarks