Virus Name: Bandia	Abbreviation: BDAV

Status
Possible Arbovirus

Select Agent
No

SALS Level
2

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

Other Information

Antigenic Group
Qalyub

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
IPD/A 611

Accession Number

Original Date Submitted
10/19/1984

Family
Reoviridae

Genus
Nairovirus

Information From
P. Bres, Y. Robin, M. Cornet, G. Hery

Address
Institut Pasteur, B.P. 220, Dakar, Senegal, West Africa

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
M. Cornet (O.R.S.T.O.M.)

Isolated at Institute
Bandia, Senegal

Host Genus
Mastomys sp.

Species

Host Age/Stage
Young adult

Sex
Male

Isolated From	Isolation Details
Whole Blood	

Signs and Symptoms of Illness
Moribund

Arthropod

Time Held Alive before Inoculation

Collection Method
Trap

Collection Date
2/26/1965

Place Collected (Minimum of City, State, Country)
Bandia Forest, Thies Region, Senegal

Latitude
14° 35' N

Longitude
17° 1' W

Macrohabitat
Dry savannah, sea-level tropical; one rainy season (July-October)

Microhabitat
Rodent burrows

Method of Storage until Inoculated
Revco at -60dC

Footnotes

Section III - Method of Isolation

Inoculation Date
3/2/1965

Animal (Details will be in Section 6)
nb mice

Route Inoculated
ic and ip

Reisolation
No

Other Reasons
First isolation . First isolation in the laboratory. . First isolation in the laboratory. First isolation in the laboratory.

Homologous Antibody Formation by Source Animal
Not tested

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 **0.5 dex**	Control Titer **6.3 dex**
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer

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)
No	**SMB ext. by sucrose-acetone and fluorocarbon**	**Goose**
pH Range	pH Optimum	
Temperature Range **Room temperature**	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF

Footnotes

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

CF- homologous titres for IPD/A 611 = 256/128

CF- screening: IPD/A 611 antigen at dilutions 1:10 and 1:128 gave negative results with following hyperimmune fluids from mice:

Group A:	Chikungunya, Middelburg, Ndumu, Semliki Forest, Sindbis.		
Group B:	Bukalasa bat, Dakar bat, Entebbe bat, Ntaya, Spondweni, Uganda S, Usutu, Wesselsbron, West Nile, yellow fever, Zika.		
Bunyamwera Group:	Bunyamwera, Germiston, Ilesha, Olifantsvlei (Ar 5133), Shokwe (Ar 4042).		
Bwamba Group:	Bwamba, Pongola.	Simbu Group:	Ingawavuma, Simbu, Yaba 7.
California Group:	Lumbo.	Kemerovo Group:	Chenuda, Wad Medani.
Mossuril Group:	Mossuril.	Nyamanini Group:	Nyamanini.
Nyando Group:	Nyando.	Quaranfil Group:	Quaranfil.
Rabies Serogroup:	Lagos bat.	Thogoto Group:	Thogoto.
Other:	BA 40, IPD/A401, Gossas, Lebombo, Nkolbisson, Tanga, Tataguine, Witwatersrand, YM 176.		

Bandia virus was found to be related to Qalyub by the CF test [2] :

	Antiserum	
Antigen	**Qalyub**	**Bandia**
Qalyub	256+/16+	32/16+
Bandia	16/16+	256+/16+

Antibody titer/antigen titer

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV)

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)	
PS (CL)	SMB 3	4	CPE	7.7*					

* 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
Man		6/176 CF	Bandia, Senegal
Man	0/950	8/147 CF	Around Bandia, Senegal
Man		0/18 NT	
Muridae	1/93	8/8 CF	Bandia Forest
Other rodents	0/13	0/7 CF	Bandia Forest and Senegal
Other vertebrates	0/3,789	0/40 CF	
Bats		0/83	Senegal
Ornithodoros			
larvae	0/100		Bandia Forest, 1965
nymphs	7/859		
adults	2/237		
Ornithodoros	0/2,473		Bandia Forest, 1966
Other ticks	0/900		Bandia Forest and Senegal
Mosquitoes	0/16,884		
Other arthropods	0/2,672		

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 3	ic 0.02	Death	7-8	5.6
Mice (nb)		ip 0.02	None		
Mice (nb)		sc			
Mice (wn)		ic 0.03	None, antibodies prod.		
Mice (wn)		ip 0.10	None, antibodies prod.		
guinea pig (3 mo)		ic 0.20	Irregular death (2/3)	14	
rabbit (3 mo)		ic 0.20	None, antibodies prod.		

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)
Suckling mouse: Important neuronal necrosis in cortex and rhin-encephalus, less important in thalamus (chromatolysis,pycnosis) and medulla (anterior horns); some cuffing of blood vessels with lymphocytes. Some pulmonary alveolitis; no muscular abnormalities.

Inclusion Bodies — Intranuclear

Organs/Tissues Affected
Spinal cord (LV)

Category of tropism
Neurotropic

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)
Senegal

Suspected (Antibody only detected)

Section XIII - References

1. Bres, P., et al. 1967. Ann. Inst. Pasteur 113:739-747.
2. Casals, J. Personal communication. 1971.

Remarks