Virus Name: Forecariah	Abbreviation: FORV

Status
Possible Arbovirus

Select Agent
No

SALS Level

SALS Basis

Other Information

Antigenic Group
Bhanja

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
ArK 4927

Accession Number

Original Date Submitted
3/5/1985

Family

Genus
Bunyavirus-like

Information From
Guinea-USSR Lab. Virology and Microbiology

Address
IRBANC, BP 561, Conkary, Guinea Republic

Information Footnote

Section II - Original Source

Isolated By (name)
Virology Branch, Guinea-USSR Lab. Virology and Microbiology

Isolated at Institute
Conkary-India

Host Genus
Boophilus geigyi, pool of 28 ticks

Species

Host Age/Stage
Adult

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod
Engorged

Time Held Alive before Inoculation

Collection Method
Collected by hand from cattle

Collection Date
2/23/1983

Place Collected (Minimum of City, State, Country)
Forecariah region, Guinea

Latitude
9° 25' N

Longitude
13° 6' W

Macrohabitat
Savannah

Microhabitat

Method of Storage until Inoculated
Frozen at 25dC

Footnotes

Section III - Method of Isolation

Inoculation Date
3/22/1983

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

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 **2.8 dex**	Control Titer **6.0 dex**
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer **2.0 dex**	Control Titer **6.0 dex**

Other (formalin, radiation)

Virion Morphology

Shape	Dimensions **< 220 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
Inclusion Bodies	Other	

Hemagglutination

Hemaggiutination	Antigen Source	Erythrocytes (species used)
Yes	**SMB ext. by sucrose-acetone**	**Goose**
pH Range	pH Optimum	
6.0 - 6.4	**6.2**	
Temperature Range	Temperature Optimum	
4dC, room temperature	**Room temperature**	

Remarks

Serologic Methods Recommended
CF, NT

Footnotes

CF test: homologous titer = 1024/32.

J.P. Digoutte and G. Heme, Insitut Pasteur, Dakar.

ArK 4927 did not react with any virus except Bhanja; cross-CF and neutralization tests with Bhanja and Kisemayo viruses gave the following results:

COMPLEMENT FIXATION TEST

Mouse Ascitic Fluid	Antigens		
	ArK 4927	Bhanjai	Kisemayo
ArK 4927	1024/32 *	256/64	<8/2
Bhanjai	256/32	256/64	16/16
Kisemayo	<=8/2	8/64	256/32

* Antibody titer/antigen titer.

NEUTRALIZATION TEST IN MICE

Mouse Ascitic Fluid	Antigens		
	ArK 4927	Bhanjai	Kisemayo
ArK 4927	4.4 **	1.0	0.4
Bhanjai	0.2	2.2	0.9
Kisemayo	0.2	0.1	5.6

** LNI in dex.

Results indicate that strain ArK 4927 represents a new virus related to Bhanja.

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)	P-7	4	++		6	< 1 mm	3.9 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
Boophilus geigyi	1/4,927		Forecariah region, Republic of Guinea (1)
Man		22/293 **	Forecariah, Guinea
Man		12/382 **	Kindia, Guinea
Cattle		8/367 **	Forecariah; Kindia, Guinea

** Precipitating antibodies.

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)	P-7	ic 0.02	Death	4-5	6.0-6.4
" (nb)		ip 0.05	Death		
" (nb)		sc 0.1	Death		
" (wn)		ic 0.03	Antibodies		
" (wn)		ip 0.2	Antibodies		
" (ad)		ip 0.4	Antibodies		
guinea pig (ad)		ip 0.4	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

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)
republic of Guinea

Suspected (Antibody only detected)

Section XIII - References

1. Institut Pasteur Dakar Annual Report. 1985. P. 111.

Remarks