

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 geigy, pool of 28 ticks	Species	Host Age/Stage Adult
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
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

Hemagglutination

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:

Mouse Ascitic Fluid	COMPLEMENT FIXATION TEST		
	ArK 4927	Antigens 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.

Mouse Ascitic Fluid	NEUTRALIZATION TEST IN MICE		
	ArK 4927	Antigens 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 +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
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 geigy	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 log ₁₀ /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 log ₁₀ /ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log ₁₀ /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