Virus Name: Kismayo	Abbreviation: KISV

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
A3641

Accession Number

Original Date Submitted
7/28/1987

Family

Genus
Bunyavirus-like

Information From
A. Butenko

Address
Institute of Virology, Academy of Medical Sciences, Moscow, USSR

Information Footnote

Section II - Original Source

Isolated By (name)
D. Lvov, et.al.

Isolated at Institute
Moscow, USSR

Host Genus
2 Rhipicephalus pulchellus ticks*

Species

Host Age/Stage

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method

Collection Date
2/19/1974

Place Collected (Minimum of City, State, Country)
Kismayo, Somalia

Latitude
0° 23' S

Longitude
42° 30' E

Macrohabitat

Microhabitat
***Removed from a jackal**

Method of Storage until Inoculated

Footnotes

Section III - Method of Isolation

Inoculation Date
4/1/1974

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons
A new virus, different from all other viruses in the 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)	After Treatment Titer **6.4 dex loss**	Control Titer
Lipid Solvent (chloroform)	After Treatment Titer **6.8 dex loss**	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer **3.6 dex loss**	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)
Yes	**SMB ext. by sucrose-acetone**	**Goose**
pH Range	pH Optimum	
5.5-6.4	**5.7-6.0**	
Temperature Range	Temperature Optimum	
	22dC	

Remarks

Serologic Methods Recommended
CF, NT, agar gel diffusion precipitation test

Footnotes

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

By CF, Kismayo virus antigen did not react with the following immune ascitic fluids: Group A, Group B, Group Bunyamwera, Getah, Sinbis, Powassan, West Nile, Batai, Cache Valley, Ilesha, Maguari, Tahyna, Guaroa, Simbu, Turlock, Kaeng Khoi, CHF-Congo, Dera Ghazi Khan, Hughes, Soldado, Dugbe, Bandia, Qalyub, Uukuniemi, Kaisodi, Lanjan, Silverwater, Upolu, Bakau, Lone Star, Tamdy, Colorado tick fever, Baku, Kemerovo, Wad Medani, Chobar Gorge, Sawgrass, Batken, Chim, Matucare, Nyamanini, Quaranfill and Wanowrie.
Antigenically, Kismayo virus was found to be related by the HI test to Bhanja virus. No cross-reaction between these agents was demonstrated by CF, agar gel diffusion or NT [1] - [3] .

HI TEST

Ascitic Fluids	Antigens			
	Hp9 (8 HAU)	IbAr 2709 (8 HAU)	Rh91 (4 HAU)	Ph92 (8 HAU)
Bhanja (Hp9)	320	160	160	80
Kismayo (Rh91)	20	20	320	160
Kismayo (Rh92)	20	20	640	320
CHF-Congo	0	0	0	0
Bunyamwera	0	0	0	0

IbAr 2709 = Bhanja

HAU: hemagglutination units

0 = <10

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)	PISM 2				7-8		8.3 dex (3)	

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
Ticks *	1		Kismayo, Somalia; 1974
Rhipicephalus pulchellus **	2/673 (26 pools)		Dzhakhar town market, Somalia; 1974

* Removed from donestic animals (species unstated)

** Removed from camels

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 15	ic 0.02	Illness, death	3	9.7-10.2
" (nb)		ip			
" (nb)		sc			
" (wn)		ic			
" (wn)		ip			

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)
Somalia

Suspected (Antibody only detected)

Section XIII - References

1. Butenko, A.M. et.al., 1979. Vop. Virusol. 6:661-664.
2. Hubalek, Z. and Holouzka, J. 1985. Arch. Virol. 84:175-180.
3. Karabatsos, N. Personal communication, 1985.

Remarks