

Virus Name: Batken		Abbreviation: BKNV
Status Possible Arbovirus	Select Agent No	SALS Level 3
SALS Basis Insufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.		
Other Information		
Antigenic Group Ungrouped		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation LEIV-306K	Accession Number	Original Date Submitted 8/10/1984
Family Not listed	Genus Not listed	
Information From D.K. Lvov et al.	Address Ivanovsky Inst. of Virology, Gamaleya St. 16, Moskow, D-98, USSR	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) D.K. Lvov and colleagues	Isolated at Institute Moskow, USSR	
Host Genus Hyalomma plumbeum plumbeum	Species	Host Age/Stage Adults
Sex Not Answered		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method By hand, from sheep	Collection Date 4/15/1970	
Place Collected (Minimum of City, State, Country) Batken region, Oshsk Prov., Kirghiz SSR, USSR		
Latitude 40° 4' N	Longitude 70° 51' E	
Macrohabitat Semidesert	Microhabitat Body of sheep	Method of Storage until Inoculated Alive in refrigerator at +4dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
6/1/1970

Animal (Details will be in Section 6)
nb mice

Route Inoculated Intracerebral	Reisolation Yes
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Other Reasons
New virus, none other in laboratory

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical
RNA

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 0.0 dex	Control Titer 6.9 dex
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate) 1:100	After Treatment Titer 2.2 dex	Control Titer 5.7 dex
Other (formalin, radiation)		

Virion Morphology

Shape	Dimensions 50 nm	
Mean nm	Range nm	
Measurement Method 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 No	Antigen Source SMB ext. by sucrose-acetone	Erythrocytes (species used) Goose
pH Range 5.5-7.0	pH Optimum	
Temperature Range 4dC, 22dC	Temperature Optimum	
Remarks		
Serologic Methods Recommended CF		
Footnotes		

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

In the CF test Batken antigen did not react with antisera to the following arboviruses:

polyvalent group A, B, C; Simbu, Kaisodi, Quarantfil, Bunyamwera, Qalyub, Bakau, Hughes, Palyam; Getah, western equine encephalomyelitis of group A; Japanese encephalitis, tick-borne encephalitis, Tyuleniy, Sokuluk of group B; Silverwater, Lanjan of the Kaisodi group; Akabane, Sabo, Samford, Shamonda, Sathuperi of the Simbu group; Manawa, Sumakh, Grand Arbaud of the Uukuniemi group; Naples sandfly fever, Sicilian sandfly fever, Candiru, Chagres, Bujaru of the sandfly fever group; Ketapang of the Bakau group; Bandia of the Qalyub group; Dugbe of the NSD group; Baku of the Kemerovo group; Tahyna of the California group; Congo-CHF of the Congo group; Bhanja of the Bhanja group; DGK of the DGK group; Nyamanini of the Nyamanini group; Thogoto of the Thogoto group; Upolu of the Upolu group; Lagos bat of the rabies serogroup; and Colorado tick fever of the CTF group; and the following other arboviruses, including Issyk-Kul, Ogunpa, Matucare, Jos, IbAr 2012, and IbAr 248. Ectromelia, reovirus, type 3, murine encephalomyocarditis, lymphocytic choriomeningitis were excluded serologically.

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)	
Chick embryo (PC)			No CPE			1.0 mm	8.2 *	+
Human embryo kidney (PC)			No CP	4.5 *				+
Human embryo fibr. (PC)			No CPE	4.5				+
Duck embryo (PC)			No CPE	5.2				+
BHK-21 (CL)			No CPE	4.0				+
Vero (CL)			No CPE	4.5				+
L cells (CL)			No CPE	4.0				+

* Expressed in dex

TCD50 determined by assay of extent of interference with the multiplication of challenge WEE virus.

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Hyalomma plumbeum plumbeum	2/146		Batken region, Kirghizia, USSR
Aedes caspius caspius,	1		Leninsk region, Kirghizia, USSR
Culex hortensis (mixed pools)			
Man		2/579 CF	Kirghiz SSR
Cattle		2/150 CF	
Sheep		2/200 CF	

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)		ic 0.01	Paralysis, death		7.5
Mice (nb)		ip 0.1	Paralysis, death		7.3
Mice (nb)		sc			
Mice (wn)		ic 0.03	Paralysis, death		7.0
Mice (wn)		ip 0.3	Paralysis, death		6.8
Mice (ad)		ic	Paralysis, death		7.0
Mice (ad)		ip	Paralysis, death		6.7
hamster (ad)		ic	Paralysis, death		7.0
hamster (ad)		ip	Paralysis, death		6.6
chicken (3-day)		sc	Paralysis, death		6.5

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)

Kirghiz SSR, USSR

Suspected (Antibody only detected)

Section XIII - References

1. Lvov, D.K., et al. 1974. Arch. ges. Virusforsch. 44:70-73.

Remarks