

<b>Virus Name: Karshi</b>		<b>Abbreviation: KSIV</b>
Status <b>Possible Arbovirus</b>	Select Agent <b>No</b>	SALS Level <b>2</b>
SALS Basis <b>Results of SALS surveys and information from the Catalogue.</b>		
Other Information		
Antigenic Group <b>B</b>		

**SECTION I - Full Virus Name and Prototype Number**

Prototype Strain Number / Designation <b>LEIV-2247 US</b>	Accession Number	Original Date Submitted <b>8/15/1984</b>
Family <b>Flaviridae</b>	Genus <b>Flavivirus</b>	
Information From <b>D.K. Lvov</b>	Address <b>Inst. of Virology, USSR Academy of Medical Science, Gamaleya Str. 16, Moscow, USSR</b>	
Information Footnote <b>Reviewed by editor</b>		

**Section II - Original Source**

Isolated By (name) <b>D.K. Lvov and co-workers</b>	Isolated at Institute <b>Moscow, USSR</b>	
Host Genus <b>Ornithodoros papillipes</b>	Species	Host Age/Stage <b>Adult</b>
Sex <b>Not Answered</b>		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method <b>Collected by hand</b>	Collection Date <b>6/9/1972</b>	
Place Collected (Minimum of City, State, Country) <b>Karshi desert, Uzbekistan, USSR</b>		
Latitude <b>38° 53' N</b>	Longitude <b>65° 36' E</b>	
Macrohabitat	Microhabitat <b>Burrow of Rhombomys opimus Licht. (Great Gerbil)</b>	Method of Storage until Inoculated <b>Alive in refrigerator at 4dC</b>
Footnotes		

**Section III - Method of Isolation**

Inoculation Date  
**10/16/1972**

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	Control Titer
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**

Hemagglutination      Antigen Source      Erythrocytes (species used)  
**Yes**      **SMB ext. by sucrose-acetone**      **Goose**

pH Range      pH Optimum  
**6.0-7.0**      **6.2**

Temperature Range      Temperature Optimum  
**4dC, 22dC**

Remarks

Serologic Methods Recommended  
**CF, NT**

Footnotes

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

MIAF	ANTIGENS		VIRUS							
	CF		NT - cell culture							
	2247-US	WN	2247-US	TBE	WN	POW	LI	KFD	LGT	Kadam
B group	16									
TBE	32/128 <sup>a</sup>		0	1.7						
JE	16/256									
WN	64/128	128	4.6 <sup>b</sup>		2.0					
SOKOLUK	<8/128									
POWASSAN	32/128		1.5			3.8				
LOUPING ILL	8/128		0				2.7			
KFD	32/128		0.2					1.4		
LANGAT	16/64		0						1.4	
TYULENIY	16/256									
2247-US	256	<8/256	4.7	0.8	0.2	0.3	0	0.1	1.0	0

Kadam

0

1.5

<sup>a</sup> Ho serum CF titer/Ht serum CF titer<sup>b</sup> LNI in dex; blank = not tested

NT-suckling mice			Precipitation test			
Sera	Virus	2247-US	Sera	Antigen		2247-US
	WN			WN (African)	WN (Indian)	
WN	5.8 <sup>c</sup>	4.8	WN(African)	+	+	-
2247-US	1.6	5.5	WN(Indian)	+	+	-
			2247-US	-	-	+

<sup>c</sup>LNI in dex

**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)					5	Plaques	6.9 (d)(4)	
LLC-MK2 (CL)					5	Plaques	6.3(4)	
PS (CL)					6	Plaques	7.8(4)	
Duck embryo (PC)						No plaques(4)		

(d) 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
Ornithodoros papillipes	3		Karshi, Uzbekistan USSR

**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 <sub>10</sub> /ml
Mice (nb)	SMB 2	ic	Death	5	6.0
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)	SMB 4	ic	Death	5	8.0
Mice (wn)		ip			

**Section IX - Experimental Arthropod Infection and Transmission**

Arthropod species & virus source(a)	Method of Infection log <sub>10</sub> /ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log <sub>10</sub> /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) <b>Uzbekistan; Kazakhastan, USSR</b>
Suspected (Antibody only detected)

**Section XIII - References**

1. Sidorova, G.A., et al. 1973. Ecology of Viruses, v. 1, Moscow. p. 87-90. 2. Lvov, D.K., et al. 1976. Arch Virol. 50:29-36. 3. Chumakov, M.P. Unpublished data. 1977-78. 4. Calisher, C.H., et al. Personal communication. 1983.
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**Remarks**

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