

Virus Name: Tamdy

Abbreviation: TDYV

Status: Possible Arbovirus

SALS Level: 3

Antigenic Group: Ungrouped

Taxonomic status: *Bunyavirus-like*

Other Information: None.

Select Agent:

SALS Basis: IE

HEPA Filtration:

Section I - Full Virus Name and Prototype Number

Full Virus Name:

Tamdy

Prototype Number:

LEIV-1308Uz

Information from: D.K. Lvov

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Date:

8/21/1984

Address: Inst. of Virology, USSR Acad. of Med. Sciences, Gamaleya, 16, Moscow, USSR

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Reviewed by editor

Section II - Original Source

Isolated by: D.K. Lvov, et al.

at: Moscow, USSR

Genus and species: Hyalomma asiaticum (pool of 15 ticks) **Sentinel** X

Age/Stage: Adult **Sex:** F

Isolated From	Isolation detail
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Signs and symptoms of illness:

Arthropod engorged depleted gravid

Time held alive before inoculation:

Collection date: 8/1/1971 **Method:** By hand

Place collected: Tamdinsk region, Bukharsk province, Uzbek SSR

Latitude: 41° 52' " N

Longitude: 64° 16' " E

Macrohabitat: Sheep-cote, desert

Microhabitat: Soil

Method of storage until inoculated: Alive in refrigerator at +4dC

Footnotes:

Section III - Method of Isolation and Validity

Inoculation Date: 10/15/1971

Animal: nb mice

Embryonated egg:

Tissue Culture:

(Details in Section VI - Biologic Char.)

Route inoculated: Intracerebral

Reisolation: Yes

Other reasons: Virus different from those existing in the laboratory

Homologous antibody formation by source animal (See Section II):

Test used: HI

CF

NT

Other:

Footnotes:

Section IV - Virus Properties

Physicochemical:

RNA: X	DNA:	Single Strand:	Double Strand:
Pieces:	Infectivity:	Sedimentation coefficient(s): /strong>	
Percentage wt. of virion protein		, lipid	carbohydrate
Virion polypeptides:			
Number:	Details:		
Non-virion polypeptides:			
Number:	Details:		
Virion density:		Sedimentation coefficient:	
Nucleocapsid density		Sedimentation coefficient:	

Stability of infectivity (effects) pH

Lipid solvent:

(ether) 50%	After treatment titer 4.0 dex	Control titer 6.0 dex
(chloroform)	After treatment titer	Control titer
Detergent:		
(deoxycholate) 1:1000	After treatment titer 3.0 dex	Control titer 5.0 dex
Other (formalin, radiation):		

Virion morphology:

Shape		Dimensions 90 nm
Mean (nm)	range (nm)	how measured Electron microscopy (2)
Surface projections, envelope		
Nucleocapsid dimensions, symmetry		

Morphogenesis:

Site of constituent formation in cell
Site of virion assembly
Inclusion bodies
Other

Hemagglutination:

HemagglutinationNo	Antigen source SMB ext. by sucrose-acetone	
Erthrocytes Goose	pH range 5.5-7.0	pH optimum
Temperature optimum	range 4dC, 22dC	
Remarks	* Type of nucleic acid determined by sensitivity of the virus to 5-bromo-2-deoxyuridine.	
Serologic methods recommended	CF	
Footnotes:	* Type of nucleic acid determined by sensitivity of the virus to 5-bromo-2-deoxyuridine.	

Section V - Antigenic Relationship And Lack of Relationship To Other Viruses

Tamdy antigen in the CF test did not react with polyvalent MIAF to arbovirus groups A, B, Bakau, Bunyamwera. It did not react with MIAF to arboviruses: Getah, Sindbis of group A; tick-borne encephalitis, Powassan, Langat, Japanese encephalitis, West Nile, Karshi, Kadam, St. Louis encephalitis, Sokuluk of group B; Tahyna, Trivittatus of group California; Dugbe of group NSD; CHF of group CHF-CON; Batai, Shokwe of group Bunyamwera; Kaisodi, Lanjan, Silverwater of group Kaisodi; Kemerovo, Baku, Okhotskiy, Wad Medani, Chenuda of group Kemerovo; Qalyub, Bandia of group Qalyub; C-5502 of group Quarantil; Simbu, Akabane, Sabo, Samford, Sango, Shamonda, Sathuperi, Aino of group Simbu; Turlock, Umbre of group Turlock; Hughes, Soldado of group Hughes; Uukuniemi, Zaliv Terpeniya, Grand Arbaud of group Uukuniemi; Matariya of group Matariya; Tete, Bahig, Matruh of group Tete; Sakhalin of group Sakhalin; Bhanja of group Bhanja; Colorado tick fever of CTF group; Nyamanini of Nyamanini group; Sawgrass of group Sawgrass; Upolu of Upolu group; Wanowrie, Dhori, Lone Star, Matucare, Chobar Gorge, Jos, Batken, Issyk-Kul, Oyta, Khasan, Tamdy, Razdan, Artashat, Chim of ungrouped arboviruses. Ectromelia, reovirus, type 3, and LCM were serologically excluded. Then ungrouped Khasan virus is now member of CHF-CON group (ed.). Polyvalent MIAF's were obtained from YARU.

Section VI - Biologic Characteristics

Virus source (all VERTEBRATE isolates): Blood (M)(LV), nasopharyngeal (M), liver (LV), pooled organs (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS): Newborn mice

Susceptibility of Cell Culture Systems:

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)	
Chicken, duck embryo fibroblast(PC)			No CPE					-
L cell cultures(CL)			CPE	5.3**				
RH cell cultures(CL)			CPE	5.0				
A1 cell cultures(CL)			CPE	2.4				
** Expressed in dex								

Section VII - Natural Host Range

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Hyalomma a. asiaticum	5/37 pools (1,300 females)		Tamdyansk region, Bukharsk province,
Hyalomma a. asiaticum	3/19 pools (640 males)		Uzbek SSR and Maryisk province, Turkmen SSR
Hyalomma a. asiaticum	1/21 pools (5,200 larvae)		
Hyalomma plumbeum plumbeum	1/12 pools (228 females and 161 males)		

Section VIII - Susceptibility To Experimental Infection (Record Viremia)

Experimental host and age	Passage history and strain	Inoculation Route-Dose	Evidence of infection	AST (days)	Titer log10/ml
Mice (nb)	SMB 5	ic 0.01	Paralysis, death	6-8	8.5
Mice (nb)		ip 0.10	Paralysis, death	8-14	5.0
Mice (nb)		sc			
Mice (wn)		ic 0.03	Paralysis, death	8-14	5.0
Mice (wn)		ip			
Mice (ad)		ip 0.20	Antibody		
hamsters (ad)		ip 0.50	Antibody		
guinea pigs (ad)		ip 1.00	Antibody		
rats (ad)		ip 1.00	No illness		
rats (nb)		ic 0.03	No illness		

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:

Inclusion bodies:

Cytoplasmic:(M) (LV) Intranuclear: (M) (LV)

Organs-tissues affected:

Category of tropism:

Section XI - Human Disease

Human disease: In nature: (S) (R)

Death: (S) (R)

Residua: (S) (R)

Laboratory infections: Subclinical: (S) (R)

Overt Disease: (S) (R)

Clinical manifestations:

Category: No. of cases:

Section XII - Geographic Distribution

Known (virus):

Uzbek SSR, Turkmen SSR, USSR

Section XIII - References

1. Lvov, D.K., et al. 1974. The Ecology of Viruses 1:80. Moscow.
2. Lvov, D.K., et al. 1976. Arch. Virol. 51:15-21.
3. Lvov, D.K., et al. 1984. Sborn. Nauch. Trud. Inst. Virus. imeni D.I. Ivanovsky, Akad. Med. Nauk SSSR (4):487-490.

Section XIV - Remarks

Tamdy virus is reported to be "pathogenic" for man (3).