

Virus Name: Tehran		Abbreviation: TEHV
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Placed at this biosafety level based on close antigenic or genetic relationship to other viruses in a group of 3 or more viruses, all of which are classified at this level.		
Other Information		
Antigenic Group Phlebotomus Fever		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation I-47	Accession Number	Original Date Submitted 9/19/1984
Family Bunyaviridae	Genus Phlebovirus	
Information From R. Tesh, W. Suyemoto, and A. White	Address Yale Arbovirus Research Unit	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) A.B. White, W. Suyemoto and H.C. Barnett	Isolated at Institute University of Maryland	
Host Genus Phlebotomus papatasi	Species	Host Age/Stage Adult
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method Aspirator	Collection Date 8/2/1959	
Place Collected (Minimum of City, State, Country) Tehran, Iran		
Latitude 35° N	Longitude 52° E	
Macrohabitat Urban area	Microhabitat	Method of Storage until Inoculated Unknown
Footnotes		

Section III - Method of Isolation

Inoculation Date
3/22/1960

Animal (Details will be in Section 6)
nb mice

Route Inoculated Intracerebral	Reisolation Yes
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Other Reasons

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical
RNA, Single Strand

Pieces (number of genome segments) 3	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 1.8 dex	Control Titer 6.3 dex
Lipid Solvent (deoxycholate)	After Treatment Titer 3.3 dex	Control Titer 6.5 dex
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

Various(3)

pH Range

pH Optimum

5.8-6.4

6.0 (3)

Temperature Range

Temperature Optimum

Not dependent (3)

Remarks

Treatment of erythrocytes with trypsin enhances agglutination (3)

Serologic Methods Recommended

HI, CF, NT

Footnotes

Treatment of erythrocytes with trypsin enhances agglutination (3)

Results of HI test [2].

Antigens	Antisera to:				
	Karimabad	Tehran	Naples	Sicilian	Salehabad
Karimabad	640 ^a	0	40	0	80
Tehran	640	320	640	0	80
Naples	640	160	1280	0	20
Sicilian	40	0	0	1280	0
Salehabad	320	0	20	0	320

^a HI titers with 8 HA units of antigen; 0 = <1:20

Results of CF and plaque-reduction neutralization tests (PRNT) [4].

Antigen/Virus	CF			PRNT		
	Antibody to:			Antibody to:		
	Naples	ISS.Phl.3	Tehran	Naples	ISS.Phl.3	Tehran
Naples	256/128 ^b	64/64	128/128	320 ^c	10	<10
ISS.Phl.3	128/256	256/> 512	128/256	20	> 5120	<10
Tehran	128/64	64/64	256/128	<10	<10	80

^b Highest serum titer/highest antigen titer^c Reciprocal of highest serum dilution giving >90% plaque reduction.

In cross-neut. tests, Tehran virus and immune serum did not react with: AGU, ALE, ANH, AMT, BUE, BUJ, CAC, CAI, CDU, CHG, CHI, FRI, GF, GOR, ICO, ITA, ITP, KAR, NIQ, PAC, PT, RVF, RG, SAF, SAL, SFS, TRA, or URU viruses or immune sera [4].

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
 Blood (LV), brain (LV), liver-spleen (LV), kidney (LV), lung (LV), heart (LV)(16)

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)		4-5	4+		5	1 mm	5.8 (d)	

(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
Phlebotomus papatasi	1		Tehran, Iran (5)
Man		0/402 NT	Isfahan Province, Iran (6)
Gerbils		0/38 NT	

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) Iran
Suspected (Antibody only detected)

Section XIII - References

1. Robeson, G., et al. 1979. J. Virol. 30:339-350.
2. Director, RFVL. Personal communication. 1964.
3. Gaidamovich, S. Ya. and Kurakhmedova, Sh. A., 1974. Arch. ges. Virusforsch, 45:177-184.
4. Tesh, R.B., Unpublished data.
5. Barnett, H.C. and Suyemoto, W., 1961. Trans. N.Y. Acad. Sci., 23:609-617.
6. Saidi, S., et al. 1977. Am. J. Trop. Med. Hyg. 26:288-293.

Remarks

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