

<b>Virus Name: Umbre</b>		<b>Abbreviation: UMBV</b>
Status <b>Probable 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>Turlock</b>		

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

Prototype Strain Number / Designation <b>IG1424</b>	Accession Number	Original Date Submitted <b>12/5/1984</b>
Family <b>Bunyaviridae</b>	Genus <b>Bunyavirus</b>	
Information From <b>Dr. T.H. Work</b>	Address <b>University of California Medical Center, Los Angeles, CA 90024</b>	
Information Footnote <b>Reviewed by editor</b>		

**Section II - Original Source**

Isolated By (name) <b>Virus Research Centre (1)</b>	Isolated at Institute <b>Poona, India</b>	
Host Genus <b>Culex bitaeniorhynchus</b>	Species	Host Age/Stage <b>Adult</b>
Sex <b>Female</b>		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation <b>One day</b>		
Collection Method <b>Aspirated during biting on human</b>	Collection Date <b>10/14/1955</b>	
Place Collected (Minimum of City, State, Country) <b>Near Umbre village, Bombay State, India</b>		
Latitude <b>20° N</b>	Longitude <b>75° E</b>	
Macrohabitat <b>Island of bamboo-hardwood forest surrounded by open rice field in foothills of western ghats of peninsular India</b>	Microhabitat <b>Humid shade of dense vegetation.</b>	Method of Storage until Inoculated <b>Held alive in tubes</b>
Footnotes		

**Section III - Method of Isolation**

Inoculation Date <b>10/15/1955</b>	
Animal (Details will be in Section 6) <b>nb mice</b>	
Route Inoculated <b>ic and sc</b>	Reisolation <b>No</b>
Other Reasons	
Homologous Antibody Formation by <u>Source Animal</u>	
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)	
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<b><u>Stability of Infectivity (effects)</u></b>		
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 <b>3 dex inactivated</b>	Control Titer
Other (formalin, radiation)		
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<b><u>Virion Morphology</u></b>		
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 <b>Yes</b>	Antigen Source	Erythrocytes (species used)
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pH Range 6.2	pH Optimum
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Temperature Range 37dC	Temperature Optimum
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#### Remarks

**HA with strain G16310 in 29th newborn mouse passage gives 4 units at 1:5 dilution.**

#### Serologic Methods Recommended

**CF, NT**

#### Footnotes

**HA with strain G16310 in 29th newborn mouse passage gives 4 units at 1:5 dilution.**

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

Complement-fixation with homologous strains and crosses with Turlock.

Immunologically unrelated to chikungunya, JBE, dengue 1, RSSE, yellow fever, Marituba, Oriboca, Caraparu, Apeu, Bunyamwera, Wyeomyia, Guama, Catu, Quarantil, Chenuda, Bwamba, Anopheles A, Simbu, Oropouche, Sathuperi, Wad Medani, CTF, Bhanja, Ganjam, Tacaiuma, Lunyo, Naples sandfly, Sicilian sandfly, and Manzanilla by complement-fixation tests. Umbre virus also was shown to be distinct from other Turlock serogroup viruses by cross-neutralization test [8] .

Umbre virus still cross-reacts with plaque-purified Barmah Forest virus by CF and HI tests [9] . Umbre virus remains in the Turlock serogroup while Barmah Forest virus was placed in serogroup A.

**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							Growth Without CPE +/- (g)
		CPE			PLAQUES				
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)		
Vero (CL)	SM 4				9	3 mm	5.2* (4)		
LLC-MK2 (CL)					3	4 mm	5.8 (4)		
PS (CL)			CPE			Plaques (7)			

\* Expressed in dex

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Man	None	None/44	India
Man		42/915 * NT	Malaysia (6)
Bird (blood)	1		South India (2)
Mosquito			
Culex vishnui	3		Sathuperi, India (3)
Culex vishnui	1		Sulari, India (3)
Culex vishnui	1		Kammavanpettai, India (3)
Cx pseudosinensis	1		Malaysia (6)
Cx vishnui	2		
Cx pseudovishnui	1		
Sentinel chickens		37/66 HI,NT	
Wild birds		12/375 HI,NT	

N.P. Gupta (Poona) has noted ten or more isolations from naturally infected arthropods (5).

\* Included nine conversions



**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>India, Malaysia</b>
Suspected (Antibody only detected)

**Section XIII - References**

1. Taylor, R.M. (Comp.) 1967. Catalogue of Arthropod-borne Viruses of the World. PHS Publ. No. 1760, 1st Ed. pp. 245-248.
2. Carey, D.E., et al. 1968. Indian J. Med. Res. 56:1340-1352.
3. Dandawate, C.N., et al. 1969. Indian J. Med. Res. 57:1420-1426.
4. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
5. Hammon, W.McD. Personal communication. 24 May 1972.
6. Rudnick, A. Personal communication. May 1976.
7. Cogate, S.S. 1976. Indian J. Med. Res. 64:83-86.
8. Calisher, C.H., et al. 1984. Acta Virol. 28:148-151.
9. Dalgarno, L., et al. 1984. Virology 133:416-426.

**Remarks**

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