

<b>Virus Name: Sembalam</b>		<b>Abbreviation: SEMV</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>Ungourped</b>		

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

Prototype Strain Number / Designation <b>CMC 8518</b>	Accession Number	Original Date Submitted <b>11/12/1984</b>
Family <b>Not listed</b>	Genus <b>Not listed</b>	
Information From <b>Arbovirus Res. Off., Microbiol. Dept., Christian Med. Coll. (CMC) Hosp.</b>	Address <b>Vellore-4, N. Arcot, Tamil Nadu, India</b>	
Information Footnote <b>Reviewed by editor</b>		

**Section II - Original Source**

Isolated By (name) <b>D.E. Carey (1)</b>	Isolated at Institute <b>Virus Research Centre, Poona-CMC</b>	
Host Genus <b>Nycticorax nycticorax (Linnaeus)</b>	Species	Host Age/Stage <b>Nestling</b>
Sex <b>Not Answered</b>		
<u>Isolated From</u> <b>Serum/Plasma</b>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method <b>Removed from nest, bled and returned to nest</b>	Collection Date <b>10/14/1963</b>	
Place Collected (Minimum of City, State, Country) <b>Sembalam, Cheyyar Tk., N. Arcot Dist., India</b>		
Latitude <b>12° 55' N</b>	Longitude <b>79° 8' E</b>	
Macrohabitat <b>Throughout India, Pakistan, Burma, Ceylon (3)</b>	Microhabitat <b>Night heron crepuscular, Grey heron, somewhat crepuscular. Wade into shallow water (3)</b>	Method of Storage until Inoculated <b>Inoculated on day of collection</b>
Footnotes		

**Section III - Method of Isolation**

Inoculation Date  
**10/14/1963**

Animal (Details will be in Section 6)  
**nb mice**

Route Inoculated <b>Intracerebral</b>	Reisolation <b>No</b>
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Other Reasons  
**Three additional strains isolated.**

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) <b>1.0%</b>	After Treatment Titer <b>&lt;1.3 dex</b>	Control Titer <b>4.1 dex</b>
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)  
**No**                      **SMB ext. by sucrose-acetone**                      **Goose\*\***

pH Range                      pH Optimum  
**6.0-7.0**

Temperature Range                      Temperature Optimum  
**22dC, 37dC**

Remarks  
**SMB tr. by alk. aqueous ext. with and without protamine tr., also tried for HA. \*\* Others used for HA detection included human O, goose, chicken, guinea pig, mouse, rat, sheep**

Serologic Methods Recommended  
**CF**

Footnotes  
**SMB tr. by alk. aqueous ext. with and without protamine tr., also tried for HA. \*\* Others used for HA detection included human O, goose, chicken, guinea pig, mouse, rat, sheep**

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

In complement-fixation tests performed in Vellore, one or the other of these two strains was found to be non-reactive with hyperimmune mouse sera to the Group A virus, Sindbis; Group B virus, dengue 1; and psittacosis. Reactive with hyperimmune mouse sera to other strains of same agent. (See page 3)

In complement-fixation tests carried out in the laboratories of the Yale Arbovirus Research Unit, New Haven, non-reactive with grouping hyperimmune mouse ascitic fluids of arbovirus Groups A, B, C, Guama, Bunyamwera, Simbu, California, Anopheles A, Anopheles B, Turlock Capim, Tacaribe, VSV, Quaranfil, Kaisodi, and Qalyub. In addition, hyperimmune mouse ascitic fluid of isolate 8672 was non-reactive in complement-fixation tests with antigens prepared from nearly 150 viruses isolated in different parts of the world.

**Section VI - Biologic Characteristics**

Virus Source (all VERTEBRATE isolates)  
Biocharact Blood (LV)

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)		
PS (CL)			No CPE			No plaques		+ (4)	

**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
Nycticorax nycticorax (night heron)	1/26		Vellore, Tamil Nadu, India
Ardea cinerea (grey heron)	4/79		
Man	Nil	0/30 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 <sub>10</sub> /ml
Mice (nb)	SM 10	ic	100% mortality		
Mice (nb)		ip	Mortality ratio 5/7		
Mice (nb)		sc			
Mice (wn)		ic	100% mortality		
Mice (wn)		ip	No illness		
Mice (nb)	SM 10, strain 8518	ic			4.0
Mice (nb)	SM 11, strain 8672	ic			4.1

**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)		
<u>Inclusion Bodies</u>	<u>Intranuclear</u>	
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>India</b>
Suspected (Antibody only detected)

**Section XIII - References**

1. Carey, D.E., et al. 1971. Indian J. Med. Res. 59:1708-1711. 2. Carey, D.E., et al. 1968. Indian J. Med. Res. 56:1340-1352. 3. Salim Ali, The Book of Indian Birds. 7th Ed. Bombay Natural History Society. Bombay, India. c. 1964. 4. Cogate, S.S. 1976. Ind. J. Med. Res. 64:83-86.
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**Remarks**

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