Virus Name: Enseada **Abbreviation:** ENSV

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: **Enseada**
Prototype Number: 76V25880
Information from: Division of Vector-Borne Viral Diseases *
Date: 9/24/1984
Address: P.O. Box 2087, Fort Collins, Colorado 80522
*
Reviewed by editor

Section II - Original Source

Isolated by: D.B Francy **at:** DVBVD, Fort Collins, CO
Genus and species: Culex (Mel) taeniopus **Sentinel** X
Age/Stage: Imago **Sex:** F

Isolated From	Isolation detail

Signs and symptoms of illness:
Arthropod engorged **depleted** X **gravid** X **Time held alive before inoculation:**
Collection date: 8/3/1976 **Method:** CDC light trap with CO2
Place collected: Cananeia, State of Sao Paulo, Brazil
Latitude: 24° 0' " S **Longitude:** 47° 0' " W
Macrohabitat:
Microhabitat:
Method of storage until inoculated: -65dC
Footnotes:

Section III - Method of Isolation and Validity

Inoculation Date: 6/27/1977
Animal: **Embryonated egg:** **Tissue Culture:** X
(Details in Section VI - Biologic Char.)
Route inoculated: **Reisolation:** Yes
Other reasons:
Homologous antibody formation by *source animal* (See Section II):
Test used: HI **CF** **NT**
Other:
Footnotes:

Section IV - Virus Properties

Physicochemical:
RNA: **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) **After treatment titer** **Control titer**
(chloroform) **After treatment titer** **Control titer**
Detergent:
(deoxycholate) 1:1000 **After treatment titer** <2.0 dex **Control titer** 7.2 dex
Other (formalin, radiation):

Virion morphology:
ShapeSpherical (1) **Dimensions** 90-110 nm diameter (1)
Mean (nm) 100 nm**range (nm)** 90-110nm**how meansured** Grating replicas and photometric msmts.
Surface projections, envelope Envelope present
Nucleocapsid dimensions, symmetry 70-75 nm

Morphogenesis:
Site of constituent formation in cell
Site of virion assembly Intracellular cytoplasmic membranes
Inclusion bodies
Other

Hemaggiutination:
HemaggiutinationNo **Antigen source** SMB ext. by sucrose-acetone
Erthrocytes Goose **pH range** 5.8-6.9 **pH optimum**
Temperature optimum **range** RT
Remarks
Serologic methods recommended CF, PRNT
Footnotes:

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

Antigens of strains 76V-25880 and 78V-213 were tested by CF with grouping MIAF: A, B, C, Bunyamwera, Simbu, Guama, Turlock, California, Anopheles A, Anopheles B, Patois and Capim [1] . Also tested with MIAF for EEE, WEE, VEE, AURA, MAY, Uruma, MUC, PIX, UNA, SDN, MEL, GAM, ICO, ITP, TCM, LUK, ANA, ANB, BOR, TUR, IRI, KWA, SLE, YF, ROC, BSQ, ILH, DEN-2, VSI, VSNJ, COC, PIRY, TIM, CHO, ARU, IERI, TME, TNT, MAT, NAR, NAV, MCO, BER, GTB, and Reo-3. No reactions obtained with these preparations.
In addition, hemagglutinins of the following viruses were tested by HI with MIAF for strain 78V-213: La Crosse, Tensaw, Caraparu, Bunyamwera, Nepuyo, Mermet, Tahyna, Apeu, Madrid, Marituba, Oriboca, Gumbo Limbo, Anhembi, Batai, Main Drain, Lokern, Santa Rosa, Ilesha, Cache Valley, Icoaraci and Sandfly (Sicilian).
MIAF prepared to 78V-213 was tested by CF with the following antigens (as well as those listed above): APEU, ACA, GMA, CAP, PAT, SIM, MAG, SOR, WYO, CAR, ITQ, MTB, MUR, NEP, ORI, RES, BSB, GJA, MOR, BIM, CATU, MOJU, MAN, ORO, JUR, MIR, KRI, AMB, DEN-3, CDU and mouse hepatitis virus. No reactions were noted [1] .
Strains 76V-25880 and 78V-213 were shown by both CF and PRNT to be identical [1] .

Section VI - Biologic Characteristics

Virus source (all VERTEBRATE isolates):
Lab Methods of Virus Recovery (ALL ISOLATIONS): Vero cell cultures
Susceptibility of Cell Culture Systems:

Cell system (a)	Virus passage history (b)	Evidence of Infection							
		CPE			PLAQUES			Growth Without CPE	
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	+/- (g)	
Vero (CL)	Orig.				6	Plaques	1.0**		
Vero (CL)	V1SM2				3	2 mm	6.1		
Vero (CL)	V1SM2V1				3	2 mm	7.5		
Duck embryo (PC)						No plaques			

** 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
Cx (Mel) taeniopus	1 *		State of Sao Paulo, Brazil
Cx (Mel) epanastasis	1 *		

* A total of 36,602 mosquitoes collected in Sao Paulo State were tested.

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)	SM2V1	ic	Paralysis, death	3-4	7.8
Mice (nb)		ip	Paralysis, death	5	5.7
Mice (nb)		sc			
Mice (wn)		ic	Paralysis, death	7	3.8
Mice (wn)		ip	None		
Mice (nb)	V1	ic	Paralysis, death	3	
Mice (nb)	V1SM1	ic	Paralysis, death	3	
Mice (nb)	V1SM2	ic	Paralysis, death	4	7.0
Mice (nb)	SM2	ic	Paralysis, death	5	

Section IX - Experimental Arthropod Infection And Transmission

Arthropod species & virus source(a)	Method of Infection log10/ml (b)		Incubation period (c)		Transmision by bite (d)		Assay of arthropod, log10/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):
Brazil

Section XIII - References

1. Calisher, C.H. et al. 1983. Am. J. Trop. Med. Hyg. 32:424ö431.

Section XIV - Remarks