Virus Name: Sena Madureira		Abbreviation: SMV
Status **Possible Arbovirus**	Select Agent **No**	SALS Level **3**

SALS Basis
Isufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.

Other Information

Antigenic Group
Timbo

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
BeAn 303197

Accession Number

Original Date Submitted
9/26/1984

Family
Rhabdoviridae

Genus

Information From
F.P. Pinheiro and Amelia P.A.T. Rosa

Address
Instituto Evandro Chagas, FSESP, Ministry of Health, CP-621, Belem, Para, Brazil

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
Gilberta Bensabath

Isolated at Institute
Instituto Evandro Chagas

Host Genus
Ameiva ameiva ameiva (lizard)

Species

Host Age/Stage
adult

Sex
Not Answered

Isolated From	Isolation Details
Whole Blood	
Organs/Tissues	**pool of heart, liver, spleen, and kidney**

Signs and Symptoms of Illness
no

Arthropod

Time Held Alive before Inoculation

Collection Method
by hand

Collection Date
9/3/1976

Place Collected (Minimum of City, State, Country)
Sena Madureira (BR 364 km. 8), Acre

Latitude
9° 3' S

Longitude
68° 39' W

Macrohabitat
urban environment

Microhabitat
ground level

Method of Storage until Inoculated
liquid nitrogen and mechanical freezer (-60dC)

Footnotes

Section III - Method of Isolation

Inoculation Date
1/20/1977

Animal (Details will be in Section 6)
nb mice

Route Inoculated
intracerebral

Reisolation
No

Other Reasons

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) **1:1000**	After Treatment Titer **>=1.5 dex**	Control Titer **1.7 dex**

Other (formalin, radiation)

Virion Morphology

Shape
Rhabdovirus morphology

Dimensions

Mean
nm

Range
nm

Measurement Method
electron microscopy

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

Hemaggiutination	Antigen Source	Erythrocytes (species used)
No	**SMB ext. by sucrose-acetone + sonication**	**goose**
pH Range **5.8-7.0**	pH Optimum	
Temperature Range **room, 37dC**	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF and NT

Footnotes

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

A CF relationship was demonstrated with Timbo and Chaco viruses (Rhabdoviridae) as shown below. Sena Madureira virus (BeAn 303197) appears to be a new rhabdovirus in the Timbo serogroup.

Complement-Fixation Test

Antigens	Sera			
	BeAn 303197	Timbo	Chaco	Marco
BeAn 303197	128/64 [a]	32/64	0	0
Timbo	16/>=64	>=128/>=64	0	0
Chaco	8/>=64	32/16	64/64	0
Marco	0	0	0	64/>=64

[a] Serum titer/antigen titer; 0 =<4/<4

Sena Madureira virus did not react with any additional rhabdoviruses when tested at YARU.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
blood and viscera (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
newborn mice

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)	P unk.	5	4+	6.2 [b]					

[b] 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
Ameiva a. ameiva	1/172	0/30 CF	Sena Madureira, Acre, Brazil; 1976-78
Tupinambis nigropunctatus (lizard)	0/1		
Marsupials	0/252		
Rodents	0/945		
Primates	0/17		
Edentate (sloth)	0/1		
Chiruptera	0/63		
Culicidae	0/166,992		
Phlebotomines (female)	0/796		
Phlebotomines (male)	0/799		
Reptiles (lizards and turtles)	0/12		Cachoeira Porteira, Para, Brazil; 1976-79
Repitles (19 lizards, 4 aligators, 8 turtles and 5 snakes)	0/36		Porto Trombetas, Para, Brazil; 1980

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 log10/ml
mice (nb)	SMB 2	ic 0.02	illness, death	7.2	
mice (nb)		ip 0.02	none		
mice (nb)		sc			
mice (wn)		ic 0.03	antibodies		
mice (wn)		ip 0.03	antibodies		
mice (nb)	SMB 7	ic 0.02	illness, death		5.0

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 (specify host)

Inclusion Bodies — Intranuclear

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)

Suspected (Antibody only detected)

Remarks

1. Tesh, R.B., et al. 1983. J. Gen. Virol. 64:169-176.