Virus Name: Sawgrass	Abbreviation: SAWV

Status
Possible Arbovirus

Select Agent
No

SALS Level
2

SALS Basis
Results of SALS surveys and information from the Catalogue.

Other Information

Antigenic Group
Sawgrass

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
64A-1247

Accession Number

Original Date Submitted
12/20/1984

Family
Rhabdoviridae

Genus
Not listed

Information From
Florida St. Bd. of Health

Address
4001 Tampa Bay Blvd., Tampa, Florida 33614, USA

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
A.L. Lewis

Isolated at Institute
Encephalitis Research Center

Host Genus
Dermacentor variabilis (pool of 19 male and 11 female)

Species

Host Age/Stage
Adult

Sex
Not Answered

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Combed from trapped raccoon

Collection Date
5/1/1964

Place Collected (Minimum of City, State, Country)
Sawgrass Lake, Tampa Bay area, Florida, USA

Latitude
27° 50' N

Longitude
82° 40' W

Macrohabitat
Maple swamp bordering shallow marshy lake

Microhabitat

Method of Storage until Inoculated
-20dC

Footnotes

Section III - Method of Isolation

Inoculation Date
5/13/1964

Animal (Details will be in Section 6)
nb mice

Route Inoculated
ic and ip

Reisolation
Yes

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 **2.25 dex**	Control Titer **4.33 dex**

Other (formalin, radiation)

Virion Morphology

Shape **Rhabdovirus morphology (4)**	Dimensions **220 x 65 nm**	
Mean nm	Range nm	
Measurement Method **By electron microscopy (4)**	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 **No**	Antigen Source **SMB ext. by sucrose-acetone; crude pH 9.0 antigen**	Erythrocytes (species used) **Goose**
pH Range **5.75-7.4**	pH Optimum	
Temperature Range	Temperature Optimum	
Remarks		
Serologic Methods Recommended		
Footnotes		

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

Tick Viruses

N. America:	Egypt:	Africa	Europe
Hughes	Chenuda	Dugbe	Uukuniemi
Colorado tick fever	Nyamanini	Thogoto	Tribec
CalAr 846 (Farallon)	Quaranfil	Wad Medani	**Johnston Atoll**
Silverwater	**India:**	**USSR:**	JA
Powassan	Ganjam	Kemerovo	
Trinidad:	Bhanja	**Pakistan:**	
Soldado	Wanowrie	Manawa	
	Kaisodi		

Other Arboviruses	Bwamba	VSV-Piry	Marco

Other Arboviruses		Bwamba	VSV Piry,	Marco
Group A -	Polyvalent	California	Chandipura	Pacui
Group B -	Polyvalent	Changuinola	Bunyamwera Supergroup	Lebombo
	Modoc	Guama	Jurona	Cotia
Group C -	Polyvalent	Koongol	Mirim	Witwatersrand
Group -	Anopheles A	Mossuril	Tacaribe	Tembe
	Tacaiuma	Nyando	**Others**	Tribec
	Anopheles B	Simbu (4 viruses)	Navarro	Triniti
	Bakau (Ketapang)		Hart Park	Kowanyama
	Bunyamwera (6 viruses)	Turlock	Kern Canyon	Klamath

Serological tests were performed by Miss Gladys Sather in YARU laboratories.

Sawgrass antigen was non-reactive with immune sera to the above viruses by CF. Related by CF to registered New Minto virus. Both viruses were shown to be related to the subsequently registered Connecticut virus. These viruses now consititue the Sawgrass serogroup. See New Minto and Connecticut virus registrations.

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							
		CPE			PLAQUES			Growth Without CPE	
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	+/- (g)	
Vero (CL)	SM 7				6	3 mm	4.6*		
LLC-MK2 (CL)					11	2 mm	5.2		
Vero (CL)		3-5	CPE (5)						
CER (CL)		2	CPE (2)						
BHK-21 (CL)		2	CPE (5)						
Duck embryo (PC)			No CPE (5)						

* 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
Dermacentor variabilis	16		Tampa Bay area, Florida, USA (3)
Haemaphysalis leporispalustris	12		

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)	SM 4	ic 0.01	Illness and death	3-4	5.2
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)		ic 0.03	None		
Mice (wn)		ip			

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)
Florida, USA

Suspected (Antibody only detected)

Section XIII - References

1. Sather, G.E., et al. 1970. Am. J. Trop. Med. Hyg. 19:319-326.
2. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
3. Wellings, F.M., et al. 1972. Am. J. Trop. Med. Hyg. 21:201-213.
4. Murphy, F.A. Personal communication. 1977.
5. Calisher, C.H. Personal communication. 1981.

Remarks