

Virus Name: Sedlec		Abbreviation: SEDV
Status Possible Arbovirus	Select Agent No	SALS Level
SALS Basis		
Other Information		
Antigenic Group Not listed		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation AV 172	Accession Number	Original Date Submitted 7/7/1989
Family Not listed	Genus Bunyaviridae	
Information From Dr. Zdenek Hubalek	Address Inst. Systematical and Ecological Biol., Czech. Acad. Sci., Kvetna 8, 603 65 Brno, Csechoslovakia	
Information Footnote		

Section II - Original Source

Isolated By (name) Hubalek et.al. (1)	Isolated at Institute Inst. Syst. Ecol. Biol., Brno	
Host Genus Acrocephalus scirpaceus (Herm.), reed warbler	Species	Host Age/Stage Juvenile
Sex Not Answered		
<u>Isolated From</u> Whole Blood	<u>Isolation Details</u>	
Signs and Symptoms of Illness Symptomless	Arthropod	
Time Held Alive before Inoculation		
Collection Method netted (and released)	Collection Date 7/30/1984	
Place Collected (Minimum of City, State, Country) Fishpond "Neyt" near Sedlec, Czechoslovakia		
Latitude 48° 46' N	Longitude 16° 43' E	
Macrohabitat Freshwater swamp	Microhabitat Littoral Phragmiton plant alliance (Scirpo-Phragmitetum Koch)	Method of Storage until Inoculated 3 hourson wet ice, then 17 days in REVCO at -60dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
8/17/1984

Animal (Details will be in Section 6)
nb mice

Route Inoculated Intracerebral	Reisolation Not tried
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Other Reasons
Unrelated to any other virus in the laboratory

Homologous Antibody Formation by Source Animal
Not tested

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) 20%	After Treatment Titer 5.1 dex	Control Titer 8.0 dex
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate) 0.1%	After Treatment Titer 3.7 dex	Control Titer 7.4 dex

Other (formalin, radiation)
Stable at +4dC for 18 hr. (decrease 0.2 dex)

Virion Morphology

Shape Bunyavirus-like	Dimensions 90-100 nm	
Mean nm	Range nm	
Measurement Method filtration; electron microscopy (1)	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 No	Antigen Source SMB extracted by sucrose-acetone	Erythrocytes (species used) Goose
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pH Range 5.7-7.4	pH Optimum
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Temperature Range	Temperature Optimum
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Remarks

Serologic Methods Recommended
CF, IFA

Footnotes

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

COMPLEMENT-FIXATION. No positive reaction between Sedlec antigen and the following mouse immune ascitic fluids or hyperimmune sera in dilution 1:8 (homologous titre = 256): alphaviruses: Sindbis, Chikungunya, WEE, EEE, VEE, Whataroa; Flaviviruses: Dengue-1, Dengue-2, Japanese encephalitis, West Nile, Yellow Fever, Powassan, Central European encephalitis, Tyuleny, Apoi; bunyaviruses: Baku, Batai, Calovo, Tahyna, Mahogany, Hammock, Mirim, Simbu, Bahig, Matruh, Tate, Tsuruse, Lednice; phleboviruses: Karimabad, Sandfly fever Naples, Sandfly fever Sicilian, Tehran; nairoviruses: Hazara, Dera Ghazi Khan, Hughes, Soldado, Dugbe, Paramushir, Sakhalin, Taggert, Tillamook; uukuviruses: Grand Arbaud, Uukuniemi; bunyavirus-like viruses: Bhanja, Upolu, Kaisodi, Lone Star, Razdan, Tamdy, Wanowrie, Zevashen, Artashat, Caspiy; orbiviruses: Eyach, Kemevoro, Tribec, Reoviridae Matucare; rhabdoviruses: Burg el Arab, Piry, Kwatta, Mossuril, Kologo, Chandipura, Barur, Bimbo; orthomyxoviruses: Dhori; unclassified viruses: Burana, Yaba-7, Tyulec.

NEUTRALIZATION. Mixtures of inactivated undiluted sera and tenfold dilutions of Sedlec virus were incubated for 90 min. at 37°C and inoculated into adult mice intracerebrally. Neutralization indices (in dex) with particular antisera were: Sedlec 4.1, Lednice (strain 6118) 0.4, Central European encephalitis 0.1.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn or weanling mice

Cell system (a)	Virus passage history (b)	Evidence of Infection						
		CPE			PLAQUES			Growth Without CPE +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
Vero (CL)	SMB 6		No CPE				No Plaques	
SPEV (=pig kidney embryo) (CL)			No CPE				No Plaques	
XTC-2 (CL)			No CPE					
CV-1 (CL)					4-5		6.2 dex	

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Acrocephalus scirpaceus (blood)	1/266	15/65 NT	S. Moravia, Czechoslovakia, 1984-88
A. schoenobaenus (blood)	0/218	1/9 NT	S. Moravia, Czechoslovakia, 1984-88
Other wild birds of 45 species (blood)	0/539		S. Moravia, Czechoslovakia, 1984-88
Emberiza schoeniclus		0/2 NT	S. Moravia, Czechoslovakia
Remiz pendulinus		0/2 NT	
Locustella luscinioides		2/2 NT	

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 ₁₀ /ml
mice (nb)	SM 3	ic 0.02	Encephalitis, death	4-5	8.2
™ (nb)		ip 0.03	No illness		
™ (nb)		sc 0.03	No illness		
™ (wn)		ic 0.03	Encephalitis, death	4-7	7.3
™ (wn)		ip 0.2	No illness, antibody		
™ (wn)		sc 0.2	No illness, antibody		
™ (10 week)		ic 0.03	Encephalitis, death	6-10	6.5
rabbit (3.5 kg)	SM 4	iv 0.2	No illness, no antibody		

Section IX - Experimental Arthropod Infection and Transmission

Arthropod species & virus source(a)	Method of Infection log ₁₀ /ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log ₁₀ /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)

Czechoslovakia

Suspected (Antibody only detected)

Section XIII - References

1. Hubalek, Z. et.al. 1989. Acta Sci. Nat. (Brno) 23(7): 1-50.

Remarks