

Virus Name: **Sedlec**

Abbreviation: **SEDV**

Status: Possible Arbovirus

Select Agent:

SALS Level:

SALS Basis:

HEPA Filtration:

Antigenic Group: Not listed

Taxonomic status: *Bunyaviridae*

Other Information: None.

Section I - Full Virus Name and Prototype Number

Full Virus Name:

Prototype Number:

Sedlec

AV 172

Information from: Dr. Zdenek Hubalek

Date:

7/7/1989

Address: Inst. Systematical and Ecological Biol., Czech. Acad. Sci., Kvetna 8, 603 65 Brno, Csechoslovakia

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Section II - Original Source

Isolated by: Hubalek et.al. (1)

at: Inst. Syst. Ecol. Biol., Brno

Genus and species: *Acrocephalus scirpaceus* (Herm.), reed warbler

Sentinel X

Age/Stage: Juvenile Sex: ?

Isolated From	Isolation detail
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Signs and symptoms of illness: Symptomless

Arthropod engorged depleted gravid

Time held alive before inoculation:

Collection date: 7/30/1984 Method: netted (and released)

Place collected: Fishpond "Neyt" near Sedlec, Czechoslovakia

Latitude: 48° 46' " N Longitude: 16° 43' " E

Macrohabitat: Freshwater swamp

Microhabitat: Littoral Phragmition 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 and Validity

Inoculation Date: 8/17/1984

Animal: nb mice

Embryonated egg:

Tissue Culture:

(Details in Section VI - Biologic Char.)

Route inoculated: Intracerebral

Reisolation: Not tried

Other reasons: Unrelated to any other virus in the laboratory

Homologous antibody formation by source animal (See Section II): Not tested

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) 20% After treatment titer 5.1 dex Control titer 8.0 dex
(chloroform) After treatment titer Control titer

Detergent:

(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:

ShapeBunyavirus-like Dimensions 90-100 nm
Mean (nm) range (nm) how measured filtration; electron microscopy (1)
Surface projections, envelope
Nucleocapsid dimensions, symmetry

Morphogenesis:

Site of constituent formation in cell

Site of virion assembly

Inclusion bodies

Other

Hemagglutination:

HemagglutinationNo Antigen source SMB extracted by sucrose-acetone

Erythrocytes Goose pH range 5.7-7.4 pH optimum

Temperature optimum range

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, Tyuleniy, 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

Susceptibility of Cell Culture Systems:

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	

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
Acrocephalus scinpaceus (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 (Record Viremia)

Experimental host and age	Passage history and strain	Inoculation Route-Dose	Evidence of infection	AST (days)	Titer log10/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		
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:

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):

Czechoslovakia

Section XIII - References

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

Section XIV - Remarks
