Virus Name: Clo Mor	Abbreviation: CMV

Status
Possible Arbovirus

Select Agent
No

SALS Level
2

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

Other Information

Antigenic Group
Sakhalin

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
ScotAr 7

Accession Number

Original Date Submitted
7/19/1984

Family
Bunyaviridae

Genus
Nairovirus

Information From
Andrew J. Main

Address
Yale Arbovirus Research Unit, 60 College Street, New Haven, Conn. 06510, USA

Information Footnote
Revised

Section II - Original Source

Isolated By (name)
A.J. Main (1)

Isolated at Institute
Yale Arbovirus Research Unit

Host Genus
Ixodes uriae (=Ixodes putus)

Species

Host Age/Stage
Nymphs

Sex
Not Answered

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod
Engorged

Time Held Alive before Inoculation
17 days

Collection Method
By hand

Collection Date
6/15/1973

Place Collected (Minimum of City, State, Country)
Clo Mor, Cape Wrath, Scotland

Latitude
58° 36' N

Longitude
4° 53' W

Macrohabitat
Rocky cliff

Microhabitat
Murre (Uria aalge) colony

Method of Storage until Inoculated
Held alive 17 days, then frozen at -70C

Footnotes

Section III - Method of Isolation

Inoculation Date
7/3/1973

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

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)
Stable at pH 3.o;after tr 5.2dex; ctrl tr 4.2 dex

Lipid Solvent (ether - % used to test) **1:2**	After Treatment Titer **<0.6 dex**	Control Titer **3.4 dex**
Lipid Solvent (chloroform) **1:2**	After Treatment Titer **<0.5 dex**	Control Titer **3.4 dex**
Lipid Solvent (deoxycholate) **1:1000;1:500;1:100**	After Treatment Titer **<1.5;<1.5;<1.5 dex**	Control Titer **4.1 dex**

Other (formalin, radiation)

Virion Morphology

Shape	Dimensions **<220 nm**	
Mean nm	Range nm	
Measurement Method **Filtration**	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**	Erythrocytes (species used) **Goose**
pH Range **5.8-7.4**	pH Optimum	
Temperature Range **4dC; 22dC; 37dC**	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF, NT, IFA

Footnotes

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

		Antigen/Virus			Ascitic Fluid		
		CF		NT	CF		NT
Virus	(strain)	Ht/Ho	Ratio	Ht/Ho	Ht/Ho	Ratio	Ht/Ho
Sakhalin	(LEIV 71c)	4/16	1/4	0.0/0.4	4/16	1/4	1.0/.04
Tillamook	(RML 86)	32/128	1/4	0.5/2.2	8/16	1/2	0.4/0.4
Taggert	(MI-14850)	32/512	1/16	1.0/>4.3	<4/16	<1/4	0.3/0.4
Avalon	(CanAr 173)	<4/128	<1/32	0.2/>2.5	<4/16	<1/4	1.8/0.4
Avalon	(CanAr 15)	4/128	1/32		<4/16	<1/4	
Avalon	(CanAr 46B)	<4/256	<1/64		<4/16	<1/4	
Avalon	(CanAn 476)	<4/512	<1/128		<4/16	<1/4	

NT: LNI given in dex

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)	ScotAr 7, P-10				8-10	Plaques	6.6* (2)		

* 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
Ixodes (Ceratixodes) uriae White (= Ixodes putus P.-C.)			Scotland; Wales; 1973-74 (1)
eggs	0/1/50 *		
larvae	0/1/2		
nymphs	1/13/89		
adult males	0/2/2		
adult females	0/20/97		

* Number of isolates/number of pools/number of specimens

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)	ScotAr 7 P-2-12	ic 0.02	Paralysis, death	4-11	4.4-7.4
Mice (nb)		ip 0.02	Death, viremia	6-15	5.7-6.0
Mice (nb)	P-6	sc 0.02	Death, viremia	5-12	4.4
Mice (wn)	P-2-11	ic 0.03	None		
Mice (wn)		ip 0.03	CF but no NT antibody; no viremia		
Mice (wn)	P-6	sc 0.03	CF but no NT antibody; no viremia		

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
Aedes aegypti (1)		5.7 (P-12)	2-14	28			Negative		Suckling mice (1)
Cules pipiens quinquefasciatus		5.7 (P-12)	2-12	28			Negative		Suckling mice
Anopheles quadrimaculatus		5.7 (P-12)	2-10	28			Negative		Suckling mice

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)
Northern Scotland

Suspected (Antibody only detected)

Section XIII - References

1. Main, A.J., et al. 1976. J. Med. Ent. 13:309-315.
2. Karabatsos, N. Personal communication. 1984.

Remarks