

Virus Name: Bailine	Abbreviation: BAUV	
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Kemerovo		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation CanAr 14	Accession Number	Original Date Submitted 7/18/1984
Family Reoviridae	Genus Orbivirus	
Information From Andrew J. Main, Jr.; revised	Address Yale Arbovirus Research Unit; 60 College St., New Haven, CT 06510, USA	
Information Footnote Revised		

Section II - Original Source

Isolated By (name) A.J. Main, Jr.	Isolated at Institute YARU	
Host Genus Ixodes uriae (= Ixodes putus)	Species	Host Age/Stage Nymphs
Sex Not Answered		
<u>Isolated From</u> <u>Isolation Details</u>		
Signs and Symptoms of Illness	Arthropod Engorged	
Time Held Alive before Inoculation 9 days		
Collection Method By hand	Collection Date 7/23/1971	
Place Collected (Minimum of City, State, Country) Great Island, Newfoundland, Canada		
Latitude 47° 11' N	Longitude 53° 8' W	
Macrohabitat Rocky island	Microhabitat Substrate from puffin (Fratercula arctica) burrows	Method of Storage until Inoculated Alive for 9 days, then frozen at -60dC for 12 days
Footnotes		

Section III - Method of Isolation

Inoculation Date
8/13/1971

Animal (Details will be in Section 6)
nb mice

Route Inoculated Reisolation
Intracerebral No

Other Reasons
Five additional isolates from Ixodes uriae on Great Island in 1972

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical
RNA, Double Strand

Pieces (number of genome segments)	Infectivity	Sedimentation Coefficients(s)
10 (2)		(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)
pH 3.0: <1.5 dex; pH 7.2: 7.7 dex

Lipid Solvent (ether - % used to test)	After Treatment Titer	Control Titer
1:2	3.9 dex	7.8 dex
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
1:2	3.7 dex	7.8 dex
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer
1:1000; 1:500; 1:100	5.2; 2.6; 2.0 dex	4.7 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
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Inclusion Bodies	Other	
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Hemagglutination

Hemagglutination No	Antigen Source SMB ext. by sucrose-acetone	Erythrocytes (species used) Goose
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pH Range 5.8-7.0	pH Optimum
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Temperature Range 4dC, 22dC, 37dC	Temperature Optimum
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Remarks

Serologic Methods Recommended
CF, NT

Footnotes

Virus (strain)	BAULINE (CanAr 14)				Ascitic Fluid		
	Antigen		NT Ht/Ho	CF Ht/Ho	Ascitic Fluid		NT Ht/Ho
	CF Ht/Ho	Ratio			CF Ht/Ho	Ratio	
Great Island (CanAr 41)	128/128	1/1	0.4/3.4	128/128	1/1	0.2/2.7	
Tindholmur (DenAr 2)	32/32	1/1	1.0/2.4	128/128	1/1	0.0/3.0	
Mykines (DenAr 12)	8/256	1/32	<1.1/2.6	128/128	1/1	0.0/3.0	
Cape Wrath (ScotAr 20)	32/64	1/2	0.0/3.3	64/128	1/2	0.3/1.9	
(FinV-808)	256/1024	1/4		64/128	1/2		
(FinV-873)	128/256	1/2		128/128	1/1		
(FinV-962)	64/64	1/1		64/128	1/2		
Yaquina Head (RML 15)	16/32	1/2	0.3/3.7	64/128	1/2	0.7/2.7	
Yaquina Head (RML 62)	128/64	2/1		8/32	1/4	1.2/2.1	
Okhotskiy (LEIV 287ka)	<4/32	<1/8	<1.0/3.3			0.2/2.4	
Nugget (AusMI-14847)	128/512	1/4	0.0/3.2	128/128	1/1	0.7/2.4	
Kemerovo (R-10)	32/256	1/8	0.1/5.2	64/128	1/2	0.1/1.9	
Lipovnik (Lip 91)	32/128	1/4		32/128	1/4		
Tribec (original)	16/128	1/8	0.0/2.7	32/128	1/4	0.3/1.9	
Chenuda (EgAr 1152)	<4/256	<1/64		<4/128	<1/32		
Mono Lake (CalAr 861)	8/256	1/32		<4/128	<1/32		
Huacho (CalAr 883)	<4/256	<1/64		<4/128	<1/32		
Wad Medani (EgAr 492)	<4/256	<1/64		<4/128	<1/32		

CF: Heterologous serum CF titer/homologous serum CF titer

NT: Heterologous LNI in dex/homologous LNI

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						Growth Without CPE +/- (g)			
		CPE			PLAQUES						
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)				
Vero (CL)	P-3				3	Plaques	6.0*				

* 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 41; (= <i>I. putus</i>)			Great Island, Newfoundland, Canada; 1971, 1972(1, 3)
eggs	0/227/3 *		
larvae	0/48/6		
nymphs	2/479/60		
adult males	1/105/14		
adult females	3/356/60		
<i>Larus argentatus</i> (chicks)	0/84	0/28 NT	
<i>Larus marinus</i> (chicks)	0/2	0/2 NT	
<i>Rissa tridactyla</i> (chicks)	0/15		
<i>Uria aalge</i> (chicks)	0/3		
<i>Fratercula arctica</i> (chicks)	0/20		
<i>Fratercula arctica</i> (adults)		47/126 NT	
<i>Oceanodroma leucorhoa</i> (adults)		5/128 NT	

* Number of isolates/number of ticks/number of pools

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)	CanAr 14, SMB 2-3	ic 0.02	Paralysis, death(4)	3-4	6.0-7.7	
Mice (nb)	SMB 4	ip 0.02	Paralysis, death	4-5	7.1	
Mice (nb)		sc				
Mice (wn)		ic 0.03	None			
Mice (wn)		ip 0.03	None			
chicks (1 day)	SMB 3	ic 0.03	Paralysis, death	2-4	5.1	
" (1 day)		sc 0.03	Paralysis, death	3-5		
" (2 day)	SMB 4	ic	No viremia or NT antibody			
" (2 day)		sc	No viremia or NT antibody			

Section IX - Experimental Arthropod Infection and Transmission

Arthropod species & virus source(a)	Method of Infection log10/ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log10/ml (e)		
	Feeding	Injected	Days	°C	Host	Ratio	Whole	Organ	System
Aedes aegypti		4.1	2-10	28			negative		nb mice (3,4)
Culex pipiens quinquefasciatus		4.5	2-10	28			negative		nb mice
Anopheles quadrimaculatus		4.1	2-12	28			negative		nb 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)
Newfoundland, Canada

Suspected (Antibody only detected)

Section XIII - References

1. Main, A.J., et al. 1973. J. Med. Ent. 10:229-235.
2. Knudson, D.L. Personal communication. 1980.
3. Main, A.J., et al. 1976. J. Wildlife Dis. 12:182-194.
4. Main, A.J., et al. 1976. J. Med. Ent. 13:304-308.

Remarks