Virus Name: Manitoba		Abbreviation: MBAV
Status **Possible Arbovirus**	Select Agent **No**	SALS Level
SALS Basis		
Other Information		
Antigenic Group		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation	Accession Number	Original Date Submitted
Mn 936-77		3/7/1991
Family **Rhabdoviridae**	Genus	
Information From **Harvey Artsob**	Address **Zoonotic Diseases, National Laboratory for Special Pathogens, Laboratory Centre for Disease Control, Tunney's Pasture, OTTAWA, KIA OL2, Canada**	
Information Footnote		

Section II - Original Source

Isolated By (name) **L. Sekla and W. Stackiw**	Isolated at Institute **Cadham Prov. Lab, WINNIPEG, Canada**	
Host Genus **Culex tarsalis, pool of 2**	Species	Host Age/Stage **adult**
Sex **Female**		
Isolated From	Isolation Details	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method **flock trap**	Collection Date **8/16/1977**	
Place Collected (Minimum of City, State, Country) **Morris, Manitoba**		
Latitude **49° N**	Longitude **97° W**	
Macrohabitat **grassy plain (prairies) surrounded by shelter belt trees in the Red River Valley**	Microhabitat **near a flock of chickens**	Method of Storage until Inoculated **processed immediately**
Footnotes		

Section III - Method of Isolation

Inoculation Date
8/16/1977

Animal (Details will be in Section 6)
(Tissue Culture)

Route Inoculated

Reisolation
Yes

Other Reasons

Homologous Antibody Formation by Source Animal

Test(s) Used
IFA

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) **1:5**	After Treatment Titer **<1.0 dex TCID50**	Control Titer **4.0 dex TCID50 (1)**
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer

Other (formalin, radiation)

Virion Morphology

Shape **rhabdovirus**	Dimensions **65-75 x 200-250 nm (1)**	
Mean nm	Range nm	
Measurement Method **EM (ultrathin sections)**	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	Antigen Source **vero cell culture**	Erythrocytes (species used) **goose**
pH Range **5.8-7.0**	pH Optimum	
Temperature Range	Temperature Optimum	

Remarks

Serologic Methods Recommended
IFA

Footnotes

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

Isolate Mn936-77 did not react by IFA with antibodies to 88 viruses definitely or putatively considered to be members of the family Rhabdoviridae and antibody to MN936-77 (titer 200) did not react by IFA with any of these 88 viruses. These included 24 viruses of the genus Vesiculovirus, 25 of the genus Lyssavirus, 5 Hart park, 3 Timbo,3 Matariya, 3 Sawgrass, 2 Ledantec, 3 Bahia Grande, 4 Kern Canyon groups, or to any of 16 serologically unrelated rhabdoviruses [2] .

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
BHK-21 cell cultures and 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)	V3	4	4+	6.0 (1)				
chick embryo (PC)	V3	4	3+	4.0 (1)				
mouse neuroblastoma (CL)	V3	4	3+	5.0 (1)				
C6/36 (CL)	V3	12	0	-				- (1)

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
Culex tarsalis	1/thousands		Manitoba, Canada (1)

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)	vero 1	ic .02	Asymptomatic in mice (brain suspension produced CPE in vero cells 7 days PI)	-	2.0 TCID50 (1)
"" (nb)		ip			
"" (nb)		sc			
"" (wn)		ic			
"" (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)

Suspected (Antibody only detected)

Section XIII - References

1. Artsob, H. et al. 1991. Can. J. Micorbiol. In press.
2. Calisher, C.H. et al. 1989. Intervirology 30:241-257.

Remarks