Virus Name: Erve		Abbreviation: ERVEV
Status **Possible Arbovirus**	Select Agent **No**	SALS Level

SALS Basis

Other Information

Antigenic Group
Ungrouped

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
Brest/An 221

Accession Number

Original Date Submitted
11/4/1987

Family

Genus
Bunyavirus like

Information From
Claude Chastel

Address
Virus Laboratory, Faculty of Medicine, BP 815 29285 Btest Cedex, France

Information Footnote

Section II - Original Source

Isolated By (name)
C. Chastel

Isolated at Institute
Brest, France

Host Genus
Crocidura russula

Species

Host Age/Stage
Adult

Sex
Not Answered

Isolated From	Isolation Details
Organs/Tissues	**Spleen and kidney**

Signs and Symptoms of Illness
Not obvious

Arthropod

Time Held Alive before Inoculation

Collection Method
Sherman trap

Collection Date
5/5/1982

Place Collected (Minimum of City, State, Country)
Saulges, Mayenne, France

Latitude
47° 59' N

Longitude
0° 20' W

Macrohabitat
Calcerous plateau with meadows and hedges

Microhabitat
Hedge

Method of Storage until Inoculated
Dry ice and then -70dC

Footnotes

Section III - Method of Isolation

Inoculation Date
9/16/1982

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons

Homologous Antibody Formation by Source Animal
No

Test(s) Used
CF

Footnotes

Section IV - Virus Properties

Physicochemical
RNA

Pieces (number of genome segments) **3**	Infectivity	Sedimentation Coefficients(s) (S)
Percentage wt, of Virion Protein	Lipid	Carbohydrate
Virion Polypeptides: Number	Details	
Non-virion Polypeptides: Number	Details	
Virion Density **1.17 g/cm3 in sucrose**	Sedimentation Coefficients(s) **490**(S)	
Nucleocapsid Density	Sedimentation Coefficients(s) (S)	

Stability of Infectivity (effects)

pH (infective range)
3.0: 3.2 dex loss

Lipid Solvent (ether - % used to test) **X**	After Treatment Titer **1.8 dex**	Control Titer **5.2 dex**
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer

Other (formalin, radiation)
Heating: 4.2 dex loss

Virion Morphology

Shape **Spherical**	Dimensions **About 100nm**	
Mean **98.6**nm	Range **78-118**nm	
Measurement Method **electron microscopy**	Surface Projections/Envelope **Surface projections: possible; trilamellar**	Nucleocapsid Dimensions, Symmetry

envelope: 7-8 nm

Morphogenesis

Site of Constituent Formation in Cell	Site of Virion Assembly	Site of Virion Accumulation
Cytoplasm	**Golgi apparatus and cytoplasmic vesicles**	**Extracellular spaces**

Inclusion Bodies	Other
No	

Hemagglutination

Hemaggiutination	Antigen Source	Erythrocytes (species used)
No	**SMB ext. by sucrose-acetone**	**Goose**

pH Range	pH Optimum

Temperature Range	Temperature Optimum

Remarks
Chick erythrocytes also tried

Serologic Methods Recommended
CF, NT and IFA

Footnotes
Chick erythrocytes also tried

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

No antigenic relatinship demonstrated with >165 antigens and >80 antibody reagents in the form of mouse immune ascitic fluids to individual viruses or immune grouping fluids. These tests included the use of reference strains of arboviruses and other viruses at YARU, hantaviruses at Seoul, Korea and at Brest, France and 3 viruses of the family Toroviridae at Brest.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Spleen and kidney (LV)

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)
BHK-21 (CL)	7 SMB		No CPE			No Plaques		-
Aedes albopictus clone C6/36 (CL)	7 SMB		No CPE			No Plaques		-
Vero (CL)	7 SMB		No CPE			No Plaques		-
Vero, clone E6 (CL)	8 SMB	3-5	3+	5.2 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
Seabirds		1/215 (CF)	Brittany, France (10
Landbirds		0/33 (CF)	
Small wild mammals	3/116	2/116(CF)	Saulges area, Hayenne, France
Passeriforms	0/3	0/3 (CF)	
Small wild mammals		0/55 (CF)	"Parc d'Armorique", Brittany, France
Small wild mammals		0/57 (CF)	Exeter, Devon, Great Britain
Small wild mammals	0/129	0/129(CF)	Cap Sizun, Brittany, France
Large wild mammals		7/668(CF)	France (Deux-Sevres, Haute-Marne, Hautes-Pyrennees) (2)
Humans (blood donors)		21/378(IFA)	Western France (3)
Humans (blood donors)		17/334(CF)	

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)	Ann 221 (4th pass)	ic	Paralysis, death	7	6.7
"" (nb)		ip	None		
"" (nb)		sc			
"" (wn)		ic	None		
"" (wn)		ip	None		

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)
In infected suckling mouse brain; meningeal infiltration with round cells, neurone necrosis; perivascular cuffing and endothelitis

Inclusion Bodies — Intranuclear

Organs/Tissues Affected
Brain (no lesions observed in liver, spleen, kidney, lung)

Category of tropism
Neurotropic

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)
Western France (4)

Suspected (Antibody only detected)
France (2)

Section XIII - References

1. Chastel, C., et.al. 1985. Bull. Soc. Path. Ex. 78:594-605.
2. Le Lay-Rogues, G., et.al. 1987. Med. Mal. Infec. 6/7:370-376.
3. Richard, P., DEA Biologie Cellulaire et Moleculaire, UBO, Rennes, September 1987, 99 pages.
4. Chastel, C., et.al. VII Intern. Cong Virology, Edmonton, Canada, Aug. 1987, R3-12.

Remarks