Virus Name: Ponteves	Abbreviation: PTVV

Status
Possible Arbovirus

Select Agent
No

SALS Level
3

SALS Basis
Isufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.

Other Information

Antigenic Group
Uukuniemi

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
Larves 6

Accession Number

Original Date Submitted
10/24/1984

Family
Bunyaviridae

Genus
Uukuvirus

Information From
C. Hannoun

Address
Laboratoire des Arbovirus Institut Pasteur, Paris 15, France

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
C. Hannoun et al (1)

Isolated at Institute
Paris, France

Host Genus
Argas reflexus, pool of 200, from eggs hatched in lab.

Species

Host Age/Stage
Larvae

Sex
Not Answered

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation
4 weeks after hatching

Collection Method
Females collected by hand; eggs laid in the lab

Collection Date
5/18/1966

Place Collected (Minimum of City, State, Country)
Ponteves, farm near Le Sambuc, France

Latitude
43° N

Longitude
4° E

Macrohabitat
Camargue, Rhone delta

Microhabitat
Pigeon house, wall crevices

Method of Storage until Inoculated
Held alive in lab without feeding

Footnotes

Section III - Method of Isolation

Inoculation Date
11/30/1966

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)

Lipid Solvent (ether - % used to test)	After Treatment Titer	Control Titer
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate) **1:1000**	After Treatment Titer **5.8 dex**	Control Titer **7.0 dex**

Other (formalin, radiation)

Virion Morphology

Shape	Dimensions	
Mean nm	Range nm	
Measurement Method	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	Erythrocytes (species used)
No	**SMB ext. by sucrose-acetone or 3 fluorocarbon extractions**	**Goose**
pH Range **5.8-7.0**	pH Optimum	
Temperature Range **RT**	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF

Footnotes

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

HI test:

Mouse hyperimmune serum for Ponteves tested against 8 units of each of the following antigens: Sindbis, chikungunya, yellow fever, West Nile, SLE, Ntaya, MVE, dengues 1 and 2, CEE, Bunyamwera, Tahyna, Sicilian SF, Naples SF. The serum diluted 1:10 failed to inhibit HA.
CF test:

The following hyperimmune sera or ascitic fluids were tested against Ponteves antigen (homologous titer with mouse serum 128/32*): Group A, Group B, Group Bunyamwera, Group Sandfly fevers, West Nile, Tahyna, Grand Arbaud, Uukuniemi [2] .
An immune serum against Potepli virus, a strain of Uukuniemi virus [3] , was also included in the test.

The only positive results were as follows:

Antigen	Antiserum			
	Ponteves	Grand Arbaud	Uukuniemi	Potepli
Ponteves	128/32 *	16/32	4/16	-
Grand Arbaud	2 /2	64/32	64/8	-
Uukuniemi	-	2/8	32/16	64/64

* Serum titer/antigen titer; - = <2/<2

These reactions suggest a relationship between Ponteves and Uukuniemi; and also a one-sided relationship between Ponteves and Grand Arbaud. However, Grand Arbaud is not identical to Uukuniemi.

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)	
BHK-21 (CL)	SMB 3				5	Plaques			

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
Argas reflexus (larvae) *	1/29 pools		Camargue, Southern France, 1966
	1/1 pool		Camargue, Southern France, 1968

* Larvae from eggs laid in lab. Oct. 1966 by females collected May 1966 (transtadial and transovarial passage of virus).

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)	SMB 3	ic 0.02	Paralysis, death	6	7.5
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)	SMB 3	ic 0.03	Paralysis, death	7-8	7.0
Mice (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)
In the brain of experimentally infected suckling mice (passage 3): disseminated foci of encephalitis, sometimes hemorrhagic, principally in the anterior brain and cerebellum.

Inclusion Bodies — Intranuclear

Organs/Tissues Affected
Brain (LV)

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)
Southern France

Suspected (Antibody only detected)

Section XIII - References

1. Hannoun, C., et al. 1970. Acta Virol. 14:167-170.
2. Oker-Blom, N., et al. 1964. Ann. Med. Exper. Biol. Fenniae 42:109-112.
3. Kolman, J.M., et al. 1966. Acta Virol. 10:171-172.
4. Hannoun, C. and Rau, U. 1970. Folia Parasitol. 17:365-366.

Remarks