

Virus Name: Punta Salinas		Abbreviation: PSV
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Hughes		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation Ar 888	Accession Number	Original Date Submitted 11/27/1984
Family Bunyaviridae	Genus Nairovirus	
Information From Harald N. Johnson and Jordi Casals	Address California Dept. of Health, Berkeley, CA and Yale Arbovirus Research Unit, New Haven, CT	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) Harald N. Johnson	Isolated at Institute	
Host Genus Ornithodoros amblus, pool of 10 ticks	Species	Host Age/Stage Adult
Sex Not Answered		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method By hand	Collection Date 10/14/1967	
Place Collected (Minimum of City, State, Country) Punta Salinas, Huacho, Peru		
Latitude 11° S	Longitude 78° W	
Macrohabitat Guano bird colony, rocky peninsula	Microhabitat In cracks in rocks	Method of Storage until Inoculated Held alive in plastic bags with rock debris
Footnotes		

Section III - Method of Isolation

Inoculation Date
12/11/1967

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Not tried

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)	After Treatment Titer	Control Titer

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

Hemagglutination
No

Antigen Source
SMB ext. by sucrose-acetone

Erythrocytes (species used)
Goose

pH Range
6.0-7.0

pH Optimum

Temperature Range
37dC

Temperature Optimum

Remarks

Serologic Methods Recommended
CF, NT

Footnotes

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

Complement-fixation test. Grouping immune sera or ascitic fluids for the following listed groups, reacted negatively against Punta Salinas antigen. The sera were in dilutions from 1:4 and up and the antigen in dilution 1:8. The grouping reagents used were: Group A, B, C, Anopheles A, Bunyamwera, Bwamba, California, Capim, Guama, Nyando, Palyam, rhabdoviruses, Simbu, Tacaribe, Tete, and VSV.

The following type specific immune sera or ascitic fluids, in dilutions from 1:4 and up, have reacted negatively with antigen Punta Salinas, in dilution 1:8: Aruac, Changuinola, Cotia, Kern Canyon, LCM, Lukuni, Nariva, Pacui, rabies and Tembe. In cross complement-fixation tests with about 40 distinct non-group B tick-borne viruses, Punta Salinas serum and antigen reacted only with members of the Hughes group. An example of the relationship is shown in the table:

Antigen	Complement-Fixation Test	
	Punta Salinas	Soldado
Hughes	32	8
Farallon	32	8
Soldado	8	128
Punta Salinas	128	8

Serum titers against 8 and 16 units of antigen.

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)		

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
Ornithodoros amblus	1/7		Peru
Ornithodoros amblus (nymphs)	0/3		
Argas arboreus (from rookeries)	1		Tanzania (2)

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)	Original	ic 0.015	6/6 sick, 10 days	12	
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)	P2	ic 0.015	6/6 sick, 6 days	10	
Mice (wn)		ip			
Mice (nb)		ic 0.015			

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

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) Peru
Suspected (Antibody only detected)

Section XIII - References

1. Johnson, H.N. and Casals, J. 1972. In: Transcontinental Connections of Migratory Birds and their Role in the Distribution of Arboviruses; edited by Cherepanov, A.I., et al. Publishing House "NAUKA". Siberian Branch, Novosibirsk.
2. Converse, J.D., et al. 1981. Trans. Roy. Soc. Trop. Med. Hyg. 75:755-756.

Remarks
