Virus Name: Pichinde	Abbreviation: PICV

Status
Not Arbovirus

Select Agent
No

SALS Level
2

SALS Basis
Level 2 arenaviruses are not known to cause serious acute disease in man and are not acutely pathogenic for laboratory animals, including primates. Survey experience is sufficient to conclude that laboratory aerosol infection does not occur in the course of routine work with cell cultures and animals not subject to chronic infection. In view of reported high frequency of laboratory aerosol infection that occurred in workers manipulating high concentrations of Pichinde virus, it is strongly recommended that work with high concentrations of Level 2 arenaviruses be done at Level 3.

Other Information

Antigenic Group
Tacaribe

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
An 3739

Accession Number

Original Date Submitted
11/25/1984

Family
Arenaviridae

Genus
Arenavirus

Information From
Carlos Sanmartin

Address
Cali Virus Laboratory, Universidad del Valle, Cali, Colombia

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
Cali Virus Laboratory (1)

Isolated at Institute
Cali, Colombia

Host Genus
Oryzomys albigularis

Species

Host Age/Stage
Young adult

Sex
Female

Isolated From	Isolation Details
Organs/Tissues	**Liver, spleen and kidney pool**

Signs and Symptoms of Illness
None observed

Arthropod

Time Held Alive before Inoculation

Collection Method
Trapped alive

Collection Date
8/5/1965

Place Collected (Minimum of City, State, Country)
Pichinde Valley, Colombia

Latitude
3° 25' N

Longitude
76° 35' W

Macrohabitat
Fog forest at elevation of 1800 meters

Microhabitat
Forested ravine

Method of Storage until Inoculated
Screw capped vial at -60dC

Footnotes

Section III - Method of Isolation

Inoculation Date
8/17/1965

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons
No viruses of this group in the labor

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical
RNA, Single Strand

Pieces (number of genome segments)
2 viral

Infectivity

Sedimentation Coefficients(s)
30-31S; 22-24S(S)

Percentage wt, of Virion Protein

Lipid

Carbohydrate

Virion Polypeptides: Number
4 (8)

Details
VI, VII: 72,000 MW; VIII: 34,000 MW; VIV: 12,000 MW; VII, VIII = glycoproteins; VI = ribonucleoprotein (8).

Non-virion Polypeptides: Number

Details

Virion Density

Sedimentation Coefficients(s)
(S)

Nucleocapsid Density

Sedimentation Coefficients(s)
(S)

Stability of Infectivity (effects)

pH (infective range)
Relatively thermostable; stable between pH 5.5 to 9.0 (5).

Lipid Solvent (ether - % used to test)

After Treatment Titer
Sensitive (5)

Control Titer

Lipid Solvent (chloroform)

After Treatment Titer

Control Titer

Lipid Solvent (deoxycholate)
1:1000

After Treatment Titer
<2.0 dex

Control Titer
5.3 dex

Other (formalin, radiation)
Replication not inhib. by IUDR and ara-C. Inhib. by 1-4 ,g/ml actinomycin D (5).

Virion Morphology

Shape

Dimensions
60-280 nm

Mean
nm

Range
nm

Measurement Method

Surface Projections/Envelope

Nucleocapsid Dimensions,

Electron microscopy (4)	**Envelope observed (4)**	Symmetry

Morphogenesis

Site of Constituent Formation in Cell	Site of Virion Assembly	Site of Virion Accumulation
Inclusion Bodies	Other	

Hemagglutination

Hemaggiutination **No**	Antigen Source **SMB ext. by sucrose-acetone**	Erythrocytes (species used) **Goose**
pH Range **6.0-7.4**	pH Optimum	
Temperature Range **4dC, 37dC**	Temperature Optimum	

Remarks

Serologic Methods Recommended

Footnotes

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

Pichinde crude brain antigen did not react in CF with mouse immune ascitic fluids for A, B, C, and Bunyamwera groups, Tacaribe, Junin, Machupo and Amapari. A low titer (4/10) CF result was observed with Tacaribe group MIAF. By plaque NT the virus also was shown to be different from Tacaribe, Juninn, Machupo, Amapari and Tamiami [1] . Further CF tests with all known members of the Tacaribe group indicated that Pichinde is related to Tamiami [2] , [3] .

Results of Complement-fixation tests [2]

	Immune ascitic fluid	
	Pichinde	**Tamiami**
Antigen	**An 3739**	**W-10777**
Pichinde	>256/32 *	4/4
Tamiami	64/>64	128/> 128

* Serum titer/antigen titer

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV), CNS (LV), lung (LV), liver (LV), spleen (LV), kidney (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice, hamsters

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)		4	CPE (1)		2	Plaques (5)			
BS-C-1 (CL)						Plaques (5)			
Rabbit kidney (PC)						Plaques (5)			
BHK-21 (CL)			Replication (8)						

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
Oryzomys albigularis	45/230		Pichinde, Colombia
Oryzomys albigularis	7/32		Munchique, Colombia
Oryzomys albigularis	2/8		Guatape, Colombia
Thomasomys fuscatus	1/173		Pichinde, Colombia
Thomasomys fuscatus	0/5		Guatape, Colombia
Other rodents	0/771		Pichinde, Colombia
Other rodents	0/16		Munchique, Colombia
Other rodents	0/22		Guatape, Colombia
Marsupials	0/43		Pichinde, Colombia
Marsupials	0/4		Munchique, Colombia
Marsupials	0/4		Guatape, Colombia
Insectivore	0/1		Pichinde, Colombia
Carnivore	0/3		
Ixodes tropicalis larvae	4 pools		
Ixodes tropicalis nymphs	5 pools		
Gigantolaelaps inca	3 pools		
Gigantolaelaps sp.	1 pool		
Man (laboratory workers)		6/13 CF	USA (7)

Approximately 13,000 ectoparasites processed. All isolations were from ectoparasites collected on viremic hosts.

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)	SM11, SH2	ic 0.02	Death	8.1	4.9*
Mice (nb)		ip 0.05	Death	11.8	4.9
Mice (nb)		sc			
Mice (wn)		ic			
Mice (wn)		ip			
Mice (6 wk)		ic 0.03	None observed		
Mice (6 wk)		ip 0.1	Production of CF antibody		
hamster (nb)		ic 0.03	Death	7.8	4.9
hamster (nb)		ip 0.1	Death	9.6	4.9
hamster (nb)		sc 0.1	Death	9.6	4.9
hamster (ad)		ic 0.03	None observed		4.9
hamster (ad)		ip 0.1	None observed		4.9
hamster (ad)		sc 0.1	None observed		4.9

* The titer per ml. is based on ic inoculation of 0.02 ml in 2 day-old mice.

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)
Colombia

Suspected (Antibody only detected)

Section XIII - References

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Remarks