

Virus Name: Chilibre		Abbreviation: CHIV
Status Probable Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Phlebotomus Fever		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation VP-118D	Accession Number	Original Date Submitted 8/5/1984
Family Bunyaviridae	Genus Phelbovirus	
Information From Robert B. Tesh	Address Yale Arbovirus Research Unit	
Information Footnote Revised		

Section II - Original Source

Isolated By (name) R. Tesh and P. Peralta (1)	Isolated at Institute MARU, Panama	
Host Genus Lutzomyia (mixed species)	Species	Host Age/Stage 87 adults
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod Depleted	
Time Held Alive before Inoculation 12-14 hrs on wet ice		
Collection Method Hand aspirator	Collection Date 9/30/1969	
Place Collected (Minimum of City, State, Country) Limbo Hunt Club, Canal Zone, Panama		
Latitude 9° 10' N	Longitude 79° 44' W	
Macrohabitat Moist tropical forest	Microhabitat Tree buttresses	Method of Storage until Inoculated Liquid nitrogen, then at -60dC
Footnotes		

Section III - Method of Isolation

Inoculation Date 10/13/1969	
Animal (Details will be in Section 6) (Tissue Culture)	
Route Inoculated	Reisolation Yes
Other Reasons	
Homologous Antibody Formation by <u>Source Animal</u>	
Test(s) Used	
Footnotes	

Section IV - Virus Properties

Physicochemical RNA, Single Strand		
Pieces (number of genome segments) X	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)	
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<u>Stability of Infectivity (effects)</u>		
pH (infective range)		
Lipid Solvent (ether - % used to test)	After Treatment Titer	Control Titer
Lipid Solvent (chloroform) 5%, 10 min	After Treatment Titer <2.8 dex	Control Titer 4.9 dex
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer
Other (formalin, radiation)		
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<u>Virion Morphology</u>		
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 Not tried	Antigen Source	Erythrocytes (species used)
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pH Range	pH Optimum
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Temperature Range	Temperature Optimum
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Remarks

Serologic Methods Recommended
NT

Footnotes

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

Despite five serial blind passages (ic) in newborn mice and hamsters, Chilibre virus did not produce illness or death in these animals. Attempts to produce CPE and CF antigen with Chilibre in MA-111, BHK-21, L-cells, LLC-MK2, primary mouse embryo, and primary RMK cells were also unsuccessful, thus CF tests were not performed.

Cross-neutralization tests (plaque method) using Chilibre virus and hyperimmune hamster sera (hamsters immunized with infected Vero cells; homologous titer = 1024) were done against each of the following viruses and specific antisera with negative results: Naples, Punta Toro, Chagres, Icoaraci, Candiru, Itaporanga, Karimabad, Sicilian, Gabek Forest, Anhangá, Urucuri, Salehabad, Buenaventura, Frijoles, Nique, Caimito, Cacao, Aguacate, Charleville, Rift Valley fever, Alenquer, Gordil, Saint-Floris, Tehran, Toscana, and Itaituba.

Slight neutralizing activity against Chilibre virus was noted with Pacui, Bujaru and Arumowot antisera as follows:

Antiserum	Virus			
	Chilibre	Pacui	Bujaru	Arumowot
Chilibre	1024 *	<16	<16	<16
Pacui	64	4096	<16	<16
Bujaru	16	<16	<16	<16
Arumowot	64	<16	<16	2048

* Reciprocal of highest serum dilution giving >90% plaque reduction .

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Vero cell cultures

Cell system (a)	Virus passage history (b)	Evidence of Infection						
		CPE			PLAQUES			Growth Without CPE +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
Vero (CL)	Vero 3	6	3-4+		10	<1 mm	6.3**	

Chilibre virus did not produce CPE in cell lines MA-111, BHK-21, LLC-MK2, L cells, and primary mouse embryo or RMK cells.

** Expressed in 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
Lutzomyia sp. (males)	1/70,043		Canal Zone, Panama(1)
Lutzomyia sp. (females)	1/86,202		
Lutzomyia trapidoi (males)	0/9,906		
Lutzomyia trapidoi (females)	0/63,985		
Lutzomyia ylephilatrix (females)	0/24,376		

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 3(VP-1180)	ic 0.02	None (despite 5 blind passages)			
Mice (nb)		ip				
Mice (nb)		sc				
Mice (wn)		ic				
Mice (wn)		ip				
hamster (nb)		ic 0.02	No illness			
hamster (wn)	ip 0.1	Antibody				

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
Aedes albopictus		1.1	10	32			2.9		Plaques in Vero cell cultures (3)
Culex quinquefasciatus		1.1	10	32			<1.0		Plaques in Vero cell cultures (3)

Section X - Histopathology

Character of lesions (specify host)		
<u>Inclusion Bodies</u>	<u>Intranuclear</u>	
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) Panama
Suspected (Antibody only detected)

Section XIII - References

1. Tesh, R.B., et al. 1974. Am. J. Trop. Med. Hyg. 23:258-269. 2. Tesh, R.B., et al. 1975. Am. J. Trop. Med. Hyg. 24:135-144. 3. Tesh, R.B., et al. 1975. J. Med. Ent. 12:1-4.
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Remarks
