

Virus Name: Caimito		Abbreviation: CAIV
Status Possible 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-488A	Accession Number	Original Date Submitted 7/5/1984
Family Phlebovirus	Genus	
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 Middle America Research Unit, Panama	
Host Genus Lutzomyia ylephilatrix (pool of 57)	Species	Host Age/Stage Adults
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod Depleted	
Time Held Alive before Inoculation 2-3 hours		
Collection Method Hand aspirator	Collection Date 1/21/1971	
Place Collected (Minimum of City, State, Country) El Aguacate, Panama Prov.		
Latitude 8° 45' N	Longitude 79° 58' W	
Macrohabitat Secondary forest (abandoned coffee plantation)	Microhabitat Aspirated from tree branches on canopy platform at 18 meters	Method of Storage until Inoculated Liquid nitrogen, then at -60dC
Footnotes		

Morphogenesis

Site of Constituent Formation in Cell Site of Virion Assembly Site of Virion Accumulation

Inclusion Bodies Other

Hemagglutination

Hemagglutination Antigen Source Erythrocytes (species used)

Not tried

pH Range pH Optimum

Temperature Range Temperature Optimum

Remarks

Serologic Methods Recommended

CF, NT

Footnotes

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

Caimito antigen (homologous titer = 64/128) did not react in CF tests with immune sera for groupd A, B, C, Phlebotomus fever, Tacaribe, Capim, Simbu, California nd Bunyamwera; or with specific antisera for Anopheles A and B, Turlock Manzanilla, VS-Indiana, VS-New Jersey, VS-Alagoas, Cocal, Piry, Chandipura, Charleville and Changuinola.

In cross-CF tests, Caimito antigen and hamster immune serum failed to react with any of the following Phlebotomus fever group antigens or specific antisera: Naples, Sicilian, Punta Toro, Chagres, Icoaraci, Candiru, Itaporanga, Darimabad, Buenaventura, Gabek Forest, Anhanga, Bujaru, Arumowot, Salehabadk, Urucuri, Frijoles, Nique, Chilibre, Cacao, Aguacate or Pacui [2]. In cross-plaque neutralization tests, Caimito virus and immune serum also failed to react with any of the following Plebotomus fever group virus and immune reagents: AGU, ANH, AMT, BUE, BUJ, CAC, CDU, CHG, CHI, FRI, GF, GOR, THE, ICO, TOS, ITA, ITP, KAR, NIQ, PT, RVF, RG, SAF, SAL, SFN, SFS, TUA, and URU. CAI immune serum (homologous titer = 40) inhibited ALE and PAC viruses to a 1:10 dilution in PRNT [2], [3].

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 2	5	3-4+		6-7	1 mm	5.7*	

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

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 log ₁₀ /ml
mice (nb)	488A	ic	death	5.5	5.9
mice (nb)	Vero 2, HB 4, MB 1	ip			
mice (nb)		sc			
mice (wn)		ic			
mice (wn)		ip			
hamster (nb)		ic 0.02	death		
hamster (wn)		ip 0.1	antibody		

NOTE: Caimito virus was originally isolated in Vero cell cultures. It required four serial blind passages (ic) in newborn hamsters before it produced illness and death.

Section IX - Experimental Arthropod Infection and Transmission

Arthropod species & virus source(a)	Method of Infection log ₁₀ /ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log ₁₀ /ml (e)		
	Feeding	Injected	Days	°C	Host	Ratio	Whole	Organ	System
Caimito virus did not multiply or survive after inoculation in <i>Aedes albopictus</i> or <i>Culex quinquefasciatus</i> mosquitoes (4).									

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. Unpublished data. 4. Tesh, R.B. 1975. J. Med. Ent. 12:1-4.

Remarks
