

Virus Name: Aruac		Abbreviation: ARUV
Status Probable Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Ungrouped		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation TRVL 9223	Accession Number	Original Date Submitted 1/24/1985
Family Rhabdoviridae	Genus Not listed	
Information From Trinidad Regional Virus Laboratory	Address P.O. Box 164, Port of Spain, Trinidad	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) TRVL (1)	Isolated at Institute Port of Spain, Trinidad	
Host Genus Trichoprosopon theobaldi (32 mosquitoes)	Species	Host Age/Stage Adult
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method	Collection Date 8/26/1955	
Place Collected (Minimum of City, State, Country) Human baitCounty St. Andrew, Trinidad		
Latitude 10° 38' N	Longitude 61° 3' W	
Macrohabitat Melajo Forest, Northeast Trinidad	Microhabitat Evergreen seasonal forest; mosquitoes taken at ground level	Method of Storage until Inoculated Held alive overnight at 4dC before sorting and grinding
Footnotes		

Section III - Method of Isolation

Inoculation Date		
Animal (Details will be in Section 6) nb mice		
Route Inoculated Intracerebral	Reisolation No	
Other Reasons		
Homologous Antibody Formation by <u>Source Animal</u>		
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)	
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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)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer
Other (formalin, radiation)		
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<u>Virion Morphology</u>		
Shape Bullet-shaped virions (4)	Dimensions	
Mean nm	Range nm	
Measurement Method By electron microscopy (4)	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 acetone-ether; sucrose-acetone

Erythrocytes (species used)

Goose

pH Range

6.0-7.0

pH Optimum

Temperature Range

4dC, 22dC, 37dC

Temperature Optimum

Remarks

Serologic Methods Recommended

CF

Footnotes

An antigen prepared from Aruac virus failed to react in CF with the following mouse hyperimmune sera:

EEE	Spondweni	Chenuda (EgAr 1152)
WEE	Zika	Anopheles A
Semliki	Makonde	Wad Medani
Chikungunya	Ntaya	Turlock
Sindbis	Oriboca	Bwamba
Ilheus	Marituba	Rift Valley fever
St. Louis	Apeu	Simbu
Dengue	Catu	Mengo
Yellow fever	Guama	Lukuni
Rio Bravo	Bimiti	Triniti
JBE	SF Naples	Ieri
West Nile	Tacaiuma	Nepuyo
RSSE	Quaranfil (EgAr 1095)	Tacaribe
		GD VII

It was reported that a weak CF cross with Triniti and Ieri viruses has been observed [1], but this could not be confirmed at TRVL nor by Downs [2]. It is, therefore, for the present listed as an ungrouped virus.

Aruac virus was shown to be related to an unregistered virus isolated in French Guyana [5]. The extent of the antigenic relation between these two viruses has not been defined. Therefore, provisionally, Aruac will continue to be listed as an ungrouped virus (ed.).

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 +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
Hamster kidney (PC)	MB 12		No CPE					
BHK-21 (CL)	P-unk.	5	2+-3+	6.5 ** (6)				
Vero (CL)	P-5					No plaques (7)		
LLC-MK2 (CL)						No plaques (7)		
C6/36 (CL)	P-16				6-7	Plaques	5.7 ** (8)	

** Expressed in dex

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Man	0/2,500	0/30 NT	Trinidad
Cebus (monkey)	0/26		
Alouatta (monkey)	0/79		
Birds	0/2,300	NTantibody	Trinidad (3)
Sentinel mice	0/4,303		Trinidad
Trichoprosopon theobaldi	1		Melajo Forest, Trinidad
Wyeomyia sp.	1		
Psorophora ferox	1		Rio Grande Forest, Trinidad
Phoniomyia spp.	2		
Culex sp.	4		3 forest areas, Trinidad
Sabethes chloropterus	1		Rio Grande Forest, Trinidad

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 14	ic 0.02	Illness, death	4-6	6.0
Mice (nb)	SMB 10	ip 0.03	None		
Mice (nb)		sc			
Mice (wn)		ic 0.03	None		
Mice (wn)	SMB 14	ip 0.2	None		
chick emb. (10 day)	SMB 11	am.s.	None		
chick emb. (10 day)		al.c.	None		
chick emb.(7 day)		ys	Virus present after 13 passages		

Section IX - Experimental Arthropod Infection and Transmission

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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) Trinidad
Suspected (Antibody only detected)

Section XIII - References

1. Spence, L., et al. 1966. Am. J. Trop. Med. Hyg. 15:231-234.
2. Downs, W.G. Personal communication.
3. Spence, L., et al. 1968. Progr. Med. Virol. 10:415-486.
4. Harrison, A., et al. Personal communication. 1981.
5. Yale Arbovirus Research Unit, New Haven, CT. Unpublished.
6. Karabatsos, N. and Buckley, S.M. 1967. Am. J. Trop. Med. Hyg. 16:99-105.
7. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
8. Karabatsos, N. Unpublished data.

Remarks
