Virus Name: Triniti	Abbreviation: TNTV

Status
Probable Arbovirus

Select Agent
No

SALS Level
2

SALS Basis
Results of SALS surveys and information from the Catalogue.

Other Information

Antigenic Group
Ungoruped

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
TRVL 7994

Accession Number

Original Date Submitted
1/24/1985

Family
Togaviridae

Genus
Not listed

Information From
Trinidad Reg. Virus Lab.

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 spp., pool of 37 mosquitoes

Species

Host Age/Stage

Sex
Not Answered

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Human bait

Collection Date
5/31/1955

Place Collected (Minimum of City, State, Country)
St. George County, Trinidad

Latitude
10° 33' N

Longitude
61° 15' W

Macrohabitat
Arena Forest (now timber plantation)

Microhabitat
Formerly evergreen seasonal forest; collection at ground level

Method of Storage until Inoculated
Held alive at 4dC overnight before sorting and grinding

Footnotes

Section III - Method of Isolation

Inoculation Date
6/1/1955

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical
RNA

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 **1.18 gm/ml in sucrose (6)**	Sedimentation Coefficients(s) (S)	
Nucleocapsid Density	Sedimentation Coefficients(s) (S)	

Stability of Infectivity (effects)

pH (infective range)
Sensitive to pH 3.0; titer reduced >2.0 dex (6)

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 **<2.5 dex**	Control Titer **5.2 dex**

Other (formalin, radiation)

Virion Morphology

Shape **Spherical; resemble Togaviridae (6)**	Dimensions **65 nm (6)**	
Mean nm	Range nm	
Measurement Method **By electron microscopy**	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

Hemaggiutination	Antigen Source	Erythrocytes (species used)
No	**SMB ext. by sucrose-acetone**	**Goose**
pH Range **6.0-7.0**	pH Optimum	
Temperature Range	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF, NT

Footnotes

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

No antigenic relationship has been demonstrated with any of a number of arboviruses as listed in Reference [1] .

It was reported that a weak CF cross with Aruac and Ieri viruses had been observed [2] , but this could not be confirmed at TRVL nor by Downs [3] . It is, therefore, for the present listed as an ungrouped virus.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn and adult mice

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, LLC-MK2, hamster kidney (PC)	MB 24		No CPE						
Vero (CL)	P-26				18	1 mm	5.9* (5)		
LLC-MK2 (CL)					6	4 mm	6.6 (5)		

* 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
Man	0/2,800		Trinidad
Man		4/95 NT	Vega de Oropouche and Rio Claro, Trinidad
Alouatta seniculus insularis	0/79	0/28 NT	
Cebus albifrons trinitatis	0/26	0/1 NT	
Wild birds	0/2,705		Trinidad
Wild mammals (mainly rodents	0/1,000		
Trichoprosopon spp.	1		Arean Forest, Trinidad
Other mosquitoes and arthropods	0/120,000		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)	MB 21	ic 0.02	Death	6	5.8
Mice (nb)	MB 22	ip 0.03	Death	9	3.8
Mice (nb)		sc			
Mice (wn)	MB 21	ic 0.03	Death	9	6.4
Mice (wn)		ip 0.2	No illness		
chick emb.(10 day)	MB 22	am.s.	No propagation		
chick emb. (10 day)		al.c.	No propagation		
chick emb. (7 day)		ys	No propagation		
chicks (1 day)	MB 21	im 0.5	None		
hamsters (ad)	MB 22	ic 0.05	Death	11	
guinea pigs (ad)		ic 0.05	Antibodies		

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
Triniti virus (21st mouse passage) was serially passaged (intrathoracic inoculation of 5 salivary gland pairs) at 1 or 2 week intervals five times through Aedes taeniorhynchus, Ae serratus and Ae scapularis; Culex quinquefasciatus appeared refractory to serial passage, however, obvious maintenance of virus in some species but successful transmission to day-old mice were few. Four transmissions effected by Ae taeniorhynchus (after 14 days incubation); 2 with Ae serratus (15 day incubation) and one with Cx quinquefasciatus (after 14 days incubation but during the first passage) (4).									

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)
Trinidad

Suspected (Antibody only detected)

Section XIII - References

1. Spence, L., et al. 1964. Am. J. Trop. Med. Hyg. 13:114-117.
2. Whitman, L. Personal communication (in Reference 1).
3. Downs, W.G. Personal communication.
4. Spence, L. Personal communication.
5. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
6. El Mekki, A.A. , et al. 1981. Trans. Roy. Soc. Trop. Med. Hyg. 75:799-806.

Remarks