Virus Name: Kairi		Abbreviation: KRIV
Status **Arbovirus**	Select Agent **No**	SALS Level **3**

SALS Basis
Disease is sheep, cattle, or horses.

Other Information

Antigenic Group
Bunyamwera

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation	Accession Number	Original Date Submitted
TRVL 8900		2/3/1985

Family	Genus
Bunyaviridae	**Bunyavirus**

Information From	Address
Trinidad Reg. Virus Laboratory	**P.O. Box 164, Port of Spain, Trinidad**

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)	Isolated at Institute	
TRVL (1)	**Port of Spain**	
Host Genus **Aedes (Och) scapularis (285 mosquitoes)**	Species	Host Age/Stage **Adult**

Sex
Female

Isolated From	Isolation Details
Signs and Symptoms of Illness	Arthropod

Time Held Alive before Inoculation

Collection Method	Collection Date
Human bait	**8/9/1955**

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

Latitude	Longitude
10° 38' N	**61° 3' W**

Macrohabitat	Microhabitat	Method of Storage until Inoculated
Melajo Forest, Northeast Trinidad	**Evergreen seasonal forest; mosquitoes taken at ground level**	**Held alive overnight at 4C before sorting and grinding**

Footnotes

Section III - Method of Isolation

Inoculation Date
8/10/1955

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

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)	

Stability of Infectivity (effects)

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 **<2.6 dex**	Control Titer **6.4 dex**

Other (formalin, radiation)

Virion Morphology

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

Hemaggiutination **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 and NT

Footnotes

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

Kairi virus has been shown to fall in the Bunyamwera group. For relation to other members of this group see Reference [2] . For list of viruses with which it has been compared without detection of any relationship, see Reference [1] .
SIRACA has antigenically classified Kairi virus as a distinct virus type, and has placed it in the Kairi complex of the Bunyamwera serogroup [8] .

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Spleen (LV), kidney (LV), urine (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn hamster

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)	
Hamster kidney (PC)	SMB 19		No CPE						
HeLa (CL)	MB 10 TRVL 8900		CPE	6.7** (7)					
BHK-21 (CL)					7	0.5-1.5 mm	5.3** (6)		
Vero (CL)					9	3-4 mm	3.7 (6)		

** 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	0/2,500	9/86 NT	Trinidad
Saimiri (monkey)	1		Belem (3)
Cebus (monkey)	0/26	1/18 NT	Trinidad
Alouatta (monkey)	0/79	0/34 NT	
Donkey		11/19 NT	
Birds	0/2,300		
Sentinel mice	0/4,303		
Sentinel monkey	1		Belem, Brazil (3)
Oecomys	1		
Aedes (Och) scapularis	4		Melajo Forest, Trinidad
Aedes (Och) scapularis	1		Belem, Brazil (5)
Aedes (Och) scapularis	1		Guayacasira, Colombia (4)
Aedes taeniorhynchus	1		
Wyeomyia spp.	2		Melajo Forest, Trinidad
Wy aporonoma	1		
Wy ypsipola	1		Archer Est. Trinidad
Psorophora ferox	2		Melajo Forest,
Psorophora ferox	1		Belem, Brazil (3)
Sabethini	1		
Culex spissipes	1		Melajo 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)	MB 17	ic 0.02	Illness and death	2-3	4.6
Mice (nb)		ip 0.03	Illness and death	3-4	4.0
Mice (nb)		sc			
Mice (wn)		ic 0.03	Illness and death	5-8	2.8
Mice (wn)	MB 19	ip 0.2	None		
chick emb.(10 day)	MB 18	am.s.	Virus present after 5 passages		
" " (10 day)		al.c.	None		
" " (7 day)		ys	Virus present after 5 passages		

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
Aedes scapularis, Ae taeniorhynchus, Culex quinquefasciatus and Mansonia titillans inoculated parenterally with 20th MB passage virus transmitted the virus to 2-day-old mice by bite, and the virus was carried through varying numbers of mosquito inoculation passages. (9)									

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; Brazil; Colombia

Suspected (Antibody only detected)

Section XIII - References

1. Anderson, C.R., et al. 1960. Am. J. Trop. Med. Hyg. 9:70-72.
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6. Bergold, G.H. and Mazzali, R. 1968. J. Gen. Virol. 2:273-284.
7. Buckley, S.M. 1964. Proc. Soc. Exp. Biol. 116:354-358.
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Remarks