

Virus Name: Pathum Thani		Abbreviation: PTHV
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Dera Ghazi Khan		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation Ari 753	Accession Number	Original Date Submitted 11/25/1984
Family Nairovirus	Genus	
Information From M.I. Moussa and R.E. Williams	Address U.S. NAMRU-3 c/o U.S.I.S., Spanish Embassy, Cairo, Egypt, A.R.E.	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) U.S. NAMRU-3	Isolated at Institute Cairo, Egypt	
Host Genus Argas robertsi	Species	Host Age/Stage nymphs
Sex Not Answered		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method by hand	Collection Date 3/24/1970	
Place Collected (Minimum of City, State, Country) Pathum Thani		
Latitude 14° 1' N	Longitude 100° 32' E	
Macrohabitat	Microhabitat open-billed stork colony (Anastomus ascitans)	Method of Storage until Inoculated ticks held alive until triturated and inoculated
Footnotes		

Section III - Method of Isolation

Inoculation Date
5/27/1970

Animal (Details will be in Section 6)
nb mice

Route Inoculated
intracerebral

Reisolation
Not tried

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) 1:100	After Treatment Titer <1.0 dex	Control Titer 5.5 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

Hemagglutination Antigen Source Erythrocytes (species used)
No **SMB ext. by sucrose-acetone** **goose**

pH Range pH Optimum
5.8-7.0

Temperature Range Temperature Optimum

Remarks

Serologic Methods Recommended
CF

Footnotes

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

By CF, no relationship could be demonstrated to the following agents: SIN, DEN-1, LGT, POW, Royal Farm (ArT 371), UGS, WN, YF, ZIKA, BUN, MTR, COR, ACD, DUG, CNU, KEM, TRB, WM, LJV, SIL, BEA, MTY, QYB, QRF, AMT, SFS, GA, MWA, DHO, THO, NYM, UPO, WAN, EgAn 6165-63 (SIM group), EgAn 1825-61 (UUK group), ArT 619, ArT 1147, SudAr 1275-64, SudAr 1225-64, SudAr 1169-64. A CF relationship has been demonstrated with DGK and Kao Shuan (ArT 904).

Pathum Thani Antigen			Pathum Thani Immune Serum		
Immune Sera	Ht/Ho	CF	Antigens	Ht/Ho	CF
		Ratio			Ratio
DGK	<8/512	>1/64	DGK	8/128	1/16
Kao Shuan	<8/128	>1/16	Kao Shuan	32/128	1/4

Pathum Thani virus and other members of the DGK serogroup share intergroup relationships with viruses of serogroups CHF-CON, HUG, NSD, QYB, and SAK, all of which comprise the Nairovirus genus [1], [2].

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
newborn mice

Cell system (a)	Virus passage history (b)	Evidence of Infection							Growth Without CPE +/- (g)
		CPE			PLAQUES				
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)		

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
Argas robertsi	4/95		Thailand

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 8	ic .01	death	7	5.7
mice (nb)		ip .02	death	11	3.5
mice (nb)		sc			
mice (wn)		ic .03	anitbody		
mice (wn)		ip .2	antibody		
hamsters (3 wk)		ic .03	antibody		
rabbits (4 wk)		ic .05	antibody		
guinea pigs (7 day)		ic .03	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

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)
Suspected (Antibody only detected)

Section XIII - References

1. Casals, J. and Tignor, G.H. 1980. Intervirology 14:144-147. 2. Bishop, D.H.L., et al. 1980. Intervirology 14:125-143.

Remarks
