

Virus Name: Gurupi		Abbreviation: GURV
Status Possible Arbovirus	Select Agent No	SALS Level 3
SALS Basis Insufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.		
Other Information		
Antigenic Group Changuinola		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation BeAr 35646	Accession Number	Original Date Submitted 10/11/1984
Family Reoviridae	Genus Orbivirus	
Information From F. Pinheiro and Amelia P.A.T. Rosa	Address Instituto Evandro Chagas, FSESP, Ministry of Health, CP-621, 66.000-Belem, Para, Brazil	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) Belem Virus Laboratory	Isolated at Institute Instituto Evandro Chagas	
Host Genus Lutzomyia sp. (1)	Species	Host Age/Stage Adult
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Organs/Tissues		
Signs and Symptoms of Illness	Arthropod Depleted	
Time Held Alive before Inoculation 25-50 hours		
Collection Method Human bait	Collection Date 9/15/1961	
Place Collected (Minimum of City, State, Country) Belem-Brasilia Highway, km. 94, Para State, Brazil		
Latitude 3° S	Longitude 48° W	
Macrohabitat Virgin forest	Microhabitat Ground level	Method of Storage until Inoculated -60dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
9/25/1961

Animal (Details will be in Section 6)
nb mice

Route Inoculated Intracerebral	Reisolation No
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Other Reasons
Antigenically distinct from other viruses isolated in this laboratory

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 6.5 dex	Control Titer 6.4 dex (3)
Lipid Solvent (deoxycholate) 1:1000	After Treatment Titer 4.5 dex	Control Titer 4.6 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 + sonication** **Goose****

pH Range pH Optimum
5.8-7.0

Temperature Range Temperature Optimum
25-27dC

Remarks
**** Green monkey erythrocytes also tested**

Serologic Methods Recommended
CF and NT

Footnotes
**** Green monkey erythrocytes also tested**

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

Related by CF to Irituia virus (BeAn 28873) of the Changuinola group as follows [2] :

Antigen	Serum or Ascitic Fluid				
	Irituia [3i]	Gurupi [6i]	Ourem [4i]	Caninde [5i]	Control
Irituia	16/64 ^a	32/64	64/16	128/64	0
Gurupi	32/64	32/64	64/16	128/64	0
Ourem	8/16	32/16	>256/64	64/64	0
Caninde	32/64	64/64	64/16	128/64	0
Control	0	0	0	0	0

^a Antibody titer/antigen titer; 0 = <4

Results of plaque-reduction cross-neutralization tests with Changuinola group viruses performed at YARU were as follows [3] :

Virus	Serum								
	CGL	GUR	Bt766	Bt2365	Bt104	OUR	Bt2164	CoAr2837	IRI

CGL	>256	0	>256	0	0	0	0	0	0
Gurupi	0	>256	0	4	0	8	0	0	0
Bt 766	>256	0	256	4	4	0	0	0	0
Bt 2365	0	0	0	64	0	0	128	2	0
Bt 104	0	0	0	0	32	0	0	0	0
Ourem	0	0	0	0	0	>256	0	0	0
Bt 2164	0	0	0	32	0	0	32	2	0
CoAr 2837	0	2	0	2	0	0	0	>256	0
Irituia	0	0	0	0	0	0	0	0	256

0 = <2

CGL = Changuinola; GUR = Gurupi; OUR = Ourem; IRI = Irituia

Results of neutralization tests performed in infant mice (ic route) at the Evandro Chagas Institute were as follows:

Virus	Ascitic Fluid or Serum					
	IRI [5i] ^b	GUR [5i] ^b	OUR [4i] ^b	CAN [5i] ^c	JAM [5i] ^c	ALT [4i] ^c
Irituia	3.0 ^d				<1.0	0.8
Gurupi		2.5			<0.3	<0.3
Ourem			3.9		<1.0	<0.9
Ar 54342				3.0	0.8	0.4
Jamanxi	0.2	0.3	0	0.5	3.0	0
Altamira	1.1	1.2	1.0	1.0	0.9	>3.1

^b Ascitic fluid

^c Serum

^d LNI in dex

CAN = Caninde; JAM = Jamanxi; ALT = Altamira

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						
		CPE			PLAQUES			Growth Without CPE +/- (g)
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	
Vero (CL)	SMB 13	2nd	4+	7.25 (e)				

(e) 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 sp.	1/128 (8,535 insects)		Belem-Brasilia highway, km. 85- 107, Para Brazil

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) Para State, Amazon region of Brazil
Suspected (Antibody only detected)

Section XIII - References

1. Travassos da Rosa, A.P.A., et al. 1984. Intervirology 21:38-49. 2. Director, Belem Virus Laboratory. Personal communication. 1966. 3. Baker, S.T. Thesis, Yale University School of Medicine, 1972.

Remarks

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