Virus Name: Irituia		Abbreviation: IRIV
Status **Possible Arbovirus**	Select Agent **No**	SALS Level **2**

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

Other Information

Antigenic Group
Changuinoal

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
BeAn 28873

Accession Number

Original Date Submitted
2/27/1985

Family
Reoviridae

Genus
Orbivirus

Information From
Belem Virus Lab

Address
Belem Virus Laboratory, Instituto Evandro Chagas, Belem, Para, Brazil

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
Belem Virus Laboratory

Isolated at Institute
Belem, Para, Brazil

Host Genus
Oryzomys sp.

Species

Host Age/Stage
Adult

Sex
Not Answered

Isolated From	Isolation Details
Serum/Plasma	

Signs and Symptoms of Illness
None observed

Arthropod

Time Held Alive before Inoculation

Collection Method
Trapped

Collection Date
3/29/1961

Place Collected (Minimum of City, State, Country)
Belem, Brasilia Highway, km 92, Brazil

Latitude
3° S

Longitude
48° W

Macrohabitat
Virgin forest

Microhabitat
Ground level

Method of Storage until Inoculated
Not stored

Footnotes

Section III - Method of Isolation

Inoculation Date
3/29/1961

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons

Homologous Antibody Formation by Source Animal
Not tested

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) **1:1000**	After Treatment Titer **3.8 dex**	Control Titer **5.0 dex**

Other (formalin, radiation)
Labile at pH 3.0; relatively stable to lipid solvents and SDC (7)

Virion Morphology

Shape	Dimensions **65-80 nm**	
Mean nm	Range nm	
Measurement Method **Electron microscopy (6)**	Surface Projections/Envelope **Envelope absent (6)**	Nucleocapsid Dimensions, Symmetry **Icosahedral symmetry (6)**

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)
Yes	**BHK-21 cells, clone 13; untr. cent. cell cult. fl. 48 hr post- infection.**	**Human O**
pH Range **6.0-7.2**	pH Optimum **7.2**	
Temperature Range	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF, NT

Footnotes

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

Related by CF to Changuinola (BT 436).

By CF testing not related to Groups A, B, C, Guama, California, Bunyamwera or Capim; or to Oropouche, Mirim, Tacaiuma, Piry, Icoaraci, Pacui or Acara.
Comparison of Changuinola with Irituia by CF as follows:

Antigens	Mouse Hyperimmune Sera	
	BT 436	BeAn 28873
Changuinola (BT 436)	16/32 *	32/32
Irituia (BeAn 28873)	0/0	64/32
Normal brain	0/0	0/0

* Serum titer over antigen titer.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Blood (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn 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)	
BHK-21 (CL)	P-7				4-5	Plaques	5.2** (2)		
Chick embryo (PC)						Plaques (2)			
HeLa (CL)	SMB 2		CPE	3.7** (3)					
Vero (CL)	P-8				4	1 mm	7.6 (4)		
LLC-MK2					3	4 mm	7.1 (4)		
Aedes aegypti(CL)			Multiplication (5)						
Ae albopictus (CL)			Multiplication (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
Oryzomys sp.	1		Para, Brazil (1)

3 CF-related strains isolated from Lutzomyia spp. (phlebotomines) in Para, Brazil, are separable by NT from BeAn 28873 and from each other.

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 3	ic 0.02	Death	2.5	6.2
Mice (nb)		ip 0.02	None		
Mice (nb)		sc			
Mice (wn)		ic 0.03	Antibody		
Mice (wn)		ip 0.03	Antibody		

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

Section X - Histopathology

Character of lesions (specify host)
SM: encephalitis only (L.B. Dias)

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)
Brazil

Suspected (Antibody only detected)

Section XIII - References

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5. Buckley, S.M. 1972. J. Med. Ent. 9:168-170.
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7. Borden, E.C., et al. 1971. Ibid. 13:261-271.

Remarks