Virus Name: Purus		Abbreviation: PURV
Status **Possible Arbovirus**	Select Agent **No**	SALS Level **3**

SALS Basis
Isufficient 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	Accession Number	Original Date Submitted
BeAr 361064		9/26/1984

Family	Genus
Orbivirus	

Information From	Address
F.P. Pinheiro and Amelia P.A.T. Rosa	**Instituto Evandro Chagas, FSESP, Ministry of Health, CP-621, Belem, Para, Brazil**

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)	Isolated at Institute	
Gilberta Bensabath	**Instituto Evandro Chagas**	
Host Genus	Species	Host Age/Stage
Psorophora (Jan) albipes, pool of 25 (1)		**adult**

Sex
Female

Isolated From	Isolation Details

Signs and Symptoms of Illness

Arthropod
Depleted

Time Held Alive before Inoculation
2-3 hours

Collection Method	Collection Date
human bait at ground level	**12/1/1977**

Place Collected (Minimum of City, State, Country)
Sena Madureira (Bairro Triangulo), Acre

Latitude	Longitude
9° 3' S	**68° 39' W**

Macrohabitat	Microhabitat	Method of Storage until Inoculated
secondary growth forest	**ground level**	**liquid nitrogen and mechanical freezer (-60dC)**

Footnotes

Section III - Method of Isolation

Inoculation Date
2/8/1980

Animal (Details will be in Section 6)
nb mice

Route Inoculated
intracerebral

Reisolation
No

Other Reasons

Homologous Antibody Formation by Source Animal

Test(s) Used

Footnotes

Section IV - Virus Properties

Physicochemical
RNA, Double Strand

Pieces (number of genome segments)
10

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
3.6 dex

Control Titer
3.5 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

Hemaggiutination	Antigen Source	Erythrocytes (species used)
No	**SMB ext. by sucrose-acetone + sonication**	**goose**
pH Range **5.8-7.0**	pH Optimum	
Temperature Range **room, 37dC**	Temperature Optimum	

Remarks

Serologic Methods Recommended
CF and NT

Footnotes

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

A CF antigen and antibody for virus strain BeAr 361064, with a homologous titer of 256/32, reacted with Changuinola virus and various other viruses of the Changuinola serogroup. Results of neutralization testing are presented below.

Neutralization Test (Newborn Mice, ic Route)

Virus	Sera											
	IRI	GUR	OUR	CAN	JAM	ALT	CGL	Purus	Jari	Monte Dourado	Saraca	Almeirim
Irituia	2.4 [a]						0.6	0.3	0.3	0.0	0.0	0.7
Gurupi		2.6					0.7	<=1.7	0.0	0.9	1.0	0.9
Ourem			3.7				0.3	1.2	1.2	0.6	0.7	0.3
Caninde				3.0			<=0.3	0.8	0.8	0.1	1.9	0.4
Jamanxi					3.1		<=0.6	0.8	<=0.2	0.6	<=0.2	<=0.2
Altamira						3.6	<=0.3	1.2	<=0.8	1.0	<=0.8	<=0.5
Changuinola	<1.0	<1.1	<1.0	<1.0	<1.1	<1.0	2.1	<=1.0	<=1.0	<=1.1	<=1.0	<=1.0
Purus	0.6	0.4	0.6	0.7	0.3	0.4	1.0	2.5	0.0	0.2	<=0.5	0.3
Jari	0.6	0.6	0.0	0.4	0.4	0.8	0.3	<=0.1	1.7	0.0	0.0	0.0
Monte Dourado	<=0.7	<=0.7	0.7	1.4	<=0.8	<=0.7	<=0.5	1.2	<=0.4	3.0	<=0.7	0.8
Saraca	<=0.8	<=0.8	<=0.8	1.7	<=0.9	<=0.8	<=1.2	1.1	<=1.0	<=0.8	3.0	<=1.1
Almeirim	0.0	0.5	<=0.3	<=0.3	<=0.3	<=0.3	0.4	0.8	0.0	<=0.3	0.2	2.4

[a] LNI in dex

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	
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	+/- (g)	
Vero (CL)	SMB 3	6	4+		8	1mm	5.5 [b]		

[b] 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
Psorophora (Jan) albipes	1/14,871		Sena Madureira area, Acre State, Brazil
Other Culicidae	0/152,121		
Phlebotomines (females)	0/796		
Phlebotomines (males)	0/466		

Purus virus was not isolated from blood or viscera of the following animals captured in Sena Madureira from 1976 to 1978: 252 marsupials, 945 rodents, 17 primates, 1 edentate, 63 bats, 173 reptiles, 617 wild birds, and 680 domestic birds.

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 4	ic 0.02	illness, death	3.5	
mice (nb)		ip 0.02	survived		
mice (nb)		sc			
mice (wn)		ic 0.03	survived		
mice (wn)		ip 0.03	survived		
mice (nb)	SMB 7	ic 0.02	death		6.2

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)

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)

Suspected (Antibody only detected)

Remarks

1. Travassos da Rosa, A.P.A., et al. 1984. Intervirology 21:38-49.