

**Virus Name: Jurona**

**Abbreviation: JURV**

**Status:** Possible Arbovirus

**SALS Level:** 2

**Antigenic Group:** Vesicular Stomatitis

**Taxonomic status:** *Vesiculovirus*

**Other Information:** None.

**Select Agent:**

**SALS Basis:** S

**HEPA Filtration:**

**Section I - Full Virus Name and Prototype Number**

**Full Virus Name:**

**Jurona**

**Prototype Number:**

BeAr 40578

**Information from:** Belem Virus Lab.

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**Date:**

1/27/1985

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

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Reviewed by editor

**Section II - Original Source**

**Isolated by:** Belem Virus Laboratory

**at:** Belem, Para, Brazil

**Genus and species:** Haemagogus sp.

**Sentinel** X

**Age/Stage:** Adult

**Sex:** F

Isolated From	Isolation detail
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**Signs and symptoms of illness:**

**Arthropod engorged** ~~depleted~~ **gravid**

**Time held alive before inoculation:**

**Collection date:** 3/3/1962 **Method:** By hand off human bait

**Place collected:** Belem-Brasilia Highway, km 87, Brazil

**Latitude:** 3° ' ' S

**Longitude:** 48° ' ' W

**Macrohabitat:** Virgin forest

**Microhabitat:** Canopy

**Method of storage until inoculated:** -60dC

**Footnotes:**

**Section III - Method of Isolation and Validity**

**Inoculation Date:** 3/12/1962

**Animal:** nb mice

**Embryonated egg:**

**Tissue Culture:**

(Details in Section VI - Biologic Char.)

**Route inoculated:** Intracerebral

**Reisolation:** Yes

**Other reasons:**

**Homologous antibody formation by source animal** (See Section II):

**Test used:** HI

CF

NT

**Other:**

**Footnotes:**

#### Section IV - Virus Properties

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##### Physicochemical:

RNA: DNA: Single Strand: Double Strand:  
Pieces: Infectivity: Sedimentation coefficient(s): /strong>  
Percentage wt. of virion protein , lipid carbohydrate  
Virion polypeptides:  
Number: Details:  
Non-virion polypeptides:  
Number: Details:  
Virion density: Sedimentation coefficient:  
Nucleocapsid density Sedimentation coefficient:

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##### Stability of infectivity (effects) pH

Lipid solvent:  
(ether) After treatment titer Control titer  
(chloroform) After treatment titer Control titer  
Detergent:  
(deoxycholate) 1:1000 After treatment titer <3.5 dex Control titer 6.3 dex  
Other (formalin, radiation):

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##### Virion morphology:

Shape Bullet-shaped (5) Dimensions  
Mean (nm) range (nm) how measured  
Surface projections, envelope  
Nucleocapsid dimensions, symmetry

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##### Morphogenesis:

Site of constituent formation in cell  
Site of virion assembly  
Inclusion bodies  
Other

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##### Hemagglutination:

Hemagglutination Yes Antigen source SMB ext. by sucrose-acetone + protamine  
Erythrocytes Goose pH range 6.1-6.2 pH optimum 6.2  
Temperature optimum 37dC range  
Remarks  
Serologic methods recommended CF, HI, NT  
Footnotes:

## Section V - Antigenic Relationship And Lack of Relationship To Other Viruses

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Jurona HA antigen inhibited by Oropouche 1:20 (8 units) Simbu Grouping serum 1:10, Bunyamwera Grouping serum 1:40.

Jurona serum did not react with EEE, Aura, Una, Mayaro, YF, Ilheus, Bussuquara, SLE, Oriboca, Murutucu, Caraparu, Guama, Maguari, Guaroa, Icoaraci, Tacaiuma, Turlock, Candiru, Anhangá. in the HI test.

In CF Jurona antigen did not react with grouping sera of Groups A, B, C, Guama, Capim, Bunyamwera, Phlebotomus fever, California, Simbu, Bakau; nor with sera of epizootic hemorrhagic disease of deer-NJ, Navarro, Trinita, Ieri, Aruac, Tacaribe, Hart Park, CTF, Anopheles A and B, Panama J55, Tete, Cas Cas, TRVL 42336, Nyamanini, Witwatersrand, Quarantil, Lebombo, SF Sicilian, Bwamba, Wad Medani, Mossuril, Wongal, Mapputta, Wanowrie, Ganjam (IG 3159), Nodamura, Tsuruse, K-622, Chenuda, VSNJ, Mirim, Oropouche, Icoaraci, Palyam, Tacaiuma, Turlock, Cocal, Lukuni, Candiru, Piry, Pacui, Acara, Irituia, Marco, Timbo, Chaco, or Anhangá.

Following the observation that Jurona virus possessed rhabdovirus morphology [5] , it was serologically placed in the VSV serogroup [6] .

**Section VI - Biologic Characteristics**

**Virus source (all VERTEBRATE isolates):**

**Lab Methods of Virus Recovery (ALL ISOLATIONS):** Newborn mice

**Susceptibility of Cell Culture Systems:**

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)	
BHK-21 (CL)	P-5				<4	Plaques	8.3* (4)	
Chick embryo (PC)					2-3	2 sizes	7.0 (4)	
Turkey embryo (PC)						Plaques	6.0 (4)	
GMK (CL)			CPE (4)					
Vero (CL)					2	8 mm	7.7 (3)	
LLC-MK2 (CL)					4	11 mm	7.2 (3)	

\* Expressed in dex

**Section VII - Natural Host Range**

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested	Test used	Country and region
Haemagogus spegazzinii Birds, forest	1			Para, Brazil (1)
		Of 174 sampled by HI, 10% had low-titered antibody not confirmable by NT (2).		

**Section VIII - Susceptibility To Experimental Infection (Record Viremia)**

Experimental host and age	Passage history and strain	Inoculation Route-Dose	Evidence of infection	AST (days)	Titer log10/ml
Mice (nb)	P-2	ic 0.02	Death	1.3	8.0
Mice (nb)		ip 0.02	Death	1.5	
Mice (nb)		sc			
Mice (wn)		ic 0.03	Antibody		
Mice (wn)		ip 0.03	Antibody		

**Section IX - Experimental Arthropod Infection And Transmission**

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Arthropod species & virus source(a)	Method of Infection log <sub>10</sub> /ml (b)		Incubation period (c)		Transmission by bite (d)		Assay of arthropod, log <sub>10</sub> /ml (e)		
	Feeding	Injected	Days	°C	Host	Ratio	Whole	Organ	System

**Section X - Histopathology**

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**Character of lesions:** Occasional lesions of the thymus (L.B. Dias)

**Inclusion bodies:**

**Cytoplasmic:**(M) (LV)      **Intranuclear:** (M)      (LV)

**Organs-tissues affected:**

**Category of tropism:**

**Section XI - Human Disease**

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**Human disease:**      **In nature:**      (S) (R)

**Death:**      (S) (R)

**Residua:**      (S) (R)

**Laboratory infections: Subclinical:**      (S) (R)

**Overt Disease:**      (S) (R)

**Clinical manifestations:**

**Category:**      **No. of cases:**

**Section XII - Geographic Distribution**

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**Known (virus):**

Brazil

**Section XIII - References**

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1. Woodall, J.P. 1967. Atas Simpos. Biota Amazon. 6:31-63.
2. Shope, R.E., et al. 1966. Am. J. Epidem. 84:467-477.
3. Stim, T.B. 1969. J. Gen. Virol. 5:329-338.
4. Pinheiro, F.P. Personal communication.
5. Araujo, R. Personal communication. 1982.
6. Tesh. R.B., et al. 1983. J. Gen. Virol. 64:169-176.

**Section XIV - Remarks**

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