| Virus Name: Caninde | Abbreviation: CANV |
|---|---|

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
**BeAr 54342**

Accession Number

Original Date Submitted
10/12/1984

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
**Inst. Evandro Chagas**

Host Genus
**Lutzomyia sp. (1)**

Species

Host Age/Stage
**Adult**

Sex
**Female**

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation
**25-50 hours**

Collection Method
**Unknown**

Collection Date
**3/15/1963**

Place Collected (Minimum of City, State, Country)
**Belem-Brasilia highway, km 87, Para, 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
**4/17/1963**

Animal (Details will be in Section 6)
**nb mice**

Route Inoculated
**Intracerebral**

Reisolation
**No**

Other Reasons
**First virus of this type 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<br>**5.8 dex** | Control Titer<br>**6.3 dex (2)** |
| Lipid Solvent (deoxycholate)<br>**1:1000** | After Treatment Titer<br>**5.5 dex** | Control Titer<br>**5.3 dex** |

Other (formalin, radiation)

**Virion Morphology**

| | |
|---|---|
| Shape | Dimensions |
| Mean<br>nm | Range<br>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, sonicated** | **Goose **** |

| pH Range | pH Optimum |
|---|---|
| **5.8-7.0** | |

| Temperature Range | Temperature Optimum |
|---|---|
| **37dC** | |

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] :

| | Serum or Ascitic Fluid | | | | |
|---|---|---|---|---|---|
| **Antigen** | **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 = <1:4

Results of neutralization tests performed in infant mice (ic route) at the Evandro Chagas Institute were as follows [3] :

| | Ascitic fluid | | | |
|---|---|---|---|---|
| **Virus** | **Irituia** | **Gurupi** | **Ourem** | **Caninde** |

| | | | | |
|---|---|---|---|---|
| Irituia | 2.8+ | 1.0 | 0.8 | 1.2 |
| Gurupi | 0.8 | 2.3 | 0.7 | 0.5 |
| Ourem | 0.2 | 0.9 | 2.1 | 0 |
| Caninde | 0.5 | 0.3 | 0.9 | 2.8 |

| | Ascitic Fluid or Serum | | | | | |
|---|---|---|---|---|---|---|
| **Virus** | **Irituia [5i] [b]** | **Gurupi [5i] [b]** | **Ourem [4i] [b]** | **Caninde [5i] [c]** | **Jamanxi [3i] [c]** | **Altamira [4i] [c]** |
| Irituia | 3.0 [d] | | | | <1.0 | 0.8 |
| Gurupi | | 2.5 | | | <0.3 | <0.3 |
| Ourem | | | 3.9 | | <1.0 | <0.9 |
| Caninde | | | | 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

## 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 5 | 3 | 4+ | 6.75 (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, Amazon region of Brazil |

## 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 2 | ic | Death | 3.0 | |
| Mice (nb) | | ip | None | | |
| Mice (nb) | | sc | | | |
| Mice (wn) | | ic | Irregular deaths | | |
| Mice (wn) | | ip | None | | |
| Mice (nb) | SMB 5 | ic | Death | | 7.2 |

## 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)
**Para State, Amazon region ofBrazil**

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. Director, Belem Virus Laboratory. Personal communication. 1965.


## Remarks