

|  |                           |                           |
|--|---------------------------|---------------------------|
| <b>Virus Name: Sakpa</b>   |                           | <b>Abbreviation: SPAV</b> |
| Status<br><b>Possible Arbovirus</b>  | Select Agent<br><b>No</b> | SALS Level<br><b>3</b>    |
| SALS Basis<br><b>Insufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.</b> |                           |                           |
| Other Information  |                           |                           |
| Antigenic Group<br><b>ungrouped</b>  |                           |                           |

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

|  |   |   |
|--|---|---|
| Prototype Strain Number / Designation<br><b>AnB 1398</b> | Accession Number  | Original Date Submitted<br><b>10/2/1984</b> |
| Family<br><b>unclassified</b>                            | Genus   |   |
| Information From<br><b>J.P. Digoutte</b>                 | Address<br><b>Institut Pasteur, B.P. 304, 97305 Cayenne, Guyane Francaise</b> |   |
| Information Footnote<br><b>Reviewed by editor</b>        |   |   |

**Section II - Original Source**

|   |  |   |
|---|--|---|
| Isolated By (name)<br><b>J.P. Digoutte and M. Germain</b>           | Isolated at Institute<br><b>Bangui, Central African Republic</b> |   |
| Host Genus<br><b>Praomys (= Mastomys)</b>                           | Species  | Host Age/Stage<br><b>adult</b>                              |
| Sex<br><b>Male</b>  |  |   |
| <u>Isolated From</u>  | <u>Isolation Details</u>   |   |
| Signs and Symptoms of Illness<br><b>organs/tissues</b>              | Arthropod  |   |
| Time Held Alive before Inoculation                                  |  |   |
| Collection Method<br><b>by trap</b>                                 | Collection Date<br><b>2/20/1972</b>                              |   |
| Place Collected (Minimum of City, State, Country)<br><b>Botambi</b> |  |   |
| Latitude<br><b>4° 12' N</b>   | Longitude<br><b>18° 30' E</b>                                    |   |
| Macrohabitat<br><b>clearing in equatorial moist forest</b>          | Microhabitat<br><b>banana plantation</b>                         | Method of Storage until Inoculated<br><b>revoc at -75dC</b> |
| Footnotes   |  |   |

**Section III - Method of Isolation**

Inoculation Date  
3/22/1972

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

Route Inoculated  
**ic and ip**

Reisolation  
**No**

Other Reasons  
**first virus of this type in 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)<br><b>5%</b> | After Treatment Titer<br><b>&lt;1.5 dex</b> | Control Titer<br><b>5.5 dex</b> |
| Lipid Solvent (deoxycholate)            | After Treatment Titer                       | Control Titer                   |

Other (formalin, radiation)

**Virion Morphology**

|   |                              |                                   |
|---|------------------------------|-----------------------------------|
| Shape   | Dimensions                   |                                   |
| Mean nm   | Range nm                     |                                   |
| Measurement Method<br><b>filtration through Millipore 450nm; after filtration titer</b> | 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<br><b>No</b>              | Antigen Source<br><b>SMB ext. by sucrose-acetone</b> | Erythrocytes (species used)<br><b>goose</b> |
| pH Range<br><b>5.8-6.8</b>                 | pH Optimum   |   |
| Temperature Range                          | Temperature Optimum<br><b>room temperature</b>       |   |
| Remarks                                    |  |   |
| Serologic Methods Recommended<br><b>CF</b> |  |   |
| Footnotes                                  |  |   |

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

CF test - Homologous titer = 32/2 Institut Pasteur (Dakar) [2].

AnB 1398 gives negative results with the following viruses: Group A; Semliki Forest virus, chikungunya, o'nyong-nyong, Igbo-Ora (B 543), Sindbis, ArY 251, Middleburg, Ndumu. Group B; Ntaya, Bagaza (ArB 209), Wesslesbron, ArY 310, Usutu, ArY 276, West Nile, Koutango (AnD 5443), Dakar bat, Uganda S, Saboya (AnD 4600), Banzi, Bouboui (ArB 490), yellow fever, Zika, Spondweni, Bukalasa bat (AnD 595), Royal Farm (T 285), Kadam (UgAr 6640), Cambodia (AnC 38), AnY 589. Bunyamwera; Bunyamwera, Germiston, Ilesha, Shokwe, Birao (ArB 2198). Simbu; Buttonwillow, Ingwavuma, Simbu, Nola (ArB 2882). Bwamba; Bwamba, Pongola. California; Lumbo. Olifantsvlei; Olifantsvlei, Bobia (ArB 1569), Botambi (ArB 937). Tete; Tete (SAAN 3518), Bahig (EgB 90), Matruh (EgAn 1047), DakAnB 1442, AnB 1292, AnB 1544, AnB 1564. Phlebotomus; Arumowot (SudAr 1284), Gabek Forest (AnD 3150), Gordil (AnB 496), Saint-Floris (AnB 512-Re), Zinga (ArB 1976). Boteke; Boteke (ArB 1077), Zingilamo (AnB 1245). Corriparta; Acado (EhAr 1846), Corriparta, ArB 3689. Eubenangee; Eubenangee (In 1074), Pata (ArB 1327). Matariya; Burg el Arab (EgAn 3782), Matariya (Eg 1477), Garba (AnB 423). Mossuril; Bangoran (ArB 2053), Mossuril, Kamese. Nyando; Eret 147 (AnY 176), Nyando. Turlock; Yaba 1 (ArB 365). Congo; Congo (IbAr 10200). NSD; Dugbe (IbAn 1792). Kemerovo; Chenuda, Wad Medani. Qalyub; Bandia (ArD 611), Qalyub (EgAr 370). Quarantil; Quarantil. Thogoto; Thogoto. Bhanja; Bhanja (ArD 9540). Keuraliba; Keuraliba (AnD 5314), Le Dantec (HD 763). Nyamanini; Nyamanini. Ungrouped; Lebombo, Nkolbisson, Okola, Tanga, Tataguine, Witwatersrand, Orungo (ArB 2078), SudAr 1275, Jos (ArD 15131), Somone (ArD 4499), IbAn 39048 (ArY T 34), Gossas (AnD 401), Toure (AnD 6411), Yogue (AnD 5634), AnD 11411, Yata (ArB 2181), Bangui (HB 754), Landjia (AnB 769), Gomoka (AnB 787), Kolongo (AnB 1094), Bimbo (AnB 1054), Ouango (AnB 1582), Bobaya (AnB 2208), Sandjimba (AnB 373), Ippy (AnB 188), Koumbala (AnB 160), AnB 277, AnB 1227, AnB 1398, AnB 904. AnYV 6, AnYV 177. Non arbovirus; herpesvirus (HB 3667).

AnB 1398 antigen failed to react with the following immune fluids: Group B; Entebbe bat, Montana Myotis leukoencephalitis, dengue1, 2, 3, 4, Potiskum (IbAn 10069). Simbu; Sango, Shamonda, Sabo, Shuni, Sathuperi, Yaba 7. California; Group serum. EHD; IbAr 22619. VSV; Chandipura (IbAn 9978). Phlebotomus; Goup serum. Kaisodi-Qalyub-Quarantil; Serum polyvalent (Johnston Atoll, Kaisodi, Bandia, Silverwater, Quarantil, Lanjan, Qalyub). Oukuniemi; Grand Arbaud, Ponteves, EgAn 1825. Bluetongue; Type 10 (IbAr 22618). AHS; IbAn 53177. Rabies serogrouped; Lagos bat. Ungrouped; IbAr 23380, IbAn 2898 (Oyo), IbAn 17143, Mount Elgon bat, IbAn 33709, IbAn 218946, EgAn 1398/61 (IbAn 39652). Non arbovirus; LCM-Rabies, IbAn 27377 and IbH 29777 (related to rabies), IbAn 20433 (NDV).

In addition, AnB 1398 antigen was screened against and gave negative results with NIH immune grouping fluids.

Results indicate that ArB 1398 is apparently a new virus.

**Section VI - Biologic Characteristics**

Virus Source (all VERTEBRATE isolates)  
**brain (LV), liver (LV), spleen (LV), heart (LV)**

Lab Methods of Virus Recovery (ALL ISOLATIONS)  
**newborn mice**

| Cell system<br>(a) | Virus passage<br>history (b) | Evidence of Infection |               |                       |            |             |                     |  | Growth<br>Without CPE<br>+/- (g) |
|--------------------|------------------------------|-----------------------|---------------|-----------------------|------------|-------------|---------------------|--|----------------------------------|
|                    |                              | CPE                   |               |                       | PLAQUES    |             |                     |  |                                  |
|                    |                              | Day<br>(c)            | Extent<br>(d) | Titer<br>TCD50/ml (e) | Day<br>(c) | Size<br>(f) | Titer<br>PFU/ml (e) |  |                                  |
|                    |                              |                       |               |                       |            |             |                     |  |                                  |
|                    |                              |                       |               |                       |            |             |                     |  |                                  |

**Section VII - Natural Host Range (Additional text can be added below table)**

| Vertebrate (species and organ) and<br>arthropod | No. isolations/No.<br>tested | No. with antibody/No. tested<br>Test used | Country and region              |
|---|------------------------------|---|---------------------------------|
| Praomys (rodent; organs)                        | 1/168                        |   | Central African<br>Republic (1) |
|   |                              |   |                                 |

**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 log <sub>10</sub> /ml |
|---------------------------|----------------------------|------------------------|-----------------------|------------|-----------------------------|
|                           |                            |                        |                       |            |                             |
| mice (nb)                 | SMB 6                      | ic 0.02                | death                 | 3          | 6                           |
| mice (nb)                 |                            | ip 0.02                | death                 |            |                             |
| mice (nb)                 |                            | sc                     |                       |            |                             |
| mice (wn)                 |                            | ic 0.03                | death                 | 5          |                             |
| mice (wn)                 |                            | ip 0.03                | death                 |            |                             |
| mice (ad)                 |                            | ic 0.03                | death                 |            |                             |
| mice (ad)                 |                            | ip 0.1                 | death                 |            |                             |

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

| 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**

Character of lesions (specify host)

**mouse brain; large focal necrosis in cortex and hippocampus, important meningeal reaction with granulocytes.**

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)

**Section XIII - References**

1. Digoutte, J.P. 1972. Rapport Annuel de l'Institut Pasteur de Bangui. p. 30.
2. Robin, Y. Personal communication.

**Remarks**