

Status: Possible Arbovirus

Select Agent:

SALS Level: 2

SALS Basis: S

Antigenic Group: Ungrouped

HEPA Filtration:

Taxonomic status: *Not listed*

Other Information: None.

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

Gomoka DakArB 2712

Information from: J.P. Digoutte **Date:**

* 8/9/1984

Address: Institut Pasteur B.P. 304 Cayenne Guyane Francaise

*

Reviewed by editor

Section II - Original Source**Isolated by:** J.P. Digoutte, R. Cordellier **at:** Bangui, Central African Republic**Genus and species:** Anopheles paludis **Sentinel X****Age/Stage:** Imagos **Sex:** F

Isolated From	Isolation detail
---------------	------------------

Signs and symptoms of illness:

Arthropod engorged depleted gravid

Time held alive before inoculation:**Collection date:** 5/1/1970 **Method:** Collected by hand**Place collected:** Near Bambio on the fourth parallel, Cent. Afr. Rep.**Latitude:** 3° 57' " N **Longitude:** 16° 58' " E**Macrohabitat:** Equatorial forest**Microhabitat:****Method of storage until inoculated:** Liquid nitrogen, Revco at -75dC**Footnotes:****Section III - Method of Isolation and Validity****Inoculation Date:** 5/20/1970**Animal:** nb mice **Embryonated egg:** **Tissue Culture:**

(Details in Section VI - Biologic Char.)

Route inoculated: ic and ip **Reisolation:** No**Other reasons:** First virus of this type in laboratory**Homologous antibody formation by source animal (See Section II):****Test used:** HI CF NT**Other:****Footnotes:**

Section IV - Virus Properties

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:

Stability of infectivity (effects) pH totally sensitive to pH 3.0 (3)

Lipid solvent:
(ether) 1:1 After treatment titer <2.0 dex Control titer 4.7 dex
(chloroform) After treatment titer <2.0 dex Control titer 4.5 dex
Detergent:
(deoxycholate) 0.2% After treatment titer <2.0 dex Control titer 4.0 dex
Other (formalin, radiation):

Virion morphology:

Shape Reoviridae-like (3) Dimensions 62-67 nm
Mean (nm) 65 nm range (nm) how measured EM (3)
Surface projections, envelope No envelope
Nucleocapsid dimensions, symmetry

Morphogenesis:

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

Hemagglutination:

Hemagglutination No Antigen source SMB ext. by sucrose-acetone
Erthrocytes Goose pH range 6.0-7.0 pH optimum
Temperature optimum range 4dC, RT, 37dC
Remarks
Serologic methods recommended CF, NT
Footnotes:

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

CF tests. Homologous = 8/4 Institut Pasteur (Dakar). DakArB 2172 gives negative results with the following viruses:

Group A;	Semliki Forest virus, chikungunya, o'nyong nyong, Begoa (DakHB 543), Sindbis, DakArY 251, Middelburg, Ndumu.
Group B;	Ntaya, Bagaza (DakArB 209), Wesselsbron, DakArY 276, West Nile, Koutango, Dakar bat, Uganda S, Saboya, Banzi, Bouboui, yellow fever, Zika, Spondweni, Bukalasa bat, Royal Farm, Kadam (UgAr 6640), Dak Ar 310, Usutu.
Bunyamwera;	Bunyamwera, Germiston, Ilhesha, Shokwe, Birao.
Simbu;	Ingwavuma, Simbu, DakAnB 331, DakArB 994, DakArB 1351.
Bwamba;	Bwamba, Pongola.
California;	Lumbo.
Olifantsvlei;	Olifantsvlei, Bobia, Botambi.
Turlock;	Yaba 1, M'Poko (DakArB 365).
Nyando;	Nyando, Eret 147, DakArY 176.
Mossuril;	Mossuril.
Matariya;	Garba (DakAnB 423).
Eubenangee;	Pata.
Phlebotomus;	Nafada (DakAnD 3150).
NSD;	Dugbe.
Kemerovo;	Chenuda, Wad Medani.
Qalyub;	Bandia.
Quaranfil;	Quaranfil.
Bhanja;	Bhanja (DakArD 9540).
Boteke;	Boteke.
Le Dantec;	Keuraliba, Le Dantec.
Nyamanini;	Nyamanini.
Thogoto;	Thogoto.
Miscellany;	Witwatersrand, Okola, Nkolbisson, Tataguine, Lebombo, Tanga, Jos (DakArD 91), Gossas, Gomoka, Somone (DakArD 4499), Toure, Zinga, Bangoran, Sandjimba, Yata, Landjia, Nola (DakArB 2882), Bangui, Kolongo (DakAnB 1094), Bimbo (DakAnB 1054), DakAnB 277, Ouango (DakAnB 1582), Saint-Floris (DakAn 512r), DakAnB 160, DakAnB 188.
Nonarbovirus;	Herpesvirus (DakHB 3667).

In addition, DakArB 2712 antigen failed to react with the following immune fluids:

Group B;	Entebbe bat, Montana Myotis leukoencephalitis, dengue 1, 2, 3, 4, Th Sman, TH-36.
Simbu;	Sango, Shamonda, Sabo, Shuni, Sathuperi, Yaba 7.
California;	Group serum.
Tete;	Tete, Matruh.
EHD-NJ;	Abadina (IbAr 22388), IbAr 22619.
Matariya;	Matariya, Burg el Arab.
Corriparta;	Acado.
VSV;	Chandipura (IbAn 9978).
Phlebotomus;	Group serum. Arumowot (IbAn 15736).
Kaisodi-Qalyub-Quaranfil;	Group serum (Johnston Atoll, Kaisodi, Bandia, Silverwater, Quaranfil, Lanjan, Qalyub).
Uukuniemi;	Grand Arbaud, Ponteves, EgAn 1825.
Congo;	Congo.
Bluetongue;	Type 7 (IbAn 22703), type 10 (IbAr 22618).

Rabies serogroup;	kotonkan, Lagos bat.
Miscellany;	SudAr 1275/64, IbAn 2898 (Oyo), IbAn 17143, Mount Elgon bat, IbAn 33709, IbAn 28946.
Nonarboviruses;	LCM-rabies, IbAn 27377 and IBH 29777 (related to rabies), IbAn 20433 (NDV).

Results indicate that DakArB 2712 is apparently a new virus.

Gomoka virus is related by IFA and CF to Arkonam and Ieri viruses and weakly cross-reacts by IFA and Great Island virus [3] . Gomoka, Arkonam and Ieri viruses form the new Ieri antigenic group.

Section VI - Biologic Characteristics

Virus source (all VERTEBRATE isolates): Blood (LV)

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

Susceptibility of Cell Culture Systems:

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
Anopheles paludis	1/45 pools		Central African Republic
Culex perfuscus	1/220 pools		
Andropadus virens (bird; blood)	2/251		

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)	SMB 8	ic 0.02	Death	3	4.5
Mice (nb)		ip 0.03	No illness		
Mice (nb)		sc			
Mice (wn)		ic 0.03	No illness		
Mice (wn)		ip 0.1	Antibody		

Section IX - Experimental Arthropod Infection And Transmission

Arthropod species & virus source(a)	Method of Infection log10/ml (b)		Incubation period (c) Days	Transmision by bite (d)		Assay of arthropod, log10/ml (e)		
	Feeding	Injected		°C	Host	Ratio	Whole	Organ

Section X - Histopathology

Character of lesions:

Inclusion bodies:

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

Organs-tissues affected:

Category of tropism:

Section XI - Human Disease

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

Known (virus):

Central African Republic

Section XIII - References

1. Rapport Annuel de l'Institut Pasteur de Bangui. 1970. p. 43.
2. Robin, Y. Institut Pasteur de Dakar. Personal communication.
3. Zeller, H. et al. 1989. III. ARch. Virol. Submitted.

Section XIV - Remarks
