

Virus Name: M'poko

Abbreviation: MPOV

Status: Possible Arbovirus
SALS Level: 2
Antigenic Group: Turlock
Taxonomic status: *Bunyavirus*
Other Information: None.

Select Agent:
SALS Basis:

HEPA Filtration:

Section I - Full Virus Name and Prototype Number

Full Virus Name: M'poko
Prototype Number: BA 365
Information from: J.P. Digoutte *
Date: 11/7/1984
Address: Institut Pasteur BP 923, Bangui, Central African Republic *
Reviewed by editor

Section II - Original Source

Isolated by: J.P. Digoutte, F.X. Pajot **at:** Institut Pasteur, Bangui (2)
Genus and species: Mixed Culex **Sentinel** X
Age/Stage: Adult (imago)**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: 11/21/1966 **Method:** Collected by hand
Place collected: M'Poko Bridge near Bangui, Cent. Afr. Rep.
Latitude: 4° 19' " N **Longitude:** 18° 31' " E
Macrohabitat: Savannah, forest mosaic
Microhabitat: Ground level; bank of river; daylight
Method of storage until inoculated: -65dC
Footnotes:

Section III - Method of Isolation and Validity

Inoculation Date: 11/21/1966
Animal: nb mice **Embryonated egg:** **Tissue Culture:**
(Details in Section VI - Biologic Char.)
Route inoculated: ic and ip **Reisolation:** No
Other reasons: No similar virus 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

Lipid solvent:
(ether) 1:1 After treatment titer <2.0 dex Control titer 7.6 dex
(chloroform) After treatment titer Control titer
Detergent:
(deoxycholate) 0.5% After treatment titer <2.0 dex Control titer 7.2 dex
Other (formalin, radiation):

Virion morphology:

Shape Dimensions
Mean (nm) range (nm) how measured
Surface projections, 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 fluorocarbon, sucrose-acetone + protamine
Erythrocytes Goose pH range 5.8-7.2 pH optimum
Temperature optimum range Room temperature
Remarks
Serologic methods recommended CF, NT
Footnotes:

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

CF tests

Homologous titer 256/64

BA 365 gives negative results with the following sera from mice:

Group A:	chickungunya, o'nyong nyong, Semliki Forest virus, Sindbis, Middelburg, Ndumu.
Group B:	Ntaya, Wesselsbron, Usutu, West Nile, Dakar bat, Uganda S, yellow fever, Zika, Spondweni, Bukalasa bat, Entebbe bat.
Group Bunyamwera:	Germiston, Ilesha, Shokwe.
Group Bwamba:	Bwamba, Pongola.
Group Simbu:	Simbu, Ingwavuma.
Others:	Chenuda, Nyamanini, Thogoto, Wad Medani, Bandia, Lebombo, Mossuril Nyando, Olifantsvlei, Tanga, Witwatersrand, Tataguine, Lagos bat, Quarantfil.

However BA 365 is related to Yaba 1 as shown by following cross CF tests [3] :

Antigens	Turlock Ascitic fluid	Umbre Serum	Yaba 1 Serum	BA 365 Ascitic fluid
Turlock	64/256	64/64	16/64	4/256
Umbre	8/16	128/64	8/4	2/4
Yaba 1	8/64	16/64	256/256	16/1024
BA 365	4/64	16/64	256/64	16/256

On further testing, M'Poko was found to be indistinguishable from Yaba-1 by cross CF and NT [5] .

Neutralization data shown on the Lednice virus registration card indicate that Yaba 1 and M'Poko viruses manifest two-way differences [7] .

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)	
Hela (CL)	SMB 8	7-8	CPE	8.4*				
Chick embryo fibroblasts(PC)					3	Plaques	8.4*	

* 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
Mixed Culex	3/2,000 pools		Surroundings of Bangui Central African Rep.
Culex decens	1		Centr.Afr.Republic (6)
Culex (Cux) perfuscus	1/2,000 pools		Surroundings of Bangui Central African Rep.
Man		11/32	Central African Rep.
Turdus libonyanus (bird)	1		Centr. African Rep.(6)
Culex cinereus	1		Republic of Guinea (8)

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	2	8.6
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)		ic 0.02	Death	3	8.6
Mice (wn)		ip	None		

Section IX - Experimental Arthropod Infection And Transmission

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

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. Rapports sur le fonctionnement technique de l'Institut Pasteur de Bangui, 1966, 1967, 1968.
2. Digoutte, J.P., et al. 1970. Ann. Inst. Pasteur 119:512-519.
3. Shope, R.E. Personal communication.
4. Henderson, B.E., et al. 1969. E. Afr. Virus Res. Inst. Rep. No. 18:31-33.
5. Digoutte, J.P. Personal communication. Jan. 5, 1973.
6. Rapport Annuel de l'Institut Pasteur de Bangui. 1974.
7. Calisher, C.H., et al. 1984. Acta Virol. 28:148-151.
8. Boiro, I., et al. 1985. Bull. Soc. Path. Exotique 78:425-455.

Section XIV - Remarks
