

Virus Name: Le Dantec	Abbreviation: LDV	
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Le Dantec		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation DakHD 763	Accession Number	Original Date Submitted 11/17/1984
Family Rhabdoviridae	Genus Not listed	
Information From Arbovirus Reference Centre	Address Institut Pasteur, BP 220, Dakar, Senegal	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) Docteur P. Bres	Isolated at Institute Institut Pasteur, Dakar	
Host Genus Human	Species	Host Age/Stage 10 years
Sex Female		
<u>Isolated From</u>		<u>Isolation Details</u>
Serum/Plasma		
Signs and Symptoms of Illness Liver and spleen enlargement	Arthropod	
Time Held Alive before Inoculation		
Collection Method Venipuncture	Collection Date 5/13/1965	
Place Collected (Minimum of City, State, Country) Le Dantec Hospital, Senegal		
Latitude 14° 40' N	Longitude 17° 26' W	
Macrohabitat Sea level; tropical; one rainy season (July-October)	Microhabitat Hospital	Method of Storage until Inoculated At -50dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
5/18/1965

Animal (Details will be in Section 6)
nb mice

Route Inoculated
ic and ip

Reisolation
Yes

Other Reasons

First virus of this type in laboratory

Homologous Antibody Formation by Source Animal

No

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) 20%	After Treatment Titer <1.5 dex	Control Titer 6.3 dex
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer	Control Titer
Other (formalin, radiation)		

Virion Morphology

Shape

Rhabdovirus morphology (4)

Dimensions

Mean
nm

Range
nm

Measurement Method
Thin-section electron microscopy (4)

Surface Projections/Envelope

Nucleocapsid Dimensions,
Symmetry

Morphogenesis

Site of Constituent Formation in Cell	Site of Virion Assembly	Site of Virion Accumulation
Inclusion Bodies	Other	
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Hemagglutination		
Hemagglutination No	Antigen Source SMB ext. by sucrose-acetone + protamine tr.; fluorocarbon	Erythrocytes (species used) Goose
pH Range 5.7-6.6	pH Optimum	
Temperature Range	Temperature Optimum Room temperature	
Remarks		
Serologic Methods Recommended		
CF		
Footnotes		

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

CF test. Homologous titer = 128/64.

(Institut Pasteur, Dakar) HD 763 did not react with the following viruses:

Group A;	Semiliki Forest virus, chikungunya, o'nyong-nyong, Begoa (DakArB 543), Sindbis, DakArY 251, Middleburg, Ndumu.
Group B;	Ntaya, Bagaza (DakArB 209), Wesselsbron, DakArY 310, Usutu, DakArY 276, West Nile, Koutango, Dakar bat, Uganda S. Saboya, Banzi, Bouboui, yellow fever, Zika, Spondweni, Bukalasa bat, (DakAnD 595), Royal Farm, Kadam (UgAr 6640).
Bunyamwera;	Bunyamwera, Germiston, Ilesha, Shokwe, Birao (DakArB 2198).
Simbu;	Simbu, Ingwavuma, DakAnB 331, DakArB 994, DakArB 1351.
Bwamba;	Bwamba, Pongola.
California;	Lumbo.
Olifantsvlei;	Olifantsvlei, Bobia (DakArB 1569).
Turlock;	Yaba 1, M'Poko (DakArB 365).
Nyando;	Nyando, Eret 147, DakArY 176.
Mossuril;	Mossuril.
Matariya;	DakAnB 423.

Eubenangee;	Pata (DakArB 1327).
Phlebotomus;	Nafada (DakAnD 3150).
NSD;	Dugbe, DakAnB 373.
Kemerovo;	Chenuda, Wad Medani.
Qalyub;	Bandia.
Quaranfil;	Quaranfil.
Others;	Witwatersrand, Okola, Nkolbisson, Tataguine, Lebombo, Tanga, Nyamanini, Thogoto, Jos (DakArD 3491), Bhanja (DakArD 9540), Gossas, Somone (DakArD 4499), Toure, Keuraliba, Yogue, Hann (DakArD 8194), Botambi, Boteke, Zinga (DakArB 1976), Bangoran (DakArB 2053), Sokoumba (DakArB 2078), Yata (DakArB 2181), DakHB 754, DakAnB 769, DakArB 2712, DakArB 2846, DakArB 2882, DakArY 347.
Nonarbovirus;	Herpesvirus (DakHB 3667).

In addition, D 763 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, IbAn 28558.
California;	Group serum.
Tete;	Tete, Matruh.
EHD-NJ;	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).
Others;	SudAr 1275/64, Abadina (IbAr 22388), kotonkan, Oyo (IbAn 2898), IbAn 17143, Lagos bat, Mount Elgon bat, IbAn 33709, IbAn 28946, SAAN 4511.
Nonarboviruses;	LCM-rabies, Mokola, and IbH 2977 (related to rabies), IbAn 20433 (NDV).

Yale Arbovirus Research Unit (New Haven): HI test D 763 antiserum did not react with the following antigens; Oriboca, Itaqui, Marituba, Murutucu, Nepuyo, Gumbo Limbo, Apeu, Caraparu, Pixuna, Aura, Mucambo, EEE, WEE, VEE, Mayaro, Arumowot (IbAn 15736), Naples, Anhangá, Sororoca, Tacaima, Turlock, Umbre, Utinga, Zegla, Sango (Maru-11709), SLE, Powassan, California, Icoaraci, Sicilian, Tahnya, Guaroa, Taissui, Maguari, Anopheles A, Anopheles B, Bakau, Benfica, Buttonwillow, Guajara, Kairi, Ketapang, Manzanilla, Patois, Itaporanga, Candiru, Chagres, Bujaru, Pacora, Karimabad, Wongal.
Le Dantec virus was shown to be antigenically related to Keuraliba virus by CF tests although both viruses were distinct [4]. Previously, Keuraliba virus was antigenically placed in the VSV serogroup, but this relationship is now in question. It is recommended that Keuraliba virus be removed from the VSV serogroup; therefore, Keuraliba and Le Dantec viruses will now comprise the Le Dantec serogroup.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)

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)			
Vero (CL)	SM 3	9	2+			0.5-1.0 mm	4.8* (4)			
BHK-21 (CL)		2	2+			2-4 mm	8.7 (4)			
CER (CL)		2	4+			2-3 mm	8.3 (4)			
SW13 (CL)		2	4+			2-4 mm	8.3 (4)			

* 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
Man	1/2174		Dakar, Senegal

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 5	ic 0.02	Death	3	7.3	
Mice (nb)		ip				
Mice (nb)		sc				
Mice (wn)		ic 0.03	None; antibody prod.			
Mice (wn)		ip 0.1	None; antibody prod.			
rabbit (2 mo)		iv 0.5	Antibody production			

Arthropod species & virus source(a)	Method of Infection log10/ml (b)		Incubation period (c)		Transmission 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)

Inoculated newborn mice: severe lesions of encephalitis with important destruction of the neurons of the cerebrum (cortex, thalamus, hypothalamus) less acute in the spinal cord. Perivascular cuffing with mononuclear cells. No myositis.

Inclusion Bodies

Intranuclear

Organs/Tissues Affected

Brain (LV), spinal cord (LV)

Category of tropism

Neurotropic

Section XI - Human Disease

In Nature Reported	Residual	Death
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Subclinical	Overt Disease
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Clinical Manifestations

Fever (R), headache (R), CNS signs (including encephalitis (R))

Number of Cases	Category (i.e. febrile illness, etc.)
	Febrile illness, encephalitis

Section XII - Geographic Distribution

Known (Virus detected)

Senegal

Suspected (Antibody only detected)

Section XIII - References

1. Rapport du Centre O.M.S. de Reference pour les Arboviruses, Institut Pasteur de Dakar. 1968.
2. Director, YARU. Personal communication. 1968.
3. Woodruff, A.W., et al. 1977. Brit. Med. J. 3:1632-1633.
4. Cropp, C.B., et al. Personal communication. 1984.

Remarks