

Virus Name: Barur		Abbreviation: BARV
Status Possible Arbovirus	Select Agent No	SALS Level 2
SALS Basis Results of SALS surveys and information from the Catalogue.		
Other Information		
Antigenic Group Kern Canyon		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation 6235	Accession Number	Original Date Submitted 8/13/1984
Family Rhabdoviridae	Genus Not listed	
Information From Director, Virus Research Centre	Address Poona India	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) P.K. Rajgopalan, K. Banerjee	Isolated at Institute Virus Research Center, Poona	
Host Genus Rattus rattus wroughtoni	Species	Host Age/Stage
Sex Not Answered		
<u>Isolated From</u>	<u>Isolation Details</u>	
Organs/Tissues	Spleen	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation		
Collection Method Trapping	Collection Date 1/2/1962	
Place Collected (Minimum of City, State, Country) Forest near Barur village, India		
Latitude 14° 15' N	Longitude 75° 11' E	
Macrohabitat	Microhabitat	Method of Storage until Inoculated Fresh specimen inoculated
Footnotes		

Section III - Method of Isolation

Inoculation Date
1/2/1962

Animal (Details will be in Section 6)
wn mice

Route Inoculated
Intracerebral

Reisolation
Not tried

Other Reasons
No other virus existed in the laboratory at the time of isolation

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	Control Titer
Lipid Solvent (deoxycholate) 1%	After Treatment Titer 2.6 dex	Control Titer 7.5 dex
Other (formalin, radiation)		

Virion Morphology

Shape Bullet-shaped particles	Dimensions 125 x 55 nm	
Mean nm	Range nm	
Measurement Method Electron microscopy	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry

Morphogenesis

Site of Constituent Formation in Cell	Site of Virion Assembly	Site of Virion Accumulation Electron microscopy shows rhabdovirus maturing through extrusion from cell membrane
Inclusion Bodies	Other	

Hemagglutination

Hemagglutination No	Antigen Source SMB ext. by sucrose-acetone	Erythrocytes (species used) Goose
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pH Range	pH Optimum
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Temperature Range	Temperature Optimum
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Remarks

Serologic Methods Recommended
CF

Footnotes

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

Barur, Kern Canyon and Nkolbisson viruses are related by IFA, CF and EIA and thus form the Kern Canyon antigenic group [4].

The Barur antigen did not react with the group specific sera of the following: Group A, Group B, Group C, Guama, Simbu, Bunyamwera, VSV, Tacaribe, Anopheles A, Turlock, California, Capim, Phlebotomus fever, and polyvalent sera against Corripata, Eubenangee, Kaisodi, Quarafil, Qalyub, Tete, Matariya, An 1398, LCM and rabies viruses. Hyperimmune mouse serum against Barur virus did not react in CF with the antigens of the following: Bandia, Bwamba, Bushbush, Capim, Changuinola, Pongola, Guajara, Irituia, Koongol, Wongal, Timbo, Chaco, Yaba-1, Hughes, Farallon, Nyando, Soldado, Kaisodi, Lanjan, Quarafil, Qalyub, Silverwater, Kemerovo, Chenuda, Lipovnik, Ingwavuma, Tribec, Johnston Atoll, Hart Park, Trinita, Ieri, Aruac, Marco, Rift Valley fever, Witwatersrand, Mapputta, Kowanyama, Venkatapuram, Bhanja, Upolu, Colorado tick fever, Dera Ghazi Khan, Matucare, Nyamanini, Manawa, Lahore, Sawgrass, Thogoto, Lone Star, Wanowrie, Wad Medani, Thottapalayam, Kannamangalam, Kammavanpettai, Huacho, Kern Canyon, Klamath, Cotia, Embu, Jurona, Kwatta, Tembe, Pacui, Lagos bat, Mt. Elgon bat, Ogumpa, Tatguine, Ichampadi, Minnal, Palyam, Matariya, An 1398, UGMP 5659, Agua Preta, Navarro, Lebombo, Pacora, La Joya, Buenaventura, Acado, IbAn 7798, Gabek Forest (IbAn 10065), IbAn 17143, SudAr 1225, SudAr 1275, UAR 1477, UAR 1825, Nkolbisson, Eretmapodites, Gossas, and Hazara viruses.

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)
Spleen (LV)Lab Methods of Virus Recovery (ALL ISOLATIONS)
Weanling mice

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)					6-7 (3)	Plaques (3)		
BHK-21 (CL)		2	No CPE	7.0				+ (3)
Vero (CL)		2-3	No CPE	6.8				+ (3)
CER (CL)		2	No CPE	5.7				+ (3)
C6/36 (CL)		3-4	No CPE	4.9				+ (3)

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
<i>Rattus rattus wroughtoni</i>	1		Barur village, Shimoga Dist., Karnataka, India
<i>Haemaphysalis intermedia</i>	2		Ticks from goats; Saga, Shimoga Dist., Karnataka, India
Mostly <i>Mansonia uniformis</i> , <i>Anopheles gambiae</i> , <i>Culex antennatus</i>	1/324,486		Kano Plain Kenya (1)
<i>Rhipicephalus pulchellus</i> (from camels)	3		Mogadisha, Somalia, 1974 (2)

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 ₁₀ /ml
Mice (nb)		ic 0.02	Sickness and death		9.2
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)		ic 0.03	Sickness and death		8.5
Mice (wn)		ip			
rabbit		ip 0.03	No sickness		
Macaca mulatta		sc 0.05	No sickness; antibodies produced		

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 (specify host)	
<u>Inclusion Bodies</u>	<u>Intranuclear</u>
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) India, Kenya (1), Somalia (2)
Suspected (Antibody only detected)

Section XIII - References

1. Johnson, B.K., et al. 1977. Trans. R. Soc. Trop. Med. Hyg. 71:518-521. 2. Butenko, A.M. 1981. J. Med. Ent. 18:232-234. 3. Kerschner, J. Personal communication. 1983. 4. Calisher, C.H. et al. 1989. Intervirology. In Press.

Remarks
