

Virus Name: Yug Bogdanovac		Abbreviation: YBV
Status Possible Arbovirus	Select Agent No	SALS Level 3
SALS Basis Insufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.		
Other Information		
Antigenic Group Vesicular Stomatitis		

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation Yu 4/76	Accession Number	Original Date Submitted 9/19/1984
Family Rhabdoviridae	Genus Vesiculovirus	
Information From Ana Gligic (1)	Address Institute of Immunobiology and Virology Torlak, Beograd, Yugoslavia	
Information Footnote Reviewed by editor		

Section II - Original Source

Isolated By (name) Ana Gligic (1)	Isolated at Institute Yale University School of Med., U.S.A.	
Host Genus Phlebotomus perfilewii	Species	Host Age/Stage Adult
Sex Female		
<u>Isolated From</u>	<u>Isolation Details</u>	
Signs and Symptoms of Illness	Arthropod	
Time Held Alive before Inoculation 68 days		
Collection Method Unknown	Collection Date 8/10/1976	
Place Collected (Minimum of City, State, Country) Merosina, Serbia, Yugoslavia		
Latitude 43° 16' N	Longitude 21° 39' E	
Macrohabitat Farmed areas with sparse forest around	Microhabitat	Method of Storage until Inoculated Revco at -75dC
Footnotes		

Section III - Method of Isolation

Inoculation Date
10/28/1976

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons

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)	After Treatment Titer	Control Titer
Other (formalin, radiation)		

Virion Morphology

Shape Bullet-shaped particles	Dimensions	
Mean nm	Range nm	
Measurement Method Negative stain electron microscopy (3,4)	Surface Projections/Envelope	Nucleocapsid Dimensions, Symmetry

Morphogenesis

Site of Constituent Formation in Cell Site of Virion Assembly Site of Virion Accumulation

Inclusion Bodies Other

Hemagglutination

Hemagglutination Antigen Source Erythrocytes (species used)
No **SMB ext. by sucrose-acetone** **Goose**

pH Range pH Optimum
5.75-8.0

Temperature Range Temperature Optimum
RT

Remarks

Serologic Methods Recommended
CF

Footnotes

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

CF test: homologous = 256/64. Yug Bogdanovac virus in laboratory of the Institute of Immunobiology and Virology Torlak, Beograd, Yugoslavia did not react with the following viruses: Naples, Sicilian, Karimabad, Powassan, WN, WEE, EEE, Sindbis, Calovo, Tahyna, CHF-Congo.

In the laboratory of the Yale Arbovirus Research Unit (New Haven), Dr. R. Tesh tested Yug Bogdanovac virus and homologous serum against the following rhabdovirus antigens and antisera: Hart Park, Flanders, Mosqueiro, Sawgrass, New Minto, Connecticut, Kwatta, BeAn 157575, Timbo, Chaco, Sena Madureira, Mossuril, Kamese, Charleville, Bangoran, Barur, Cuiaba, Kern Canyon, Keuraliba, Marco, VS-Indiana, Cocal, VS-New Jersey, Piry, Chandipura, Isfahan, Jurona, Dak A94, Dak MG A802, rabies, Lagos bat, Mokola, Duvenhage, Obodhiang, kotonkan, Almpiwar, Aruac, Inhangapi, Joinjakaka, Klamath, La Joya, Mt. Elgon bat, Navarro, Porton, Tibrogargan, Yata, Gray Lodge (serum only), bovine ephemeral fever (serum only) and VS-Alagoas (serum only). A weak reaction with Isfahan and Chandipura was noted as shown below. All other tests were negative [2], [4].

ANTIGEN	CF		
	ANTISERA		
	Chandipura	Isfahan	Yug Bogdanovac
Chandipura	128/32 *	0	4/8
Isfahan	4/8	128/128	4/8
Yug Bogdanovac	0	0	256/32

* Antiserum titer/antigen titer; 0 = <4/<4

In IFA tests, Yug Bogdanovac antigen and/or MIAF reacted with the following vesiculovirus antigens and antisera: VSNJ, VSI, Cocal, Piry, Chandipura and Jurona. In PRNT, Yug Bogdanovac virus was neutralized by VSI MIAF [2], [4].

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice

Cell system (a)	Virus passage history (b)	Evidence of Infection							Growth Without CPE +/- (g)
		CPE			PLAQUES				
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)		
Vero (CL)	SM 5	3	3+		8-9	pinpoint	7.2**		

** Expressed in dex

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Phlebotomus perfiliewi	1/8 * (533 insects)		Serbia, Yugoslavia (2)
Ph. papatasi	0/3 (90 insects)		
Man		3/82 CF	Serbia, Yugoslavia (3)
Sheep		7/13 CF	
Goat		0/5 CF	
Cow		0/15 CF	
Swine		0/8 CF	
Dog		0/13 CF	

* Three viruses were isolated from sandflies, Ph. papatasi and Ph. perfiliewi. One of them was Yug Bogdanovac virus, one was SFN virus and the third was unidentified.

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) Yugoslavia
Suspected (Antibody only detected)

Section XIII - References

1. Gligic, A., et al. 1980. Proceedings of the 3rd Yugoslav Symposium on Electron Microscopy. Belgrade, pp. 76-78.
2. Tesh, R., et al. 1983. J. Gen. Virol. 64:169-176.
3. Gligic, A., et al. 1981. Mikrobiologija 18(1):1-10.
4. Gligic, A., et al. 1983. Mikrobiologija 20(2):97-105.

Remarks

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