Virus Name: Resistencia	Abbreviation: RTAV

Status
Possible Arbovirus

Select Agent
No

SALS Level

SALS Basis

Other Information

Antigenic Group
Resistencia

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
AG80-504

Accession Number

Original Date Submitted
7/6/1984

Family
Bunyaviridae

Genus
Bunyavirus-like

Information From
C.Mitchell, T.Monath, C.Calisher, M.Sabattini

Address
CDC, Ft. Collins, CO and Inst. Virologia, Cordoba, Argentina

Information Footnote

Section II - Original Source

Isolated By (name)
C.Mitchell, T.Monath, M.Sabbattini

Isolated at Institute
CDC, Ft. Collins, CO

Host Genus
Culex (Melanoconion) delpontei, pool of 65

Species

Host Age/Stage
Adult

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod
Engorged, Depleted, Gravid

Time Held Alive before Inoculation
Nil

Collection Method
CDC light trap and CO2

Collection Date
4/9/1980

Place Collected (Minimum of City, State, Country)
Near Rio Negro Bridge, NE Resistencia, Argentina

Latitude
27° 27' S

Longitude
58° 52' W

Macrohabitat
Subtropical riverine forest

Microhabitat
Tree-lined margin of Rio Negro (choked with aquatic vegetation)

Method of Storage until Inoculated
Dry ice and -80dC freezer

Footnotes

Section III - Method of Isolation

Inoculation Date
6/17/1980

Animal (Details will be in Section 6)
(Tissue Culture)

Route Inoculated

Reisolation
Not tried

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)
Labile at pH 3.0

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	Dimensions	
Mean nm	Range nm	
Measurement Method	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

Hemaggiutination	Antigen Source	Erythrocytes (species used)
No	**Infected SMB ext. by sucrose-acetone**	**Goose**
pH Range **5.8-7.2**	pH Optimum	
Temperature Range	Temperature Optimum	
Remarks		
Serologic Methods Recommended **CF, N**		
Footnotes		

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

Six strains were shown to be identical by cross-CF tests: AG80-226, AG80- 517, AG80-785, AG80-1545, AG80-381, and AG80-504. Strain AG80-504 (sucrose- acetone antigen) tested by CF with a battery of HIAF containing antibodies to more than 300 arboviruses and other viruses; no reactions were detected. No inhibition of hemagglutination was detected in HI tests employing HIAF for AG80-504 and antigens of viruses belonging to serogroups A, B, C, Bunyamwera, Turlock, California, and Phlebotomus fever [1] .
NT tests were performed with five of these six isolates (AG80-785 = AG80- 1545). The results (shown below) demonstrate that, although interrelated, AG80-504, AG80-226 and AG80-381 are distinct from each other, that AG80-785 is identical with AG80-504 and that AG80-517 is a subtype of AG80-504 [1] .

	PRNT titer of antibody to:				
Strain	**AG80-226**	**AG80-381**	**AG80-504**	**AG80-785**	**AG80-517**
AG80-226	2560 *	80	-	-	-
AG80-381	320	320	-	10	10
AG80-504	40	-	640	640	160
AG80-785	-	-	640	1280	640
AG80-517	20	-	320	1280	1280

* Reciprocal of highest dilution producing >90% plaque reduction;

- = <10

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Vero cell cultures

Cell system (a)	Virus passage history (b)	Evidence of Infection							
		CPE			PLAQUES			Growth Without CPE	
		Day (c)	Extent (d)	Titer TCD50/ml (e)	Day (c)	Size (f)	Titer PFU/ml (e)	+/- (g)	
Vero (CL)	Vero 1	6	1-2+						
Vero (CL)	Vero 1 SM 2				5	1 mm	7.3**		
Duck embryo (PC)						No plaques	<2.0		

** 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
Culex (Mel) delpontei	4/8,081		Chaco Province, Argentina
Cx (Mel) spp.	0/24,235		
Cx (Cux) spp.	0/13,537		
Aedeomyia squamipennis	0/2,181		
Aedes scapularis	0/3,074		
Anopheles albitarsis	0/565		
Anopheles spp.	0/17,195		
Coquillettidia spp.	0/1,858		
Mansonia spp.	0/31,492		
Psorophora spp.	0/1,228		
Uranotaenia spp.	0/1,204		
Other arthropod spp.	0/985		
Akodon sp.		7/38 NT	
Calomys sp.		0/3 NT	
Oryzomys sp.		0/23 NT	
Horses		0/137 NT	
Horses		9/49 NT	Santiago del Estero Prov., Argentina
Horses		0/89 NT	Cordoba and Corrientes Prov., Argentina

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)	Vero 1 SM 2	ic	Death	6	>7.0
Mice (nb)		ip			
Mice (nb)		sc			
Mice (wn)		ic			
Mice (wn)		ip			
Mice (6-8 wk)	Vero 2 SM 1	ip	None		

Section IX - Experimental Arthropod Infection and Transmission

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

Inclusion Bodies — Intranuclear

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)
Argentina

Suspected (Antibody only detected)
Santiago del Estero Prov., Argentina

Section XIII - References

1. Calisher, C.H., et al. 1985. Am. J. Trop. Med. Hyg. 34:956-965.

Remarks