Virus Name: Acado	Abbreviation: ACDV

Status
Possible Arbovirus

Select Agent
No

SALS Level
2

SALS Basis
Results of SALS surveys and information from the Catalogue.

Other Information

Antigenic Group
Corriparta

SECTION I - Full Virus Name and Prototype Number

Prototype Strain Number / Designation
EthAr 1846-64

Accession Number

Original Date Submitted
11/7/1984

Family
Reoviridae

Genus
Orbivirus

Information From
J.R. Schmidt

Address
Department of Navy, BUMED, Washington, D.C. 20372

Information Footnote
Reviewed by editor

Section II - Original Source

Isolated By (name)
J.R. Schmidt

Isolated at Institute
NAMRU-3, Cario, Egypt

Host Genus
Culex antennatus and Culex univittatus neavi (pool of 76)

Species

Host Age/Stage
Adult

Sex
Female

Isolated From

Isolation Details

Signs and Symptoms of Illness

Arthropod

Time Held Alive before Inoculation

Collection Method
Aspirated from man

Collection Date
10/22/1963

Place Collected (Minimum of City, State, Country)
Acado, Baro River, Ilubabor Prov., Ethiopia

Latitude
8° 15' N

Longitude
34° 25' E

Macrohabitat
Scrub savannah

Microhabitat
North bank of Baro River

Method of Storage until Inoculated
At -5d C for 1 week, at -60° C thereafter

Footnotes

Section III - Method of Isolation

Inoculation Date
8/19/1964

Animal (Details will be in Section 6)
nb mice

Route Inoculated
Intracerebral

Reisolation
Yes

Other Reasons
No similar virus

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) **1:10**	After Treatment Titer **5.5 dex**	Control Titer **7.9 dex**
Lipid Solvent (chloroform)	After Treatment Titer	Control Titer
Lipid Solvent (deoxycholate)	After Treatment Titer **7.8 dex**	Control Titer **8.4 dex**

Other (formalin, radiation)
Relatively stable to lipid solvents

Virion Morphology

Shape	Dimensions **60 nm**	
Mean nm	Range nm	
Measurement Method **Thin-section electron microscopy**	Surface Projections/Envelope **Envelope observed**	Nucleocapsid Dimensions, Symmetry

Thin-section electron microscope	**Envelope observed**	Symmetry **Capsid; diameter = 28 nm; spherical shape**

Morphogenesis

Site of Constituent Formation in Cell	Site of Virion Assembly	Site of Virion Accumulation
	Virions found free in cytoplasm and in assoc. with matrices and endoplasmic reticulum	
Inclusion Bodies **Cytoplasmic matrices**	Other	

Hemagglutination

Hemaggiutination	Antigen Source	Erythrocytes (species used)
Yes	**SMB ext. by sucrose-acetone**	**Goose**
pH Range **6.0 - 7.2**	pH Optimum **6.5 - 6.7**	
Temperature Range **4° C- 37° C**	Temperature Optimum **4d C**	

Remarks
Mamium titer = 1:80

Serologic Methods Recommended
CF, NT

Footnotes
Mamium titer = 1:80

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

Antigen	Antibody: Acado	Antibody: Corriparta
Acado	64/16 *	16/64
Corriparta	16/4	32/16

* Antigen/antibody

Unrelated by CF to following agents having bluetongue-like morphology: Palyam, Mitchell River, Warrego, Changuinola, Chenuda, Colorado tick fever, DakArB 1327, EHD-NJ, Eubenangee, Orungo (IbH 11306), Kemerovo, Lebombo, Tribec, Wad Medani, reovirus 3, AHS, bluetongue ([1] , [2]).
Related to Corriparta virus by NT as follows ([1]):

Virus	Ascitic Fluid	dex LD50	LNI
Corriparta	Normal	4.0	
	Acado	1.0	3.0
	Corriparta	<0.5	> 3.5
Acado	Normal	6.2	
	Acado	1.4	4.8
	Corriparta	4.0	2.2

Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)

Lab Methods of Virus Recovery (ALL ISOLATIONS)
Newborn mice

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. tsted Test used	Country and region
Culex antennatus and Culex univittatus neavi (mixed)	1/20 pools representing 2,187 specimens		Ilubabor Prov., Ethiopia

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 8	ic 0.01	Death	3 *	8.5
Mice (nb)	SMB 7	ip 0.03	Death	5.3 **	>5.4
Mice (nb)		sc			
Mice (wn)		ic 0.03	None		<1.8
Mice (wn)		ip 0.03	None		<1.6

* At 10-6 dilution

** At 10-2 dilution

Section IX - Experimental Arthropod Infection and Transmission

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)
Ethiopia

Suspected (Antibody only detected)

Section XIII - References

1. Shope, R.E. Unpublished data.
2. Schmidt, J.R., et al. 1966. E. Afr. Virus Res. Inst. Rep. No. 15:24-26.
3. Killby, V.A.A. Unpublished data.
4. Borden, E.C., et al. 1971. J. Gen. Virol. 13:261-271.
5. Murphy, F.A., et al. 1971. J. Gen. Virol. 13:273-288.

Remarks

Placed in Orbivirus taxon with other members of bluetongue-like viruses(4,5).