

<b>Virus Name: Douglas</b>		<b>Abbreviation: DOUV</b>
Status <b>Probable Arbovirus</b>	Select Agent <b>No</b>	SALS Level <b>3</b>
SALS Basis <b>Insufficient experience with virus; i.e., experience factor from SALS surveys was less than 500 in laboratory facilities with low biocontainment.</b>		
Other Information		
Antigenic Group <b>Simbu</b>		

**SECTION I - Full Virus Name and Prototype Number**

Prototype Strain Number / Designation <b>CSIRO 150</b>	Accession Number	Original Date Submitted <b>9/19/1984</b>
Family <b>Bunyaviridae</b>	Genus <b>Bunyavirus</b>	
Information From <b>T.D. St. George</b>	Address <b>CISRO, Long Pocket Laboratories, Private Bag No. 3, Indooroopilly, Queensland, Australia 4068</b>	
Information Footnote <b>Reviewed by editor</b>		

**Section II - Original Source**

Isolated By (name) <b>T.D. St. George</b>	Isolated at Institute <b>CSIRO, Long Pocket Laboratories</b>	
Host Genus <b>Bovine, sentinel</b>	Species	Host Age/Stage <b>1 year</b>
Sex <b>Female</b>		
<u>Isolated From</u> <b>Whole Blood</b>	<u>Isolation Details</u>	
Signs and Symptoms of Illness <b>None</b>	Arthropod	
Time Held Alive before Inoculation		
Collection Method <b>Heparin tube</b>	Collection Date <b>6/23/1978</b>	
Place Collected (Minimum of City, State, Country) <b>Douglas Station, Northern Territory, Australia</b>		
Latitude <b>13° 38' S</b>	Longitude <b>131° 27' E</b>	
Macrohabitat <b>Savannah</b>	Microhabitat	Method of Storage until Inoculated <b>4dC</b>
Footnotes		



### 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)

pH Range      pH Optimum

Temperature Range      Temperature Optimum

Remarks

Serologic Methods Recommended  
**CF, NT in newborn mice, BHK-21, or Vero cell cultu**

Footnotes

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

Related to other Simbu Group viruses by CF (Filippich, personal communication, QIMR).

Douglas virus was placed within the Simbu complex of the Simbu serogroup primarily by CF testing [2]. Other members of this complex consisted of Simbu, Akabane, Yaba-7, Shamonda, Sabo, Sango, Peaton, Aino, Shuni, Kaikalur, Sathuperi, and Tinaroo viruses.

Neutralization testing indicated that Douglas virus was most closely related to Sathuperi virus and distantly related to Shuni virus. Douglas virus was considered to be a subtype of Sathuperi virus [2].

Results of serum dilution plaque-reduction neutralization tests [2]:

Virus	Titer of antibody to:		
	Douglas	Sathuperi	Shuni
Douglas	1280 *	920	10
Sathuperi	1280	5120	20
Shuni	<10	120	11760

\* 90% plaque-reduction titers expressed as the geometric mean of two or more determinations.

## Section VI - Biologic Characteristics

Virus Source (all VERTEBRATE isolates)  
Blood (LV)

Lab Methods of Virus Recovery (ALL ISOLATIONS)  
BHK-21 cell cultures

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)		
BHK-21 (CL)	Blood	3-4	Complete	6.0**					
Vero (CL)	SM3				<4	0.8 mm	7.7** (3)		
LLC-MK2 (CL)					<4	0.9 mm	7.7 (3)		
CER (CL)					<4	1.6 mm	7.8 (3)		
BHK-21 (CL)					<4	1.0 mm	7.5 (3)		

\*\* Expressed in dex

Vertebrate (species and organ) and arthropod	No. isolations/No. tested	No. with antibody/No. tested Test used	Country and region
Culicoides brevitarsis	2/803 (80,000 insects)		Australia
Man		0/30 NT	
Cattle (blood)	1	505/>1000 NT	
Bufflao		7/18 NT	
Deer		1/8 NT	
Goats		3/54 NT	
Horses		1/57 NT	
Sheep		4/40 NT	
Horses		0/20 NT	Papua, New Guinea
Cattle		14/38 NT	



**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) <b>Australia</b>
Suspected (Antibody only detected) <b>Papua, New Guinea. Area lies within the known distribution of Culicoides brevitarsis.</b>

**Section XIII - References**

1. St. George, T.D., et al. 1979. Aust. J. Exp. Biol. Med. Sci. 57:581-582. 2. Kinney, R.M. and Calisher, C.H. 1981. Am. J. Trop. Med. Hyg. 30:1307-1318. 3. Kinney, R.M. and Calisher, C.H. Personal communication. 1981.
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**Remarks**

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