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ARBOVIRUSES IN SRI LANKA 11 : BUNYAVIRUSES OF THE SIMBU SEROGROUP

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The prevalence of Simbu group viruses were documented for the first time in Sri Lanka by the demonstration of antibodies to Sathuperi virus by the plaque reduction neutralisation test (PRNT) and the antibody dependent plaque enhancement (ADPE) test. Table 1 shows the results of PRNT tests on human and animal sera collected from the Kandy, Mahaweli System C zone 4, Anuradhapura and Kotukachchiya areas using Sathuperi virus. Since the patterns of seropositivity in the different study areas was similar the data are presented as a composite table. The significant prevalence of PRNT antibodies to Sathuperi virus indicates, that this virus is active in Sri Lanka and infects cattle, sheep and goats.

The lack of PRNT antibodies in human sera indicates that human infection is uncommon. However the results of the broad reactive ADPE test using Sathuperi virus showed that 8/172 human sera and 54/129 porcine sera were seropositive to Sathuperi. This may indicate that a more distantly related virus within the Simbu serogroup is active in Sri Lanka causing infections in humans and pigs.

No Simbu group virus has been isolated from mosquito pools so far.

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Table 1. Antibodies to Sathuperi Virus

Species	PRNT	ADPE
Human	0/172 (0%)	8/172 (5%)
Cattle	36/172 (21%)	45/171 (26%)
Pigs	1/129 (1%)	54/129 (42%)
Goats	3/ 40 (8%)	6/40 (15%)
Sheep	1/ 16 (6%)	1/16 (6%)
Dogs	0/ 15 (0%)	8/15 (53%)