

Antibody Titers of Department of Virology Personnel to Selected Viruses

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OBJECTIVE : To test serum specimens drawn from Department of Virology personnel for evidence of antibodies directed against pathogenic viruses currently used in the Department.

BACKGROUND : For years, research work in the Department of Virology has focused on flaviviruses and hepatitis B virus, with occasional work on other viruses including alphaviruses, specifically chikungunya, and polioviruses. Recently, work has begun on hepatitis A virus. As part of an overall effort to promote laboratory safety, serum specimens from department of personnel were tested for antibody against these viruses.

METHODS : A blood serum specimens was obtained from all department employees in January 1979. The following tests were performed :

<u>Activity measured</u>	<u>Test used</u>	<u>Criteria for positive assay</u>
Anti-hepatitis A virus	HAVAB (R) (SPRIA)	<9784 CPM
Hep BsAg	CIEOP	(+) precipitation line
Anti-HBs	AUSAB (R) (SPRIA)	>300 CPM
Anti-alpha virus	Chikungunya HAI	HAI titer > 1/10
Anti-flavivirus	Dengue-1,2,3,4 and JEV,HAI	HAI titer \geq 1/10
Anti-poliovirus	Microneut on Hela cells; metabolic inhibition end-point	\geq 1/5

RESULTS : Results are summarized in Table 1 and Table 2. All Thai employees except one had evidence of previous infections with both HAV and flaviviruses; this employee had spent her childhood in western Europe and the United States, and lacked serologic evidence of infection with either HAV or flavivirus.

One person, a known chronic carrier, was found to be positive for HBsAg (not shown in tables).

Table 1. Results of Serology of Serum Specimens from Department of Virology Personnel.

Nationality	Name	HAV	Hep Bs	Any Alpha- virus	CHIK	Any Flavi- virus	D1	D2	D3	D4	JEV	Polio		
												I	II	III
USA	Burke	-	-	-	0	-	0	0	0	0	0	+	+	+
	Watts	-	-	-	0	+	10	10	20	20	40	+	+	+
	Leach	+	-	-	0	-	0	0	0	0	0	+	+	+
Thai	Regina	-	-	-	0	-	0	0	0	0	0	+	+	+
	Ananda	+	-	+	160	+	40	40	80	160	160	+	+	+
	Rapin	+	+	+	160	+	20	40	40	160	40	+	+	+
	Naowayubol	+	+	+	320	+	20	20	40	160	40	+	+	-
	Choompun	+	-	+	80	+	80	40	160	160	80	+	+	+
	Nathada	+	+	+	160	+	10	20	40	80	10	+	+	+
	Aree	+	+	+	160	+	80	80	320	320	160	+	+	+
	Pranee	+	+	-	0	+	80	40	80	320	160	+	+	+
	Somsamai	+	-	+	80	+	40	40	80	80	80	+	+	+
	Sanguan	+	+	+	2560	+	80	160	80	640	320	+	+	+
	Panor	+	+	+	2560	+	20	20	40	160	40	+	+	+
	Ming	+	+	+	80	+	80	40	80	160	80	+	+	+
	Pay	+	+	+	40	+	80	80	160	80	40	+	+	+
	Nongluk	+	-	+	80	+	40	40	80	80	80	+	+	-
	Somsak	+	+	+	160	+	20	40	40	160	80	+	+	+
	Pranom	+	+	+	160	+	20	20	20	40	20	+	+	+
	Anan	+	-	+	80	+	40	40	40	160	80	+	+	+
	Nonguard	+	-	+	320	+	20	40	20	40	80	+	+	+
	Sumitda	+	-	+	1280	+	40	40	40	160	80	+	+	+
	Boonmark	+	+	-	0	+	40	40	80	320	160	+	+	+

Table 2. Summary of Prevalence of Antibody to HAV, HBs, Alphavirus, Flaviviruses, and Polioviruses in Department of Virology Personnel.

Nationality	HAV	HBs	Any Alphavirus	Any Flavivirus	All 3 polio Types
U.S.	1/3	0/3	0/3	1/3	3/3
Thai	19/20	12/20	16/19	18/19	17/19
Total	20/23	12/23	16/22	19/22	20/22