

Suppression of Lymphocyte Blastogenic Response  
by Sera from Patients with Dengue  
Hemorrhagic Fever (DHF)

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**OBJECTIVE :** To investigate the suppressive effect that sera from DHF patients has on the response of lymphocytes stimulated with plant lectins.

**BACKGROUND :** Sera from patients\* with various infections (1, 2) have been shown to suppress the responsiveness of lymphocyte populations stimulated with plant lectins. This may be an immune regulatory mechanism influencing the interaction of specific lymphocyte subpopulations (2) or may be a non-specific response to infectious agents.

In the present preliminary study we are investigating the effect that sera from DHF patients has on the responsiveness of normal lymphocytes to stimulation with plant lectins.

**METHODS :** Acute and convalescent sera from children clinically diagnosed as having dengue hemorrhagic fever was obtained from Bangkok Childrens Hospital. Aliquots of each sample were frozen (-70°C) for future serological confirmation. The mitogen inhibition assay was performed as previously described (1).

**RESULTS :** Table 1 shows that pooled acute sera from DHF patients inhibits the responsiveness of normal lymphocytes to mitogen stimulation, while convalescent sera does not. Additional studies are being conducted to confirm these results and to determine the effect that sera from DHF patients has on normal, autologous and allogenic T cells and B cells. This is a preliminary report.

**REFERENCES :**

1. Wells, R.A., et al.: AFRIMS Annual Progress Report, pp.185-187, 1977-1978.
2. Twomey, J.J., et al.: A Serum Inhibitor of Immune Regulation in Patient with Systemic Lupus Erythematosus. J. Clin. Invest. 62(3):713-715, 1978.

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Table 1. Inhibitory Action of DHF Sera on Mitogen Response of Human Lymphocytes.

Mitogen	Pooled Serum <sup>1</sup>		
	Normal	Acute (day 0) (DHF)	Convalescent (day 14) (DHF)
PHA	156.43 <sup>2</sup>	56.67	170.59
Con A	166.94	73.52	135.25
PWM	116.06	44.16	137.71

<sup>1</sup> Each serum pool from 5 individuals.

<sup>2</sup> Stimulation index when pooled sera is added to wells (20% v/v).