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CHINTANA PHAWONG : MEMORY T CELL RESPONSE TO
BURKHOLDERIA PSEUDOMALLEI IN HEALTHY IMMUNE INDIVIDUALS.
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B. pseudomallei, the causative agent of melioidosis, is an intracellular bacterium residing in both phagocytic and non-phagocytic cells. The protective immunity to *B. pseudomallei* depends on cell-mediated immunity. Little is known about cell-mediated immunity in *B. pseudomallei* infection. The lymphoproliferation assay was developed to measure the memory T cell responses to *B. pseudomallei* in immune individuals. In this study, the lymphoproliferation assays to *B. pseudomallei* antigens, somatic antigens and secreted antigens, were evaluated in 21 seropositive subjects and 9 seronegative subjects.

This study showed that the memory T cell responses to the *B. pseudomallei* somatic antigens were detected in 13 of 21 seropositive subjects and in 3 of 9 seronegative subjects. Whereas, the memory T cell responses to the *B. pseudomallei* secreted antigens was detected in 3 of 21 seropositive subjects and 3 of 9 seronegative subjects. Two of the seropositive subjects demonstrated the T cell response to both the *B. pseudomallei* somatic antigens and the *B. pseudomallei* secreted antigens. The magnitudes of memory T cell responses to the *B. pseudomallei* somatic antigens in seropositive subjects were higher than those of seronegative subjects. However, the magnitudes of memory T cell responses did not correlated with the level of antibody responses. The *B. pseudomallei* somatic antigens and the *B. pseudomallei* secreted antigens exhibited the inhibitory effects to the PPD-induced lymphoproliferative response in a dose dependent manner. The lymphoproliferation assay developed from this study will a tool for studying the cell-mediated immune response against *B. pseudomallei*.