BURKHOLDERIA THAILANDENSIS WHOLE CELL ANTIGEN CROSS-REACTS WITH B. PSEUDOMALLEI ANTIBODIES FROM PATIENTS WITH MELIOIDOSIS IN AN IMMUNOFLUORESCENT ASSAY

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Abstract. An immunofluorescent assay (IFAT) using whole cell antigen derived from Burkholderia thailandensis used for detection of total antibodies to Burkholderia pseudomallei, was found to compare favorably with a previous published report on a B. pseudomallei IFAT assay. At a 1:20 cut-off titer, the assay had high sensitivity (98.9%) and satisfactory specificity (92.3%), when tested against sera from 94 patients suspected of melioidosis. Sera from 12 patients with culture proven melioidosis gave absolute concordance with the 2 test antigens. No sera from 50 blood donors had a titer of ≥20. Cross-reactivity with patients’ sera positive for Chlamydia, Mycoplasma, Legionella and typhoid was not observed, except for 3 sera from typhus patients and one from a patient with leptospirosis. The major advantage of this assay is that the cultivation and preparation of B. thailandensis as antigen can be carried out in any laboratory with basic microbiological set-up. The serodiagnosis of melioidosis can be made safe for medical laboratory personnel, particularly in B. pseudomallei endemic regions.

Key words: Burkholderia thailandensis, B. pseudomallei, whole cell antigen, melioidosis, IFAT