

Environmental molecular detection of *Burkholderia pseudomallei* as a cause of melioidosis in Kedah, Peninsular Malaysia

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ABSTRACT

Introduction: Melioidosis is an infectious disease caused by saprophytic soil bacteria, *Burkholderia pseudomallei* mainly found in tropical region. *B. pseudomallei* can be transmitted predominantly through contaminated soil and water. The aim of the study was to determine the distribution of *B. pseudomallei* by molecular detection method from selected agricultural, school and recreational localities in Kedah, northern Peninsular Malaysia. **Materials and Methods:** A total of 50 soil samples were taken from the surface and 30cm depth. The soil samples were processed for bacterial DNA extraction for genotypic molecular detection by portable RT-PCR thermocycler by using suitable primers. **Results:** The results of RT-PCR showered that paddy field (6/10), palm plantation (4/10), recreational area (3/10), rubber plantation (2/10) and private school (1/10) were positive for *B. pseudomallei* detection. **Conclusion:** The study showered that paddy fields demonstrate the highest detection of *B. pseudomallei*. Agricultural areas and recreational area remains the potential health hazard for melioidosis and precautionary measures need to be address in the prevention of melioidosis