

## **A low molecular weight lipopolysaccharide antigen preparation reactive to acute leptospirosis heterologous sera.**

### ABSTRACT

There is a need for identification of new infection markers against common *Leptospira* isolates in Malaysia. To achieve this goal, seven-day-old cultures of *Leptospira interrogans* serogroup Icterohemorrhagiae (L44) and *Leptospira interrogans* serogroup Javanica (L55) were used for antigen preparation by sequential extraction method using 40 mM Tris, 8M Urea and 2M thiourea. Immunoblot analysis of the antigens were performed using serum samples from 46 local patients with confirmed acute leptospirosis, 28 patients with other infections and 14 healthy controls. The patients serum samples used in this study contained heterologous antibody against a number of different *Leptospira* serovars. A strong IgM reactivity to a broad diffuse band of 10-15 kDa was observed. Combining results using L44 and L55 antigens showed sensitivity of 80.4% and specificity of 95.2% for detection of leptospirosis. Proteinase K and periodate treatment indicated that the band is likely to be lipopolysaccharide (LPS) in nature. This study showed that the 10-15 kDa antigen could potentially be useful for serodiagnosis of acute leptospirosis in Malaysia.

**Keyword:** Lipolysaccharide; Antigens; Acute leptospirosis; Heterologous.