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**Title:** Utility of quantitative analysis of urine lipoarabinomannan in the diagnosis of tuberculosis

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**Body:** Background Urinary lipoarabinomannan (LAM) detection is a promising approach for rapid diagnosis of active tuberculosis (TB) Objective: to assess the diagnostic accuracy of urine lipoarabinomannan (LAM) among tuberculous-infected patients either pulmonary or extra pulmonary. Methods This study was carried out on 85cases (46 male and 39 female) with active tubercular infection divided into three groups; Pulmonary (n=40), Extrapulmonary (n=30) and Disseminated tuberculosis (n=15) .Ten normal individual were included as control group. LAM level was measured in urine by enzyme- linked immunosorbant assay (ELISA). Results: The LAM antigen bind to Anti-LAM antibody from the urine in 69 out of 85 cases of active pulmonary and extra pulmonary TB. Patients with disseminated disease had a higher urine LAM level ( $1.75 \pm 1.65$  ng/ml) than that for patients with pulmonary ( $0.58 \pm 0.53$  ng/ml) or extra pulmonary TB ( $0.17 \pm 0.11$  ng/ml) ( $P < 0.001$ ). Patients with smear positive specimens had a higher urine LAM level ( $0.63 \pm 0.54$  ng/ml) than that of smear negative ( $0.040 \pm 0.06$  ng/ml) ( $P < 0.001$ ). Quantitative urine LAM test results positively correlate with degree of bacillary burden in patients with microbiologically confirmed TB, it was higher in high inoculums specimens ( $0.84 \pm 0.49$  ng/ml). Conclusion: Urine LAM test is rapid and reliable diagnostic modality for pulmonary or extra pulmonary TB.