

## **Detection of pathogenic *Leptospira* from selected environment in Kelantan and Terengganu, Malaysia.**

### **ABSTRACT**

Leptospirosis is recognized as one of the important zoonotic diseases in the world including Malaysia. A total of 145 soil and water samples were collected from selected National Service Training Centres (NSTC) in Kelantan and Terengganu. The samples were inoculated into modified semisolid Ellinghausen McCullough Johnson Harris (EMJH) medium, incubated at room temperature for 1 month and examined under the dark-field microscope. Positive growth of the leptospiral isolates were then confirmed with 8-Azaguanine Test, Polymerase Chain Reaction (PCR) assay and Microscopic Agglutination Test (MAT). Fifteen cultures (10.34%) exhibited positive growths which were seen under dark field microscope whilst only 20% (3/15) were confirmed as pathogenic species, based on 8-Azaguanine Test and PCR. Serological identification of the isolates with MAT showed that *hebdomadis* was the dominant serovar in Terengganu. Pathogenic leptospires can be detected in Malaysian environment and this has the potential to cause an outbreak. Therefore, precautionary steps against leptospirosis should be taken by camp authorities to ensure the safety of trainees.

**Keyword:** Leptospires; Environment; Kelantan; Terengganu.