

# Session (1) : Keynotes

**Diagnostic performance of Loop -Mediated Isothermal Amplification Technique (LAMP) for detection of *Echinococcus granulosus* one humped camel examined at Tamboul abattoir, Gezira State, Sudan**

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**ABSTRACT**

Cystic echinococcosis is a neglected zoonotic parasitic infection caused by metacestode of the dog tape worm *Echinococcus* spp. The disease has a global distribution with economic important and public health importance especially in rural communities. Rapid and specific tests are mandatory for quick surveillance and control of *Echinococcus granulosus* among both human and the domestic animals. The current study was conducted to test the efficiency of LAMP for detection of *Echinococcus granulosus* among natural infected camels slaughtered at Tamboul abattoir. 51 Hydatid cysts of camel's origin were collected from infected lungs. PCR and LAMP tests were used to confirm molecular diagnosis of *E. granulosus*. Data was analyzed and validated using SPSS. Moreover, examination 70 camels revealed of 51 cysts *E. granulosus* 31 were of pulmonary origin (42.8%) and 21 of hepatic origin (30%). The overall infection rate by hydatidosis was 72.8%. Conventional PCR confirmed prevailing of G6 genotypes (*E. canadensis*). LAMP test gave 100% sensitivity and 100% specificity when compared with conventional PCR. It was concluded that LAMP test proved to be highly sensitive for detection of CE infection. To decrease high burden of CE in the study area, regular CE surveillance using LAMP and veterinary extension coupled health education programs is strongly recommended.

**Keywords:** *Echinococcus granulosus*. LAMP, Camel, surveillance