

## Cysticidal Effect of *Balanites Aegyptiaca* and *Moringa Oleifera* on Bovine Cysticercosis with Monitoring to Dynamics of TNF- $\alpha$

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**Abstract :** The cestode, *Taenia saginata* is a zoonotic tapeworm that its larval stage which known as *Cysticercus bovis* cause cyst formation in cattle's organs such as heart, lung, liver, tongue, esophagus and diaphragm muscle, despite the infected cattle may show no clinical signs. In view of considerable interest in developing cysticidal drugs including those from medicinal plants, because of their consideration as eco-friendly and biodegradable as well as having multiple bioactive compounds that may translate to multiple mechanisms in killing the parasites. This study was achieved to evaluate, for the first time, the efficacy of methanolic extract of *Balanites aegyptiaca* fruits and *Moringa oleifera* seeds against metacestode larval stage of the cestode *Taenia saginata* in BALB/c mice compared with commonly used anthelmintic albendazole and assigning the level of tumor necrosis factor (TNF- $\alpha$ ) to monitor immune and inflammatory response of experimentally infected animals. The results revealed a marked decrease in the numbers of cysticerci found in all treated mice groups and up to 88% reduction was achieved in the *B. aegyptiaca* treated group; higher than that was recorded in both *M. oleifera* (72.23%) and albendazole treated ones (80.56%). The cysts of the treated groups were smaller of the control one. Besides, the mean concentration of TNF- $\alpha$  following treatment with *Balanites* and *Moringa* extracts, was higher but not significant difference than that in the untreated infected control one ( $P < 0.05$ ), evidence for inflammation and cyst damage. It can be concluded that the in vivo efficacy of *M. oleifera* extract was comparable to a commercial anthelmintic, and the *B. aegyptiaca* extract was superior in the reduction of cysticerci numbers.

**Keywords :** *Balanites aegyptiaca*, *Moringa oleifera*, cysticercosis, BALB/C mice

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