# Schistosomiasis induced carcinomas: Insights into the host parasite interaction

*Thesis*
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*By*

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# ABSTRAT

This work was a case-control study applied on 24 patients with chronic complicated Schistosomiasis *haematobium* with bladder carcinoma, versus 10 subjects with history of *S. haematobium*, but without complications as a control group. Gene expression of 2 anti- inflammatory cytokines (IL10 and TGF β) and 2 pro-inflammatory cytokines (IFN γ and TNF α) was done using quantitative real time PCR. The results revealed marked increase of the level of (IL10 and TGF β) (Th2), in contrast to marked decrease in the level of (IFN γ and TNF α) (Th1).

The cases in the current work were reported to be poorly controlled by unbalanced Th1/Th2 in which Th2 was dominated. The humoral immunity promoted by highly expressed Th2 cytokines was evidenced by the significantly higher O.D ELISA values in cases than control group. However, possibly failed to eliminate the impact of *Schistosoma* infection in our cases, instead counteract Th1 cytokines (significant negative correlation between Th2 anti-inflammatory cytokine IL-10 & the chief Th1 pro-inflammatory cytokine IFN γ).

This possibly led to loss of Th1 power in defending the host against both parasite and carcinogenic changes. This study suggested a vital regulatory role for IL-10 in such serious infection which certainly needs further elucidation as regard its prognostic and therapeutic potential.

***Key Words:*** Schistosomiasis *haematobium*- inflammatory cytokines- gene expression- quantitative PCR.