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Assessment of *Sterculia setigera* and *Lantana camara* extracts as schistosomicidal agentRahma Abu Bakr Musa Adam  
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This study was planned to evaluate the prophylactic and curative activities of the methanol extract of two medicinal plants; *Sterculia setigera* bark and *Lantana camara* leaves and their combination against *Schistosoma mansoni* in white albino mice and to evaluate their effects on the major enzyme activities involved in liver metabolism during the course of infection. Liver function tests, total proteins, albumins, globulins, alanine aminotransferase (ALT) and aspartate aminotransferase (AST) were measured. A group of 35 adult normal CD-1 Swiss albino mice, each weighing 20 gms, were divided into five groups and infected each with 80 *S. mansoni* cercariae (Egyptian strain). Groups, one, two and three of the infected mice were treated orally with the extract in a dose rate of 500 mg/kg b.wt for five consecutive days; seven days before infection with *S. mansoni* cercariae (prophylactic), as well as four and seven weeks post-infection (curative). Group four was treated with praziquantel (PZQ) at a dose of 500 mg/kg b.wt for two consecutive days seven weeks post-infection (treated control), while in group five the mice were left untreated after infection (infected untreated control). Nine weeks post-infection (constant period), the animals were sacrificed, perfused to evaluate the efficacy of the plant extracts in the treatment of the infection. *S. setigera* bark, *L. camara* leaves and a combined dose of both extracts had a significant reduction in worm burden (29%, 29% and 40% respectively) *In vivo* and ova count and a decrease in the percentage of mature and immature stages compare with praziquantel which has significant effect on biological parameters. The *S. setigera* bark extract had promising prophylactic activity (40% worm reduction) *in vivo*. Administration of *S. setigera* bark or *L. camara* leaves or combination extracts significantly diminished serum ALT and AST and restored albumin, globulins and total protein to the normal levels in both treated and prophylactic groups and improved A/G ratio. In conclusion the different extracts possess anti schistosomal, prophylactic and hepatoprotective activities.

## Direct evidence of viral infection and mitochondrial alterations in the brain of fetuses at high risk for schizophrenia

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**Introduction:** There is increasing evidences that favor the prenatal beginning of schizophrenia. These evidences point toward intra-uterine environmental factors that act specifically during the second pregnancy trimester producing a direct damage of the brain of the fetus. The current available technology doesn't allow observing what is happening at cellular level since the human brain is not exposed to a direct analysis in that stage of the life in subjects at high risk of developing schizophrenia.

**Methods:** In 1977 we began a direct electron microscopic research of the brain of fetuses at high risk from schizophrenic mothers in order to finding differences at cellular level in relation to controls.

**Results:** In these studies we have observed within the nuclei of neurons the presence of complete and incomplete viral particles that reacted in positive form with antibodies to herpes simplex hominis type I [HSV1] virus, and mitochondria alterations.

**Conclusion:** The importance of these findings can have practical applications in the prevention of the illness keeping in mind its direct relation to the etiology and physiopathology of schizophrenia. A study of amniotic fluid cells in women at risk of having a schizophrenic offspring is considered. Of being observed the same alterations that those observed previously in the cells of the brain of the studied fetuses, it would intend to these women in risk of having a schizophrenia descendant, previous information of the results, the voluntary medical interruption of the pregnancy or an early anti HSV1 viral treatment as preventive measure of the later development of the illness.