

Expression of SmATPDases in *Schistosoma mansoni* eggs favors IL-10 mediated modulation in infected individuals

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Abstract

Background and objectives: A role of IL-10 is down-regulating T cell responses to schistosome antigens. Since SmATPDases can be correlated to modulation of the immune response, we evaluated the expression of enzymes in *S. mansoni* eggs. **Patients/Methods:** Fecal samples were collected from 40 infected individuals to detect coding regions of the SmATPDases. The cytokines was measured in supernatants of PBMC. The analysis was performed by the global median determination and set up high producers (HP) of cytokines. **Results:** Six individuals expressed SmATPDase1, six expressed SmATPDase2, and six expressed both enzymes. The group who expressed only SmATPDase1 showed a high frequency of IFN- γ , TNF, IL-4 HP, individuals who expressed only SmATPDase2 showed a high frequency of IFN- γ , IL-6, and IL-4 HP and individuals who expressed both enzymes showed a high frequency of IL-10 HP. In the group that showed expression both enzymes was observed lower indices the ratio between IFN- γ /IL-10. The positive correlation between infection intensity and IL-10 levels remained only in the positive SmATPDase group. The IL-10 is the only cytokine induced by the expression of both enzymes. **Conclusions:** The expression of both enzymes seems to be a factor that modulates the host immune response by inducing high IL-10 production.

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