

Tsetse fly saliva: Could it be useful in fly infection when feeding in chronically aparasitemic mammalian hosts

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Abstract

Sleeping sickness and nagana are two important diseases caused by African trypanosomes in humans and animals respectively, in tropical african countries. A number of trypanosome species are implicated in these diseases, but it is the *Trypanosoma brucei* group that is responsible for the chronic form of sleeping sickness. During the course of this chronic infection the parasite shows a clear tropism for organs and tissues and only sporadically appears in the blood stream. Notwithstanding this feature, tsetse flies normally get infected from chronically infected aparasitemic hosts. For some pathogens like the microfilaria, it has already shown that the saliva of the vector, black fly saliva contribute to orient the pathogen to the site of the vector bite. Chemotaxis of tsetse saliva may perhaps stimulate movement of *Trypanosoma brucei* parasites from tissues to the bloodstream and via the vascular to the tsetse feeding site, and could explain the relatively high infection rate of tsetse flies feeding on chronically infected animals. This review paper looks into the possible role of trypanosome-vector saliva in ensuring parasite acquisition and its application in the tsetse – trypanosome interaction at the host skin interphase.