

## **Abstract**

*Trypanosomatids* are protozoan parasites known for its medical and economical significance. *Leishmania*, *Trypanosoma*, *Endotrypanum* and *Phytomonas* genera are dioxenous parasites. Part of the life cycle takes place in the insect vector, where the parasites are attached using their flagella. Supraplyarian *Leishmania* differs in the binding method depending on the type of vector it uses for its transmission. The attachment is dependent on lipophosphoglycan (LPG) in a specific vector while in a permissive vector, the interaction is based on a different mechanism (LPG-independent). Attachment of *T. cruzi* in the posterior part of a digestive system of a hemipterous bugs appears to be necessary for metacyclogenesis. Similar strategy seems to be used by *T. brucei* which is attached in the salivary glands. The genera *Endotrypanum* and *Phytomonas* are not medically significant pathogens, thus their life cycles have not been profoundly researched. *Endotrypanum*, as well as *Leishmania*, develops in the digestive system of sand flies, thus the binding mechanism could be analogous. *Phytomonas* develops in the salivary glands of hemipterous bugs which denotes similarity with *T. brucei*. Based on the collected data, it is assumed that the binding mechanism of the Trypanosomatids is generally based on the lectin-like protein interaction with carbohydrates (glycoproteins, glycolipids). However, this topic has not been researched thoroughly to this date.

**Key words:** Trypanosomatids, *Leishmania*, *Trypanosoma*, *Endotrypanum*, *Phytomonas*, insect vector, development, attachment