

TITLE: *Bacteroides fragilis* AND *Trichomonas vaginalis* INTERACTION: IS THERE A WINNER?

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ABSTRACT

The Genus *Bacteroides* is composed of gram-negative and strict anaerobic species, which, in normal conditions, establish a commensal relationship with the host. *Bacteroides fragilis* is present in several host sites, including the female urogenital tract. Depending on the host site condition not only a microorganism but more than one, from different genders and species, may act as pathogenic agent. *Trichomonas vaginalis* is a parasite, etiologic agent of trichomoniasis, a sexually transmitted disease that affects humans' urogenital tract. The persistence of this infection, among other possibilities, is related to parasite's ability to phagocytose other microorganisms, but this mechanism is not fully understood. In this study, were used *T. vaginalis* trophozoites and *B. fragilis* strains, clinically the most important species in the genus, since it is the most commonly isolated from endogenous infection processes, often associated to gastrointestinal, respiratory and female urogenital tract infections. Previous analyses were proceeded using parasite interaction-bacteria in the proportions of 1:10, 1:50 and 1:100 for 1, 2, 6, 8 and 12 hours, including viability tests. Those data showed for 1:100 proportion, after 6 h of interaction, the bacteria phagocytosis by the parasite beyond the decay in *T.vaginalis* viability after 8h of interaction. After 12 h of interaction, not only ultrastructure alterations in the parasite were noted but also viable trophozoites were no longer found, which suggested the bacteria capacity in subvert parasite action. Thus, in this study, preliminary analysis using negative contrast electron microscopy after interaction essays, indicated alterations in parasite cells, corroborating previous findings. The deleterious consequences of the interaction for *T.vaginalis* suggest *B. fragilis* ability to maintain its viability, which could be associated to toxic metabolites production. More detailed analysis will be carried out, including those to study the apparent bacterial biofilm formation also observed.

Key words: *Bacteroides fragilis*, *Trichomonas vaginalis*, Interaction essays, Phagocytosis

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