

An Ectonucleotide ATP-diphosphohydrolase Activity in *Trichomonas vaginalis* Stimulated by Galactose and Its Possible Role in Virulence

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This work describes the ability of living *Trichomonas vaginalis* to hydrolyze extracellular ATP (164.0 ± 13.9 nmol Pi / h $\times 10^7$ cells). This ecto-enzyme was stimulated by ZnCl₂, CaCl₂ and MgCl₂, was insensitive to several ATPase and phosphatase inhibitors and was able to hydrolyze several nucleotides besides ATP. The activity was linear with cell density and with time for at least 60 min. The optimum pH for the *T. vaginalis* ecto-ATPase lies in the alkaline range. D-galactose, known to be involved in adhesion of *T. vaginalis* to host cells, stimulated this enzyme by more than 90%. A comparison between two strains of *T. vaginalis* showed that the ecto-ATPase activity of a fresh isolate was twice as much as that of a strain axenically maintained in culture, through daily passages, for several years. The results suggest a possible role for this ecto-ATPase in adhesion of *T. vaginalis* to host cells and in its pathogenicity.