

Heterogeneity in Extracellular Nucleotide Hydrolysis Among Isolates of  
*Trichomonas vaginalis*

Tiana Tasca<sup>1</sup>, Carla D. Bonan<sup>2</sup>, Geraldo A. De Carli<sup>3</sup>,  
João J. F. Sarkis<sup>4</sup>, J. F. Alderete<sup>5</sup>

<sup>1</sup>Laboratório de Pesquisa em Parasitologia, Faculdade de Farmácia, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil <sup>2</sup>Laboratório de Neuroquímica e Psicofarmacologia, Faculdade de Biociências, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, RS, Brazil <sup>3</sup>Instituto de Geriatria e Gerontologia, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, RS, Brazil <sup>4</sup>Departamento de Bioquímica, ICBS, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, Brazil; <sup>5</sup>School of Molecular Biosciences, Washington State University, Pullman, WA, USA

*Trichomonas vaginalis* is a parasitic protozoan that causes trichomonosis, a sexually-transmitted disease, with serious sequelae to women and men. As the host-parasite relationship is complex, it is important to investigate biochemical aspects of the parasite that contribute to our understanding of trichomonal biology and pathogenesis. Nucleoside triphosphate diphosphohydrolase (NTPDase), which hydrolyzes extracellular ATP and ADP, and ecto-5'-nucleotidase, which hydrolyzes AMP, have been characterized in *T. vaginalis*. These enzymes were found to be uniquely expressed among isolates. Fresh clinical isolates presented higher ATPase and ADPase activities than long-term-grown isolates. Furthermore, some isolates had low or absent ecto-5'-nucleotidase activity. Growth in iron-replete and iron-depleted medium resulted in different patterns in extracellular ATP, ADP and AMP hydrolysis among isolates, suggesting heterogeneity in the enzyme activities under varied environmental conditions. Finally, we found no correlation between the presence or absence of dsRNA virus infection among trichomonad isolates and NTPDase and ecto-5'-nucleotidase activities.

Keywords: *Trichomonas vaginalis*, nucleotide, extracellular hydrolysis, heterogeneity, clinical isolates

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