IMMUNOPROTEASOME EXPRESSION IN CELLS INFECTED BY *TRYPANOSOMA CRUZI*.

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The proteasome is a large multicatalytic cytoplasmic and nuclear protease complex that is responsible for the majority of non-lysosomal protein degradation within eukaryotic cells. Its catalytic core, the 20S proteasome, is a barrel-shaped complex made of two outer α-rings and two inner β-rings. In vertebrates, when cells are exposed to interferon-γ, the catalytic subunits of the 20S proteasome, β1, β2 and β5, are replaced by their IFN-γ-inducible counterparts, β1i, β2i and β5i, respectively, leading to the formation of the so-called immunoproteasome. This particle exhibits a modified activity profile as compared with that of the constitutively expressed proteasome and is involved in the processing of MHC class I ligands through immunological processing of intracellular antigens. This work aims to detect some alteration in the proteasome protein profile of HeLa and L6 cells upon infection in the presence of the intracellular protozoan parasite *Trypanosoma cruzi*. We demonstrate that HeLa cells previously treated with IFN-γ were protected against *T. cruzi* infection. In addition, expression of the three inducible subunits was not observed when HeLa and L6 cells were infected with *T. cruzi*. However, β1i, β2i and β5i subunits expression was not equivalent to that found when cells were treated only with IFN-γ. These findings provide insights that *T. cruzi* infection impairs the immunoproteasome biogenesis in cell culture.

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