A Multi-Protein Complex at *Leishmania amazonensis* Telomeres: Preliminary Results

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In vertebrates, telomere binding proteins such as TRF1 and TRF2 play crucial roles in telomere biology by interacting with several other telomere regulators to ensure proper maintenance of telomeres and to form high order complexes known as telosome or shelterin. In *Leishmania* spp. some telomeric proteins have been described and LaTRF (*Leishmania amazonensis* TTAGGG repeat-binding factor), an homologue of the human and *Trypanosoma brucei* TRF proteins, was recently characterized in the lab. By indirect immunofluorescence and Western blotting analysis it was possible to show that LaTRF localizes at the parasite nucleus and by chromatin immunoprecipitation that the protein binds telomeres *in vivo*. In order to check that similarly to its vertebrate counterparts, LaTRF can associate with other telomeric proteins, we found through co-immunoprecipitation experiments that LaTRF is probably a subunit of a telomere associated high molecular weight complex that also contains LaRpa-1 and LaRbp38. At the moment we are trying to isolate the multi-protein complex by gel filtration. We also checked if LaTRF is phosphorylated in response to DNA damage. Nuclear extracts from parasites exposed or not to UV radiation were submitted to Western blotting analysis revealed with a anti-LaTRF serum. The results showed that LaTRF do not suffer any phosphorylation at normal conditions or upon DNA damage.

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