INTERACTION AMONG POLY-A BINDING PROTEIN (PABP) HOMOLOGUES FROM *LEISHMANIA MAJOR* AND POLY-A USING RNA BAND-SHIFT

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The PABP is a highly conserved eukaryotic protein that binds the mRNAs poly(A) tail and functions in the regulation of translation efficiency and mRNA stability. Little is known about protein synthesis in trypanosomatid protozoans, but single PABP homologues have been described from *Leishmania major*, *Trypanosoma cruzi* and *T. brucei*. Our group has characterized three PABPs homologues found in *Leishmania major* (*Lm*PABP1-3). Here we examine the interaction among these three PABP homologues with a poly(A) rich RNA probe. To address this issue, band-shift experiments were performed and found that the three PABP homologues had different binding abilities: both *Lm*PABP1 and *Lm*PABP3 produced two shifts when bound to the probe, in contrast to *Lm*PABP2 which only produced one; addition of poly(A) strongly inhibited the binding by *Lm*PABP1 and to a lesser extent the binding by *Lm*PABP2-3; the binding of all three proteins was moderately inhibited by poly-U but poly(C) did not produce any effect; only the binding by *Lm*PABP2 was sensitive to heparin addition. In conclusion we have three PABPs homologues, which have distinct RNA binding patterns, and are differently affected by the competitors used. Nevertheless, additional studies must be done to understand how these three proteins differ functionally and what are their roles in protein synthesis and mRNA metabolism.