

2007 Ohio Student Research Forum

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RESEARCH ABSTRACT FORM

TITLE: Characterization of Pol III Transcription Factors in *Leishmania***AUTHOR:** Kimberly Jennings¹, Juan D. Alfonzo, PhD², Joseph Pitula, PhD¹.**MENTOR(S):** Juan D. Alfonzo, PhD²**DEPARTMENT:** University of Maryland Eastern Shore¹, The Ohio State University²**INSTITUTION:** Ohio State University

Trypanosomatids are the cause of many diseases across the world. *Leishmania* is a specific trypanosomatid that is the causative agent of Leishmaniasis. Trypanosomes are unique in their tRNA transcription in that, two transcription factors that were believed to be necessary for transcription are not found in genomic databases. To find out if there are transcription factors that bind to the promoter region of the tRNA gene, we conducted band-shift assays using nuclear extracts from *Leishmania* cultures and an oligonucleotide sequence of the promoter region/tRNA gene. The assays revealed three distinct protein- DNA complexes. Through a competition with NaCl, we found that higher levels of salt (>0.15M) lead to an inhibition of protein binding. Furthermore, the lowest shift, complex A, is the most stable complex.