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## Analysis of TATA Binding Protein (TBP) of *Taenia solium* and core promoter elements in Taenidae family genes

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Little is known about the transcriptional system in cestodes. Therefore, we wanted to study and found the differences with the human and pig (host) transcription system. The aim of this study was the identification of the elements present in the core promoter that regulates the formation of the Pre-Initiation Complex (PIC) in Taenidae family genes and the analysis of TATA Binding Protein of *Taenia solium* (TsTBP). We analyze the core promoter of different genes and identify the cis-elements presents. We have cloned and characterized a TBP in *T. solium*. We produce an in silico model from TsTBP, produce nuclear extracts from cysts and identified TsTBP by western blot. Southern and northern blot were carried out. We perform EMSA and Super Shift to TATA Box present in proximal promoters of *T. solium* genes. We identified putative core promoter elements present in Taenidae family. We isolate the gene and cDNA that encodes TsTBP. The amino acid sequence reveals a 238-residues protein with an expected weight of 26.7 kDa. Southern and northern blot suggest the presence of one gene and two mRNA for TsTBP. EMSA and supershift shows a specific interaction between the TATA box of different promoters and nuclear extracts from *T. solium*. Our results indicate that we have isolated the gene encode a TBP and showed its interaction with the TATA box from different genes. We identified INR and putative DPE in some genes from Taenidae family.

### Biography

Oscar Rodríguez-Lima is a PhD student at Medicine School in Universidad Nacional Autónoma de México (UNAM) and partial time Professor at Chemistry School in Universidad La Salle (ULSA). He obtained his MSc degree in Biochemistry at Medicine School in UNAM. Currently, he is doing his PhD characterizing transcription factors and cis elements present in core promoters of *Taenia solium* genes.

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