

**PROTEIN INTERACTION PROFILE OF THE HUMAN REGULATORY  
PROTEIN FEZ1 SUGGESTS NEW ROLES IN THE CONTEXT OF  
TRANSCRIPTIONAL REGULATION**

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The protein FEZ1 (Fasciculation and Elongation protein Zeta-1) is an orthologue of *C. elegans* UNC-76, necessary for the formation and normal growth axon in this worm and efficiently promotes the neurite elongation in the rat PC12 cells. We employed the yeast two-hybrid system and identified among others several transcription regulatory proteins as FEZ1(221-392) interactors. The others identified proteins are functionally associated to neuronal cell development, intracellular transport processes and apoptosis. Here, we focused our efforts on studies with the following proteins involved in transcriptional regulation: BAF60a (BRG Associated Factor 60a – involved mainly in chromatin opening), SAP30L (Sin3A Associated Protein 30 like – involved mainly in chromatin compaction) and KIBRA (Kidney and Brain – involved in memory performance). 6xHis-SAP30L expressed in *E. coli*, purified and employed for in vitro phosphorylation assays. We also performed sub-cellular localization studies of SAP30L in human cells. 6xHis-BAF60a expressed in the soluble fraction and its purification is currently being optimized. We are also performing a KIBRA(869-1113) yeast two-hybrid assay in order to obtain a better characterization of the cellular functional context of this protein and to integrate these data with the data on FEZ1. Furthermore, the proteins will be utilized in co-crystallization trials with FEZ1 and analytical gel-filtration and spectroscopic studies for the biophysical characterization of the protein-complexes.

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