

# **MIP6 a putative mRNA binding protein and its role in RNA export**

Nada Mohamad\*, Jeronimo Bravo

Instituto de Biomedicina de Valencia (IBV), Calle Jaime Roig 11, Valencia, 46010  
Valencia, Spain

nmohamad@ibv.csic.es

Proteins are the building blocks for cells, they are essential for every process cells undergo; hence understanding how proteins come to be is of crucial importance to understand how cells behave. Proteins are translated from mRNA that is transcribed from DNA located in the nucleus, mRNA, in eukaryotes, needs to be exported to the cytoplasm to undergo post-transcriptional modifications that are essential for the final production of proteins.

We are interested in studying the activity of a mRNA export protein termed MIP6 (MEX67 INTERACTING PROTEIN). While MEX67 is heavily studied and characterized little is known about MIP6 and its ability to bind either MEX67 or mRNA or both. Our methodology include mapping the sites of interaction between MIP6, MEX67 with mRNA and characterizing these domains, in addition our main goal is to define the boundaries of the interaction by solving the structure of both proteins using crystallography techniques. X-RAY crystallography will help us visualize the protein structures at an atomic level and will enhance our knowledge of the function of these proteins and their conformational changes.

In this sense, we have identified and purified the binding regions of MIP6 and MEX67 located in the c-terminus of both proteins, we are currently conducting trial experiments to crystallize this complex in Baculovirus-insect cells system since MIP6 is not soluble and incorrectly folded in *Escherichia coli*.