

Interaction of Adenomatous Polyposis Coli protein with microtubules by cryo-electron microscopy and tomography

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Discovered for its direct link with colon cancer, Adenomatous Polyposis Coli protein (APC) has been first characterized for its role in the *Wnt* signaling pathway. In this pathway, APC is part of the degradation complex of beta-catenin and prevents the transcription of specific oncogenes. APC is a ubiquitous protein and takes part in essential cellular processes such as cell division or cell migration. Transcriptomic studies have revealed that APC was abundantly expressed in brain. In neurons, for instance, APC is involved in the development of both axon and post-synaptic compartment. APC mutations associated with a loss of function in APC gene are related to neurologic disabilities such as autism or schizophrenia. These functions are connected to the cytoskeleton interacting properties of APC. We will present preliminary data on the interaction of APC with microtubules obtained by video microscopy, cryo-electron microscopy and tomography