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Alzheimer Dementia



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### Keywords

Alzheimer Disease - Amyloid Precursor Protein (APP) - APP Intracellular Domain (AICD) - Epigenetic.

### Science

The amyloid precursor protein (APP) plays a key role in the onset and progression of Alzheimer's disease. Recent data, including the work of the host team, indicate that the pathophysiological function of APP is based on its ability to control genes transcription through its intracellular domain (AICD, APP intracellular domain). Using a recent and unbiased technology (ChIP-Seq), we will try to identify, in primary cultures of neurons, genomic sequences that AICD binds and genes which can be controlled by it. Other data suggest that transcriptional control of AICD is linked to acetyltransferase (HAT) and histone deacetylases (HDAC) activities. Our project aims also to study these epigenetic mechanisms by characterizing their in vitro activities and by identifying their actors. Finally, we plan to understand the link between AICD, epigenetic modifications and gene regulation in vitro and in vivo.