Poster 7

Structural Characterization of the N-Terminal Domain of Histone H4

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Histones, nuclear proteins that interact with DNA to form nucleosomes, are essential for both the regulation of transcription and the packaging of DNA within chromosomes. The N-terminal domain of histone H4 contains four acetylation sites at lysines and may play a separate role in chromatin structure from the remainder of the H4 chain. Chromatin structure could be reversibly modulated to activate or silence transcription by targeting histone acetyltransferases or deacetylases to a particular gene. We report here the NMR characterization of N-terminal peptide of histone H4 which is acetylated at pH 3.0 and 7.0. Two dimensional DQF-COSY, TOCSY and NOESY spectra were served for spectral assignments and structural informations. Structural calculations were performed using molecular modeling program, X-PLOR 3.1.