

KC 2 - Protein-Ligand Interactions of Chitooligosaccharides as Revealed by X-ray, NMR, and MS Analysis

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The study of protein-sugar interactions is of general interest in glycobiology, including chitin enzymology. Recent results are reviewed:

Protein crystallography showed the interaction of oligosaccharides and inhibitors with amino acid residues and yielded clues about the mechanism of catalysis of chitinases. trNOESY and STD NMR spectroscopy yielded information about the conformation of protein bound oligosaccharides and enzyme inhibitors. Nano-ESI mass spectrometry led to the identification of the sequence of a partially acetylated chitopentaose, bound to chitinase B from *Serratia marcescens* from a mixture of chitooligosaccharides.