

PDB-Ligand Based Signaling Network of Disease Related Proteins

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Rapidly increasing protein complexes with ligands in protein data bank(PDB) are found to be useful for generating a signaling network of proteins. Recently, many evidences have been accumulated that ligands, particularly fatty acids play critical roles in protein interaction, signaling, targeting and membrane binding process. For those proteins whose interacting ligands are not known, their possible natural or synthetic ligands can be directly imported through structural superfamily based collection of ligands and selection by odd ratio in protein structure database. In this talk, a PDB-ligand based signaling network of Diabetes Mellitus related proteins will be briefly introduced and a possible mechanism will be suggested with full evidences in literature. This noble procedure can be used as a model system for the other disease related signaling networks.