Glycan binding proteins in health and disease

More than half of the proteins in our body possess covalently attached glycan or carbohydrate molecules. These glycan molecules are recognized by a special group of proteins known as glycan binding proteins (GBP) or lectins. Lectins play important roles in numerous biological processes including immune defense and pathogen invasion. Lectins interact with their glycan ligands through a unique recognition process. Specific examples of lectin-glycan interactions in cancer and bio-detection and their clinical significance will be discussed.