

PROTEIN MODIFICOMICS

From Modifications to Clinical Perspectives

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Protein Modificomics: From Modification to Clinical Perspectives deals comprehensively with all of the most recent aspects of post-translational modification (PTM) of proteins, including diseases involving PTMs, plant PTMs, the role of therapeutic strategies, and other topics such as translational proteomics.

PTMs are the backbone of several key biological processes. It has been known that many proteins often undergo unwanted modifications, leading to the disruption of proteostasis and ultimately gains in disease etiology. These diseases include Alzheimer's, Huntington's, X-linked spinal muscular atrophy-2, aneurysmal bone cyst, Angelman syndrome, OFC10, etc. Cancer is also one of the major complex diseases wherein various proteins undergo undesired modifications that result in deregulation of the cell cycle, disruption of DNA repair mechanisms, and the inactivation of the proapoptotic pathways. Furthermore, the allosteric insight to regulation or deregulation of the protein structure due to modifications is of immense importance for designing drugs for therapeutic intervention in diseases caused due to the modifications.

PTMs also play a significant role in plant physiology and the production of medicinally important primary and secondary metabolites. Understanding of PTMs in plants will help us to enhance the production of these metabolites without greatly altering the genome. This will give us robust eukaryotic systems for production and isolation of desired products without considerable downstream and isolation processes.

Key Features

- Collects in one place a thorough insight into post-translational modifications (PTMs) of proteins in both the plant and animal kingdoms, along with their therapeutic implications
- Diagrammatic representation of various protein modification and estimation mechanisms in four-color
- Includes coverage of diseases involving post-translational modifications and their role as diagnostic markers



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