



## Recent Advances in Protein Phosphorylation

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### Message from the Collection Editors

This reversible PTM is generally catalyzed by the opposing activities of large families of protein kinase and phosphatase enzymes. For example, the human genome encodes more than 500 protein kinases and about 300 protein phosphatases. Approximately 13000 human proteins have sites that are phosphorylated and dephosphorylated. These numbers reflect the importance and complexity of protein phosphorylation. Abnormal phosphorylation resulting from an imbalance in enzymatic reactions of kinases and phosphatases has been implicated in a wide range of human diseases, including cancer, diabetes mellitus, neurodegeneration, and immune/inflammatory and vascular disorders. Therefore, methods for quantitative and qualitative monitoring of alterations in the phosphorylation states of certain proteins are also very important for studies on the proteome, particularly in relation to the elucidation of the molecular origins of diseases and the rational molecular design of drugs.

This Special Issue will focus on the role of protein phosphorylation in all living cells. Original manuscripts and reviews about protein phosphorylation and related pathophysiology and methodology are very welcome.





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