kinases and phosphatases

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Research on Protein Phosphorylation in Genetic Diseases

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Message from the Guest Editors

Dear Colleagues,

Protein phosphorylation is the most recurrent post-translational modification by which the properties of eukaryotic proteins can be reversibly changed. In a protein, the phosphorylation extent of tyrosine, serine, and threonine sites are regulated by the balance of the action of protein kinases and protein phosphatases. It is well known that an aberrant phosphorylation could take part to the pathogenesis of several human diseases, such as cancer, neurodegenerative diseases, diabetes. Likewise, inherited mutations in genes of specific protein kinases or phosphatases have been identified as the cause of different genetic diseases. Moreover, also pathological proteins involved in genetic disorders have been shown to have an aberrant function due to the alteration of their phosphorylation state, caused by the disease-associated mutation, including α-synuclein, tau, APP. This Special Issue will cover the recent progress in all of the areas related to the involvement of protein phosphorylation in genetic diseases. Both original research articles and reviews are welcome.