Lipidated Proteins: Occurrence, Mechanisms, Biological Functions, and Enabling Technologies

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Abstract

Protein lipidation, including cysteine prenylation, N-terminal glycine myristoylation, cysteine palmitoylation, and serine and lysine fatty acylation, occurs in many proteins in eukaryotic cells and regulates numerous biological pathways, such as membrane trafficking, protein secretion, signal transduction, and apoptosis. In this talk I tried to explain about proteins known to be modified and the functions of the modifications for infectious viruses or cancer cells to drug design. Also we take look at some recent computational studies on these type of systems and the tools and technologies developed to study them. Here I also point to some unsolved problems about protein lipidation that highlighted in literature and the challenges associated with answering such questions.