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Nota di contenuto	Protein Phosphorylation; Preface; Contents; List of contributors; List of Abbreviations; 1 The brain of the cell; 1.1 Signals and symbols; 1.2 Proteins as communicative molecules; 1.3 The discovery of protein phosphorylation; 1.4 Protein phosphorylation in prokaryotes; 1.5 Protein phosphorylation in eukaryotes; 1.5.1 Eukaryotic protein kinases: common features and diversities; 1.5.2 Control of protein kinase activity; 1.5.3 The problem of substrate specificity; 1.5.4 Regulatory signals for protein kinases and examples of signaling cross-talk 1.5.5 Protein tyrosine phosphorylation and the integrity of multicellular organisms 1.6 Signal extinction by protein dephosphorylation; 1.7 Cancer: a cellular 'psychosis'; 1.8 Advancing beyond the metaphor: proteins as non-trivial machines; References; 2 cAMP-dependent protein kinase: structure, function and control; 2.1 Introduction; 2.2 Biochemistry of cAPK; 2.2.1 Principles of purification of cAPK; 2.2.2 The

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2.4 Structural aspects of cAPK function
2.4.1 Dynamics of substrate-induced fit in solution; 2.4.2 Crystal structure of cAPK C-subunit; 2.4.3 Aspects of future research on cAPK; 2.5 A quick look at the cGMP-dependent protein kinase: a close relative of cAPK; 2.6 Structural consequences of protein phosphorylation in general; 2.6.1 Immediate physical consequences; 2.6.2 Conformational change - indirect evidence; 2.6.3 Conformational change - direct evidence; 2.6.4 Structural effects in peptides; References; 3 Protein kinase C; 3.1 Introduction; 3.2 The protein kinase C isoenzyme family
3.2.1 The PKC subfamilies
3.2.2 PKC isoenzyme structures: common features and differences
3.2.3 Regulation of PKC activity
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3.3.6 How PKC may acquire substrate specificity; 3.4 Protein kinase C in disease; 3.4.1 Involvement of PKC expression in benign and malignant hyperproliferative diseases
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4.3.1 Biochemical features and molecular structures of CK1

Sommario/riassunto

Protein phosphorylation is a key mechanism in cellular signaling. This volume presents a state-of-the-art survey of one of the most rapidly developing fields of biochemical research. Written by leading experts, it presents the latest results for some of the most important cellular pathways. Color plates illustrate structural or functional relationships, numerous references provide links to the original literature.
