

Preface

In the second volume of the *SpringerBriefs series on Protein Folding and Structure* we now turn to protein domains. Protein domains are compact structural units with well-defined tertiary interactions, whose folding and evolution is frequently independent of those of the proteins in which they are found. Classical protein domains include Zinc fingers, EF-hands and Immunoglobulin-like domains to which precise functions are associated. However, the fact is that a substantial number of proteins comprise protein domains with as yet uncharacterised functions. Understanding proteins and their structural and functional versatilities thus requires a thorough knowledge of protein domains and potential functions thereof. In this volume, Presto and Johansson present us with an insightful assay which introduces the BRICHOS domain, a structural module which renders chaperone and anti-aggregation properties in its proproteins. The volume uncovers how knowledge on BRICHOS has evolved since its discovery over a decade ago, overviews the different proteins in which it is found, and accounts for the latest discoveries relating to new regulatory functions of this domain over amyloid- β aggregation, with implications in Alzheimer's Disease. By combining a historical perspective with the latest biochemical and functional insights into BRICHOS domains, this volume constitutes an excellent addition to the series that illustrates the relevance of frontier research on protein domains towards the goal of understanding protein structure and folding in a broader sense. Enjoy reading.

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The BRICHOS Domain

Its Proproteins and Functions

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