



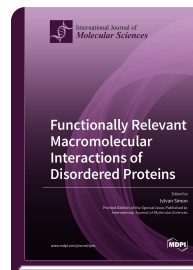
Special Issue Reprint

Functionally Relevant Macromolecular Interactions of Disordered Proteins

www.mdpi.com/books/reprint/2712

Edited by
Istvan Simon

ISBN 978-3-03936-521-0 (Hardback)
ISBN 978-3-03936-522-7 (PDF)



Disordered proteins are relatively recent newcomers in protein science. They were first described in detail by Wright and Dyson, in their J. Mol. Biol. paper in 1999. First, it was generally thought for more than a decade that disordered proteins or disordered parts of proteins have different amino acid compositions than folded proteins, and various prediction methods were developed based on this principle. These methods were suitable for distinguishing between the disordered (unstructured) and structured proteins known at that time. In addition, they could predict the site where a folded protein binds to the disordered part of a protein, shaping the latter into a well-defined 3D structure. Recently, however, evidence has emerged for a new type of disordered protein family whose members can undergo coupled folding and binding without the involvement of any folded proteins. Instead, they interact with each other, stabilizing their structure via “mutual synergistic folding” and, surprisingly, they exhibit the same residue composition as the folded protein. Increasingly more examples have been found where disordered proteins interact with non-protein macromolecules, adding to the already large variety of protein–protein interactions. There is also a very new phenomenon when proteins are involved in phase separation, which can represent a weak but functionally important macromolecular interaction. These phenomena are presented and discussed in the chapters of this book.



Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/2712

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.