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## Protein Structure and Diseases

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Proteins fold into a characteristic and functional 3-dimensional structure, which is determined by their amino acid sequences. There is increasing evidence that polymorphisms and mutations in protein sequences can be risk factors for development of different diseases.

In this volume of Advances of Protein Chemistry and Structural Biology, recent results have been emphasized which help to understand important aspects of structure-function relations altering the biological activity of proteins. Some of the disorders which have been discussed in this book include thrombosis and vascular disease, and congenital erythropoietic porphyria. In addition, some computational methods for studying protein dynamics and long range allostery in cell signaling, with respect to their structure, have been presented. Limitations and shortcomings of the methods, along with their perspectives in design of new approaches for drug development, are also discussed.

**Cover image**: Conserved surface exposed regions are shown in different colors in the cyan colored monomer of neuraminidase (Other monomers are colored in Magenta, Green and Yellow). Here the six conserved regions are shown in six different colors. The highly conserved C-terminal portion is shown in blue color.

**Credit**: Ambarnil Ghosh, Papiya Nandy, Physics Department, Jadavpur University, Kolkata, India and Ashesh Nandy, Centre for Interdisciplinary Research and Education, Jodhpur Park, Kolkata, India.

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