

Contents

<i>Preface</i>	v
1. From Kuru to Nucleation, Aggregation, Polymerization and Crystallization in Biology and Medicine <i>D. Carleton Gajdusek</i>	1
2. Gels Mimicking Antibodies in Their Selective Recognition of Proteins and Its Potential Use for Protein Crystallization <i>Jan Sedzik, Nasim Ghasemzadeh, Fred Nyberg and Stellan Hjertén</i>	11
3. Bioinformatics of Myelin Membrane Proteins <i>Gunnar von Heijne and Jan Sedzik</i>	35
4. Biomolecular Mass Spectrometry: Applications to Proteins and Peptides <i>Leopold L. Ilag and Gianluca Maddalo</i>	55
5. Myelin: A One-Dimensional Biological “Crystal” for X-Ray and Neutron Scattering <i>Hideyo Inouye and Daniel A. Kirschner</i>	75

6. Two-Dimensional Crystallization of Biological Macromolecules	95
<i>Hans Hebert</i>	
7. Crystallization of Proteins: Principles and Methods	113
<i>Lata Govada</i>	
8. The Role of Oil in Protein Crystallization	129
<i>Naomi E. Chayen</i>	
9. Introduction to Crystallization of Fine Chemicals and Pharmaceuticals	145
<i>Åke C. Rasmuson</i>	
10. Myelin Basic Protein, A Saucy Molecule With High Responsiveness to the Environment or Just an Unusual Membrane Protein?	173
<i>Paolo Riccio</i>	
11. The Use of a Magnetic Field and Magnetic Force as a Means to Improve the Quality of Protein Crystals	195
<i>Mitsuo Ataka</i>	
12. Interactive Crystallomic	225
<i>Jan Sedzik</i>	
13. Virtual Molecule: P0 Myelin Glycoprotein. I. Homology Modeling and Prediction of the Secondary and Tertiary Structure	237
<i>Jan Pawel Jastrzebski and Jan Sedzik</i>	

Contents

14. <i>In meso</i> Approaches to Membrane Protein Crystallization	259
<i>Valentin I. Gordeliy and Ekaterina S. Moiseeva</i>	
15. Amyloid, The Amyloid β -Peptide and Alzheimer's Disease: Structural Considerations	283
<i>Lars O. Tjernberg</i>	
16. Recent Advances in Structural Basis for Molecular Mimicry in Inflammatory Autoimmune Demyelinating Polyneuropathy	305
<i>Xin Yang</i>	
17. Fresh Water Pearls of Wisdom on Protein Crystallization	331
<i>Jan Sedzik</i>	
<i>Glossary</i>	345
<i>Index</i>	349