

STRUCTURAL GENOMICS ON MEMBRANE PROTEINS

While the genomic revolution has quickly led to the deposit of more than 30,000 structures in the protein data bank (PDB), less than one percent of those contributions represent membrane proteins despite the fact that membrane proteins constitute some 20 percent of all proteins. This discrepancy becomes significantly troublesome when it is coupled with the fact that 60 percent of current drugs are based on targeting this group of proteins, a trend that does not seem likely to be reversed.

Structural Genomics on Membrane Proteins provides an excellent overview on novel research in bioinformatics and modeling on membranes, as well as the latest technological developments being employed in expression, purification, and crystallography to obtain high-resolution structures on membrane proteins. This cutting-edge work also explains the difficulties facing researchers, both technical and ethical, that have slowed the process.

With contributions from more than forty top researchers from America and Europe writing about their recent progress, this volume—

- Discusses the various methods for production of recombinant membrane proteins in bacteria, yeast, insect, and mammalian cells
- Covers downstream processing, including solubilization, refolding, and purification
- Provides examples of studies on whole genomes of specific organisms, types of genes/proteins, and gene protein families
- Includes sections on the supply of protein for purification and crystallization attempts
- Presents alternative methods including the use of nuclear magnetic resonance and electron microscopy

Structural Genomics on Membrane Proteins provides researchers with an unprecedented look at the novel technologies that will ultimately allow them to conquer the last frontier in structural biology, leading to accelerated breakthroughs in drug discovery.

DK3385



Taylor & Francis

Taylor & Francis Group

A CRC PRESS BOOK

www.taylorandfrancisgroup.com

6000 Broken Sound Parkway, NW
Suite 300, Boca Raton, FL 33487

270 Madison Avenue
New York, NY 10016

2 Park Square, Milton Park
Abingdon, Oxon OX14 4RN, UK

ISBN 1-57444-526-X

90000



9 781574 445268

