Protein Targeting with Small Molecules: Chemical Biology Techniques and Applications
Hiroyuki Osada

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DESCRIPTION

Discover the link between the latest chemical biology approaches and novel drug therapies!

Protein Targeting with Small Molecules: Chemical Biology Techniques and Applications takes readers beyond the use of chemical biology in basic research, providing a highly relevant look at techniques that can address the challenges of biology and drug design and development.

This indispensable bench companion features up-to-date coverage of advances in chemistry and assesses their impact on developing new therapeutics, making it ideal for chemical biologists and medicinal chemists who are developing small molecule drugs to target proteins and treat diseases. In addition, the book examines the full range of complex biological systems and their interrelationship with chemistry, from the interaction of biological response modifiers with proteins to the chemical biology of cell surface oligosaccharides.

Distinguished by an overview of chemical biology that is reinforced and clarified by detailed examples and descriptions of techniques, Protein Targeting with Small Molecules: Chemical Biology Techniques and Applications:

• Introduces key technologies and methods of chemical biology designed to detect the interactions of small molecules and proteins

• Facilitates the discovery of small molecules that bind to proteins and describes the molecules’ application in the investigation of biological processes
• Presents timely coverage of the development of fluorescent probes for small molecules, as well as the generation of small molecule ligands and inhibitors

• Reviews important techniques such as chemical genomics, target profiling, immobilization technology, detection methods, chemical inhibition, and structure-based targeting

• Offers a compelling synopsis of data that underscores the recent progress made in the area of targeting proteins by small molecules

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**ABOUT THE AUTHOR**

Hiroyuki Osada is the Director and Chief Scientist in the Chemical Biology Department of RIKEN Advanced Science Institute and he is heading the RIKEN Natural Products Depository, RIKEN NPDepo. He is a former research fellow at the National Cancer Institute of the NIH. Dr. Osada is on the advisory boards of ACS Chemical Biology and Chemistry: An Asian Journal. In addition, he is an editorial member of four other journals, including Journal of Antibiotics and Journal of Microbiology and Biotechnology.

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