

Contents

1	The Architecture of the Presynaptic Release Site	1
	R. Grace Zhai	
2	Multiple Modes of Fusion and Retrieval at the Calyx of Held Synapse	17
	Liming He, Benjamin D. McNeil, and Ling-Gang Wu	
3	Roles of SNARE Proteins in Synaptic Vesicle Fusion	35
	Mark T. Palfreyman and Erik M. Jorgensen	
4	Roles and Sources of Calcium in Synaptic Exocytosis	61
	Zhao-Wen Wang, Bojun Chen, and Qian Ge	
5	Regulation of Presynaptic Calcium Channels	85
	Allen W. Chan and Elise F. Stanley	
6	Synaptotagmin: Transducing Ca²⁺-Binding to Vesicle Fusion	107
	Carin Loewen and Noreen Reist	
7	Functional Interactions Among the SNARE Regulators UNC-13, Tomosyn, and UNC-18	135
	Robby M. Weimer and Janet E. Richmond	
8	Roles of the ELKS/CAST Family and SAD Kinase in Neurotransmitter Release	157
	Toshihisa Ohtsuka and Yoshimi Takai	
9	The Role of Potassium Channels in the Regulation of Neurotransmitter Release	171
	Laurence O. Trussell and Michael T. Roberts	

10 Modulation of Neurotransmitter Release and Presynaptic Plasticity by Protein Phosphorylation	187
Zu-Hang Sheng	
11 Synaptic Vesicle Endocytosis	207
Liesbet Smitz and Patrik Verstreken	
12 Lipids and Secretory Vesicle Exocytosis	239
Shona L. Osborne and Frederic A. Meunier	
13 Neurotransmitter Reuptake and Synaptic Vesicle Refilling	263
Richard J. Reimer, Kimberly A. Zaia, and Hiroaki Tani	
14 Regulation of Neurotransmitter Release by Presynaptic Receptors	297
Matthew Frerking and Joyce Wondolowski	
15 Transsynaptic Regulation of Presynaptic Release Machinery in Central Synapses by Cell Adhesion Molecules	315
Kensuke Futai and Yasunori Hayashi	
16 Differential Regulation of Small Clear Vesicles and Large Dense-Core Vesicles	327
Tao Xu and Pingyong Xu	
Index	341



<http://www.springer.com/978-1-934115-38-1>

Molecular Mechanisms of Neurotransmitter Release

Wang, Z.-W. (Ed.)

2008, XIII, 347 p., Hardcover

ISBN: 978-1-934115-38-1

A product of Humana Press