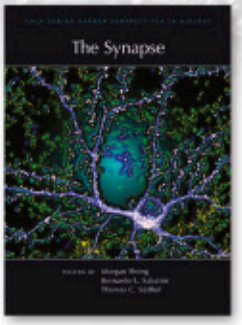
The Synapse

Edited by Morgan Sheng, *Genentech Research Group;* Bernardo Sabatini, *Harvard Medical School,* and Thomas C. Südhof, *Stanford University School of Medicine*



Synapses are specialized cell contacts where two neurons communicate. Neurotransmitter molecules released from the presynaptic terminal of one neuron diffuse to the postsynaptic terminal on the other, binding to receptors that lead to propagation or modulation of the signal.

Written and edited by experts in the field, this collection from *Cold Spring Harbor Perspectives in Biology* examines the highly complex structures and functions of the pre- and postsynaptic regions, as well as the trafficking mechanisms that transport vesicles containing neurotransmitters. The contributors discuss how long-term potentiation (LTP) and long-term depression (LTD) of synaptic transmission form the basis of learning and memory. The roles of calcium signaling in regulating synaptic and cell function and techniques to study such signaling events are also covered.

This volume also includes discussions of synaptic dysfunction in disorders such as autism and Alzheimer's disease. It is an indispensable reference for neurobiologists, cell and developmental biologists, and anyone wishing to understand how the basic building blocks of the brain are put together and communicate.

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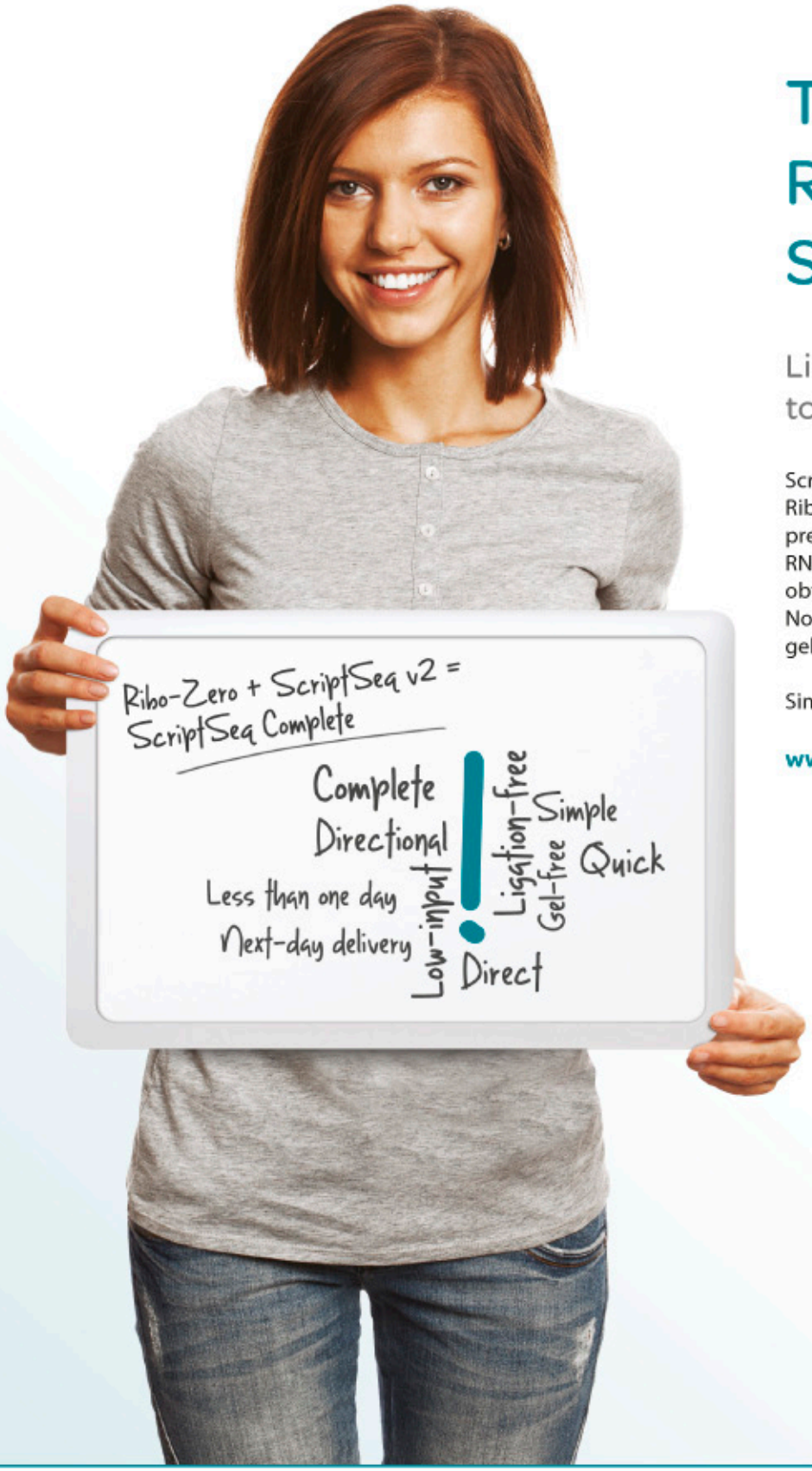

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