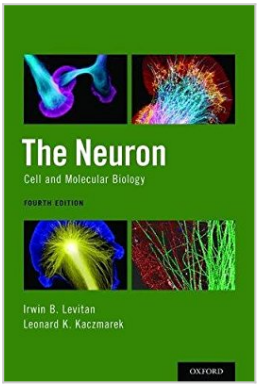

The Neuron: Cell and Molecular Biology

By Irwin B. Levitan, Leonard K. Kaczmarek

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The Fourth Edition of *The Neuron* provides a comprehensive first course in the cell and molecular biology of nerve cells. The book begins with properties of the many newly discovered ion channels that have emerged through mapping of the genome. These channels shape the way a single neuron generates varied patterns of electrical activity. Covered next are the molecular mechanisms that convert electrical activity into the secretion of neurotransmitter hormones at synaptic junctions between neurons. The following section examines the biochemical pathways that are linked to the action of neurotransmitters and that can alter the cellular properties of neurons or sensory cells that transduce information from the outside world into the electrical code used by neurons. The final section reviews our rapidly expanding knowledge of the molecular factors that induce an undifferentiated cell to become a neuron, and then guide it to form appropriate synaptic connections with its partners. This section also focuses on the role of ongoing experience and activity in shaping these connections, and finishes with an account of mechanisms thought to underlie the phenomena of learning and memory. The book contains scores of color figures and fully updated chapters; online content packaged exclusively with the Fourth Edition includes detailed animations of neural processes, in-depth supplemental reading, and additional full-color figures and tables.

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Editorial Review

Review
"The text is impressively modern, with up-to date information on the trendiest areas of neurobiology . . .the book is highly visual, with figures on virtually every page. The figures deserve special comment because they are a teacher's dream: simple and uncluttered, but conceptually powerful.
Frankly, although the recommendation is often absurd, The Neuron is one of those books that really does belong on every shelf. "

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--Canadian Journal of Neurological Sciences

About the Author

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