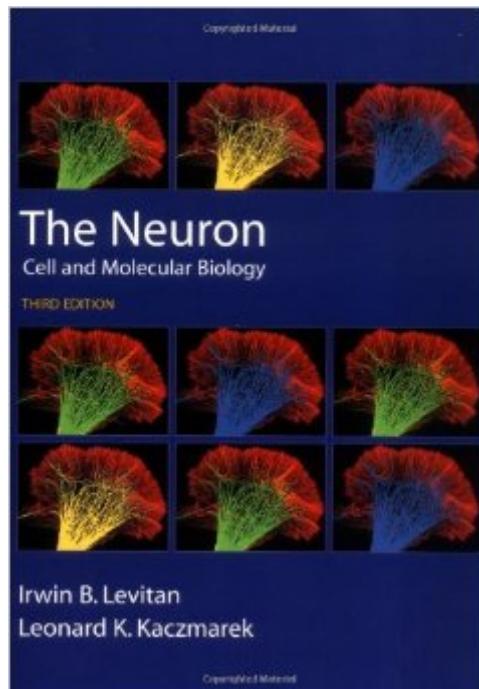


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# The Neuron: Cell And Molecular Biology



## Synopsis

The third edition of The Neuron provides a comprehensive first course in the cell and molecular biology of nerve cells. The first part of the book covers the properties of the many ion channels that shape the way a single neuron generates varied patterns of electrical activity, as well as the molecular mechanisms that convert electrical activity into the secretion of neurotransmitter hormones at synaptic junctions between neurons. The second part covers the biochemical pathways that are linked to the action of neurotransmitters and 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.

## Book Information

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## Customer Reviews

I have compared several neurobiology textbooks and this one is my favorite. It's almost like a novel, very enjoyable. It emphasizes understanding of important concepts rather than throwing an overwhelming amount of facts at the students. And the organization of the material is great. There is an updated edition now, and I look forward to reading it.

This is one of the few molecular neurobiology textbooks available to the serious student. Overall, it is a very well written text, up to date, and quite detailed. There is one weird quality about the book, however: the authors have not directly referenced statements in the book, as you would expect to find in any good advanced textbook in a scholarly field. They have instead written a bibliography at the very end, consisting of "Recommended Reading" and "References" for each chapter. I am unsure what criteria they used to differentiate the two. Other than this minor point however, it's a first rate buy. The authors deserve several pats on their backs.

The molecular biology of the neuron is considered, from its electrical properties, synapses, differentiation, axon pathfinding, to chapters concluding with behavior and memory. Well written and includes easy to follow schematic diagrams, this reference is suitable for the motivated general reader.

"The Neuron" was a fantastic book to read. It served as a perfect mesh between a textbook and a novel. The book was written in plain english so anyone could enjoy it. The concepts discussed ranged from elementary to advanced which provided a nice progression to more complicated things. This book is a must read for anyone interested in neuroscience.

I used this book to replace my giant 2 ton physiology book to learn about ion channels. I'll use it again as an additional resource to my neurology courses. I wish I could have an ebook version along with the purchase of the physical copy.

Excellent textbook, explains very well the terms it presents while on the same time is a very easy to read book. It seemed much easier for me to read and comprehend what we learned in class with "the Neuron" in comparison to our designated textbook, which was also very good but less enjoyable.

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