**Book Reviews**

**Greenspan's Basic and Clinical Endocrinology. Ninth Edition. By David G. Gardner and Dolores Shoback. China: McGraw-Hill Medical; 2011. 880 pp. US $57 Paperback. ISBN: 978-0071622431.**

In *Greenspan's Basic and Clinical Endocrinology*, the authors of each chapter succinctly develop complex physiological processes mediated by the endocrine system. Two additional chapters on obesity and endocrine hypertension have been included in this edition of the textbook. These chapters are extremely useful in educating medical professionals to tackle obesity and hypertension by understanding the science behind it. Expertise in these diseases is necessary, owing to the soaring numbers of obese and hypertensive patients. Hence, an entire chapter (Chapter 10) has been devoted to endocrine hypertension; however, pheochromocytoma, which manifests hypertension as one of the symptoms, is not mentioned. Also, the embryology of the ovary is covered in extensive detail, but not that of the testes. There are other instances of such editorial lapses. This textbook could have been refined further by paying attention to such details. Nevertheless, this textbook is a meticulous overview of basic endocrinology as well as exhaustive clinical information and diagnostic criteria and guidelines.

The order of chapters follows a rational sequence, but within the chapters, the subtopics could be arranged in a better format. A brief overview of concepts at the beginning of a chapter or a summary at the end of the chapter would help break the monotony of too much text. Figures are self explanatory and well-labeled and clearly aid understanding of the concepts, which is an advantage of this textbook.

Since the authors do not assume that readers have any previous knowledge of the topics, they begin each topic with explanations of basic concepts. Easy-to-read with clear illustrations, thorough foundation, and research-based clinically relevant novel developments in endocrinology, the enduring nature of material presented in this book makes it a useful resource to experienced medical practitioners as well as novices.

Asha Jayakumar, PhD  
Yale University

**The Mind's Machine: Foundations of Brain and Behavior. By Neil V. Watson and S. Marc Breedlove. Sunderland, MA: Sinauer Associates, Inc.; 2012. 453 pp. US $119.95 Paperback. ISBN: 978-0678939336.**

*The Mind's Machine: Foundations of Brain and Behavior* is an introductory neuroscience textbook that provides an insightful and unique exploration of how thought and action are linked with brain function. The book defines the biological basis of behavior by connecting the philosophical history of neuroscience with recent innovations in our understanding of how the brain works. The book's two neuroscientist authors, Dr. S. Marc Breedlove (Michigan State University) and Dr. Neil V. Watson (Simon Fraser University), frame neuroscience within a historical context that is likely to increase the interest and engagement of students regardless of prior exposure to the biological sciences.

*The Mind's Machine* is remarkable in several ways. First, the breadth of topics covered, from cell structure to consciousness, is a major strength of the 453-page text. Additionally, the layout of the book is
easily understandable and inviting for the beginning scientist and dabbling college student alike. The authors provide ample visual and interactive features that clarify the bulk of the information found in the text. These include figures, diagrams, and “visual summaries” provided at the ends of chapters, as well as a companion website at www.mindsmachine.com. Clearly written and well-organized, the book is an ideal introduction to neuroscience.

The strengths of The Mind's Machine far outweigh the weaknesses. It is worth noting that, perhaps because it is written by neuroanatomists, the text is slightly lacking in molecular and physiological detail. Additionally, the authors go into too much detail in tangentially related areas such as endocrinology, leading to a lack of focus in some sections of the book that could lose the interest of student readers. In some instances, important concepts are over-simplified, such as the complicated multi-pronged effects of psychoactive pharmacological agents. For example, in some cases, the book is somewhat biased and can come across as a public service brochure on the dangers of drug use rather than an explanation of their biological effects. This type of bias can be distracting, particularly to college undergraduates. Regardless, The Mind’s Machine is overall an engaging and accurate introduction to neuroscience for the undergraduate student.

Lucas Martin Cheadle
Graduate School of Arts and Sciences
Yale University

Consciousness: Confessions of a Romantic Reductionist. By Christof Koch. Cambridge, MA: MIT Press; 2012. 184 pp. US $24.95 Hardcover. ISBN: 978-0262017497.

For centuries, consciousness has fascinated philosophers, artists, and scientists. In modern times, advances in neuroscience have firmly established the crucial role of specific brain regions in maintaining consciousness, but fundamental questions regarding the mind-body relationship remain controversial as ever. Can the conventional scientific method, relying on empirical observation and “objective” reasoning, be used to address the inherently subjective concept of consciousness? Christof Koch’s perspective on the matter is deeply rooted in the camp believing that consciousness, or at least significant aspects of it, are amenable to rigorous, experimentally based neurobiological inquiry. An intense collaboration between Koch and Francis Crick during the 1990s and 2000s brought consciousness to the limelight of the neuroscience community.

Consciousness: Confessions of a Romantic Reductionist is a tale of two stories that, like the two strands in Crick and Watson’s double helix, intertwine and complement each other. The first story is autobiographical: from Koch’s upbringing in a Roman Catholic family and his fascination with computing-machines as a child to his current views on faith, science, and the universe. “I'll tell you about myself,” writes Koch, “insofar as my life is relevant to the questions: Why was I motivated — consciously or otherwise — to pursue certain problems? And, why did I adopt a particular scientific stance?” The second story is about science: an up-to-date account of experimental and theoretical studies aimed at unraveling the neurobiological basis of consciousness.

The book is engaging, fluent, thought provoking, and appeals to a wide audience, scientists and non-scientists alike. It describes methodologies and concepts, such as functional magnetic resonance imaging (fMRI), optogenetics, and information theory, in concise, clear, and non-technical language. The book starts by introducing the millennia-old mind-body problem and the general approach taken toward this problem in Koch’s work. The following chapters discuss a gamut of topics and questions pertaining consciousness, illustrating its centrality in human life: why certain sensory stimuli reach awareness and others do not; how conscious and unconscious forces shape our social life; what happens in disor-