important aspect of mitochondrial biology. *Mitochondria* is made more complete and engaging as he relates his ventures through history, going as far back as the 19th century to quote early ideas about respiration, and framing relevant questions encountered by the field at different historical stages and their ultimate solutions.

As a stimulating introduction to the subject (the author suggests the book can be used as a textbook in graduate seminars), the work contains sufficient detail and insight to serve as a reference for researchers in the field. For example, the section on mitochondrial DNA replication includes the latest controversies and makes a thorough and concise review of the literature. The discussion of human evolution and forensic applications will be of interest to anyone with even the most basic background in biology.

This book also promises to be especially engaging for any cell biologist, thanks in part to the unusual origin of these organelles. Mitochondria evolved from a symbiotic relationship between a primitive eukaryote and bacterium. The bacterium uses molecular oxygen to extract energy from carbon molecules, changing both the eukaryote and its environment forever. For the last 4.3 billion years, the host and symbiont have evolved together, leading to the eukaryotic cell we know today.

Having an independent genome introduces an extra layer of complexity to the regulation of these organelles. The nuclear and mitochondrial genomes must communicate to coordinate the assembly of respiratory complexes composed of products of both genomes. Mutations in the mitochondrial genome are associated with a number of devastating disorders, but even milder dysfunctions have been linked to aging, Parkinson’s disease, and diabetes. Transmission of the mitochondrial genome occurs maternally, making mitochondrial DNA a powerful tool in the study of human evolution and tracing the evolution of species.

Researchers studying organisms other than mammals may be disappointed by the dearth of space devoted to organisms other than human. Another apparent victim of space limitation is the last chapter entitled “Mitochondria and Pharmacology,” which is merely a page-long list of oxidative phosphorylation inhibitors and their target complexes without even a brief explanation of mechanism.

With *Mitochondria*, much of what we know about these extraordinary organelles finally has been recorded in a concise and accessible volume that will serve as a first-line reference for biologists venturing into this domain for years to come.

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*Acute Ischemic Stroke* is a comprehensive overview of contemporary data in stroke management. It appeals to multiple audiences. A medical student would find it valuable to read from start to finish in the weekend before starting a neurology rotation with an emergency component. A resident also would find it a current and thorough review of the literature, a one-stop shop of the major diagnostic and therapeutic options. An attending neurologist would find this a convenient, comprehensive reference of a specific disease process.

This book introduces the major issues in a logical and coherent format. The historical aspects of stroke are a refreshing glimpse of the big picture, allowing us to put some context in the current upswing in incidence. From there, the discussion turns more concrete with a chapter devoted to neuroimaging. Pros and cons of each modality are described, with the most current data on each. Specific clinical indications are discussed, giving a primer on imaging, which most medical students on a rotation would find exceedingly helpful.

The book is written as a series of chapters, each by authorities on the field. The tone of each is remarkably consistent and reasonably easy to read. Summaries of multiple key studies are often presented in both text and chart format, allowing some flexibility for
the reader. The major strength of this book lies in its comprehensive review of the literature. This allows the reader to contextualize the vast body of work that has been written about stroke; that is no easy task.

A forward-looking conclusion wraps up the theme that ties together most chapters: Research on stroke management is very active, and changes are occurring rapidly. Future editions of this book ideally will keep pace, allowing this to evolve as the handbook and reference for clinicians charged with the care of stroke patients. Overall, the book is a well-assembled summary of current research on this highly prevalent topic.

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The fourth edition of *Sexually Transmitted Diseases* is a comprehensive 108-chapter book that reviews the major and lesser-known causative agents of sexually transmitted diseases (STDs). Topic areas include the epidemiology, pathobiology, pathogenesis, clinical diagnosis, therapy, and prevention of STDs.

This edition has been significantly updated from the 1999 edition with current infectious disease research and is now printed in full color. Previous chapters have been expanded and several new chapters have been added that cover topics such as drug use and STDs, cervical cancer and STDs, pregnancy and bacterial STDs, STD vaccines, and more. The chapters are written by experts in their relative fields as demonstrated by the detailed nature of the material.

In particular, sections pertaining to HIV have been expanded to include recent research findings, current clinical management of HIV infection, and the development of HIV vaccines. The authors have included an addendum with recent information pertaining to the failure of the STEP Study that utilized the HIV vaccine produced by Merck and Co. Inc. for clinical trials on the prevention of HIV infection.

This book provides an exceptional review on current epidemiological studies that address the social and psychological aspects of sexuality that give rise to populations that are highly susceptible to STD transmission. An interesting section on the legal and social issues surrounding STDs is also included.

The book is divided into 16 color-coded sections. Each chapter concludes with an extensive list of updated references. *Sexually Transmitted Diseases* contains an informative appendix that summarizes significant drug interactions between medications used for STD treatment along with drug interaction management. An appendix providing guidelines for STD treatment is also included, which provide a useful quick reference for clinicians.

Although there are several informative and colorful illustrations dispersed throughout the book in the form of tables, graphs, and images, the next edition would benefit from the inclusion of more diagrams that would facilitate sorting through the immense and detailed information. The book also may be improved by including a summary of key points from the material at the end of each chapter or section.

The fourth edition of *Sexually Transmitted Diseases* is an exceptional reference book on the subject of STDs for graduate and medical students, residents, and physicians with an interest infectious disease from a clinical, microbiology, and public health perspective.

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Acute ischemic stroke (AIS) is responsible for almost 90% of all strokes. Acute ischemic stroke occurs when blood flow through a brain artery is blocked by a clot, a mass of thickened blood. Clots are either thrombotic or embolic, depending on where they develop within the body. A thrombotic stroke, the most common of the two, occurs when a clot forms within an artery in the brain.