Book Reviews

David J. Dries, Book Review Editor

CURRENT THERAPY OF TRAUMA AND SURGICAL CRITICAL CARE

Editors: Juan A. Asensio, MD, FACS, FCCM; Donald D. Trunkey, MD, FACS


Reviewer’s Expert Opinion:

Description: This multiauthored clinical review, part of the highly successful Current Therapy series, is the successor to Current Therapy of Trauma, last published in 1999. Purpose: Clinical specialists review treatment strategies for the injured and critically ill surgical patient. Audience: Senior trainees, fellows, and practitioners of any discipline embracing trauma and critical illness will benefit from this work featuring a blend of leaders and senior trainees from trauma and critical care programs in the United States. Features: The book begins with overviews of trauma systems, prehospital care, resuscitation, and management of injury according to anatomic region and organ system. Special trauma problems including burns, patients at the extremes of age, and pregnancy are also discussed. Two groups of critical care chapters conclude the book. The first discusses cardiopulmonary management and support of the patient with organ failure. The second group reviews special issues including ARDS, sepsis, principles of antibacterial and antifungal therapy, nutrition support, palliative care, management of grief, and rehabilitation. Chapters are concise, frequently 10 pages or less. Pathophysiology and medical history are not provided. Clinical strategies are emphasized based on key papers and available evidence. Chapters include reference lists of various types, length, and format. In some cases, the references date to within three years of publication, but other reference lists are brief and do not reflect recent work. Tables, flow diagrams, and line drawings are well designed and reproduce well. Occasional black-and-white radiographs and photographs of adequate though not outstanding quality are used. The table of contents provides detailed organization of chapters and lists authorship while the highly detailed index includes separate citations for figures and tables. Assessment: This is a welcome addition to the Current Therapy series. Junior readers will miss out on background information which is not included here, but clinicians will welcome focused, concise presentations. Newly created critical care reviews summarize much of the recent thinking on resuscitation, blood product use, and damage control strategies.

HUMAN STEM CELL MANUAL: A LABORATORY GUIDE

Editor: Jeanne F. Loring


Reviewer’s Expert Opinion:

Description: This laboratory manual provides a comprehensive set of protocols for isolating, characterizing, and manipulating the differentiation of human stem cells. The authors believe that dissemination of these proven methods will accelerate research and create new opportunities to improve human health. The book grew out of an NIH-sponsored human stem cell training course. Course notes and protocols were collated and transformed into this concise (formalized) laboratory manual. The 29 chapters cover topics ranging from characterization of human embryonic stem cell-derived teratomas and hematopoiesis from human embryonic stem cells to stem cell transplantation in the brain. The chapters focus on protocols for manipulating human cells (both embryonic and adult). The primary focus is on cell biology, biochemistry, and molecular biology. Purpose: According to the editors, the purpose is to provide a “how-to” manual to assist stem cell biologists, especially those new to the field. They write: “Our goal is that this manual will find a place at the lab bench and have many dog-eared corners, sticky notes, and hand-written notes to self in the margins…. We hope that most of these protocols will remain useful and that this manual will provide a ready and reliable reference source that is opened and read, and re-read by both the novice and the experienced stem cell investigator.” Audience: This book is written for basic science and clinical researchers interested in human stem cell biology, as well as those interested in developmental biology. Biomedical scientists and clinicians working in reproductive biology, bioengineering, and regenerative medicine will also appreciate the wealth of detailed information. It may also serve as a textbook for advanced students taking cell and developmental biology laboratory courses. Features: The book is rich in detail owing to the participation of many experts: stem cell scientists, students, and course instructors. Each chapter includes essential background information, an overview of objectives, and straightforward procedures filled with critical
MOLECULAR BIOLOGY OF THE CELL, 5TH EDITION

Editors: Bruce Alberts, PhD; Alexander Johnson, PhD; Julian Lewis, DPhil; Martin Raff, MD; Keith Roberts, PhD; Peter Walter, PhD


Reviewer's Expert Opinion:

Description: This is an exciting, comprehensive guide to the molecular and biochemical mechanisms that constitute life on earth. The wealth of information in this new fifth edition reflects a rapidly advancing field with close ties to evolutionary biology. The book is organized into five major sections such as basic genetic mechanisms and internal organization of the cell. Subjects range from membrane structure to the cell cycle. Chapters addressing cell social behavior (from sexual reproduction to development) are included along with illustrations and movies on a multimedia DVD-ROM. Purpose: According to the authors, the purpose is “to give readers a conceptual framework for the mass of information that we now have about cells.” Although the book is filled with facts, the authors hope that students will “learn how to put the facts to use—to reason, to predict, and to control the behavior of living systems.” Audience: The book is written for advanced undergraduates and graduate students taking a year-long course in cell biology. Faculty will appreciate access to electronic versions of the book’s figures and tables provided on the ancillary DVD. It will be appreciated by all students in the life sciences including those specializing in biophysics and bioengineering. The authors are outstanding investigators with traditions of excellence in teaching and research. Features: This full color book expertly organizes our current understanding of cell biology and provides readers with insights into research methods. Every page is filled with colorful illustrations and tables that stimulate the reader’s imagination. Side topics that fill an entire page are identified as panels. These color-coded pages are used to elucidate complex topics such as chemical formulas, research methods, or experimental results. The emphasis on research helps draw readers into the historical process of discovery. Boldface type identifies key words that are defined in the glossary at the end of the book. Each chapter includes a short list of self-assessment problems that are abstracted from a companion problems book (you have to buy the companion book to see the answers). Primary references are included to encourage further reading and scholarship. The authors frequently draw readers’ attention to evolutionary principles and explore new concepts. For example, the first chapter includes a figure that highlights the times of divergence of different vertebrates. Similarly, the chapter on how cells read the genome includes a major section on the RNA world and origin of life. An excellent feature of this book is that the “H2 headers” are declarative statements (e.g., “All cells store their hereditary information in the same linear chemical code (DNA).”). Perusing these statements on the table of contents page provides an introduction to key concepts in cell biology. The DVD includes chapters on cells in their social context (from fertilization to adaptive immunity), as well as movies and electronic files of the illustrations. Access codes for these exciting learning resources are scattered throughout the book. Assessment: This is an outstanding educational resource that will capture the attention of a wide range of students and faculty in the biomedical and life sciences. The authors organize our current understanding of cell biology, and hand this impressive body of knowledge onto the next generation of scholars. The fast pace of research in this field is clearly evident. Indeed, the idea that cells even exist and that they constitute the basic unit of life was proposed only 170 years ago! Today, we are teasing apart key signaling networks and learning how to redirect cellular differentiation. This fifth edition contains new information on comparative genomics, stem cell biology, and many other topics ranging from apoptosis to cancer. This is an outstanding core title in cell biology, expertly written and carefully edited. Readers are in for an inspiring and exciting journey.

Reviewer: Bruce A. Fenderson, PhD (Thomas Jefferson University)

INFECTIOUS DISEASE SURVEILLANCE

Editors: Nkuchia M. M’ikanatha, DrPH, MPH; Ruth Lynfield, MD; Chris A. Van Beneden, MD, MPH; Henriette de Valk, MD, MPH

Reviewer’s Expert Opinion:

Description: This is a thorough introduction and overview of the rapidly changing discipline of infectious disease surveillance. Chapters are written by over 100 experts in the field. The editors were motivated by the critical need for better surveillance. Purpose: The purpose is to provide an overview and guide for surveillance practitioners. However, the book can also serve as a primary or secondary textbook for public health students. Given the recent introduction of electronic surveillance and implementation of molecular epidemiology, the timing of this volume is good, and overall, the book meets, and in some cases exceeds, its goals. Audience: This book will help public health officials at all levels (local, regional, national, and international) think about, implement, and update disease surveillance systems. Almost all of the chapters are written at a level that can easily be understood by readers with a basic grasp of infectious disease epidemiology. The book will also serve as a reference for more advanced readers who might need to investigate specific topics. Importantly, the authors of each chapter are authorities in their fields and each chapter provides a limited but reasonable number of references. Features: The book is well organized to minimize duplication and provide easy access to the material. The book contains a broad overview of the field, but the special emphasis on the use of information technology analysis and data analysis is particularly strong. It also covers so many interesting and important topics that experts in one field will undoubtedly learn from other chapters in the book. The chapters on communication and the media are also very helpful. Assessment: Given the recent developments in the field of infectious diseases, it is time for a book to concentrate on new approaches to disease surveillance, and this one does an admirable job. The Internet has changed the way information is accessed and collected, and it also promises to change the way information about infectious diseases is collected and distributed. The field of infectious disease surveillance is becoming increasingly more complicated, but the authors of this book help make it easier for practitioners, researchers, and students to keep up.

Reviewer: Philip M. Polgreen, MD, MPH (University of Iowa Hospitals and Clinics)
The Year Book of Emergency Medicine brings you abstracts of the articles that reported the year's breakthrough developments in emergency medicine, carefully selected from more than 500 journals worldwide. Expert commentaries evaluate the clinical importance of each article and discuss its application to your practice. There's no faster or easier way to stay informed! Topics covered in the 2012 edition include Trauma, Resuscitation, Cardiovascular Emergencies, Gastrointestinal Emergencies, Infections and Immunologic Disorders, Neurology, and Pediatric Emergency Medicine.