Fields Virology, 6th Edition

The 6th edition of this highly successful book series has been much expected but long overdue since the production of its 5th sibling in 2007. Nevertheless, the readers will once again find this book an invaluable source of knowledge and information for medical virology with its replete contents and many expedient new features.

Thoughtfully revised and comprehensively updated, the new edition continues to cover almost all aspects of medically important and interesting viruses. The book is divided into 2 sections as usual. Section I, composed of 15 chapters, attentively elaborates the history of virology, the principles of virological methodology, virus structure, life cycle, viral evolution, epidemiology, host immune response, virus-host interaction, as well as classic and novel diagnostic, therapeutic, and prophylactic measures. The role of viral infections in oncogenesis is also discussed in this section. Reading through these chapters, one will find that the many tremendous progresses in the past 6 years fit nicely into the context of classic general virology. New concepts like “virome,” “metagenomics,” and “cell-to-cell transmission,” as well as newly discovered pathways like “RIG-I” are intriguingly discussed. Special emphasis is given to emerging viruses as well as the corresponding methods for new virus discovery. Upon completion of this section, readers should have a thorough grasp of the principles of general virology. More coverage on next generation sequencing technology, related bioinformatics and their application in medical virology however, may have to be expected in a future edition.

Section II, consisting of the remaining 61 chapters, systematically introduces each specific virus family. Certain representative viruses within a family are also reviewed in their respective chapters. As usual, prions are introduced in the last chapter, categorized under “unclassified agents.” Although readers focusing on specific topics may find a lot of these chapters redundant, one can hardly find a counterpart that has such a broad and in-depth coverage and can thus benefit the utmost readers in the field. Organization of materials is standardized that largely reassembles the layout of Section I, that is, the application of general virology principles to each specific virus family or virus. Reading through these chapters should therefore be straightforward for both first-time readers and veterans searching for specific answers. Special attention is given to the 2009 pandemic of H1N1 influenza, epidemic of West Nile virus in North America, and other emerging and reemerging viruses of significant medical and social importance. Treatment advances including direct acting antivirals (DAAs) for hepatitis C virus (HCV) and integrase inhibitors for human immunodeficiency virus (HIV) are appropriately addressed. Due to the highly dynamic nature of current researches, major progresses can emerge rapidly, sometimes right after the production of a book. For example, the new FDA-approved HCV polymerase inhibitors that have replaced the first generation protease inhibitors as the first line choices were then “investigational agents” in the book. In such cases, an online version that allows timely updates would be useful, a strategy that has been employed by some other books.

The new book comes with 4-color figures throughout that replace the 2-color images from the previous edition, a significant upgrade in reading experience. Other new features may also prove commendable as well. For example, owners of this edition will have permanent access to the online e-book with all contents searchable, an extremely helpful feature for a book with 2 volumes and over 2400 pages. All images in the book are also available online instead of coming with CD-ROMs so that readers can have easy access regardless of locations, a great catch-up with the information age. E-versions for mobile devices such as pads and smartphones are also available. Due to previous critics, reference numbers and image sizes are stringently limited, resulting in a reduction of over 600 pages in the printed book comparing to the previous edition. The full reference lists can be found in the on-line e-book under web-only content.

Overall, the 6th edition of Fields Virology, a joint effort of 146 world-renown experts, will continue to serve as an authoritative reference book for virologists, physicians, as well as medical students pursuing a career in infectious diseases. With the many updates in science and upgrades in production quality, the 6th edition is by far the most prominent version of this outstanding book series.

Note

Potential conflicts of interest. Author certifies no potential conflicts of interest.

The author has submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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