Book Review

Elsevier’s integrated review immunology and microbiology, Jeffrey K. Actor, 2nd ed., 2014

As a Professor of Immunology and Microbiology who has taught the immunology section of an infectious disease core to second-year medical students and to first-year graduate students for over 25 years, I can think of several admirable reference textbooks for Immunology, as well as for Microbiology, but not one that integrates both disciplines as well as Jeffrey Actor’s second edition of Immunology and Microbiology.

I have always liked to recommend to students at least two textbooks for reading assignments, one that covers Immunology and one that discusses Microbiology focused primarily on the pathobiology of the diseases. However, it is difficult to find a text that presents the material covering both disciplines in a unified, digestible format. The perfect textbook would present the integrated material in a configuration that strikes a happy median between introductory and in-depth information and that has enough substance for students to understand the material and generate a practical knowledge base that sticks with them for the future. I believe that Jeff Actor’s Integrated Review Immunology and Microbiology fits this description.

Collectively, Dr. Actor’s text provides a platform of fundamental concepts that covers both Immunology and infectious diseases that provides a solid base for those students who wish to further explore related topics. The integrated text is also presented in such a way that students coming from different academic backgrounds and with various career goals can relate to the both basic as well as the more targeted medical topics inherent in the text. The subject matter is presented in two sections and within sixteen chapters. The first section outlines and discusses the basic principles of the innate and adaptive systems and their function in generating health and disease, much like other basic texts focused on immunology. However, one unique feature of the text surfaces in Section II where the author focuses on applying basic Immunology, specifically, toward the individual groups of potentially infectious agents (bacteria, viruses, fungi and parasites) and provides an introduction to the growth, physiology, and life cycle of each group of agents as they relate to infection. This unique style provides students with insight into not only the pathogenesis caused by each group of organisms, but also their impact on the immune system, or lack thereof, in defense against each of the infectious agents.

The figures are simplified illustrations and drawings which closely support and enhance the text’s description of the discussion points, but more importantly, they are easy to understand. Individual case studies are also included to further enhance the students’ ability to comprehend the material. These examples are well written and require students to apply their knowledge of basic immunology, immunodeficiency and infectious diseases presented throughout the text in order to solve each case. I find the answers to the cases and subsequent discussions a descriptive learning experience in themselves that will be of substantial benefit to the students.

I believe that this second edition textbook by Jeffery Actor is an excellent educational tool and reference for both graduate and medical students, as well as a valuable review for preparing for boards and comprehensive exams.

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