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Review of *Molecular Infection Biology: Interactions Between Mircoorganisms and Cells* by Jörg Hacker and Jürgen Heesemann

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Molecular Infection Biology: Interactions Between Microorganisms and Cells.

By Jörg Hacker and Jürgen Heesemann; translated by Renate FitzRoy. Hoboken (New Jersey): Wiley-Liss; Heidelberg (Germany): Spektrum Akademischer Verlag. $79.95. xvii + 339 p; ill.; index. ISBN: 0–471–17846–2. [Originally published as *Molekulare Infektionsbiologie* in 2000.] 2002.

Pathogenesis is one potential outcome of the constant struggle between host defenses and the desire of microorganisms to acquire a privileged niche. This mutually competitive evolutionary process has resulted in interactions among complex and often elegant systems throughout the course of infections. The complexity of these interactions and the large number of infectious agents that exist makes the introduction of students to infectious diseases, as well as a comprehensive review of the field, an extremely daunting task. This book provides just such a comprehensive and timely description of the field in a manner that is easily understandable and enjoyable to read. There is possibly only one other book that attempts to cover similar topics, making this volume an important addition to the critical reading lists for students and postdoctoral researchers, as well as providing a useful reference for established investigators.

The different sections of this book are presented in a clear progression from more general background on classes of pathogens and aspects of the host defenses that leads nicely into discussion of the balance between symbiosis and disease as well as mechanisms of pathogenesis. There is also a valuable discussion of cellular microbiology, which makes it clear how this new field is dramatically improving our understanding of pathogen-host

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cell interactions. Important information is included on prevention and treatment methods and the experimental approaches that are used to study pathogenesis, along with specific descriptions of several of these methods. One of the later chapters goes into more detail on several model pathogens as examples of what has been discovered when these methods have been applied. The appendix contains a number of useful tables that allow direct comparison of many pathogenic characteristics from their various categories to antibiotic resistance mechanisms. This book is an important addition to the infectious disease literature. It would serve as an excellent textbook for molecular pathogenesis courses at both the advanced undergraduate and graduate level, as well as important reading for existing graduate students and postdoctoral researchers in the field. Established investigators will find that it serves as an extremely useful reference and very readable introduction to pathogenesis, providing a comprehensive and up-to-date perspective on the field.

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