

aquatic and atmospheric environments. Other highly topical issues are the evolutions of toxins, secretion systems, and antibiotic resistance.

In the third section, the 4 chapters extensively discuss the evolution of selected groups of microbial pathogens: group A *Streptococcus* and *Staphylococcus aureus*; enteric pathogens such as *Escherichia coli*, *Salmonella enterica*, and *Yersinia* spp.; *Mycobacterium* spp.; and fungal pathogens such as *Candida albicans* and *Cryptococcus neoformans*. The authors provide rich detail of molecular variation within and between populations of these species and describe how patterns of population genetic variation have contributed to our understanding of the evolution of virulence and virulence factors in these pathogens.

I have no major criticism of what is included in this book; rather, I note what is absent, which could have made the book more comprehensive. The first is an overall evolutionary framework of the distribution of microbial pathogens on the phylogenetic tree. Such a macro-evolutionary framework would showcase the non-random patterns of the distribution of human pathogens among major phylogenetic groups of microorganisms.

Second, although base substitutions, insertions and deletions, homologous recombination, and lateral gene transfer are discussed throughout the book, a generalized quantitative review of the relative contributions of these processes during the evolution of certain groups of microbial pathogens (e.g., *E. coli*) would have been highly informative. These processes are fundamental to the evolution of all groups of organisms, and the analysis of the unparalleled datasets in microbial pathogens can teach us much about the evolution of other groups of organisms. Third, although many human pathogens are globally distributed, a substantial number show geographic specificity and endemism. Therefore, the spatial and temporal patterns of distribution of microbial pathogens within a species and at the species level across the globe are highly relevant to the evolution of

microbial pathogens. Lastly, this book is highly biased toward bacterial pathogens. Only 1 chapter deals with nonbacterial (fungal) pathogens, and no chapter discusses viral or protozoan pathogens, which are responsible for some of our biggest public health threats, e.g., HIV, influenza A, and *Plasmodium falciparum*.

Nevertheless, this is a timely and much-needed book about the evolution of bacterial virulence and its pathogenesis. It will be a valuable resource for researchers in the field of microbial evolution and pathogenesis, senior undergraduate students, graduate students, faculty who teach medical microbiology and microbial evolution, clinical microbiologists, and infectious disease specialists.

**Jianping Xu\***

\*McMaster University, Hamilton, Ontario, Canada

Address for correspondence: Jianping Xu, Department of Biology, McMaster University, 1280 Main St West, Hamilton, Ontario, L8S 4K1, Canada; email: [jpxu@mcmaster.ca](mailto:jpxu@mcmaster.ca)

## Correction: Vol. 12, No. 6

In "Coccidioidomycosis as a Common Cause of Community-acquired Pneumonia," by Lisa Valdivia et al., an error occurred in the last sentence on page 961 that continues on page 962. The sentence should read "By using these entry criteria, we found that 3 of the 12 patients with valley fever who underwent radiographic examination had normal radiographs, which is consistent with results of a previous study (3), but did not adhere to Infectious Diseases Society of America or American Lung Association definitions of pneumonia (19)."

The corrected text appears in the online article at <http://www.cdc.gov/ncidod/EID/vol12no06/06-0028.htm>

We regret any confusion this error may have caused.

## Corrections: Vol. 12, No. 7

In "Migratory Passerine Birds as Reservoirs of Lyme Borreliosis in Europe," by Pär Comstedt et al., an error occurred in the second sentence of the first paragraph of Acknowledgments, page 1094. The sentence should read "This is report no. 214 from the Ottenby Bird Observatory."

The corrected text appears in the online article at <http://www.cdc.gov/ncidod/EID/vol12no07/06-0127.htm>

In "Human West Nile Virus Infection, Catalonia, Spain" by Domingo Bofill et al., an error occurred on page 1164. The final paragraph of the article incorrectly states that 20% of cases of West Nile virus infection are asymptomatic. The sentence should read "The probable WNV infection described was asymptomatic, as occurs in 80% of cases."

The corrected text appears in the online article at <http://www.cdc.gov/ncidod/EID/vol12no07/06-0164.htm>

We regret any confusion these errors may have caused.