Reviews and Resources

BOOKS

**Vibrio cholerae: Genomics and Molecular Biology**


Waterborne infections and epidemics are recurring events in human history, as highlighted by the seven pandemics caused by the bacterium *Vibrio cholerae*. An exhibit at the New York Historical Society (4 April–2 November 2008) covered the three waves of cholera epidemics that hit Gotham in 1832, 1849, and 1866. The exhibit provided a human interest backdrop for the 13 scientific chapters in this book (written by leading experts). Death from dehydration was typical following the gastroenteric infection during those years, as is the case today in many parts of the developing world. As laid out in the first chapter, Filippo Pacini (1854) first described the organism. The physician John Snow first pinpointed contaminated water as the source of cholerae during an outbreak in London. The fact that cholerae outbreaks have been reported as recently as 2008 (Vietnam), illustrates that the bat-break in London. The fact that cholerae outbreaks have been reported as recently as 2008 (Vietnam), illustrates that the bat- 

The recent emergence of pathogenic clones of non-O1, non-O139 *V. cholerae* strains reinforces the need for continued surveillance of this bacterium. Overall, the book is a valuable compendium for researchers wishing to have quick access to the latest findings regarding a bacterium that serves as a paradigm for extracellular pathogens.

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**Forgotten People, Forgotten Diseases**


In this relatively short (165 pages of text) book, the author discusses the impact of neglected tropical diseases (NTDs), which are found mainly among the poor in Third World and developing countries. These diseases are not “emerging,” having been around for centuries, and, since they are found relatively rarely in the developed world, are not “sexy” enough to find their way into the media. Approximately 530,000 persons a year die from such diseases, a small number when compared to those who die from natural disasters, AIDS, or malaria. Nevertheless, although they typically have a low mortality, NTDs tend to be chronic and often stigmatize the patient.

NTDs include diseases spread by helminths, protozoans, and bacteria. The most common NTDs are ascaridiasis, trichuriasis, and hookworm infection, and are described by the author as “the unholy trinity.” They are transmitted through the soil and find a home in the human gastrointestinal tract. The author notes that close to 1 billion people are infected with these worms and that children are more often infected than adults. Chronic infections among children impair their physical growth, mental development, and school performance. The most effective method of control is the deworming of large populations with anthelmintic drugs known as benzimidazoles anthelmintics.

Schistosomiasis is most commonly found in the poorest regions of Africa. Again, children and adolescents are at greatest risk of acquiring this disease. Praziquantel is considered the drug of choice in treatment.

Subsequent chapters describe the filarial infections (elephantiasis and guinea worm), river blindness and trachoma, mycobacterial diseases (Buruli ulcer and leprosy), the so-called kinetoplastid infections, i.e., trypanosomiasis, Chagas’ disease, and leishmaniasis. Most of the diseases mentioned to this point typically occur in rural settings. In the chapter entitled “The Urban Neglected Tropical Diseases,” leptospirosis, dengue, and rabies are considered. As opposed to mass vaccination of dogs against rabies in western countries, a major problem is the large number of unvaccinated stray dogs (e.g., in India and Bangladesh and urban centers of other developing countries) in areas where rabies deaths are high.
The chapter on NTDs of North America describes poverty-associated diseases including toxocariasis, toxoplasmosis, and giardiasis in the United States; trichinosis among the Inuit; and even elephantiasis in the Caribbean. Giardiasis and toxocariasis are most common, the number of cases of other NTDs being relatively low.

The last two chapters of the book describe the major organizations involved in NTD control and look at future trends in controlling these diseases. Organizations involved in the development of new drugs and vaccines are listed as are new drug targeting NTD’s developed between 1975 and 2004. Unfortunately, many major drug companies have little incentive to develop projects targeting diseases that exclusively afflict exclusively poor populations.

The format of the book makes it easy to read since the material is well explained and presented in an interesting manner. At the end of each chapter there is a list of summary points which condense the material covered, and easily understandable figures describing the life cycle of parasites are presented. A one-page appendix lists the NTDs. Besides a list of references at the end of the book, there is a section of Notes covering each chapter. Twelve pages of attractive color plates emphasize material covered in eight of the book’s chapters.

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