Emerging Infections in Asia

Yichen Lu, Myron Essex, Bryan Roberts, editors

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Emerging Infections in Asia comprises a selection of scientific and historical review chapters on a variety of infectious diseases and includes contributors from diverse locations ranging from Saudi Arabia to Australia. The book arose from the editors’ experience with the emerging infections described and from their professional associations with the other contributors. The book is divided into 3 disease-specific sections that focus on avian influenza, severe acute respiratory syndrome (SARS), and HIV/AIDS, respectively; a fourth section contains short reviews of other infections. Because of the relatively small size of the book for such a broad topic (250 pages), each section covers only a few specific topics for each selected disease.

The book contains some well-written reviews and valuable narrative histories that are important to document (e.g., the 2003 SARS outbreaks in Singapore and Taiwan). The chapters on SARS in animals and emerging paramyxoviruses are particularly interesting, and the book includes topics (e.g., Escherichia coli and Staphylococcus aureus) that are often overshadowed by more glamorous emerging infections. However, it is disappointing in that the first 2 chapters contradict one another on the occurrence of person-to-person transmission of influenza virus A (H5N1), and the chapter on SARS in China could have been improved with more rigorous editing. Most chapters appear to have been written around 2006, and although they provide good snapshots of the state of knowledge at that time, readers will need to look elsewhere for more recent developments.

Emerging Infections in Asia also misses an opportunity to pull together the diverse topics and experiences discussed to provide new insights into the emergence of infectious diseases and into responses to the constantly shifting challenge of emerging infections. Recognizing this drawback, the editors say in their preface, “We hope that our book can help readers make their own conclusions and ask more questions.”

Approached in this context, the book provides an account of the diversity and challenges of emerging infectious diseases in Asia and some informative historical reviews that will be of interest to students exploring this fascinating topic.

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War and Disease: Biomedical Research on Malaria in the Twentieth Century

Leo B. Slater
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War and Disease is a fascinating historical account of the discovery of drugs effective against malaria, one of the great scourges of humankind. The author, Leo B. Slater, makes good use of his expertise as a historian of biomedical science and technology. He provides a meticulous reconstruction of the manner in which the scientific community, in the midst of World War II, established an antimalarial program, which was to biomedical research what the Manhattan Project was to the physical sciences. At a time when industrialized nations are involved in the effort to find solutions to the ongoing global health catastrophe that malaria is today, this volume is a timely and valuable contribution.

Malaria’s effects have long been at the center of colonial expansion and war. The disease became a focus of research in the late nineteenth century. France and Great Britain had expanded their colonies into areas of the world where malaria was the most severe and debilitating of the parasitic tropical diseases—a factor that limited the colonial governments’ exploitation of natural resources. Malarialogic research thrived in these countries and in Italy, where the disease was not a colonial problem but an endemic scourge and overwhelming obstacle to development, just as it is in many developing countries today. From 1880 through 1898 research carried out by such prominent scientists as Charles-Louis-Alphonse Laveran, Ronald Ross, Angelo Celli, EttoreMarchiafava, and Giovanni Battista Grassi led to the discovery of the malaria transmission cycle. The neurologist, Camillo Golgi, who shared the 1906 Nobel Prize for his work on the structure of the nervous system, studied the reproductive cycle of the parasite (Plasmodium spp.) and elucidated the synchronicity between the symptoms of recurrent chills and fever and the rupture and release of merozoites into the blood. These findings offered an explanation for the effectiveness of treatment with quinine, which had been used empirically as a generic febrifuge since the 17th century. The alkaloid remained the only effective
option for treating malaria until the 1930s.

During World War II the disease reached epidemic proportions among American troops fighting the Japanese in the South Pacific. Quinine was the main line of defense, but the supply of quinine was cut off by Japanese military conquest. The development of new antimalarial drugs became a major subject of research. Three chapters of the book—Preparing for War, Preparation and Coordination, Trust and Transition—focus on the comprehensive research program, which integrated exceptional technical and scientific expertise into a massive organizational and cooperative effort. Funded by the United States Office of Scientific Research and Development, this program screened ≈14,000 compounds for antimalarial efficacy. Clinically approved Atabrine (quinacrine) became the drug of choice in 1943, and, shortly after the war, chloroquine was identified, which has had an enduring influence on antimalarial chemotherapy. The wartime effort, Slater argues, was essential to the development of the US National Institutes of Health. Making a critical point, however, he suggests that although the wartime antimalarial program is an excellent model for future large-scale biomedical research projects, it is “a potential example of how not to pursue public health research for impoverished civilians” (p. 2). The transfer of research results into health benefits for the most vulnerable persons in malarial lands was not on the agenda. The widespread usefulness of a drug such as chloroquine was only a side effect.

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