

Microbe *Are we ready for the next plague?*

Charles H. Calisher

J Clin Invest. 2006;116(8):2060-2060. <https://doi.org/10.1172/JCI29555>.

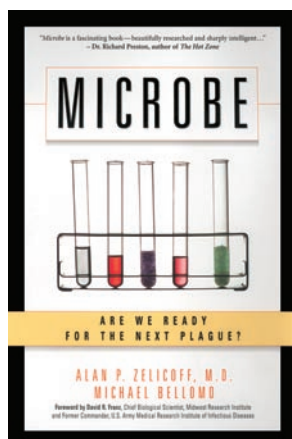
Book Review

As indicated by the authors, *Microbe* is intended for a lay audience, ostensibly a sophisticated lay audience. The subtitle *Are we ready for the next plague?* hints at Zelicoff and Bellomo's intent: to inform readers of the organizational, scientific, and bureaucratic shortcomings of existing schemes to prevent the spread of newly recognized infectious diseases. *Microbe* begins with a series of chapters describing the discovery of a number of individual infectious diseases. The authors then analyze and articulate problems in the reporting of and response to outbreaks of, for example, West Nile virus in New York City in 1999, SARS in Asia and North America, avian influenza, Hantavirus pulmonary syndrome, Legionnaires' disease, and BSE as well as the intentional spread of *Bacillus anthracis*. They go on to discuss the potential for improvement of the response protocols currently in place. Clearly, the authors are knowledgeable in these areas; however, because they oversimplify complex material in a manner usual in popular science books and introduce a number of factual errors, much of the value of their discussion is lost. The section on smallpox and its etiologic agent, *Variola virus*, explains in brief that this virus, despite the 1979 WHO certification of the eradication of smallpox, is presumably still a paramount threat to humans. The authors discuss a wide variety of issues, including the [...]

Find the latest version:

<https://jci.me/29555/pdf>





Microbe

Are we ready for the next plague?

Alan P. Zelicoff and Michael Bellomo

American Management Association. New York, New York, USA. 2005.

273 pp. \$23.00. ISBN: 0-8144-0865-6 (hardcover).

Reviewed by Charles H. Calisher

Colorado State University, Fort Collins, Colorado, USA.

E-mail: calisher@cybersafe.net

As indicated by the authors, *Microbe* is intended for a lay audience, ostensibly a sophisticated lay audience. The subtitle *Are we ready for the next plague?* hints at Zelicoff and Bellomo's intent: to inform readers of the organizational, scientific, and bureaucratic shortcomings of existing schemes to prevent the spread of newly recognized infectious diseases. *Microbe* begins with a series of chapters describing the discovery of a number of individual infectious diseases. The authors then analyze and articulate problems in the reporting of and response to outbreaks of, for example, West Nile virus in New York City in 1999, SARS in Asia and North America, avian influenza, Hantavirus pulmonary syndrome, Legionnaires' disease, and BSE as well as the intentional spread of *Bacillus anthracis*. They go on to discuss the potential for improvement of the response protocols currently in place. Clearly, the authors are knowledgeable in these areas; however, because they oversimplify complex material in a manner usual in popular science books and introduce a number of factual errors, much of the value of their discussion is lost.

The section on smallpox and its etiologic agent, Variola virus, explains in brief that this virus, despite the 1979 WHO certification of the eradication of smallpox, is presumably still a paramount threat to humans. The authors discuss a wide variety of issues, including the availability of vaccines, development of the next generation of vaccines, the appalling lack of recognition of huge epidemics, laboratory carelessness, biowar-

fare and bioterrorism, agent evolution, and the need for international collaboration. There is only so much a 273-page book can cover, and the authors have done a good job of selecting exemplars for their thesis.

Microbe's principal thesis is that our disease reporting and information dissemination systems are inadequate for rapid and effective responses to natural or engineered exposures to infectious agents. In this, the authors quite likely are correct. For all the efforts that have gone into a so-called homeland security apparatus, little progress has been made on this much-needed and gigantic task, unless one counts spending huge sums and building a bureaucracy as progress.

Zelicoff and Bellomo have included in their book a section describing the Rapid Syndrome Validation Program (RSVP), developed by Zelicoff while he was senior scientist at Sandia National Laboratories within the Department of Energy. Although RSVP is no longer in use, implementation of a successor program, the Syndrome-Based Disease Surveillance System (SBDSS) from ARES Corporation, where Zelicoff is now senior scientific consultant, is suggested. It was a quandary for me to decide whether this is a sales pitch or a legitimate recommendation. Knowing Zelicoff's reputation, I settled on the latter; still, I have remaining doubts. Nonetheless, the authors' arguments and my own common sense indicate that something is needed, and if SBDSS is useful and nothing else is available, then let's use it.

Some annoying aspects of *Microbe* are the number of errors in the text and what appears to be a slight negative bias against the CDC. The CDC, as an institution, has its flaws, but they are not the fault of the good people who work there. The embattled employees of the CDC are as good, knowledgeable, and caring a group of public servants as I know of, and lack of credit where credit is due is not helpful to them.

Awkward sentence construction and errors of fact would have been ameliorated by the efforts of a knowledgeable copy editor and would have made reading this book less of a chore. The more serious factual errors include the authors' mistaken belief that the CDC branch in Atlanta, not the CDC laboratories in Fort Collins, was initially asked to examine the West Nile virus samples obtained from the New York City outbreak in 1999. Junin virus is an arenavirus, not a flavivirus as the authors claim. They incorrectly state that it is unknown whether the first person known to have West Nile virus infection (Africa, 1937) survived and that *Aedes* mosquitoes are not native to North America.

Warts and all, this book provides background information and excellent suggestions as to what is wrong with present reporting and response systems for outbreaks of infectious disease and what changes are needed. Let us hope that before too long a more definitive and articulate book about distant early warning systems for infectious diseases better prepares us for the next plague.