

Microbe Hunters— then and now

edited by Hilary Koprowski and
Michael B.A. Oldstone

Medi-Ed Press

1996 ISBN: 0-936741-11-2 \$45.00

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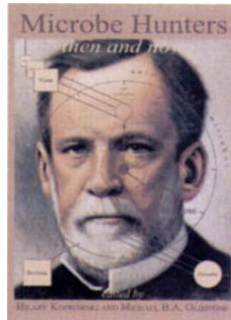
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Published in 1926, Paul de Kruif's *Microbe Hunters* tells the story in heroic terms of a dozen scientists who opened the fields of microbiology and immunology. Beginning with Leeuwenhoek's discovery of microbes, it chronicles the contributions of such greats as the ingenious country doctor, Robert Koch, who identified the organisms that cause anthrax, tuberculosis and cholera; Louis Pasteur, who developed the first vaccines; and Paul Ehrlich, the father of immunology and the discoverer of the 'magic bullet' which introduced the era of chemotherapy. That book, written in the style of a spellbinding detective novel and read by millions has inspired generations of young men and women to enter the fields of biology and medicine.

Microbe Hunters—then and now follows in the footsteps of de Kruif. The intent of the book is to document some of the remarkable discoveries that have been made in infectious diseases over the past 70 years. The approach, however, is quite different from that of de Kruif. Instead of a text written by a single author about historical figures, *Microbe Hunters—then and now* consists of 30 chapters written by some of the very people who played a key part in the discoveries that they describe. The format is unusual in that pairs of authors were asked to deal with each topic. The first member of each pair wrote a historical chapter and the second member a state-of-the-art chapter. For topics dealing primarily with new approaches and emerging infectious agents, a single author discussed both the history and the state-of-the-art in one chapter.

The topics selected by the editors, Hilary Koprowski and Michael Oldstone,

not only admirably portray the remarkable discoveries that have been made in recent years, but also describe what is nothing short of a success story in infectious diseases. One cannot help but be thrilled by the chapters on smallpox, a disease which is estimated to have caused up to 300 million deaths in the 20th century alone, two to three times more than the fatalities caused by wars, and which now has been eliminated world-wide by vaccination. Equally exciting is the story of polio virus which has been eliminated from North and South America, and which the World Health Organization hopes to eliminate from the rest of the world by the year 2000. The chapter on measles describes how vaccines have reduced the annual number of cases in the United States from two million to less than 400, but notes that in parts of the



world where vaccines are not used, millions are still infected. Other chapters deal with the success of vaccines against yellow fever, varicella, rubella, influenza and hepatitis. No less exciting are the chapters that describe the discovery of *Helicobacter pylori* as the cause of gastritis and duodenal ulcers; *Borrelia burgdorferi* as the etiologic agent of Lyme disease; human immunodeficiency virus (HIV) as the cause of AIDS; prions as the non-nucleic acid infectious proteins that cause certain chronic degenerative neurologic diseases; and viruses such as Ebola, Hanta and Lassa as the etiologic agents of often fatal hemorrhagic fevers. The re-emergence of tuberculosis, the problems in developing effective vaccines against malaria and pneumococci, new approaches to mucosal immunity and plant viruses as vaccines also make fascinating reading.

The authors, all distinguished and well known scientists, recognize the difficult challenges that lie ahead, but in general hold an optimistic view of the outcome of future research. The historical chapters, especially those written by some of the principle players in the field, provide a fascinating and lasting record of their contributions and views. Most likely, these chapters will be of greater long-term interest than the equally well written chapters dealing primarily with the state-of-the-art. The book, because of its two-tier organization (historical and

technical), will have greater appeal to biomedical scientists in general, and students of infectious diseases in particular, than to the lay public.

Although not quite as flowing as a text written by a single author, *Microbe Hunters—then and now* is both interesting and enjoyable to read, a timely sequel to de Kruif's original book and a solid historical document written by the microbe hunters themselves.

Typhoid Mary: Captive to the Public's Health

by Judith Walzer Leavitt

Beacon Press

1996 ISBN: 0-8070-2102-4 \$25.00

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Why don't we treat HIV/AIDS like every other disease? Why shouldn't all carriers of dangerous contagious diseases be identified and those posing a continuing threat be quarantined to protect others? How do we balance threats to personal liberty, resource constraints and the selective impact on 'vulnerable' persons when formulating public health policy? These questions and others are posed in this interesting, well-documented history of 'Typhoid Mary' Mallon written by Dr. Judith Walzer Leavitt, Professor of History and Medicine and Women's Studies at the University of Wisconsin.

At the turn of the Century, typhoid fever was a serious public health problem and in 1900 it accounted for over 35,000 deaths in the United States. Contributions from the 'new' science of bacteriology were just emerging. It was only in 1884 that Gaffkey had isolated the typhoid bacillus from spleens of infected patients in Germany. Such bacteriologic breakthroughs led to improved understanding of the transmission of typhoid and hope for more effective policies and procedures to control the disease.

It was in this context in 1906 that care-

