AIDS Vaccine Development: Challenges and Opportunities

Wayne C. Koff, Patricia Kahn, and Ian D. Gust, editors

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A quarter of a century after AIDS became known as a frightening new disease, substantial progress has been attained on treatments that convert this once certain death sentence into a manageable chronic disease. While some prevention successes have been attained (e.g., screening of the blood supply in industrialized countries), a safe and effective vaccine—the “holy grail” of public health prevention—remains elusive.

In the late 1990s, the first HIV vaccine taken to phase III trial, the VaxGen gp120 vaccine (VaxGen, Brisbane, CA, USA), became the basis for substantial debate and controversy between empiricists (generally public health persons who believed that the urgency of the pandemic required taking some risks, including a potentially low-efficacy vaccine as a first step) and reductionists (generally basic scientists and researchers who felt that the gp120 vaccine was unlikely to work given our state of knowledge and who wanted to wait for a better candidate vaccine). With trial results now available, we know that this vaccine was not efficacious. We also know that a phase III trial, although challenging to organize and conduct among persons at high risk, is doable. What else we do and do not know scientifically is summarized nicely in the 19 chapters of this excellently edited, concise (150 pages), softbound book.

The book is organized into 5 parts: Global Overview; What Does a Vaccine Need to Do?; Preclinical Development: Design Challenges; Clinical Trials; and From Testing to Deployment. Each chapter, written by experts in each field, is impressive in its balance of compactness (3–4 double-sided pages, including references), technical content, and user-friendliness (abstract and conclusion for each chapter make quick review easy).

The authors and editors are to be commended for bringing each of the key topics relevant to HIV vaccines to the reader in a highly accessible form. Key topics include HIV pathogenesis; the twists and turns of what specific knowledge of simian immunodeficiency virus and nonhuman primates is or is not applicable to HIV and humans; and the highly technical nature of modern immunology, virology, and structural biology. The editors were careful to include chapters on important nonscientific aspects of HIV vaccine development, such as clinical site development, regulatory issues, scale-up, and manufacturing.

This book provides an excellent introductory overview for the beginning HIV vaccine researcher or any person who needs a more technical primer on the various aspects of the HIV vaccine challenge. The number of HIV vaccine researchers is now increasing, given the support of several organizations (e.g., Bill and Melinda Gates Foundation) and collaborations (e.g., Global HIV Vaccine Enterprise, the Partnership for AIDS Vaccine Evaluation, and the Center for HIV-AIDS Vaccine Immunology). These organizations, collaborations, and researchers are attempting to better organize the human and technical resources needed to challenge this formidable foe on the scale of the Manhattan Project or the March of Dimes search for a polio vaccine. Let us hope that they will eventually succeed.

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Bird Flu: A Virus of Our Own Hatching

Michael Gerber
Lantern Books, Brooklyn, New York, USA, 2006
ISBN: 159056081
Pages: 465; Price: US $30.00

Bird Flu: A Virus of Our Own Hatching, by Michael Gerber, MD, is written for a nonprofessional audience. A professional audience would quickly put it aside for more factually correct sources of information.

Dr. Gerber is the director of Public Health and Animal Agriculture at the Humane Society of the United States. Much of the book is devoted to criticism of the commercial farming of
birds and other animals; agricultural practices are blamed for the threat of pandemic influenza. He neglects the fact that most of the cases of human infection with influenza A (H5N1) have come from family farms in Asia, rather than the large commercial ventures.

The science relating to the current subtype H6N1 is changing so rapidly that any book is out-of-date by the time it is published. The book contains 90 pages of references, mostly from the popular press. Few current peer-reviewed sources are cited.

The need for authoritative information on avian influenza (H5N1) for the lay public is great, but unfortunately, this book does not meet that need. It focuses heavily on doomsday scenarios and offers little in terms of practical advice to the public. For those interested in the book, it can be found online at www.birdflu-book.com.

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Letters

Letters commenting on recent articles as well as letters reporting cases, outbreaks, or original research are welcome. Letters commenting on articles should contain no more than 300 words and 5 references; they are more likely to be published if submitted within 4 weeks of the original article’s publication. Letters reporting cases, outbreaks, or original research should contain no more than 800 words and 10 references. They may have one Figure or Table and should not be divided into sections. All letters should contain material not previously published and include a word count.

A Country Story

Kenneth Fields

“When I was a little girl back in East Texas,”
My mother’s mother, Beulah, used to tell,
“There was an outbreak of the German measles,
Mama was pregnant, so I went away
To a neighbor lady’s, three or four miles from home
When the first signs showed. I was just eight, and sick,
And lonesome for Mama. One day she came for me.
My little sister had broken out, and Mama
Figuring she would die, and the baby, too,
Wanted us all together for those last weeks.
She wanted me home with her. As it turned out
My sister had been reading by the fire
And broke out from the heat, and it was me
That carried the measles home. After Mama died
I used to think of seeing her out the window
Talking to the neighbor lady on that day,
Crying and wiping her eyes with her apron hem.”

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