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## Book Review

G. L. Ada, A. J. Ramsay (eds.)

### **Vaccines, Vaccination and the Immune Response**

288 pages, 20 figures, 48 tables

Lippincott-Raven, Philadelphia, PA 1997

Price: \$ 102.50

The tremendous increase of knowledge and major advances in methodology during recent years have led to a resurgence of interest in the development of new vaccines. According to a survey carried out by the World Health Organization (WHO), about 300 candidate vaccines are at relatively advanced stages of development. Most of the currently available vaccines have been developed to protect against acute infectious diseases. New vaccines are also needed for chronic persisting infections, such as those caused by HIV or plasmodia in endemic areas. In addition, there are new prospects for immunoprophylaxis or immunotherapy of tumors and autoimmune disease, and for the control of fertility.

The book is organized in six sections. After a short introduction about the historical background, section 1 "Past Achievements and Future Needs" presents a review of traditional-type vaccines including candidate vaccines in advanced clinical trials. This is followed by an overview of immunization programs and a summary of future needs and possibilities. The two types of immune response, innate immunity and specific adaptive immunity, are described in section 2 "The Mammalian Immune System." The authors contributed to a better understanding of regional and mucosal immunity by their own scientific work. Section 3 gives an overview of the "Immune Processes and Their Evasion by Infectious Agents" and also of the immunological preconditions

for successful vaccination. Desirable properties and different roles of adjuvants in vaccines are described in section 4 "Immunopotential and the Selective Induction of the Immune Response." Section 5 reports on "Newer Approaches to Vaccine Development" including reviews of current knowledge of candidate vaccines based on peptides, anti-idiotypic antibodies, and site-directed replacement of nucleotide sequences. Another chapter of this section deals with approaches using recombinant DNA technology, and includes a short outlook on DNA vaccines and their future. A short chapter shows new possibilities for combination and sequential vaccines. Another category of intervention with vaccination is discussed in section 6 "Vaccination against Self and Self-Like Molecules" considering the current status and future perspectives of immunoprophylaxis and immunotherapy to control tumors, immunotherapy to control autoimmune diseases and immunocontraception to control fertility.

This book provides a concise and up-to-date overview on the principles of vaccines, vaccination, and the immunological basis. The authors succeeded in gathering most of the relevant information on current achievements as well as on new and future developments in vaccinology within the limited space of this compact volume. Many of the tables and figures can be used for teaching purposes. There is a useful and extensive list of references including recent data up to spring 1996. However, this book does not provide detailed practical information about the available vaccines. Overall, the book is an excellent resource for all interested in the immunological basis, current developments, and future perspectives of vaccination.

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