Vaccine Design

Innovative Approaches and Novel Strategies

Edited by: **Rino Rappuoli and Fabio Bagnoli**
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Vaccines have long been used to combat infectious disease, however the last decade has witnessed a revolution in the approach to vaccine design and development. No longer is there a need to rely on the laborious classical methods such as attenuation or killing the pathogen. Now sophisticated technologies such as genomics, proteomics, functional genomics, and synthetic chemistry can be used for the rational identification of antigens, the synthesis of complex glycans, the generation of engineered carrier proteins, and much more. Never has research in this area been more exciting.

In this book, expert international authors critically review the current cutting-edge research in vaccine design and development. Particular emphasis is given to new approaches and technologies. The book has been divided into two parts. The first part reviews the technologies and approaches used to identify, generate and test new vaccines. Topics include: new strategies to identify protective antigens, generation of improved adjuvants, use of alternative immunization routes, improving vaccine safety, and finding and establishing the correlates of protection. The second part of the book focuses on the development of new vaccines to replace or complement currently available products or for diseases against which prophylactic strategies are missing. Examples include vaccines against nosocomial infections, streptococci, emerging viral diseases, *P. aeruginosa,* and bovine mastitis. Essential reading for everyone with an interest in vaccine R & D.

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