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Vaccines: Preventing Disease & Protecting Health. Ciro A. de Quadros (ed).

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On the occasion of its 100-year anniversary in November 2002, the Pan American Health Organization (PAHO) organised the Conference on Vaccines, Prevention and Public Health. The present book contains contributions from all scientists who held lectures on this occasion.

Regarding the dramatically accelerated development in vaccine research within the last years caused by the HIV/AIDS pandemic, the threat of bioterrorism and the spread of new infectious diseases such as SARS in a globalised world, it is the right time to determine the starting point for future challenges in the field of vaccine research.

The state of vaccine development and immunization programmes is presented in clearly arranged and concise articles. First for already preventable infectious diseases, next for diseases for which vaccine preparation is in an advanced state, and finally for those which will hopefully become preventable in the future, notably HIV/AIDS, tuberculosis and malaria.

The explanations of the various vaccine concepts require some basic immunological knowledge, but in general they do not go extensively into technical details. The aim is always to describe the actual state of progress in clinical use. There is a chapter about new technical concepts in immunization concerning mucosal-acting vaccines, DNA vaccines and new adjuvants to complete the overview of the scientific basics. However, most chapters have a clear public health focus.

This includes the close coordination of the activities of all players involved in the development and production of vaccines including academic institutions, the pharmaceu-

tical industry, funding organisations, governmental agencies and non-profit organisations. A major issue is the allocation of scarce resources for scientific activities. Appropriate strategies for financing and implementation of immunization programmes under development assistance for low-income countries are just as indispensable as an intense international cooperation in setting safety standards for vaccines.

Some aspects from the book can illustrate this: Currently about 30 different vaccine candidates against HIV/AIDS with a broad variety of vaccine paradigms are being tested in phase 1 or phase 2 trials. Because of the different HIV subtypes, efficacy trials have to be performed in different areas of the world involving several thousand volunteers each, which is both expensive and time consuming. Therefore the scientific community is obliged to select the best candidates in international cooperation. The situation is similar for research on a new TB vaccine with efficacy in adults, but with less resources available than for a HIV/AIDS vaccine. Currently, standardised and agreed-upon criteria to choose the right candidates are lacking.

In particular for low-income countries, the price of a vaccine is crucial. To provide even the basic immunization schemes, many countries are still dependent on external development assistance. The current donor strategy for external financing from project support towards budget support is well summarised in this publication.

One important subject of PAHO's Revolving Fund is the mediation and arrangement of contracts between the vaccine-providing industry and partner states to keep prices at a low level and stable. Just a small rise in costs of a vaccine, e.g. due to market changes or after the need to remove a preservative following new international safety regulations, can threaten the entire vaccination program of a low-income country.

To call immunizations the basis of public health activities is reasonable, and the book gives an excellent overview of current activities in vaccine research. However,

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what is missing in this work is a wider outlook on how immunization could and should be linked to wider public health activities. To sustain and promote immunization programmes, a broad framework for policy-making is necessary involving medical, financial, social and political issues. However, the book transmits the spirit of the conference well, giving all involved specialists their place

within the concerted effort. Although in the chapter about safety, the reasons why parents in Britain refuse measles-mumps-rubella (MMR) vaccination for their children is discussed, the reader sometimes lacks the perspective of the millions of people who are the target of all this work and who will finally benefit from it.