

Veterinary laboratories for infectious diseases

J E Pearson (Coordinator)

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This compendium of 16 papers addresses the role, organisation and function of veterinary laboratories as well as the more complex objective of achieving international standardisation and reliability for the results and products that these laboratories deliver. The latter is increasingly a concern of the *Office International des Épizooties* (OIE), the world organisation for animal health, following its designation as the provider of criteria relating to animal health for the World Trade Organization (WTO) Agreement of the Application of Sanitary and Phytosanitary Measures to control diseases and pests. For this reason the OIE has clearly attempted to put these aspects into perspective and provide a guide to likely future developments, and has largely succeeded. Most of the contributors are eminent in the field and many of the papers, especially those dealing with aspects relating to serology in general and enzyme-linked immunosorbent assays (ELISA) in particular (papers by Jacobson, Wright, Schrijver and Kramps) are of a high standard. However, the papers on the role, organisation and function of various types of laboratory, perhaps understandably, add little to common knowledge. When it comes to the issue of standardisation, quality assurance and accreditation of diagnostic laboratories, the uninformed reader is likely to

be confused by the array of organisations and systems referred to in papers dealing with these subjects. Perhaps the major criticism of this compendium is that it does not explain in simple terms how these relate to one another and the alternatives they pose for achieving international recognition of diagnostic laboratories and test results. It is not clear, for example, how the *OIE Manual of Standards for Diagnostic Tests and Vaccines*, *ISO/IEC (International Organization for Standardization/International Electromechanical Commission) Guide 25*, *OECD Codex on Good Laboratory Practice*, the Accreditation Committee of the American Association of Veterinary Laboratory Diagnosticians and the plethora of European Union Directives compare and relate to one another and provide alternative options for accreditation. Likewise, the debate as to whether it is the OIE's role to determine quality assurance standards for diagnostic laboratories rather than organisations that specialise in this activity such as ISO/IEC is not addressed. Subtle but important differences of opinion are reflected in the papers on quality assurance in veterinary diagnostic laboratories (Caporale, Nannini and Ricci) and guidelines of the OIE for laboratory quality evaluation and proficiency testing (Anon.). On the other hand, the chapter on laboratories that produce veterinary vaccines (Randall) has a useful summary of organisations involved in, and country approaches to, international harmonisation.

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From a personal and South African perspective there are some very interesting and useful contributions. The paper on central/national diagnostic laboratories by J E Pearson (coordinator of the compendium) makes the striking point that although the structure, organisation and reporting channels of the 24 laboratories reviewed varied considerably, almost all are responsible to and report to the chief veterinary officer (CVO) of the country concerned. South Africa, in effect, does not have a CVO, and the Agricultural Research Council (ARC) institutes at Onderstepoort that fulfil the role of a national laboratory have no direct link to the national or provincial Directorates of Animal Health and Veterinary Public Health. Conversely, the major problem of accreditation and funding of national and international reference laboratories (Edwards and Alexander) is something that the ARC laboratories at Onderstepoort share with equivalent institu-

tions throughout the world. The paper on high-security laboratories (Murray), apart from listing and comparing major institutions around the world and outlining the fundamentals of biological containment, provides a most useful table comparing disease risk categories used by different international organisations and some industrialised nations.

This number of the OIE Scientific and Technical Review is essential reading for those involved in the management of veterinary laboratories in the public domain, particularly those that need to achieve national or international recognition. There are also chapters that will benefit laboratory scientists and veterinarians involved in serology, particularly those in which ELISA systems are being used routinely to enable international trade.

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