

Sir Arnold Theiler Memorial Lecture

New challenges for the veterinary profession in global animal disease control and the trade in animals and animal products

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The Faculty of Veterinary Science of the University of Pretoria, is today one of the few veterinary faculties in the world that has the privilege to look back at 100 years of turmoil, essential changes and the dedication and achievements of its gallery of eminent researchers, teachers, academia and students who all contributed to earn this faculty its worldwide recognition as a veterinary institute of indisputable excellence. In doing so is also accepting that past successes provide solid evidence for what can be achieved in the future. However, the rapid changes in the global epidemiology of animal diseases do not offer the profession the luxury to ruminate on these past achievements, as the challenges facing the veterinary world today, pose in more than one way the challenges of the past 100 years compacted into one package that is already putting our skills, current perceptions, ability to change and ability to innovate, to the test and will increasingly do so in the next five to ten years.

Several warning lights were flashed to us during the past 10 to 15 years – not so much by the diseases themselves that occurred but by the circumstances under which they occurred, the underlying causes for their rapid global spread and the way in which the profession reacted. But also increasingly so – the intensive way in which the public at large and other professions and disciplines reacted to our way to deal or not to deal, with these events. The veterinary profession has been placed under public scrutiny as seldom before and in doing so, also demonstrating a global interest and awareness in the role of the profession in promoting animal health and its linkage to safeguarding human health. The World Organisation for Animal Health (OIE) in realizing this new focus on the delivery of veterinary services has through the initiative of its current Director General, Dr Bernard Vallat, urged the international community to accept the delivery of veterinary services as a global public good. While the profession is obviously thrilled by the growing international perception that the delivery of veterinary services, either public or private, is now increasingly accepted globally as a public good, it

also calls for the realization of the implied obligation that global public goods are those whose benefits should in principle be enjoyed by the governments and peoples of all states. But also equally important, that operating in a world of global public good is also to accept operating in a world of shared risks and common opportunities grounded in the realities of mutual dependence and growing interconnection¹.

Accepting the challenge of operating in an environment of global public good, is also accepting the inevitable consequences and challenges of practicing a scientific discipline in an environment that will be questioned on non-scientific and very often also political grounds. It may have started with the BSE crisis in the late 1980's, but other events such as the foot and mouth disease outbreaks almost simultaneously in South Africa, the United Kingdom and Europe in 2000 and 2001; West Nile fever; SARS; NIPAH virus; the unprecedented rapid spread of highly pathogenic avian influenza over 4 continents in less than three years; classical swine fever in South Africa; African swine fever in Georgia and Azerbaijan; bluetongue in Europe and most recently the re-occurrence of Rift Valley fever in Africa and Madagascar. These are but a few examples warning us that events that were previously perceived as being exclusively of veterinary concern and responsibility are now also being claimed as the concern of politicians, the public at large and of many other disciplines that might sometimes have or not have an interest or a role to play. These incidents also indicate clearly that we should be sensitive to realities such as: that diseases now have the potential to spread across the globe faster than the average incubation period of a disease as there is no place in the world from which we are remote anymore or from whom we are disconnected; that 60 percent of human pathogens are zoonotic and 75 percent of

¹ International Task Force on Global Public Goods. 2006. *Meeting Global Challenges: International Cooperation in the National Interest*. Final report. Stockholm, Sweden,

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emerging diseases are zoonotic; that 80 percent of agents having a potential bioterrorist or agri-terrorist potential are zoonotic pathogens; that the estimated annual illegal trade in animals is estimated at US\$ 4 to 6 billion and that changes in human demographics and behavior and changed patterns of land use are contributing significantly to the spread of animal diseases and pathogens – the so-called ruralisation of the urban environment.

This calls for a different way in which we will have to look at diseases in the future: by looking for example beyond the classical post mortem lesions of a Rift Valley fever case and to also see the weather map of predicted climatic changes that preceded the outbreak or warned against new threats; by appreciating that an outbreak of anthrax in a dairy herd might also block the exports of products of other non-affected farms or herds; when detecting impurities in vaccines to also acknowledge that it might lessen the acceptance of guarantees to prove absence of disease and by failing to make a possible epidemiological link between migratory birds sharing meals with an ostrich herd could also lead to failure to explain an outbreak of avian influenza some months later. The international community is expecting the profession to look differently at the disease environment. They also expect that the responsibility for declaring an export safe for animal or human use – whether it is the live animal or a product of that animal – represents a scientific approach to surveillance by not only the certifying veterinarian but by every veterinarian that was in some stage of the production cycle, directly or indirectly involved.

Operating in a global public good environment and therefore also in an environment where there is a growing realization of the strong link between the occurrence of animal diseases and human health, has also resulted in a pressing and urgent identity and positioning challenge to the veterinary profession. In dealing with the global avian influenza crisis, the OIE has maintained its position that the only sure way of preventing a human pandemic crisis of avian influenza, is to control and eradicate the disease at the animal source. This also holds true for most of the other zoonotic and emerging zoonotic diseases but with an important prerequisite that all countries whether developed, developing or transitional, should strengthen the ability of their veterinary services to move towards compliance with international sanitary standards and good veterinary

governance. This challenge was also accepted by the international donor community in making available substantial funding to assist the OIE in assessing the performance of veterinary service delivery and their needs to move towards compliance with international sanitary standards. A total of 62 of the 172 OIE Member countries have been evaluated of which 31 of them in Africa alone. However, the realization of the close link between the control of animal diseases and especially human health; the increased importance of the animal/human/wildlife pathogen interface; the realization by the public of the critical role to be played by the veterinary profession and the realization by also the medical profession that control of these diseases as highlighted by the avian influenza crisis can best be achieved in a multidisciplinary way, has resulted in increasing calls for support of the so called *One world, one health* concept. While this is an exciting and commendable development, the profession should approach this with an open and rational mind realizing the financial, constitutional and other related implications. But more importantly, to accept the need to maintain the identity, the role and the unique responsibility of the profession when consider taking hands with other professions in getting closer to a multidisciplinary approach to address the new exciting challenges to our profession.

I have more than sufficient reason to believe that the Faculty of Veterinary Science of this University is ready to take that challenge as it so excellently did for the past 100 years. I also believe that there is a full realization of the new responsibilities and also a sensitivity for old responsibilities that present themselves differently than in the past; that we will look with a new acknowledgement and realization if it is said that food security is also the responsibility of all veterinarians; that creating a buffer between the animal source of disease and human health is also our responsibility; that wildlife is no more the only responsibility of wildlife specialists or conservationists; that ensuring the safety of animal products in the shopping trolley of the consumer is no more only the responsibility of the veterinary public health veterinarian and lastly to appreciate that being accepted as deliverers of a global public good, is also to acknowledge that the obligation to remain in that environment, is to deliver the goods expected from us.