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Abstract
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AVIAN INFLUENZA – PAST, PRESENT AND FUTURE CHALLENGES

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Avian influenza is an OIE listed disease, which has become a disease of great importance both for animal and for human health. Until 1999, AI was considered a sporadic disease with only 18 outbreaks occurring in domestic poultry world-wide since 1959. The total number of birds involved in all outbreaks over this 40-year period was approximately 23 million. From 1999 onwards, AI infections cannot be considered sporadic any longer. Including estimations of the ongoing Asian H5N1 epidemic, in five years over 200 million birds have been affected by this disease. Some outbreaks have maintained the characteristic of minor relevance but others, such as the Italian 1999-2000, the Dutch 2003, the Canadian 2004 and the Asian 2003-2004 have lead to devastating consequences for the poultry industry, negative repercussions on public opinion and in some countries it has even impacted the national economy. In addition, it has created significant human health issues, including the risk of generating a new pandemic virus for humans via the avian-human link, and thus represents one of the major challenges the veterinary community will have to face.

The increased relevance of AI in the fields of animal and human health, has highlighted the lack of scientific information on several aspects of the disease, which has hampered the adequate management of some of the recent crises thus resulting in millions of dead animals and concern over loss of human lives and over management of the pandemic potential.

The main issues that need to be resolved include legislative and regulatory aspects such as the inclusion of Low Pathogenicity Avian Influenza (LPAI) viruses in the definition of AI since it has been shown that LPAI viruses are the progenitors of Highly

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Pathogenic Avian Influenza (HPAI). Given the increase in the numbers of isolations of LPAI viruses of the H5 and H7 subtypes, this represents a crucial aspect for prevention and control of future outbreaks.

Recent outbreaks in Europe, North and South America, the Republic of South Africa and the unprecedented ongoing Asian H5N1 outbreak have raised the necessity of developing alternative control strategies to the stamping out policy which had traditionally been used to control this disease. It is clear, that given the human health implications of AI, regardless of the strategy chosen for control, it must aim at the eradication of infection.

It is likely that the international effort that is being carried out in the medical and veterinary scientific communities in analysing data from recent outbreaks will generate significant amounts of information in the short-medium term which will broaden our current knowledge on AI, and be instrumental to the development of novel prevention and control strategies.

However, given the current situation, it is imperative that poultry veterinarians collaborate actively with public health officials to gather and analyse field and laboratory data on this disease. The poultry sector has a pivotal role in the AI crisis management, and should make active support to the international AI crisis a global priority of the industry.