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H2O SCOUTING EXTENDS TO THE VETERINARY SECTOR

H2O has recently completed a global report on avian flu and the potential development of novel vaccines against H5N1 / highly pathogenic avian influenza (HPAI). This work is the first H2O project in the veterinary sector. In the face of HPAI and the recent outbreak of swine flu (H1N1) in 2009 which caused widespread infection in humans, the need for rapidly adaptable, sans oeuf vaccine production has become a priority. These outbreaks have also significantly increased the interest in a vaccine which is both effective across species and which retains efficacy in the face of the constant 'drift' and 'shift' of haemagglutinin (H) and neuraminidase (N) antigens. The prospect of such a vaccine has revolved around research into viral epitopes that are core antigens, more widely conserved across different strains of virus and are less subject to seasonal mutation. These vaccines may also incorporate a variety of chemical and immunological immune enhancing adjuvants required to potentiate immunogenicity as well as core antigens common to the majority of influenza strains affecting humans and animals. Asymptomatic wild birds can carry virus in the intestine and live virulent influenza virus is shed in faeces. Faecal contamination can lead to serious outbreaks of influenza in poultry farms and has led to mass culling of flocks in parts South East Asia including China, Indonesia and Vietnam. Several countries in other parts of the world, including Mexico and Egypt have also had major avian flu outbreaks. Millions of birds are dying annually with severe economic implications. Injecting poultry with vaccine is clearly time consuming, uneconomic and largely impossible in wild birds. The recent report examines the considerable unmet need for a cheap way of inoculating large numbers of birds by delivering an effective, preferably oral vaccine, for use in drinking water and feed.

For further information, please call David Kelly on: +44 (0)1865 251000 or email Info@h2ovp.com