

FROM VIRUS DISCOVERY TO INTERVENTION

Ab Osterhaus, University of Veterinary Medicine Hannover, Germany
albert.osterhaus@tiho-hannover.de

The vast majority of emerging and re-emerging pathogens in humans are of animal origin. Most if not all of this growing number of threats have their origin in wildlife, while humans are exposed either directly or through indirect domestic animal contacts. After having crossed the species barrier, the pathogen may directly start spreading efficiently among humans, like Ebola virus, or may need to adapt to further allow efficient intra-species transmission, like H5N1 avian influenza virus. Effective and economical ways of protecting mankind from emerging diseases are best based on combatting zoonotic pathogens at the animal source. The “One Health” concept creates awareness of the major opportunities that exist to protect public health through policies aimed at controlling these pathogens at the level of their animal hosts, or more specifically, at the interface between humans, animals and their environments. Implementation of these policies places those who have regular contacts with domestic animals, like owners, handlers and veterinarians in the front line together with people who regularly come into contact with wildlife and their environment. Investment in the establishment of strategies that allow rapid development and implementation of specific diagnostic, vaccine and anti-microbial strategies is crucial in this respect. Therefore the “One Health” concept highlights the importance of integration between medical and veterinary disciplines to combat the threat of emerging pathogens from the animal world.