



Healthier animals, healthier people

Peter Doherty, Nobel Prize-winning veterinarian and immunologist, was invited to be present for the adoption, by the 37th FAO Conference (25 June-2 July 2011), of a resolution declaring global freedom from rinderpest, the ancient and deadly cattle virus. In this interview, the 70-year-old Australian talks about rinderpest, animal health and human well-being.

As a veterinarian and an immunologist, how do you rank the eradication of rinderpest among scientific and international achievements?

You are, so far, the only person trained in the veterinary sciences to win a Nobel prize. Although you no longer work as a veterinarian, your training surely allows you to comment on the state of animal health in today's world.

How important is animal health to human well-being and environmental concerns? And what can be done to make people aware of the importance of eradicating or at least controlling animal diseases?

The rinderpest vaccine developed in Kenya in the 1950s and 1960s by Dr Walter Plowright is considered one of the world's safest, most effective and least expensive vaccines. Will scientists now be able to develop similarly effective vaccines for other animal diseases?

This is only the second time that a major infectious disease has been eradicated from the planet following, of course, the elimination of human smallpox. It is a magnificent achievement for veterinary science, the FAO and the OIE.

As you say, I'm not an expert on animal health. We do work on influenza, though, and I have been watching the disastrous consequences of the H5N1 panzootic for domestic poultry and avian wildlife, with continuing, occasional, deaths in humans. Vaccination has so far failed to stop this disease, and it may be that we will be looking at strategies that involve engineering resistance mechanisms into susceptible birds. Such research looks very promising. However, I believe that there is real cause for concern about the fact that many governments have been putting fewer resources into agriculture/veterinary research and that many facilities have been closed, or forced down unrealistic "commercial" pathways. With almost a billion hungry people, we need to get bright young people interested and provide more resources.

We face some general problems when discussing the relationship between animals and humans. People today live in ways that are totally remote from the realities of animal production and the animal protein-based food web. There are also real concerns about the contribution of agriculture (particularly ruminants) to greenhouse gas accumulation and anthropogenic climate change. We thus need to look at hard at some types of animal production systems and fund research into alternative solutions. When it comes to infectious disease, it is important to inform people of the risks and ensure the health of, particularly, companion animals. Politicians also need to be aware of the risks of relaxing quarantine requirements.

Walter Plowright's rinderpest vaccine has done the job and thus merits a major accolade. This is, though, a vaccine that was made before any of the revolutionary advances in molecular technology. Vaccine research is currently a very dynamic area of investigation and with sufficient investment and the enthusiastic participation of industry partners at the "downstream" end, we can achieve even better vaccines against many veterinary and human diseases.

2011 is World Veterinary Year, celebrating the 250th anniversary of the founding of the world's first veterinary school in Lyon, France.