



One piece of the 'one medicine agenda': redevelopment of the IAH

The 'one medicine agenda' emphasizes the complex interrelationships between human and animal health and the importance of cooperation between human and veterinary medicine, building on a common pool of knowledge in microbiology, immunology, physiology, pathology and epidemiology (<http://royalsociety.org/displaypagedoc.asp?id=32574>). From an initial focus on zoonotic diseases, the agenda has spread to a wider emphasis on synergistic efforts leading to improved public health, and prevention and treatment of disease affecting humans and animals. These sectors have been separated for far too long and often are only brought together when major disease threats emerge.

Animal health research has been the poorer of the two sectors, both in research capacity, funding and infrastructure. Now, a major change in the animal health landscape has started with the recent announcement by the BBSRC that the IAH at Pirbright is to be redeveloped. Currently on two sites – Compton and Pirbright – IAH will consolidate onto a single site at Pirbright with the Government confirming £100m funding for a new CL3 and CL4 high-containment laboratory complex.

In September 2009, Professor Martin Shirley, Director of IAH, announced that there was to be a major change in strategy for the IAH. Henceforth, the Institute would focus exclusively on virus diseases. The new IAH will engage on fundamental immunology, pathogenesis, epidemiology, molecular virology, computational biology and bioinformatics, to be complemented

▲ Architect's impression of the new IAH facility at Pirbright. IAH

by a synergistic and fully integrated international surveillance capability provided by the national and international virus reference laboratories already situated at Pirbright.

Specifically, the Institute will address four areas: large animal viral diseases, including those exotic to the UK; vector-borne and emerging viral diseases of livestock; avian viral diseases; and viral zoonoses from the livestock perspective. The Institute will be a national hub for this activity, providing a UK facility to attract strategic partnerships with the higher education sector, provide training opportunities for veterinary scientists, expand scientific links to developing countries and be part of the growing international network of world-class facilities.

How has this come about? Following the FMDV outbreak of 2001, BBSRC Council accepted the recommendations of my report that IAH Pirbright was badly in need of new buildings. Government accepted the advice to refurbish the Pirbright Laboratory, but inter-departmental issues in government produced delays; although some progress was made with new CL4 animal facilities being completed this year, and some ground work for the new laboratory complex started in 2007. The recent announcement of the funding under BBSRC's leadership should ensure efficient progress to completion of this critical national facility. We may not be able to say what the next major animal disease epidemic or human zoonotic episode may be, but we can say that environmental change and the changing patterns of human life in the world are conspiring to

Keith Gull explains how the long-awaited redevelopment of the Institute for Animal Health (IAH) and a change in its strategy will provide a much-needed UK hub for the integration of studies in human and veterinary medical science.

increase the rhythm of such outbreaks. UK capacity in this area will need continuing consolidation. The key development for the future is to produce a balanced, coordinated view of sort term basic research on infectious disease integrated with high-quality diagnostics, surveillance and long-term research. IAH's 20-year-long research and surveillance work on bluetongue disease meant that the UK was aware of the threat that this encroaching disease posed well before it 'landed' in the east of England.

Within 4 years the IAH will have a new, state-of-the-art, high-containment facility at Pirbright, with a comprehensive, multi-disciplinary focus on present and emerging viruses of animals, some of which are also zoonotic. It will be able to recruit the very best researchers from around the globe, and be part of an elite group of similar laboratories in strategic parts of the world. It is also one of the hubs that the UK needs to consolidate into a wider 'one medicine agenda' for integration of human and veterinary medical sciences.

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Further reading

Gull, K. (2002). *Review of the Institute for Animal Health – Pirbright Laboratory. A report for BBSRC Council.* www.bbsrc.ac.uk/organisation/policies/reviews/operational/0207_iah_pirbright.pdf

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