**Brief notes on the history of the Research Institute at Pirbright**

**(Written for *The* *Pirbright Historians*).**

Work on foot-and-mouth disease first commenced at the research institute situated just south of Pirbright village in 1924. It has since developed to become one of the world’s foremost centres of expertise on important virus diseases of livestock.

During the 19th and 20th centuries outbreaks of foot-and-mouth disease (FMD), a devastating, highly contagious illness of cattle, sheep, goats and pigs were common in Western Europe and from time to time spread to the British Isles. After a very serious epidemic in Britain in 1871, affecting some 3 million animals, the disease was made compulsorily notifiable under the *Contagious Diseases (Animals) Act* of 1869. At that time research on aspects of the disease was carried out at a number of British centres, but only at a laboratory scale. Following further outbreaks a Departmental Committee of Enquiry was convened in 1912 with one of its recommendations being that facilities should be provided for research on FMD in farm animals. Various options were considered, including the short-lived use of *HMS Daffodil*, an obsolete warship moored in an estuary off Harwich, as a floating laboratory between October 1920 and May July 1921. However, conditions there proved to be impractical.

The continuing search for land-based facilities identified the existing Cattle Testing Station at Pirbright as a suitable site. These buildings had been constructed to house pedigree cattle in quarantine while they were tested for infectious diseases, principally tuberculosis, and vaccinated against various diseases so as to be certified suitable for export, mainly to southern Africa. Two adjacent farms, Pullen’s Farm and Bakersgate Farm, situated on heathland south of the village of Pirbright, were purchased in 1912 and construction of the station was completed during the following year. The buildings included two cottages, 100 loose boxes for cattle, each measuring 4m square, 4 isolation boxes, an office and a pharmacy. Some 640 cattle passed through the station but its use was interrupted by the World War of 1914-1918 and by outbreaks of FMD. It was finally closed down in 1924, by which time quarantine facilities had been provided at the ports of embarkation.

The Ministry of Agriculture’s Foot-and-Mouth Disease Research Committee was set up in 1924 to:-

*“......initiate, direct and conduct investigations into foot-and-mouth disease either in this country or elsewhere with a view to discovering* *means whereby the invasion of the new disease may be rendered less harmful* *to agriculture”*.

Work on the disease was then ongoing at laboratories in New Haw (now *The Veterinary Laboratories Agency*) and at the *Lister Institute* in Chelsea and was about to begin at Pirbright. There the existing buildings were enclosed within a compound with exit via a changing room and bathroom. A hostel was provided nearby for 6 cattle attendants.

The facilities were progressively enlarged and improved with particular attention being paid (though not entirely successfully) to preventing the accidental escape of the virus. From 1926 research was also carried out at *The National Institute for Medical* *Research* in Hampstead under Ian Galloway. However, by 1933 all work on FMD in Britain was centralised at Pirbright, although the direction continued to be provided from New Haw until 1939, when Ian Galloway was appointed as the first full-time, independent director of the Pirbright Laboratory.

The laboratories continued through several phases of expansion with the addition of Departments of Biophysics (1948), Biochemistry (1954) and Genetics (1956) and the provision of increased, secure, large animal accommodation. By 1963, when Dr Galloway retired, graduate staff had increased from the initial 4 veterinarians to a graduate complement of 24. He was replaced as director by Dr John Brooksby. In the same year the laboratory was renamed as *The Animal Virus Research Institute (AVRI).* The international reputation of the Institute continued to be enhanced with work on a progressively wider range of economically important diseases of livestock, both at home and abroad, including not only on FMD but also over time on Vesicular Stomatitis, Vesicular Exanthema, Swine Vesicular Disease, Aujeszky’s Disease, Classical Swine Fever, African Swine Fever, Bovine Malignant Catarrh, Bluetongue, Rabies, Rinderpest, Peste de Petits Ruminants, African Horse Sickness, Lumpy Skin Disease, Epizootic Haemorrhagic Disease, Equine Rhinopneumonitis, Sheep and Goat Pox and Avian Influenza. Some of these diseases are also transmissible to man.

By 1974 the total number of staff (graduate and non-graduate support personnel) had increased to over 300 and the scientific work had been organised into three Divisions: Molecular Biology, Epidemiology and Pathology together with two support divisions: Administration and Laboratory and Animal Services. By then housing had been built nearby for staff and visiting scientists with small estates situated at Bullswater Common, Bridgemead and Upper Stanstead.

A brief summary of some of the Institute’s many notable scientific achievements includes: the development of novel means of accurately measuring the infectivity of viruses; the use of small animal models; work on disinfectants; the development of novel means of diagnosis for various diseases; ; the development of an inactivated vaccine against FMD which continues to contribute greatly to the control and sometimes eradication of the disease in many countries on all continents; research on the transmission and pathogenesis of disease, including airborne spread; fundamental studies on the molecular biology of viruses; extensive work contributing importantly to the complete global eradication of Rinderpest; while, more recently, research has been further extended to include studies on the emerging and re-emerging insect-borne diseases such as Bluetongue and Schmallenberg virus disease - now spreading as a consequence of global warming. Other vital functions provided by the institute include systematic gathering and free dissemination of global epidemiological intelligence and the delivery of advice to international agencies and governments worldwide.

In 1988 the AVRI was amalgamated with 3 other laboratories to form *The Institute for Animal Disease Research*, soon afterwards renamed *The Institute* *for Animal Health* (IAH), all four operating under the auspices of the United Kingdom Government’s *Biotechnology and Biological* *Sciences Research Council (BBSRC).*

Over the years both national and international recognition of the Institute’s standing has been accorded from many sources, including the *Food and Agriculture Organisation of the United Nations* (UN-FAO) and *The World Organisation for Animal Health* (OIE) and the European Union, culminating in its current designation as either a national and/or European and/or international Reference Laboratory for 10 of the most serious worldwide diseases of livestock.

In 2010 the institute was awarded government funding of £170 million for the construction of a new, high security laboratory on the same site. The new facility is due to be commissioned in 2014. From October 4, 2012, the research facility will be renamed as *The Pirbright Institute* and at that time staff will transfer from the BBSRC’s laboratory at Compton to create a single, global centre of international expertise.

**The Directors and Heads of Laboratory of the Pirbright Institute**

Dr Ian Galloway. Director, 1939 – 1963

Dr John Brooksby. Director, 1963 – 1979

Dr Robert Sellers. Director, 1980 – 1984

Dr Brian Mahy. Director, 1984 – 1988

Dr Christopher Bostock. Acting Head of Laboratory. 1988 - 1989

Dr Alex Donaldson. Head of Laboratory. 1989 – 2002

Dr David Mackay. Head of Laboratory. 2002 – 2006

Dr John Anderson. Acting Head of Laboratory. 2006 - 2008

Dr Michael Johnson. Head of Laboratory. 2008 -2012

Prof John Fazakerley. Director. 2012 onwards

Sources

This brief account is based in large part on the extensive, published writings of Mr Hubert Skinner who worked at the Institute between 1937 and 1946 and again between 1946 and 1979, the intervening years having been spent on active service with the RAF’s Bomber Command during World War II. He had a very practical and productive career in veterinary science and made major contributions to the control of foot-and-mouth disease. After his retirement he wrote comprehensively on the history of the Institute and recorded its scientific achievements during the first 65 years of its existence (as published in the journal *Veterinary History)*. During his career Hubert lived on Bullswater Common Road opposite the Institute and after his retirement he moved to Rowe Lane where he lived until his death in 2010. He was also a prominent member of the Pirbright community, a staunch supporter of the village church and an active leader of the scouting movement.

I am also indebted to Professor Alex Donaldson, Head of Laboratory between 1988 and 2002, for additional information, particularly on the more recent history of the institute.

AJM Garland.

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