

# Why Levy Board funding is vital

**Money from the HBLB has enabled significant veterinary advances to be made over the last 50 years but given British racing's parlous finances, the contribution is under threat**

Since its advent 50 years ago, the Horserace Betting Levy Board (HBLB) has been a big contributor towards the advancement of equine veterinary science and education – a fact of which many are unaware. However, this funding is under threat due to the current economic climate. This article aims to provide a timely reminder of its importance.

The HBLB was established in 1961 to collect a statutory levy from the bookmakers' horseracing profits, which it then distributes for the improvement of thoroughbred horseracing. This money has enabled the HBLB to support a huge number of equine veterinary surgeons in their education, work and research, resulting in significant veterinary advances.

Many vets are unaware that some of the techniques which they use on a daily basis originated as a result of HBLB funding – for example, the research that enabled vets to advise which heart murmurs are likely to be significant and the research that enabled vets to interpret tracheal washes when screening for respiratory infections in racing yards. There are numerous other excellent examples of the importance of HBLB funding, but perhaps most notable are the HBLB Codes of Practice, which have been

instrumental in reducing infectious disease outbreaks and Equine Influenza screening, which ensures that our vaccines carry the most current strains of the influenza virus.

However, the future of HBLB funding is under threat. In July 2010, the board announced that it was making significant reductions in all areas of spending, and veterinary expenditure was more than halved.

Funding for the 2010/11 research, training scholarships and Codes of Practice has been retained but almost every other area of activity has been significantly reduced. As a result, there has never been a more appropriate time to highlight the value of this funding, and the *Equine Veterinary Journal* is currently running a series of review articles in recognition of the major contribution that HBLB research and educational funding has made to the health and welfare of horses.

## Musculoskeletal injuries

The horse is a unique athlete that is capable of sustaining speeds of 30 to 40 miles per hour over distances of up to four and a half miles. As a result, the equine musculoskeletal system is put under huge stress, not least because when at gallop only one limb bears weight at a time. Unsurprisingly, this predisposes the horse to suffering musculoskeletal injuries and hence much of the HBLB funding in recent years has been channelled into finding ways of avoiding injury.

The HBLB has funded extensive research into the occurrence and risk factors associated with musculoskeletal injuries by studying horses in training and on the racecourse, as well as undertaking post-mortem studies. Recent work searching for bone markers looks likely to lead to a blood test that will be able to predict when a horse is about to suffer a fracture – an advance that could have a huge impact on lameness diagnosis.

Tendon and ligament injuries have also been a long-standing research focus, going back to the first ever *Equine Veterinary Journal* supplement in 1983 which contained the 'Silver Report' into pinfiring. Research continues to be carried out into the risk factors for tendon injuries, novel diagnostic techniques such as tendon biomarkers that could predict when an injury is about to occur, and the more up-to-date treatments such as stem cell therapy.



**The thoroughbred racehorse puts its musculoskeletal system under incredible stress and hence it is not surprising that it is susceptible to injury. HBLB-funded research is vital in order to reduce the incidence of injuries**



**HBLB research enabled vets to advise which heart murmurs are likely to be significant**

Following the sequencing of the equine genome, many believe that we are currently in a research golden age. The early focus of this new-found information has been used to try to find out more about musculoskeletal injuries. Extensive genetic research funded by the HBLB and the TBA has found distinct areas of the equine genome that can be linked to an increased risk of catastrophic fracture, tying up and OCD joint problems. As a result, it is hoped that we might soon be able to test horses for susceptibility to these three conditions.

## Infectious disease

The HBLB have been producing the 'Codes of Practice' on equine diseases for over 30 years and this has resulted in a significant reduction in the incidence of infectious disease outbreaks. The Codes, which are adopted in the UK, Ireland, France, Germany and Italy, are reviewed and updated as necessary and all Thoroughbred Breeders' Association members should receive an updated copy every year.

They set out the minimum recommended requirements with regard to the prevention and control of the most important infectious diseases. Firstly, they cover the diseases that are



>> notifiable by law – Contagious Equine Metritis, Equine Viral Arteritis and Equine Infectious Anaemia. Secondly, they cover two other important infectious diseases, Equine Herpes Virus and Strangles, that are not notifiable by law, but it is strongly recommended that the TBA is informed if a case is suspected.

The second major contribution that HBLB funding makes with regard to infectious disease is its contribution to Equine Influenza (EI) surveillance. Following an extensive outbreak two years earlier, it became mandatory in 1981 that all horses entering UK racecourses must be vaccinated against EI. To some extent this has been very successful as no race meetings have been cancelled as a result of EI ever since. However, the disease has still not been eradicated from the UK and it continues to cause major problems in other countries, as illustrated by the large outbreaks in Australia and Japan in the last few years.

Controlling EI by vaccination is difficult because it is continually evolving by a mechanism known as antigenic drift, which means that horses that have been vaccinated against a previous strain of influenza virus will lose their immunity to the new strain and vaccines against the original virus will become less effective. As a result, it is absolutely vital that we keep up to date with how EI is changing so that our vaccinations carry the current strains.



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### Respiratory disease

The respiratory system of the racehorse is of paramount importance because the amount of oxygen a horse receives can be a significant limiting factor to success on the racecourse. Over the last 15 years, our understanding of equine respiratory disease has been greatly advanced by HBLB-funded research. Viruses and bacteria have been analysed, and their genetic sequence established, thus enabling specific genes and gene products to be identified and applied to the development of better diagnostic tests, safer and more effective vaccines, as well as epidemiological tools for tracking infections through horse populations.

HBLB-funded research has also advanced veterinary science with regard to respiratory conditions that affect the lungs of racehorses in training. In fact, it was ground-breaking research funded by the HBLB that helped vets to understand the significance of mucus in the horse's lungs and taught vets to be able to interpret tracheal washes – information that is now used on an everyday basis in racing yards to search for respiratory disease.

### Worming and parasitic disease

All horses are exposed to worms and these parasites can seriously compromise health and welfare, hence the importance of effective worming programmes to prevent them.

HBLB-funded research has enabled vets to learn a great deal about the most common type of worm, the cyathostomin, which is also known as the small strongyle or redworm. The problem with this type of parasite is that no wormer is completely effective against the period in its lifecycle when it 'hibernates' within the gut wall. This is a matter of concern, given that there is already increasing resistance to our current wormers.

Fortunately, research funded by the HBLB and TBA is being carried out to combat this problem, and researchers are currently developing a diagnostic test that will reveal the number of cyathostomins. This will enable vets to know whether worming is necessary and which product to use – something that should slow down the rate at which the parasites are becoming resistant to our current treatments in the hope that we might be able to produce a new type of wormer in the interim. At the same time, studies are being performed to find out more about the cyathostomins and we have recently learnt that there are, in fact, more than 50 different species, some of which cause more damage than others. Research is also being carried out into investigating mechanisms of drug resistance to see if there is anything that can be done to combat this problem (see *TBA Seminar, page 48*).

### Conclusion

In summary, the HBLB has been funding equine veterinary advances for 50 years, but due to the current economic climate its funding has been reduced and we are now in danger of taking it for granted. This article has listed just a few examples of how this funding has advanced our veterinary knowledge and capabilities. It will be sorely missed if it disappears, as it represents the British horseracing industry's single most important means of contributing to the health and well-being of its central star, the racehorse.



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***HBLB-funded research has been at the forefront of advances in the diagnosis and treatment of tendon injuries for the last 30 years***