

## **Edward Jenner: Local Man: Global impact**

By Professor Gareth Williams

Edward Jenner (1749-1823) came from the village Berkeley in Gloucestershire where he did much of his work with the result that Berkeley became known later as the “Cradle of vaccination”. However, he also worked in London particularly with John Hunter who did much active research in the Royal College of Surgeons and regarded Jenner as his star pupil. Jenner not only studied and experimented with smallpox but was a bit of a polymath and, as well as being a musician and poet, studied ornithology and described the young cuckoo’s development of an oval hollow between its shoulders thus allowing it to get under the host bird’s eggs and thus grip, carry and eject them one by one over the edge of the nest.

In 1770, during Jenner’s life, smallpox was a feared and horrible disease being a common cause of blindness and having a mortality rate of 10%. Treatment in those days, as for many diseases, involved the application of leeches and purging. However, around 1768, it was noted that a milkmaid who contracted cowpox, a somewhat similar disease to smallpox that affected cows, and recovered was completely protected thereafter. This observation became the start of experiments by Jenner covering 30 years. Then, in 1796 he deliberately infected a small boy called James Phipps with cowpox from a cow called Blossom. Thereafter, somewhat bravely and at considerable risk he injected James with fluid from smallpox blisters and amazingly there was no reaction. Thus, was the technique for vaccination against infectious diseases invented and developed.

Extraordinarily, in those distant days, vaccination against smallpox quickly became used in many parts of the world aided by King Carlos of Spain sending the technique to the Caribbean and South America and on to the Far East. Since then, in our times, the World Health Organisation has worked effectively on global eradication programmes so that by 1980 it could declare that smallpox had been totally eradicated, the only infectious disease eliminated so far.

In 1806 Jenner was praised by US president Thomas Jefferson for his contribution to vaccination. There is now a small museum in Berkeley to Jenner’s amazing research and discoveries.

The final part of Prof William’s talk covered the extraordinary backlash that developed in this country against any type of vaccination culminating recently in Andrew Wakefield’s article against the MMR vaccination, the validity of which was subsequently totally disproved. Despite this it seems that the anti vaccination campaign is still going strong in some countries – particularly Australia.