The Liverpool School of Tropical Medicine: Role in the Development of Tropical Medicine

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The history of the Liverpool School of Tropical Medicine was the subject of a detailed study commissioned at the time of the Schools’ Centenary and written by Helen Power. This comprehensive account by an historian provides an authoritative overview of the nearly one hundred years of success and achievement. In addition, the School archivist at the time, Pat Miller, compiled an attractive illustrated book entitled “Malaria Liverpool” detailing more factual information and significant episodes in the hundred years of the School.

The lecture given at the Liverpool Medical Institution by the author of this short paper summarised his own views of the history of the School following his work as a staff member of the School from when he was first appointed in 1968 to a Lectureship position there, his time as Director from 1991-2000, and since then as running a Disease Control activity through to his role as a senior Professorial Fellow and Emeritus Professor.

The School was founded in 1898 at a meeting hosted by Sir Alfred Lewis Jones, the owner of the Elder Dempster Line and whose statue graces the Pier Head. The inscription at the base of the statue reads as follows:

A shipowner strenuous in business he enlarged the commerce of his country by his mercantile enterprise and as founder of the Liverpool School of Tropical Medicine made science tributary to civilization in Western Africa and the colonies of the British Empire.

In recent years it has become evident through the book of Adam Hochschild, King Leopold’s Ghost, that whilst there was a perception that Jones’ motives were laudable there was a larger commercial interest in his decision to found the School. This relates to the contract Jones had with King Leopold of Belgium to provide ships to provision the then Congo Free State, the essentially private domain of the King. Hochschild reveals in detail the horrors of the Congo, at that time also symbolized by Conrad’s classic The Heart of Darkness. There is no doubt that Jones was profiting from the contract and the scientific interest of Jones in the

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School may have been motivated by a desire to increase his influence with Leopold as well as for the pursuit of the new discipline of Tropical Medicine. Given the revelations by Hochschild and others of the human rights abuses and genocide in the Congo perpetrated by Belgium, initially exposed by Morel, Jones’ agent in Antwerp, and detailed in the report of Roger Casement, Jones might now be considered complicit in genocide as opposed to being regarded as a far sighted benefactor.

However, the contacts with Belgium enabled an Expedition to be mounted there in 1905 by the School which did produce remarkable scientific results despite the tragedy of the death of Joseph Dutton in Kasongo. Dutton who earlier had discovered the cause of sleeping sickness in the Gambia undertook the expedition with Todd making some remarkable discoveries not only on sleeping sickness but also described the transmission of relapsing fever by ticks. The expedition also must have laid the plans for the transportation of Congolese sleeping sickness patients to Liverpool, as some 9 patients were brought to the School (via Southampton) based at that time in the Royal Southern Hospital. The clinical patterns of their inevitable demise (including post mortem pathology) were recorded in School Memoirs. The recognition of the Liverpool contribution was rewarded by Leopold with the award the order of King Leopold on Ross and colleagues in 1906.

The Congo expedition was only one of some 32 expeditions which left Liverpool between the founding of the School in 1898 and the beginning of the First World War. These expeditions, detailed in Pat Miller’s account, produced some remarkable scientific results and discoveries which laid the foundation of Tropical Medicine over the later decades.

The School’s first appointment was Major Ronald Ross, later knighted, who had a few years before discovered that malaria was transmitted by mosquitoes and received the Nobel Prize in 1902. There were, however, many individuals who played a key role in those early days as the School developed and acquired a reputation for quality science based on its reports and publications. Most of the common tropical diseases have been discovered, described or investigated by School staff over the years. These achievements, documented by Helen Power and Pat Miller, span the decades and demonstrate the constant relevance of the School which continues today. It has always remained focused on the core challenges of what has become a truly expanding interest in what is now called Global Health, driven by factors such as globalization through travel, ecological and environmental change, the post colonial changes, and impact on health systems of broader financial determinants and trade.
The studies undertaken in Liverpool and overseas in early years focused on fundamental biological studies on tropical pathogens which were fundamental to laying the foundation for Tropical Medicine as a discipline. This was through descriptions of the agents of disease (sleeping sickness, species of malaria parasite, the transmitter of elephantiasis and relapsing fever in Africa, and Yellow Fever in the Americas) and the discovery of the transmission of river blindness in Sierra Leone in 1926 where the School established a unit with funds from the estate of Alfred Lewis Jones. This unit lasted until the end of the Second World War during which time it provided diagnostic support to Sierra Leone with limited support from the Colonial Office.

Central to the School’s research throughout its history was the emphasis on drug development which remains today a key area of research. The first major finding was the efficacy of arsenicals to treat sleeping sickness as early as 1905 (attracting the great German scientist Ehrlich to visit). Later, under Professor Warrington Yorke, drugs were developed for early stage sleeping sickness (diamidines) and leishmaniasis (antimonials) which are still used. During the Second World War, the School with ICI developed the drug proguanil (Paludrine) as a major antimalarial and which was used for many decades.

A key figure in the School’s development from 1946 was Professor Brian Maegraith who was Dean from 1946-1975. He was instrumental in many developments, particularly developing links with South East Asia through the establishment of the School of Tropical Medicine in Mahidol University, Bangkok, and links with the University of Ibadan through Professor Herbert Gilles, like Maegraith, a Rhodes Scholar. Studies under Professor Wallace Peters on the chemotherapy of malaria continued in the 1970’s. Drug development remains a major part of the School’s research portfolio as does the constant theme of malaria research, be it on the mosquito or parasite.

A major contribution also made by the School has been its interest in the health of the Far East Prisoners of War (FEPOWS) and the pioneering efforts of the late Dr Dion Bell, who with Professor Geoff Gill was instrumental in recognizing the unique physical and mental stress of this neglected group. The School has also pioneered research on snake bite and study of venoms initiated by the late Dr Alistair Reid.

One area which should not be neglected is the contribution of the School in teaching. Many thousands of students have passed through its doors and have become profoundly influential in the area of Tropical Medicine and International Health. The School Diploma in Tropical Medicine and Hygiene remains a well supported and classic introduction to the discipline, highly regarded by participants as challenging and yet rewarding, and characterised by the most expert teaching available.
Conclusion

In such a brief time it is difficult and challenging to encapsulate the remarkable achievements of an institution which has developed and evolved through changing times yet remains as relevant today as it was when it was founded. During these times, through Wars, through changing social and political times, through changing policies in Higher Education, through the complex relationship with the University of Liverpool and with the Health Service in both the provision of advice to travellers or in treating patients, one feature stands out. That is the quality and commitment of staff, their sensitivity to the challenging environments in which they work and the capacity of the School to remain relevant to the needs of those less privileged.

However, as Maegraith so aptly remarked, “the School’s impact on the tropics must be in the tropics”. In the context of the UN Millennium Development Goals and the drive to reduce poverty, that statement remains as important now as when it was made some 50 years ago.

Bibliography

