This year marks the bicentenary of the birth of A.S. Taylor, a major figure in the history of forensic medicine and toxicology. That his name remains well-known today is due not only to his writings, but also to the dignity he brought to the position of the expert witness. Born at Northfleet, the eldest son of an East India sea captain, Taylor enrolled as a student at the United Hospitals (Guy’s and St Thomas’s) in October 1823. On the separation of the hospitals he attached himself to Guy’s, studying under Sir Astley Cooper FRS (1786-1841) amongst others. In 1828 he toured Europe, in Paris attending lectures by the toxicologist Orfila, the surgeon Dupuytren, and the chemist Gay-Lussac. He spent the winter of 1829-30 at Guy’s and again visited Paris in the summer of 1830. These visits to Paris compounded an interest in forensic medicine at the time when the Society of Apothecaries made the subject a requirement for its licentiate diploma. Thus, when Taylor was appointed lecturer in medical jurisprudence at Guy’s (1831), his inaugural course of lectures was attended by leading members of the bar and some judges. He became particularly interested in the application of chemistry to medicine because at that time some 45% of cases in which medical evidence was required in Court concerned suspected poisoning.

In 1844 collaboration with the pioneer medical publisher John Churchill resulted in Taylor’s Manual of Medical Jurisprudence (10 editions in his lifetime). In 1848 he published Poisons in Relation to Medical Jurisprudence and Medicine and his Principles and Practice of Medical Jurisprudence appeared in 1865. These books became standard works and established Taylor as the major contributor to the professional establishment of medical jurisprudence. Taylor was also a pioneer of photography and devised improvements in the fixing and printing processes used by Fox Talbot. He described his methods in On the Art of Photogenic Drawing (1840). By the mid-1850s Taylor had been consulted on about 500 medico-legal cases and was recognized as a leading medical jurist. As a toxicologist his experience was equaled only by Sir Robert Christison (1797-1882) in Edinburgh and in time he became adviser to the Treasury in such matters. The controversial trials of Dr William Palmer (1856) and Dr Thomas Smethurst (1859) did much to influence his opinions concerning the nature and use of medical evidence in murder trials. In the first edition of his Manual he laid down the principle that it was the task of the jury to decide the verdict and that the medical jurist must, in doubtful cases, refrain from devoting his energies to only one side of the question. His subsequent experience in poisoning cases led him to conclude that analytical results, obtained by the imperfect methods of his time, provided only a certain degree of probability and where admitted as evidence should be used only to supplement the medical observations. The uncertainties were such that he opposed the system of engaging medical witnesses for prosecution and defence and advocated instead a system of assessment by independent experts.
Taylor retired as Professor of Chemistry at Guy’s in 1870 and from his chair in Medical Jurisprudence in 1878, but the story does not end there for he was succeeded in both positions by another major figure, Sir Thomas Stevenson MD (1838-1908); he also became Analyst, later Senior Analyst, to the Home Office (1872-1908), formalising the relationship Taylor had initiated. Stevenson had been appointed demonstrator in chemistry in 1864 and in due course served as president of the Society of Medical Officers of Health, of the Society of Public Analysts, and of the Institute of Chemistry - a pivotal figure in analytical chemistry as well as in toxicology. He edited and greatly enlarged the 3rd & 4th editions of *Principles and Practice of Medical Jurisprudence* and edited the 11th & 12th editions of the *Manual.*

One of Stevenson’s pupils and his successor as Lecturer in Chemistry at Guy’s (1901) was John Wade DSc (1864-1912), who died prematurely in a motorcycle accident. Stevenson’s most famous protégé, however, was Sir Frederick Gowland Hopkins FRS (1861-1947). Spotted by Stevenson whilst a student at his evening chemistry classes at UCL, he began work in the toxicology laboratory at Guy’s in 1883. Later he studied medicine and in 1898 became lecturer in ‘Chemical Physiology’ at Cambridge, although he did undertake work for the Home Office to supplement his income after Stevenson’s death. But by then the mantle of Senior Analyst had passed to Sir William Willcox (1870-1941) at St Mary’s, to be handed down to his successors until the post was abolished with the establishment of the Metropolitan Police laboratory at Hendon (1935).

In 1914 Hopkins became the first Professor of Biochemistry at Cambridge in recognition of his work on vitamins, for which he later shared a Nobel Prize (1929). This work not only inspired Sir William Dunn’s trustees to endow the Institute of Biochemistry that bears his name, but also ensured the commercial success of Marmite, a rich (and very cheap) source of several B vitamins including cyanocobalamin (B12)! Hopkins also discovered the existence of glutathione and helped his friend Sir Archibald Garrod (1857-1936) with his work on inborn errors of metabolism. Hopkins is a major figure in the development of modern biochemistry – when he died, 75 former students held chairs in biochemistry worldwide.

In summary, initially Taylor was ‘the right man, in the right place, at the right time’. Thereafter, his reputation was achieved and maintained, despite well-publicized set-backs, by hard work, integrity, and attention to detail. His *Principles and Practice of Medical Jurisprudence* especially was valued and updated regularly (13th Edition, Ed. A.K. Mant, 1984). The subject that he helped most to develop, analytical chemistry applied to biological specimens, has been built upon and enriched by his successors, most notably Stevenson and Hopkins, in a manner that he can never have foreseen.

REFERENCES

KEYWORDS: Alfred Swaine Taylor; Forensic toxicology; Medical jurisprudence

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