

PROF. J. L. W. THUDICHUM (1829–1901)

JOHN LEWIS WILLIAM THUDICHUM is regarded to-day as the father of neurochemistry. During 1865–82 he carried out a series of brilliant pioneer investigations on the analysis and characterization of brain tissue. This began the process of defining the nervous system in chemical terms—a scientific endeavour which has continued and is still gaining momentum to-day. Although Thudichum carried out virtually all his scientific work in London he was born in Büdingen, a small 'medieval' town in the old Grand Duchy of Hesse. It was here that after a recent colloquium in Mosbach, Baden, representatives of the Gesellschaft für Physiologische Chemie gathered to unveil a plaque on his birth-place (Fig. 1).



Fig. 1

Thudichum's family, distinguished in scholarly attainments, originated in the town of Marbach, the birthplace of the poet Schiller, and in this atmosphere he derived a great love for the classics. This latter expressed itself not only in his naming of the substances which he discovered but also in his non-scientific writing. Thudichum studied medicine at Heidelberg and later at Giessen where he was encouraged by his teacher, the great chemist Justus von Liebig, to develop a deep interest in the chemistry of natural substances.

Soon after graduation, Thudichum came to London where he married and settled for the rest of his life. Until his death he actively pursued the clinical practice of medicine, being a skilled otologist and rhinologist. He devised many surgical instruments and published a treatise on nasal polyps (which ran to several editions) and one on gall stones.

However, his interest in the application of chemistry to medicine steadily grew, he lectured in pathological chemistry at the old Grosvenor Place School of Medicine and then in 1865 he was appointed as lecturer in pathological chemistry in St. Thomas's Hospital, London. He also devoted himself to his chemical researches; urochrome, the principal colouring matter of the urine, was isolated in 1864, and he also made many important contributions to our knowledge of the carotenoids or 'luteins' as he called them.

These investigations, however, were probably not of such sustained importance as his work on the chemistry of the brain. These were carried out in his private laboratory and were supported by the Privy Council, the medical officer of which, Sir John Simon, quickly appreciated the value and brilliance of Thudichum's work. Sir John believed that eventually all diseases of the brain would be explained in chemical terminology and to do this it was first necessary to understand the chemistry of the normal brain. This in those days was remarkably far-sighted and is a line of reasoning not unfamiliar to many present-day neurochemists filling out applications for grants to support their work.

Thudichum continued his work on the brain during 1865–82, carrying out systematic analyses which resulted in the isolation of many new and important compounds, for example, sphingomyelin, cephalin, phrenasin, kersasin, sphingosine and cerebronic acid. Although in these days of chromatography we have become quite familiar with the rapid and easy separation of lipids, in the context of the times this was indeed a remarkable achievement. His work was published in a series of reports to the Privy Council and in 1884 his classic work on the *Chemical Constitution of the Brain* appeared in English, followed by a revised edition in German.

On his retirement from active chemical work, Thudichum wrote two most unusual works: the *Spirit of Cookery* appeared in 1895 and a *Treatise on Wines* in 1896. This illustrates the great diversity and originality characteristic of the man. His ever active mind and spirit appeared tireless to his contemporaries; he invented, wrote poetry, painted, sang with a fine voice and, like so many scientists, had a deep love of music. This combined brilliance often proved too much for lesser mortals and evoked unjust criticisms of his work. Nevertheless, his contribution has stood the test of time and his pioneering work still continues to act as a lead and inspiration to present-day neurochemists.

H. DEBUCH

R. M. C. DAWSON

SCIENCE IN PARLIAMENT

Metric System

IN a written answer in the House of Commons on May 24, Mr. D. Jay, the President of the Board of Trade, stated that the Government was impressed with the case which had been put to it by the representatives of industry for the wider use in British industry of the metric system of weights and measures. Countries using that system now took more than half Britain's

exports and the total proportion of world trade conducted in terms of the metric unit would probably increase. Against that background the Government considered it desirable that British industries on a broadening front should adopt metric units, sector by sector, until that system became in time the primary system of weights and measures for Britain as a whole. The Government had therefore asked the British Standards Institution—and the Institution had agreed—to pay special attention