

Society Reports

SOCIETY OF APOTHECARIES: FACULTY OF THE HISTORY OF MEDICINE AND PHARMACY

The Second British Congress on the History of Medicine and Pharmacy was held in London from 27 to 29 September 1961; it was organized by the Faculty of the History of Medicine and Pharmacy of the Worshipful Society of Apothecaries of London, with the co-operation of the Chemical Society. One hundred and twenty-seven members from all parts of the country were enrolled.

The subject chosen for discussion was 'Chemistry in the Service of Medicine', and papers were read at the Apothecaries' Hall, at the Royal College of Physicians, the Royal College of Surgeons, and at the Chemical Society, Burlington House.

The President of the Congress, Professor Douglas McKie, read a paper on 'Chemistry in the Service of Medicine, 1660-1800', in which he showed that, for the first hundred years or so of this period, chemistry remained under the influence of the alchemists and Paracelsians, this phase of iatro-chemistry continuing until the middle of the eighteenth century. In spite of the advances made by Boyle in the investigation of combustion and respiration, and the remarkable theories of Hooke and Mayow, little progress was made till the discovery of 'fixed air' by Joseph Black (1728-99), himself a physician. The studies of Cavendish, Priestley and Scheele led up to the solution of this problem, and the overthrow of the 'phlogiston' theory by Lavoisier's discoveries of the compositions of air and water. His calorimetric studies on respiration, which were so advanced for his time, and their impact on physiological thought, brought chemistry once more into the service of medicine.

Dr. Allen G. Debus (Harvard and Chicago University) had opened the proceedings with an account of Paracelsian doctrine in English medicine up to 1660. Before this, there had been a close alliance of chemistry and medicine based on techniques, e.g. distillation, which provided more potent remedies, though such processes originated not with Paracelsus himself, but with the iatrochemists. The effect of chemistry can be seen in the acceptance of Paracelsian interpretations of the microcosm in chemical terms, and from this early bond can be traced the present association of chemistry with medicine.

Dr. F. W. Gibbs spoke of the unique position occupied by Hermann Boerhaave (1668-1738), who initiated the era of scientific medicine by his insistence upon a proper knowledge of the sciences, including chemistry, for which he produced a classic book, the *Elementa Chemiae* of 1732. His work on milk and other physiological fluids entitle him to be called the Father of Biochemistry, but his plan of teaching allowed no subject to be dominant, all being subservient to applied physiology.

Professor F. G. Young, speaking on the rise of biochemistry, said that the old idea of a 'vital force' died slowly, but controversies about fermentation and decomposition were gradually decided in terms of the Existence of intra-cellular enzymes. In the nineteenth century, British Chemists, for obscure reasons, ignored the applications of their science to animal metabolism.

The 'Early History of Pharmacology' was discussed by Professor W. D. M. Paton, and Dr. W. D. Foster spoke on the Rise of Chemical Pathology, as it developed from the ancient diagnostic procedures of uroscopy and inspection of blood withdrawn at venesection.

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Important papers were read on the relationship of Chemistry to specific medical problems, by Sir Charles Dodds on 'Chemistry and Endocrinology', and by Professor Alexander Haddow on 'Chemistry and Cancer'.

Dr. T. F. Macrae, in talking of the effects of Chemical advances on nutrition, showed that discoveries in synthetic fertilizers and pesticides had played a major role in raising nutritional standards, while synthetic vitamins were now cheaply available. Lack of protein is still a problem in some parts of the world, and it has not yet proved possible to synthesise the necessary foodstuffs in acceptable forms.

Professor David Catcheside discussed the way in which, since 1940, genetic studies have brought together chemists, physicists and biologists. Big advances are being made by technical developments in, for example, chromatography and the use of radio-isotopes, and sequence analysis of animal proteins has now reached a stage where Sanger has shown insulin to consist of two chains, one of 20, and one of 31 amino-acids. Electrophoresis, too, has been used as a diagnostic measure, in, for instance, a sickle-cell anaemia, where the electrophoretic 'fingerprint' shows the displacement of the number 4 amino-acid in the patients' haemoglobin, as compared with normal haemoglobin.

Dr. W. A. R. Thompson took the title 'From Antisepsis to Antibiosis' and traced the development of anti-bacterial agents from Lister to Fleming.

The origin and rise of the Synthetic Drugs was described in masterly detail by Dr. F. L. Rose, who showed that if W. H. Perkin (later Sir Henry, 1838-1907), had not attempted to synthesize quinine (he obtained aniline blue, or mauve, and so began the dyestuff industry), the whole of chemotherapy might have been delayed for a generation. From these dyes have been synthesized trypanocides, sulphonamides, and phenothiazine (this latter originally in 1883, when it was used for its anti-helminthic properties), to mention only three of many types of drug.

These papers have shown that the historical aspect of medicine is not merely a matter of dry dates and amusing anecdotes, but a living activity in which modern doctors are themselves taking part. The influence of great chemists and doctors of three or four hundred years ago is still with us, and their inspiration, and the impetus which they provided, must be passed on.

At a brief ceremony during the Congress, the Chairman of the Faculty, Dr. W. S. C. Copeman, conferred the Faculty's Honorary Fellowship on Professor K. J. Franklin, F.R.S., the distinguished physiologist and medical historian, and on Dr. Ernst Wickersheimer, President of the Société Internationale d'Histoire de la Médecine and a leading historian of medicine in France.

A Congress dinner was held in the hall of the Worshipful Society of Apothecaries, when the guest of honour was Sir Howard Florey, P.R.S., and at which the President of the Chemical Society, Sir Alexander Todd, gave an address. Sir Alexander discussed the long-standing relation between chemistry and medicine, and stressed that medicine and the search for health had provided a great stimulus to chemical research. The title of the congress reflected the accepted separation of the basic sciences but he foresaw the day when these orthodox divisions would have to be broken down. At present the range of skills for tackling a research problem comprehensively could probably only be found in research institutes, but this was only a temporary solution. Research could best be carried out in the universities, which must use the constant influx of young minds to cross the barriers between the sciences.

The papers will later be published as a single volume of proceedings.