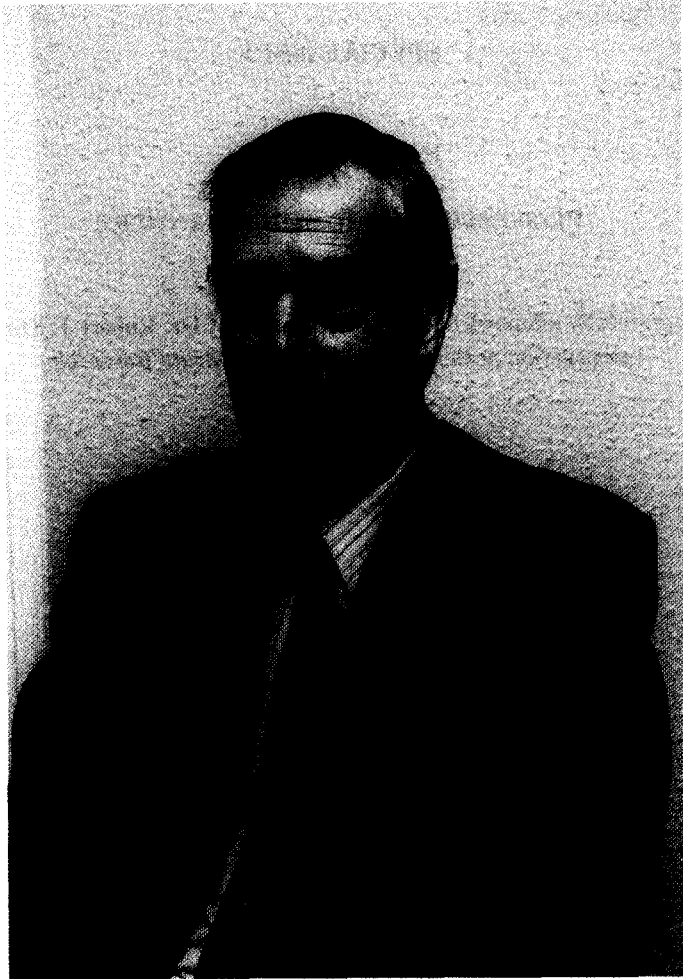


SPECIAL ISSUE

IN HONOUR OF

PROFESSOR DAVID JOHN MANNERS

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PROFESSOR DAVID JOHN MANNERS

Professor David John Manners

This issue of *Carbohydrate Research* is dedicated to Professor David John Manners, in recognition of his outstanding contributions to carbohydrate chemistry and biochemistry.

David Manners was born on 31st March, 1928, in Castleford, Yorkshire, an industrial town about 10 miles from Leeds. His secondary education was at the Grammar School, Castleford, which he left in 1946 to enter Fitzwilliam House, Cambridge University, to study Natural Sciences. He obtained a First Class in Natural Sciences Tripos, Part I and Part II, in 1949. On graduation, he elected to study for a Ph.D. degree, and it was at this stage in his career that he came under the influence of the eminent and highly respected carbohydrate chemist David James Bell, who, in the preceding 15 years, had published a series of papers describing chemical studies of glycogen.

Bell persuaded David to undertake studies of structural aspects of glycogens. At an earlier period, the nature of the interchain linkages in glycogen had been the subject of some controversy. Eventually, the (1 → 6)- α -D-glucosidic linkages were characterised by periodate oxidation, and beta-amylolysis of the glycogen furnished information on the relative lengths of the external and internal chains. Thus, by using glycogen samples prepared under defined conditions and using such enzyme preparations as beta-amylase free from maltase and alpha-amylase, David was able to define the external unit chain lengths of glycogens. At this time, methodology in carbohydrate chemistry was still at a relatively primitive level. Paper and column chromatography were in their infancy, and few enzymes had been purified and characterised sufficiently to be useful in analytical work.

The Ph.D. degree was awarded in 1952, and David then made the long trek north to an appointment as Lecturer in the Department of Chemistry of the University of Edinburgh. In that Department, there was already a strong interest in Carbohydrate Chemistry. Edmund (later Sir Edmund) Hirst had been appointed Professor of Organic Chemistry in 1948 and had laid the foundations for a Carbohydrate School which was to attain considerable prominence. Early staff members included E. G. V. Percival (who sadly died in 1951) and Elizabeth Percival, soon to be joined by Gerald Aspinall, Trevor Greenwood, and Douglas Anderson. This group provided a powerful nucleus for detailed structural studies of a wide variety of polysaccharides.

The next twenty-five years proved to be highly productive in terms of David's contributions to carbohydrate chemistry. From 1952–1964, he was lecturer in Chemistry, during a time when the field of carbohydrate chemistry was expanding rapidly. David's studies of polysaccharides were extended to include glycogens in relation to glycogen storage diseases, other α -D-glucans (amylose, amylopectin, and protozoal polysaccharides), and β -D-glucans (laminarin, lichenin, yeast cell-wall glucans, and

cereal glucans). Studies of the metabolism of polysaccharides, using carbohydrate-metabolising enzymes were also commenced during this period. Debranching enzymes, chiefly yeast isoamylase, played a major part in David's studies of the multiple branching of amylopectin and glycogen.

This work resulted in the award of the Meldola Medal of the Royal Society of Chemistry (1957) and of the degree of D.Sc. of the University of Edinburgh (1960). In 1965, he was promoted to Reader, and was elected a Fellow of the Royal Society of Edinburgh. Later the same year, he moved to Heriot-Watt University, Edinburgh, to take up the Chair of Biochemistry and the headship of the Department of Brewing and Biological Sciences.

This move marked the beginning of a second phase of his academic career, and coincided with a period of expansion of Universities in the United Kingdom. In the University of Edinburgh, he had been a member of a large Department with a considerable pool of research students, and he was now involved in the running of a small Department which had diverse interests in biochemistry, brewing, and microbiology. As a result of its close connections with the Brewing Industry, his new Department already had considerable interests in cereal polysaccharides, and joint biochemical and chemical studies had already been undertaken with the Chemistry Department at Edinburgh University. Research continued with emphasis on yeast cell walls, mixed-linkage barley α -D-glucans, and related carbohydrases, all of which were relevant to the brewing industry.

Administration, the bane of all Heads of Departments, began to take up an increasing proportion of David's time, and he gave his energy unstintingly to these diversions from his major interest in carbohydrate research. Within a short period of time, his Department of six members of staff increased to more than twenty, with the development of separate degree courses in biochemistry, brewing, microbiology, and marine biology. Administrative responsibilities followed, including a period as Dean of the Faculty of Science and membership of the University Court. This was followed in the 1970's by two frustrating periods spent planning the relocation of the Department to the recently acquired campus at Riccarton. For various financial and political reasons, both plans were set aside and it was some ten years later that David led the planning for the third and successful move to relocate the Department in the Promised Land.

A number of learned societies have benefited from David's time and energy. In 1966, the Chemical Society (now the Royal Society of Chemistry) instituted a Carbohydrate Discussion Group, and David became Chairman of the Group in 1970. On finishing his period of office with the Chemical Society Carbohydrate Group, he became Chairman of the corresponding newly created Biochemical Society Carbohydrate Group. The Biochemical Society also made use of his expertise as a representative on the British National Committee for Chemistry (1979–84), as Chairman of the Heads of Scottish Biochemistry Departments (1985–88), and as a member of its Professional and Educational Committee. Editorial responsibilities with scientific journals have included periods on the editorial board of the Biochemical Journal, Carbohydrate Polymers, the Journal of Cereal Science, and the Journal of the Institute of Brewing, as well as the

editorial advisory board of *Carbohydrate Research*.

In other spheres, David devoted considerable time as a member of the Research and Development Committee of the Potato Marketing Board, and of the Governing Bodies of Inveresk Research Foundation and of Queen Margaret College, Edinburgh, of which he was Chairman from 1978–83.

His significant contributions to research in the field of carbohydrates was further recognised in 1984 with the Alsberg–Schoch Memorial Award by the American Association of Cereal Chemists. In the same year, he was awarded the degree of Sc.D. by the University of Cambridge, and in 1989 he was honoured with the Award of Merit of the Japanese Society of Starch Science.

David's research and administrative activities have always been accompanied by meticulous planning and an excellent eye for detail. Using these talents, he has made significant contributions to the planning and organisation of such major scientific meetings as FEBS (1982), the International Symposium on Cereal Carbohydrates (1988), the VIth European Carbohydrate Symposium (Eurocarb VI) (1991), and the forthcoming International Symposium on Plant Polymeric Carbohydrates to be held in Berlin in 1992.

In 1988, David decided to take early retirement in the year before the building of the new Department was completed on the University campus at Riccarton. Retirement has not diminished his appetite for science — he remains a committed member of the editorial boards of several journals, and has accepted a number of invitations to participate in overseas carbohydrate symposia since officially retiring — but it has allowed him to spend more time with his family.

He is married to Gweneth and has two sons (one now deceased), one daughter, and five grandchildren. Involvement with science has not left much time for leisure pursuits, but he has always had an intense interest in philately. This of course has blended in well with his involvement with many overseas symposia, where a visit to the main Philatelic Bureau of the host country is mandatory!

Another active interest is in jazz, his knowledge of the subject being a source of continual surprise to several generations of students in his department. While a member of the Chemistry Department in Edinburgh University, he was a keen tennis player, and one of his proudest achievements in that sphere was in winning the mixed doubles final with Elizabeth Percival in an annual Departmental competition. He has other non-participatory sporting interests: in common with many other Yorkshiremen, he is passionately interested in Rugby League and Cricket, two sports which are akin to religion for the native Tyke. His many friends and colleagues around the world will join in wishing David a long and happy retirement with Gweneth.

Robert J. Sturgeon
(*Heriot-Watt University*)