

MORTON, RICHARD ALAN (1899 - 1977), biochemist

Name: Richard Alan Morton
Date of birth: 1899
Date of death: 1977
Spouse: Myfanwy Heulwen Morton (née Roberts)
Child: Gillian Lewis (née Morton)
Parent: John Morton
Parent: Ann Morton (née Humphreys)
Gender: Male
Occupation: biochemist
Area of activity: Science and Mathematics
Author: D. Ben Rees

Alan Morton was born on 22 September 1899 in Garston, a suburb of Liverpool, the only son and younger child of John Morton, a train driver who was born in Wrexham, and his wife Ann (née Humphreys) of Nantgwynant who came to Liverpool as a housemaid. Though christened Alun, he was always known as Alan. The Welsh-speaking family were members at the Welsh Calvinistic Methodist Chapel in Garston and were active in the local Welsh community.

He was educated at Garston primary school and Oulton School in Liverpool. Leaving school in 1917, he worked for a while at a chemist's before joining the army. He was only a soldier for some nine months, and during that time he became seriously ill with Spanish flu. In 1919 he went to Liverpool University, where he was a contemporary of **Saunders Lewis**, Gwilym Peredur Jones, Jennie Thomas and others who were influential later in the life of the Welsh nation.

Morton graduated with first class honours in Chemistry in 1922 and he then studied for his doctorate under Professor Edward Charles Cyril Baly (1871-1948), a pioneer in the application of spectroscopy in the field of chemistry. The influence of his co-researcher Selig Hecht (1892-1947) led Morton to apply spectroscopic methods to biological problems. In 1924, Morton was appointed a special lecturer in spectroscopy. In 1926, he married Myfanwy Heulwen Roberts, one of his childhood friends in Garston Chapel, and they had one daughter, Gillian (Lewis) who became a fellow of St Anne's College, Oxford.

In 1930, Morton was awarded the Meldola Medal by the Chemical Corporation for his outstanding work on the correlation of absorption spectra and structure. During that year, he took a sabbatical as a visiting professor at Ohio State University. On his return to Liverpool, Dr (later Sir) Ian Heilbron (1886-1959), professor of organic chemistry in Liverpool, got him interested in a new research problem, namely the control of rickets. That research showed that vitamin D was a far more effective and economical treatment for rickets than cod liver oil. During the Second World War Sir Edward Mellanby, secretary of the Medical Research Council, asked Morton to do more research work regarding vitamin A within a volunteer group of conscientious objectors in Sheffield. The resulting report, Needs of Human Adults for Vitamin A, still has value today.

In 1944 Morton was appointed to the Johnston Chair of Biochemistry in Liverpool, a post which he held for 22 years. During this time he built up a strong team of researchers, including Professor Huw Hefin Rees from Pembrokeshire, which was responsible for the discovery of ubiquinone and the polyprenols. In his pastoral care for students, in particular the many overseas research students who came to the department, he was ably assisted by his wife Heulwen. He did a great deal on behalf of Liverpool University's halls of residence, and his work was commemorated by a new hostel on the Carnatic site, opened in 1971 and called Morton House.

After the Second World War, Morton established the 'Beckman Club' to promote co-operation amongst users of the photoelectric spectrophotometer around Merseyside, especially those working at Unilever, Shell and Imperial Chemical Industries (ICI). The Beckman Club evolved into a Photoelectric Spectrophotometry Group with its own bulletin. Morton and others formed the Photobiology Group (now known as the British Photobiological Society), and one of its earliest meetings was held within his department in Liverpool. In 1950 he was made a Fellow of the Royal Society for his work on Vitamin A. He was a member of the Society's Council from 1959 to 1961, and chaired its Board of Scientific Publications from 1961 to 1972. He gave much public service in the field of nutrition, particularly as chair of the Food Additives and Contaminants Committee from 1963 to 1968 when regulations on additives were being established. He was chair of the British Biochemical Society from 1959 to 1961, and in 1969 he published *The Biochemical Society: its history and activities 1911-1969*.

Morton was a prolific author. His first volume, *Radiation in Chemistry*, was published in 1928 and in his second, *Absorption Spectra of Vitamins, Hormones and Co-Enzymes* (1942) he demonstrated the potential of absorption spectroscopy as a research tool. Between 1923 and 1978 he was author of a total of 282 papers, many with other scientists. His magnum opus is the third edition of his *Biochemical Spectroscopy* published in two volumes in 1975. A scientific article by him in Welsh, '**Agweddau Cemegol ar Weled**' ('Chemical aspects of sight') was published in *Y Gwyddonydd*, 3, rffif 2 (Mehefin 1965), and he contributed essays to the Merseyside Welsh magazine, *Y Bont*.

After his retirement in 1966, he was visiting professor at the University of Malta in 1969, and external examiner there in 1970, 1972 and 1974. He was honoured with doctorates from Coimbría University, Portugal in 1964, the University of Wales in 1966, and Trinity College, Dublin in 1967, and was made an honorary member of the American Institute of Nutrition in 1969.

He attended Garston Welsh Presbyterian Chapel throughout his life, where he would listen intently to sermons. At his second home in Llansannan at the foot of Hiraethog Mountain he had the opportunity to follow his other leisure interest as an artist. Alan Morton died following a heart attack at his home in Greenhill Road, Allerton on 21 January 1977, having just returned from an academic conference in India. In 1978 the Biochemical Society founded the Morton Lectureship in his memory, to be awarded to those who have made an outstanding contribution to lipid biochemistry.

Author

D. Ben Rees

Sources

D. Ben Rees, 'Coffáu Dr Richard Alan Morton' in *Cymry Lerpwl a'r cyffiniau yn yr ugeinfed ganrif* (Lerpwl 2001), pp.119-121

J. Glover and others, 'Richard Alan Morton, 1899-1977,' *Biographical Memoirs of Fellows of the Royal Society*, 24 (1978), 409-42

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Personal knowledge

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