Biographical Notes on Scientific Work

Richard Laurence Millington SYNGE

BORN OCT 28th 1914 at LIVERPOOL

Educated 1928-1933 Winchester College

1933 Entered Trinity College, Cambridge

1936 Graduated B.A. (Cambridge), specialising in Biochemistry.

Commenced work as a Research Student in Dept. of Biochemistry (Prof. Sir F. G. Hopkins) under supervision of Mr N. W. Pirie. Worked on mucoproteins and (with Dr D. J. Bell) on the selective substitution of carbohydrates.

1938. On the advice of Dr H. R. Marston, Director of C.S.I.R.O. Laboratory of Animal Nutrition, Adelaide, who was working in Cambridge for a year, was appointed International Wool Secretariat Student in Biochemistry, under general supervision by their scientific adviser, Sir Charles J. Martin. Began to work on amino-acid analysis, and ascertained that acetylamino-acids have widely different partition coefficients between chloroform and water. Sought help of A. J. P. Martin, then working at Dunn Nutritional Laboratory, Cambridge. Commenced collaboration on a countercurrent extraction train for use with chloroform-water. Martin moved to the laboratories of the Wool Industries Research Association, Leeds, to an appointment as biophysicist sponsored also by International Wool Secretariat.

1939. Collaboration on extraction train continued. Followed Martin to Leeds.

1940. Ph.D. (Cambridge) with a thesis on amino-acid analysis by countercurrent extraction. Collaboration continued.

1941. Invention of partition chromatography. Collaboration continued.

1942-3. Application of partition chromatography to analysis of peptides. First use of paper for chromatography of free amino-acids. Collaboration continued.

1943. Took up appointment on staff of Lister Institute, London. Worked on chemical structure of antibiotic peptides of gramicidin-tyrocidine group while there.

1944. With S. R. Elsden introduced partition chromatography using starch.

1946-7. Nine month leave of absence from Lister Institute to study adsorption methods used by Prof. A. Tiselius at Biokemiska Institutionen, Uppsala.

1948. Took up present appointment at Rowett Research Institute, Bucksburn, Aberdeenshire (Institute studies all aspects of nutrition of farm animals). Own work concerned with chemical study of protein and carbohydrate constituents of fodders, and their fate during digestion by the ruminant animal. Special interest in peptide-like constituents of green leaves and in improving physicochemical procedures for the

separation of large molecules.

1943-1946. Served on Committee of Biochemical Society.

1949- " " Editorial Board of Biochemical Journal.

1950- Fellow of Royal Society.

1952- Fellow of Royal Institute of Chemistry.

1952. Shared Nobel Prize for Chemistry with A. J. P. Martin for invention of partition chromatography.

Original papers and various reviews on subjects related to protein chemistry can be traced through Chemical Abstracts.