

Professor Georges J. Hoornaert

A Tribute



Georges Hoornaert was born in Kaaskerke, a small village in the North-Western side of Belgium, on 16 January, 1938. After being educated at the secondary schools of Diksmuide and Veurne, he studied at the University of Leuven where he finished the Licentie Scheikunde (M. Sc. Chemistry) in 1961. The subject of his Master thesis was related to physical chemistry. Then his career took a turn that may be seen as unexpected: in the period 1961-1962 he became a teacher in a secondary school. However, after finishing his military service in 1962-1963 he started a Ph D in Organic Chemistry, again at the University of Leuven, under the guidance of the late Prof. Verhulst. During this Ph D study (1963-1967) he held the prestigious N. F. W. O. (Belgian National Fund for Scientific Research) fellowship, that is reserved for top-level students. In 1967 he received a postdoctoral fellowship of the N. F. W. O., which became tenured in 1971. During the postdoctoral period he stayed with Professor Eschenmoser at the E. T. H. in Zurich from December 1969 to January 1971. He then became a staff member (docent) at the Department of Chemistry in Leuven in 1972 and was appointed Associate Professor (1975) and Full Professor in 1977. Professor Hoornaert received a number of prizes, including the Jan Stas prize and P. Bruylants prize, both in 1967. He was a laureate of the Royal Academy of Sciences in 1977. Within the Department of Chemistry at Leuven, he held numerous administrative functions and most notably he was the Head of Department from 1977 until 1992. He was also (and still is) the head of the division of Organic Synthesis, and chairman of a number of administrative bodies including the commission devoted to educational training of Ph D students.

Professor Hoornaert always paid a great deal of attention to his teaching duties, which included numerous courses, practical and theoretical tutoring sessions both in the Department of Chemistry and the Faculty of Agronomy. Thousands of students that were subject to his examinations (including one of the undersigned) appreciated the care and fairness of his interrogation. Professor Hoornaert trained more than 50 Ph D students in his research laboratory that, on average over the years, had at least a total of 20 undergraduate, doctoral and postdoctoral students. Several of his former collaborators eventually obtained academic positions.

The research of Professor Hoornaert dealt with the synthesis, structural characterisation and biological evaluation (by other partners) of organic, mainly heterocyclic compounds. A wide variety of synthetic methods and interesting precursors were applied to generate structures mimicking (phyto) pharmacologically active compounds or inducing supramolecular organisation. Well-defined skeletons fitted with the required substitution pattern and stereochemical characteristics were conceived to assemble information on structure-activity relationships. Meanwhile, special attention was given to novel and unexpected reaction pathways, their mechanism and potential synthetic applications.

An important and very successful topic, on which research continues until this day, was using the hetero Diels-Alder cycloadditions of pyrazinones and 1,4-oxazinones for the construction of numerous saturated and unsaturated nitrogen-heterocycles, e.g. mono- and polycyclic pyridines and pyridinones and their bridged analogues, showing a widely varying substitution pattern. A second important area of research involved the generation of heteroaromatic ortho-quinodimethane systems, e.g. benzopyran, indolopyran and pyridino-o-quinodimethanes, and their application in various inter- and intramolecular Diels-Alder cycloadditions. Over 100 publications appeared on these and other subjects. There was always extensive collaboration with the chemical industry, resulting in sponsoring of a number of projects. We are convinced that Professor Hoornaert will remain active in chemical research for many years after becoming Professor Emeritus in October 2003 and we wish him success in his further endeavours.

It has been our privilege to be the colleagues of Professor Hoornaert, and now to pay tribute to him as an outstanding organic chemistry researcher and teacher.

Prof. Frans Compernelle

Prof. Wim Dehaen