

Obituary: Jean Montreuil (1920–2010)

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On July 16, 2010, Jean Montreuil, Professor Emeritus of the University of Science and Techniques, Lille, France, passed away suddenly at the age of almost 90 in Romania, where he was preparing the 16th meeting of the Summer School Molecular Pathology and Pharmacology at the Western University of Arad. Till his final moment, he was still passionately involved in the teaching of glycobiology. Born on October 11th, 1920 in Lille, France, he obtained the Bachelor Degree in Philosophy in Valenciennes, France, in 1939. Upon returning from military service he graduated in Pharmacy at the University of Lille in 1945. He received the D.Sc degree at the Cancer Institute, in Lille, under the supervision of Prof. Paul Boulanger on a study on “Pentose-containing nucleic acids”. In 1963 he was appointed full professor at the newly created University of Science and Techniques of Lille. At the campus in Villeneuve d'Ascq, in the outskirts of Lille he created a new research laboratory for Biological Chemistry. He continued there the studies he had started on the isolation and characterization of carbohydrates and glycan moieties from human biological fluids, in particular milk, urine and serum. He discovered the glycoproteins lactotransferrin, and milk IgAs. Together with his devoted and competent coworkers like Geneviève Spik, Michel Monsigny, Bernard Fournet and Gérard Strecker, the wet chemical methods for isolation and structure determination were applied and refined, yielding the primary structures of glycans in many glycoproteins. With great imagination and model building he tried to gain insight in the possible conformations of complex glycans. He concluded that the large flexibility would allow various conformations, which could play key roles in molecular recognition processes.

Jean had an open mind for new developments and new techniques. He established a very fruitful and productive collaboration with the group of Hans Vliegthart at

Utrecht University in The Netherlands, in the field of NMR of biomolecules. This has led to the determination of numerous structures thereby providing a sound basis for the understanding of biosynthetic routes and the catabolism of glycans. These studies provided also insight into the defects in a number of inborn errors of glycan metabolism. For patients with lysosomal storage diseases, he established with Gérard Strecker the scheme for catabolism of glycans within the lysosomes. Furthermore, NMR investigations were carried out focussed on the three-dimensional structure of glycans in solution. The presumed flexibility of glycan chains could indeed be confirmed. The existence of various conformations was demonstrated.

He was not only intrigued by the structure of glycans, but equally well by the biological role and function of these moieties. This interest started with studies on milk oligosaccharides, and their importance for the development of the immune system. Even today this topic is challenging for academia and food industry. In realizing that many glycans exert their function at cell surfaces and thereby via recognition processes, he became involved in membrane-bound glycoproteins. In this respect the aging of red blood cells was for him a challenging topic. Together with Daniela Bratosin, from Arad University, Romania, he was actively involved in this research, during the last years.

He was an extraordinary good host and he could show this during large meetings like the International Glycoconjugate Symposia he organised with his group in 1973 and in 1987. However, his hospitality was even more evident at the many smaller meetings he organised like the famous international trainings courses in glycoscience. Many prominent glycoscientists of today enjoyed these fruitful and instructive courses. An essential part of each of the

courses was the midcourse party on Saturday evening with cheese and gin, the next day followed by the traditional excursion to Bruges, Belgium.

Jean Montreuil was an enthusiastic and excellent teacher at all levels. He was also a very productive author of research articles, reviews and books. Thanks to his inexhaustible energy and outstanding physical condition he could at the same time serve in numerous national and international bodies and institutions. He had a keen eye for quality in all respects.

Jean Montreuil received worldwide recognition for his outstanding contributions to science and society. He was elected corresponding Member of the French Academies of Medicine and Sciences, Honorary Member of the Romanian Academy of Sciences, Doctor honoris Causa of the Free University of Brussels, Belgium, of the University A.I. Cuza, Iasi and of the University Vasile Goldis of Arad, both in Romania. Furthermore, he received the Charles Leopold Mayer Award of the French Academy of Sciences, the Silver Medal of Utrecht University, The Netherlands, the Gold Medal of the Vasile Goldis University of Arad, Romania. He was Commander in the “Ordre des Palmes Académiques”, in the “Ordre National du Mérite” and in the National Cultural Order of Romania.

He will be remembered by his family, students and colleagues as an exceptional personality, who contributed so much to science and society and who had so much to offer.

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