

Ahead of and Behind the Show: A Special Issue Dedicated to Professor Alain Krief

Alain Krief was born in Tunis on December 13, 1942. He studied chemistry at the University Pierre et Marie Curie in Paris, where he completed a PhD on the “Cycloaddition of Ynamines with α,β -Unsaturated Carbonyl Compounds” in 1970 under the supervision of the late Professor Jacqueline Ficini. He then crossed the Atlantic ocean to do postdoctoral research (CNRS fellow) at Harvard University in the laboratory of Professor E. J. Corey, where he worked on the biosynthesis of sterol. He then returned to Ficini’s laboratory as a permanent CNRS researcher, where he pursued studies on the cycloaddition of ynamines and initiated a research programme on the reactions of sulfur ylides with imine, cyanoimine and sulfonylimine derivatives. It was, however, already very clear that Alain wished to conduct independent research as early as possible. In 1972, he was offered a chair at the Facultés Universitaires Notre-Dame de la Paix in Namur. This was quite challenging, because the “Facultés” were starting a graduate school in chemistry and they relied upon Alain to start teaching organic chemistry at the undergraduate and graduate level and to build a strong research group in synthesis. Thirty-seven years later, one can say that his mission was accomplished above all expectations! The organic chemistry group of the “Facultés” quickly became one of the strongest in the country and acquired great international visibility. It is therefore not very surprising that, after only three years, Alain was promoted to the rank of Full Professor.

Professor Krief is a leader in contemporary organic chemistry. He has made an exceptional number of seminal contributions to the development of synthetic methodology and to the structure-based understanding of chemical reactivity. A serendipitous discovery of an old box of metallic selenium on a laboratory shelf by a creative researcher curious about everything unfolded with major advances in the use of selenium in organic synthesis. These pioneering studies showed that selenides were smooth precursors of organolithium derivatives and revealed the unique behaviour of molecules such as β -hydroxyselenides, selenoxides, selenolates and selenocyanates. These discoveries provided the foundation for 35 years of remarkable accomplishments in the field of selenium-based chemistry. The synthesis of pyrethroids was another favourite research area of Alain Krief. He reported an impressive series of synthetic routes for the

stereocontrolled synthesis of three-membered rings and developed extremely effective isopropylidene transfer reagents based on phosphorus and sulfur ylides or metallated nitro- or sulfonyl alkanes. More recently, Alain Krief embarked on the synthesis of pyrethroid-derived haptens for the production of catalytic antibodies, allowing the stereocontrolled synthesis of chrysanthemic acids. Since his early days at Harvard, Alain Krief has also shown continuous interest in the elucidation of the mechanism of the biosynthesis of sterol. His passion for chemistry led him to start a project aimed at the development of an electronic encyclopedia of organic chemistry (EnCoRE) containing interactive communication tools, a digital organic-based chemistry dictionary, a search engine, chemistry ontologies and a suitable database.

Professor A. Krief is the author or co-author of over 335 research papers. He held visiting professorships in more than 14 universities worldwide and gave more than 230 lectures at national and international symposia and in universities and industries. His continuous efforts to promote organic chemistry in Belgium and Europe are testified by numerous dissemination activities: he was indeed a kingpin in the organization of the *Belgian Organic Synthesis Symposium* (BOSS) and the *European Symposium on Organic Chemistry* series. He also served as Chairman of the 40th *Bürgenstock Conference* in 2005.

Alain Krief has trained 40 PhD students. He was a respected, though very demanding, supervisor who very closely controlled the experimental work of his co-workers. In celebration of Professor Krief’s accomplishments, this special issue of *EurJOC* is meant to reflect his wide research interests. A series of original papers from colleagues and friends who were associated with him over the course of his career will walk the reader through cutting-edge areas of organic chemistry ranging from pure organic synthesis to medicinal chemistry and nanotechnology. This issue is a tribute from his colleagues and friends in recognition of his great contribution to the development of our science. We will all not only remember the great scientist but also the talented entertainer and storyteller. We wish him all the best for a well-deserved retirement and for success in his future endeavours.

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