

In Memoriam

Arno F. Spatola

It was a great shock to hear of Arno F. Spatola's sudden and unexpected death on July 5, 2003. Arno was a much loved and respected member of the scientific community both for his contributions to peptide chemistry and biology, and also for his warm, friendly and enthusiastic personality, and his many contributions to the development and nurturing of the peptide community worldwide. It is indeed an honor and privilege to dedicate this issue and the next issue of *The Journal of Peptide Research* to the memory of Dr Spatola. The response from the scientific community to participate in such a memorial has been overwhelming and thus the need for two issues of the *Journal* to accommodate all of the excellent papers that have been submitted to honor Arno's memory. I want to thank all of you who have contributed to these volumes. I know that Arno would be very pleased.

I have been very privileged to have known Arno Spatola since he entered the field of peptide and protein science in 1971 as a postdoctoral fellow in my laboratory at the University of Arizona. Before then, Arno had received his BS in chemistry (minor – political science) from Cornell University, and his MS and PhD degrees from the University of Michigan working with Prof. Daniel T. Longone, where he had received excellent training in all aspects of organic chemistry. I had been an Assistant Professor for only a few years, and having a very talented postdoc like Arno to work with, we were able to work out efficient total syntheses of several specifically deuterated analogues of oxytocin, and utilize these derivatives for novel studies of peptide hormone–protein (neurophysin) interactions, as well as novel studies of carbon-13 nuclear magnetic resonance (NMR) spectra of polypeptides, that had a major impact on peptide and protein science. These studies, some done in collaboration with Prof. Jay Glasel, lead to four full papers in major journals (PNAS, JMB, JOC, etc.). In 1973, Arno moved to the Department of Chemistry at the University of Louisville as an Assistant Professor where he quickly established his own independent creative scientific career in peptide chemistry and biology. He quickly rose through the ranks to become a full Professor as a result of his innovative research, his involvement at the University of Louisville in academic and interdisciplinary collaboration, and his excellence as a teacher. He held a joint appointment in the Department of

Biochemistry for most of his career at Louisville and was a vital member of the Cancer Center. In 1996 with colleagues at the School of Medicine Arno founded The Institute of Molecular Diversity and Drug Design to promote and further develop his lifelong passion for multidisciplinary research, and to serve as a training center for scientists in many diverse areas of chemistry, biology and medicine. As a result of these and many other outstanding contributions to the University of Louisville, he received the President's Award for Outstanding Scholarship, Research and Creativity in 2003.

Arno's major research interests centered around the organic chemistry, structural chemistry, and biological chemistry of biological active peptides, cyclic peptides, pseudopeptides, cyclic peptide libraries, and their application to the design of biological active ligands with novel properties. In these studies he made critical contributions to cyclic peptide and pseudopeptide synthetic methodology that are used worldwide. His seminal review and overview of amide bond replacements and pseudopeptides, and his own contributions to this area, greatly stimulated its development to its current role as a major area of both peptide and protein science, and in medicinal chemistry and drug development. He originated and promulgated the 'psi-bracket' pseudopeptide nomenclature (which he claimed arose from his appreciation of the saguaro cactus found only in the Sonoran Desert around Tucson, Arizona). He also pioneered previous studies of metalloprotease inhibitors, and more recently inhibitors of nuclear hormone receptor proteins. And his ammonium formate catalytic transfer hydrogenation method is used worldwide.

Arno participated extensively worldwide in scientific conferences and in promoting international science as an often invited speaker at these conferences, as an enthusiastic proponent of peptide science, and as an active member of the scientific community. He was the organizer of the much acclaimed 1990 Gordon Research Conference on Peptide Chemistry and Biology. He was a co-founder of the American Peptide Society, served on its council, and at the time of his death was the secretary of the Society. He was on the Editorial Board of this *Journal* for many years, and served on several other Editorial Boards. He had many friends worldwide, and used his

enthusiasm and popularity to promote science at all levels.

As a human being, it is hard to top Arno. He was kind, enthusiastic, a lover of good food, wine and company, a devoted husband and father, a friend beyond compare. He enjoyed people and life, and made sure others participated with him in this enjoyment. It is impossible to measure Arno's importance to those who knew him, who worked with him, and who traveled with him and participated in

life with him. His vision will continue to stimulate us for many years to come.

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