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Foreword

In this special issue of the International *Journal of Mass Spectrometry*, Franz Hillenkamp, who retired in 2001 from his position as a professor at the Institute of Medical Physics and Biophysics, University of Münster, is honored by a collection of scientific publications. For all of us who know Franz Hillenkamp his formal retirement may have come as a surprise, and indeed Franz is nothing less than tired and his activity and deep engagement has been and still is impressing for everybody happening to meet him or to attend one of his lectures.

Franz started his university studies in 1955 at the Technical University of Munich as a student for "Elektrotechnik". In 1960–1961 he was granted a Fulbright stipend for Purdue University, USA, where he received his first degree, the Master of Sciences in Electronic Engineering. This was followed by the diploma in "Nachrichtentechnik" at the Technical University of Munich in 1962. In 1966 he finalized his Ph.D. to "Dr. Ing" at the Technical University, his research was carried out at the German National Laboratory on Radiation and Environmental Research, Neuherberg, where he was a senior scientist until 1976. From 1965 to 1976 he was a Lecturer of Physics at the University of Maryland, Campus Munich. From 1976 to 1986, Franz was a Professor of Biophysics at the JW Goethe University of Frankfurt. In 1986 he accepted the Chair of a Professor for Medical Physics and Biophysics in the Medical Department of the University of Münster and became the director of the institute until his retirement. Since 1985 Franz had a visiting professorship at Harvard University, Medical School in Boston. Moreover, he was Visiting Professor at the Universita di Napoli, Seconda Facolta di Medicina in 1986, at Texas A&M University, College Station in 1999, and at the University of Innsbruck, Austria in 2000. Two major awards acknowledged his scientific achievements, the first was the "ASMS Award for a Distinguished Contribution to Mass Spectrometry" in 1997 and the award "Molecular Bioanalytics" by the German Society for Biochemistry and Molecular Biology. Franz is an ordinary member of the Academy of Sciences of Nordrhein-Westfalen, Germany, and since 2001 is focusing his activities as a Chief Consultant for Mass Spectrometry for Sequenom Inc., San Diego, USA.

Needless to say, Franz is known to everybody in the mass spectrometry community because of MALDI. But this was only in the mid-1980s and since then the last chapter of his scientific career is obvious to everybody by numerous scientific publications and lectures. But what occurred before that ? There is indeed another earlier achievement of Franz's scientific efforts which created the major prerequisite for the development of MALDI, even though nobody could even dream of it at the early 1970s. This was the LAMMA, the laser microprobe mass analyzer. The concept for this instrument—they were commercialized around 1980 and a few are still in use today—connected two major parts, a microscopically focused short-pulse laser beam and a time-of-flight (TOF) mass spectrometer. It was a common effort of Franz and the late Raimund Kaufmann, who—as a electrophysiologist was interested in new tools for spatially determined metal cations in biological tissues, while Franz was interested in new applications for the Ruby laser, in the development of which he was involved at a very early stage in research labs of Siemens. Both laser and TOF were completely out of the mainstream developments in organic mass spectrometry and both

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Franz and Raimund Kaufmann were outsiders in the mass spectrometric community. This may have been even important, since it delivered the frame to start the construction of the instrument and the investigations without a predetermined mind. It soon turned out that a shorter wavelength is helpful and that the ignition of dense plasma was counterproductive for the generation of even metal cations. The development to MALDI was driven by the increasing demands of biological mass spectrometry in the early 1980s, but it essentially bases on the critical analysis of a common idea at that time, i.e., the laser wavelength is not an important parameter in laser desorption.

To overcome those barriers and later to push students and coworkers to do so is definitely Franz's major strength as a scientist. A real culture of conducting controversial discussions without any hierarchic restrictions, indeed that he loves to do so and has always time for this, including the absolute right to pose "stupid" questions without being "punished" for that, created the vivid structure of Franz's lab when I joined him in 1983. That is the first major topic to learn from his successful carrier. The second is, that scientific openness and the free interchange of ideas is a key issue for a successful lab and always beneficial, well-understood competition is a sportive one, but should never be used to justify secretiveness and a spirit of competition.

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