

Remembering Distinguished Professor Georges Guiochon, a Great Mentor and Friend.

By Andrew Shalliker

An early morning email informed me that Distinguished Professor Georges Guiochon passed away on October 21st 2014. His contributions to the field of separation science need no introduction, and no doubt these aspects of his professional life will be remembered and detailed in many forms of reflection. But for me there are few, other than my father, who have shaped my life like Georges has done. He was an inspirational scientist, mentor and friend.

Our association started in my 20s, from a very naïve letter of introduction, with an opening– ‘...we have similar research interests...’, seeking postdoctoral experience in his group. His reply was immediate, and some three months down the track I was astounded by an invitation to join his group at the University of Tennessee, Knoxville (UTK). Shortly thereafter I learnt of many other naïve postdocs who sent similar letters as they also had ‘...similar research interests...’. We were not judged poorly by our underestimation of what would come to life in our futures.

I was attracted to Georges’ research on column technology. His was a laboratory that enabled the seemingly impossible: Some members of his group impregnated column beds with dyes and polymer resins, the beds hardened and were extracted from the tubes, then sectioned to reveal the radial distribution of solute migration. Other members designed special detectors that were positioned precisely at discrete locations at the column outlet. These end column detectors revealed further detail about column bed heterogeneity. When I joined Georges’ group, he offered me a project on visualising fluid flow in HPLC columns. We made columns that had invisible beds by matching the refractive indices of the stationary and mobile phases. The beds were packed in glass tubes and coloured solutes could be tracked as they migrated through the column. We detailed for the first time the wall effect and had much fun with viscous fingering. Collectively, his group has led the world in column technology and characterisation processes. Column technology is a topic that has dominated my research and



As a member of the French analytical society (GAMS) Georges Guiochon was a close collaborator with the Chromatographic Society in the 1970s and 1980s. He is sat in this picture next to Dr Jack Kirkland with Professor Ray Scott (2nd left) and Professor Phylis Brown also sat in the front row

teachings even to date. Importantly, he taught me in these early days that you learn more about chromatography by packing bad chromatography columns, a concept that was odd for someone geared towards packing good columns. Of course, his advice was correct and we mastered the art of packing bad columns.

During my time in Georges’ group (1997 to 1999) there were mathematicians, theoreticians and experimentalists from Hungary, Sweden, Germany, Japan, China, Algeria, Morocco, Italy, Australia and of course the USA. His group was culturally and scientifically diverse; we all had a place.

While academic purposes originally brought us together, I soon began to understand his strong sense of social views. He taught me the importance of a holistic life, of having a good work-life balance, and encouraged my wife (Lini) and I to see the United States of America. In 18 months we visited 21 states and these trips were discussed at length with Georges, who always made recommendations and often provided a detailed historical account. Considering

Georges’ prolific work output, his holistic approach to balancing work and life, and his close relationship with his wife Lois Beaver, served to shape my future. Over the years I knew Georges, my family also formed a close bond with Lois. Together their worldly knowledge of what to see and do would put to shame any travelogue. Their adventures provided many hours of conversation. The relationship between Georges and Lois was, however, more than just marriage; they shared a passion also for analytical sciences, being mentored by Georges, also meant being mentored by Lois. Their companionship was inspirational.

I recall the time I was seeking an academic appointment, and I sought Georges’ views on an offer I received. I was unsure, but he gave me advice that perhaps changed my life; advice that I could not ignore. He said to me, that I have no choice but to take the position. When I asked why, he said, ‘because you no longer have a job here’. Georges’ social responsibilities were such that whatever opportunity arose, you had a responsibility to grasp it and pave your own destiny.

I returned to Australia, but maintained a close relationship with Georges and continued our research collaborations. Several of my students were also mentored by Georges and I know they too think of him as family.

Georges and Lois were remarkable travellers, but prior to the mid 2000s Georges had not considered favourably the prospect of travel to Australia. He changed his mind in 2006 when my colleague David Shock and I convinced him and Lois to be the star attractions at a 2DHPLC workshop that we had organised. Georges wrote the landmark paper – 'The Limits of the Separation Power of Unidimensional Column Liquid Chromatography', published in 2006 in the *Journal of Chromatography A*, which I believe was the foundational driving

force behind the modern day technique of multidimensional HPLC, and also the foundation of our 2DHPLC workshop. We held this event four times. These events were not overly successful, at least not to the extent of having such a bright shining star as Georges, but that did not deter him from attending. He came anyway, aware that his trips were as much about the friendship as they were about science. They returned to Australia almost annually for various events, including HPLC 2013 in Hobart, albeit that trip was prone to



An active member of the HPLC Symposium series Georges Guiochon (right) wasted no time in congratulating Ron Majors (left) and David McCalley (centre) upon receiving the 2007 Martin Medal and 2008 Jubilee Medal respectively at the HPLC 2008 meeting in Baltimore, Maryland, USA.

travel problems caused largely by wayward birds conjoining airline flight paths.

Georges provided guidance and insight to so many parts of my life as no topic was too mundane for him. As I reflect on my relationship with Georges I struggle to remember many of these, but I guess that is the importance of this point. While Georges was my mentor, his friendship was so much more, his advice was consoling, his experiences priceless, and the mundane nature of conversation, of my life, was just part of that.

The last time I saw Georges was at the Conference for Small Molecule Science (CoSMoS) held in Williamsburg, VA, in July 2014. I did not think then, that, that would be our last conversation. His travel schedule as usual was intense. At CoSMoS he gave a talk on the future of chromatography, which was as much a historical perspective of chromatography, from then to now, which may sadly be lost with Georges. His recount was a fascinating journey through time for all those interested in Separation Science. I wish he had penned his thoughts. My generation does not appreciate enough these early years, but Georges was an integral part throughout the development of Modern HPLC, he was part of it all, his stories, his associations and his contributions to the field are priceless.

I know that my relationship with Georges was not unique. He was held in high esteem amongst all those who have worked with him. I am forever grateful for the opportunity that I had to meet my mentor and become his friend.