

Commemoration Barry Karger 65



Barry Karger is well known in the international separation science community for more than 35 years, when he started in 1969 with research in HPLC after some juvenile pranks in gas chromatography (water as stationary phase) and foam fractionation. He soon realized that HPLC would not be only a universal separation technique for “small” molecules in pharmaceutical and chiral analysis, but would have a powerful input on biochemistry as the separation tool in peptide and protein analysis, documented in his many papers on different applications of HPLC.

In the 1980s he started with the emerging technique of capillary electrophoresis, pioneering in practical HPCE development. He jumped so totally into this field that HPLC instrumentation could no longer be found in his laboratory for a while. His research on high-resolution separation of DNA molecules with surface-coated capillaries and high-molecular-mass polyacrylamide as sieving medium extended the reading frame in DNA sequencing to over 1000 base pairs in less than 1 h.

His research is currently focused on the integration of high-resolution separation systems (HPLC is back again!) with mass spectrometry and NMR for proteome analysis. With the preparation of narrow-bore columns (i.d. > 50 μm) for improved mass sensitivity, he returned to his roots of column preparation. However, this time the stationary phases are prepared in situ by polymerization within the column, in contrary to the classical HPLC approach with particulate stationary phases packed after coating into (nowadays one would like to say “wide-bore”) columns.

Barry’s interdisciplinary approach had an international touch from the beginning. He has been very active in attracting renowned scientists from abroad as visiting lecturers to Northeastern University, and recruiting post-docs from all over the world. This rush started with Europeans in 1969 (when I started in his laboratory there was one HPLC instrument for a student and a research associate). In his laboratory there had always been a good mix of Ph.D. students (not only from the USA) and many excellent post-docs from all over the world. In the beginning of the weakening of the iron curtain it was primarily easy for Hungarians to visit the USA (and for a period of time the main language in his laboratory shifted to Hungarian), but after the final opening of the borders after 1990, Czechs and Russians came to work in his laboratory either as post-docs or as full-time scientists, followed now by research workers from the Peoples’ Republic of China. Overall he trained up to now more than 150 Ph.D. students and post-docs. Their work has been documented in more than 275 publications and 28 patents. It seems to be that Barry was very astute in selecting his coworkers, especially from abroad, because some of his “pupils” acquired top positions in industry or became also renowned scientists and teachers at universities in their home countries. To improve the transfer of knowledge he established in 1989 the successful High Performance Capillary Electrophoresis (HPCE) symposium series as an annual meeting place for bioanalytical micro analysis by electrophoresis and other micro analytical separation methods on chips.

I now know Barry for more than 35 years, and from the position as “slave” friendship developed between both of us and between our families. Meeting him I have always been fascinated by his stimulating and new ideas, which he propagated not only at scientific meetings but also in French

restaurants!¹ His enthusiastic relationship to his research is certainly one of the reasons for his success in raising funds for new instrumentation (which became like MS more and more expensive) and additional financial support for his research.

With 65, Barry will certainly not retire (in Europe we are forced to stop working at university with 65: “*Amerika,*

du hast es besser, als unser Kontinent, der alte”²), and will hopefully in the best of health continue his scientific work for the progress of separation science and bioanalysis.³

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¹ Oeufs à la Neige is one of his favorite desserts.

² J.W.v. Goethe, *Xenien*, 9. *Buch* (America, you have it better, then our continent, the old).

³ P.S.: It is always said, scientists are unable to handle scientific instrumentation. The picture may prove that Barry finally can work with electronic equipment.