Buffalo, New York, in the fall of 1977 was a wonderful place to be a pharmacy resident or postdoctoral trainee. I felt I had arrived there during a golden age for advancement of clinical pharmacy practice, and I was part of a revolution. All around me were superstars who were celebrities of the biomedical literature. I was participating in a drama that was progressing at a rapid pace. Allow me to set the stage with a historical backdrop before introducing a few of the players.

The nation’s first Pharm.D.-granting program was established at the University of Southern California in 1950, but it was not until 1968 that the first clinical pharmacy program was initiated there, with clinical clerkships becoming available in 1970.1 By the mid-70s, about a dozen universities across the country were offering a Pharm.D. as a postbaccalaureate degree. The Millis Commission report in 1975 proclaimed a need for developing clinical scientists in colleges of pharmacy.2 These pharmacists would be trained in the research laboratory and the patient ward, and would be capable of making contributions in both settings. The report was expected to stimulate a transformation in pharmacy education similar to the effect that the Flexner report in 1910 had on medical training.3 In a religious sense, my vocation had issued me a calling.

The term clinical pharmaceutical scientist came into vogue. A small number of training sites for pharmacists had highly visible research programs in pharmacokinetics. Prominent programs were located in San Francisco, Ann Arbor, Cincinnati, and Buffalo. They were particularly oriented toward human studies, and I was delighted to be learning this craft. The research produced during this time was not only exciting, but it had impact. A report from our laboratory published in the Journal of the American Medical Association revealed that gentamicin had a prolonged elimination phase whereby drug would accumulate to nephrotoxic concentrations in all patients, even those with normal renal function.4 This finding sent a shock wave through the financial markets. Development of nomograms using serum drug concentrations was an innovative approach for calculating drug dosage.5 This use of pharmacokinetics was applied by clinical pharmacists to aminoglycosides,6 theophylline,7 and numerous other drugs. These approaches to dosing have been tested and validated over decades and continue to evolve.8

By 1975, a handful of post-Pharm.D. training programs were available in the country. The American Society of Health-System Pharmacists, known then as the American Society of Hospital Pharmacists, accredited hospital pharmacy residencies that included significant distributive systems experience, but did not yet accredit programs that were mostly clinical experiences. I was attracted to Buffalo because of Don McLeod, a founder of the American College of Clinical Pharmacy (ACCP), who described a
pharmacy residency at Buffalo General Hospital as being essentially equivalent to a year of medical internship rotations. There was minimal pharmacy staffing responsibility, and the level of involvement in patient care was high. Medical staff regulations required 24-hour coverage by a pharmacist to prepare all medications for administration during a hospital-wide call for assistance with a cardiac arrest. This responsibility was shared among the clinical pharmacy residents. During a cardiac arrest, the policies and procedures were followed the vast majority of the time. In the early hours of the morning, however, during times of minimal staffing, pharmacy residents occasionally participated in hand-to-chest cardiopulmonary resuscitation. These events were humbling experiences and ones that bound us as residents to dedicate our careers as clinical pharmacists to make a difference.

The clinical pharmacy residency at Buffalo General Hospital in the 1970s was an exploratory model that centered only on patient care issues that involved drugs. Fred Bennes (now deceased), a pharmacist and physician assistant who possessed an impressive intellect, taught the residents physical diagnosis. Sue Hunt essentially controlled all drug therapy in the medical intensive care unit. Her recommendations for pharmacotherapy were rarely questioned by the medical staff. Her stern, but effective, supervision was balanced by the equanimity of Beth Resman, the residency program director.

There was an abundance of talent in Buffalo to aid a neophyte clinical scientist in career development. Jeff Koup had a legendary influence at Buffalo Children’s Hospital, as did Jerry Schentag at the Millard Fillmore Hospital. Bill Jusko, also an ACCP founder, would become my mentor in a pharmacokinetics fellowship. The Clinical Pharmacokinetics Laboratory he established at the Millard Fillmore Hospital was an avant-garde venture to extend the expertise of the State University of New York at Buffalo Department of Pharmaceutics to a patient research setting. It proved to be a highly successful academic–private research partnership. There was also Gerhard Levy.

Dr. Gerhard Levy, now retired, was remarkable for being at the top of his field with a Doctor of Pharmacy degree. His career has influenced countless aspiring pharmaceutical scientists. The logical simplicity of his experimental designs still stands in his models for investigating drug disposition. It was rumored during the time I knew Dr. Levy—although he had National Institutes of Health (NIH) funding back then—that his lack of a Ph.D. or M.D. degree prevented him from being awarded NIH support, although he participated in study sections to review funding applications that would have included less accomplished principal investigators. Regardless of the existence of such an obstacle to success, the perception remained for years that a Pharm.D. degree made NIH funding more difficult to obtain. It was not until 1983 that the United States Food and Drug Administration provided written documentation to Pete Vlasses, then President of ACCP, that Doctors of Pharmacy were acceptable as principal investigators on pharmaceutical industry–sponsored clinical trials. These events increased the determination of clinical pharmaceutical scientists to fulfill the vision of the Millis report.

One spring day while I was a trainee in Buffalo, Bill Evans, then Director of Pharmaceutical Services at St. Jude Children’s Hospital, drove from Memphis to meet with Don McLeod and Jerry Schentag to campaign for the founding of ACCP. I was privileged to attend that luncheon meeting. I was also impressed with Bill’s persuasiveness, and it never surprised me that he rose to the leadership position of Chief Executive Officer of St. Jude Children’s Hospital. In 1978, I would make my first research presentation at the inaugural ACCP annual meeting in Boston, where I had the opportunity to meet Russell Miller, Pharmacotherapy’s founding editor.

Serendipity often plays a prominent role in our careers, being in the right place at the right time, hearing a presentation that resonates with a new research direction, or accepting the advice of an experienced investigator. Most important, interpersonal relationships with people around us at critical times of development shape our lives and direction. Under the best circumstances, parents are there from our beginning to their end. Their influence is never gone. Mentors and colleagues, and teachers and fellow students all play a role in shaping our view of the professional environment. The people I have mentioned, as well as many I have not, each had a positive impact on my professional development. I am confident that each reader can identify individuals in their past who have made a difference in their career.

Pharmacotherapy, beginning with this issue and continuing periodically, will bring you reflections on the professional lives of clinical pharmacists, pharmaceutical scientists, and edu-
cators who have had a notable impact on our profession and have served as mentors. These interviews, in their own words, will begin with a series of past ACCP presidents. I hope that the messages conveyed through these conversations will encourage the giving of advice and support to those with less experience in the profession. As beneficiaries of an outstanding heritage of pioneering clinical pharmacists, we should pay it forward. Most everyone can use some help. After all, life has no dress rehearsal.

References