EDITORIAL

**Neurosurgery program building at its best:
Dr. Charles Wilson (1929–2018)****James T. Rutka, MD, PhD**

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IN the fall of 1982, I journeyed to San Francisco to interview for the residency training program in neurosurgery at the University of California, San Francisco (UCSF). At that time, I was an intern at the Royal Victoria Hospital in Montreal, part of the McGill University training program. I had determined that I wanted to be a neurosurgeon having completed a 1-month elective in neurosurgery at the Hospital for Sick Children in Toronto. I knew that the neurosurgery program at UCSF was among the top programs in the country. At UCSF, I met and interviewed with several faculty members including Drs. Edward Boldrey, Harold Rosegay, John Adams, Lawrence Pitts, and Mike Edwards. At the end of the day, it was my privilege to meet with Dr. Charles Wilson, who looked at my curriculum vitae in a somewhat curious way, as I was coming from a Canadian training program and system, and he thanked me for taking the time to visit. He described the UCSF program to me, and all the advantages I would benefit from if I matched to the program. Not having interviewed previously for a neurosurgical residency position, I can recall wearing a shirt and tie, dress pants, but no suit. Dr. Wilson continued to look at me in a curious fashion.

I can recall spending that weekend after the interview touring San Francisco with my wife, Mari. What is not to like about Marin County, Muir Woods, Mount Tamalpais, Fisherman's Wharf, and Ghirardelli Square? As luck would have it, a resident in the neurosurgery program at the University of Toronto, Dr. Mark Bernstein, was conducting a research fellowship in the Brain Tumor Research Center (BTRC) at UCSF and had already garnered the attention of Dr. Wilson and his colleagues. Mark was studying with Dr. Phil Gutin on the topic of experimental interstitial brachytherapy. Kathleen Smith, Dr. Wilson's administrative assistant, had arranged for Mark to meet with us, and to take us out on the town. I remember traveling in Dr. Bernstein's Honda Accord, with manual transmission, up and down the streets of San Francisco includ-

ing the twists and turns of Lombard St., going to the top of the Mark Hopkins Hotel for a cocktail, and then to Caps Corners restaurant in North Beach. Needless to say, I was enthralled with the notion of studying at UCSF.

Upon my return to McGill, I started to make formal applications to residency programs. The application process for Canadian programs was somewhat different than for US programs. I decided to call Dr. Wilson to see what my chances would be to enter the program at UCSF. To my amazement, Kathleen connected me directly to Dr. Wilson, who spoke honestly with me. He told me I would be one of 6 candidates being considered for the 2 positions offered. Upon some reflection, I decided to stay in Canada as I had already been virtually guaranteed a position to enter the neurosurgery training program in Toronto. And so I began neurosurgery training at the University of Toronto in July 1982. After working diligently for the first 18 months on the clinical neurosurgery services in Toronto, I was told by Dr. Alan Hudson, then chair of the Division of Neurosurgery, that I would go to San Francisco to study brain tumor research under Dr. Wilson. Mark Bernstein had just returned to Toronto, and Dr. Hudson wished to continue to build Toronto's presence in the field of brain tumors.

Without further discussion, I applied to the research laboratory of Dr. Mark Rosenblum, who, at that time, was studying the use of monoclonal antibodies to characterize the clonogenic stem cell population within gliomas. Dr. Rosenblum accepted me as a research fellow in his lab, and I was fortunate to receive a research fellowship award from the Medical Research Council of Canada for my studies. Soon after my arrival in San Francisco in July 1984, I made an appointment to meet with Dr. Wilson once again. He immediately remembered me and stated how pleased he was that I was returning for some research studies in the UCSF BTRC. He also welcomed me to attend any of the departmental activities I had time for.

In those days, it was very impressive to watch Dr.

Wilson hold court and have the final say on most discussions that revolved around neurosurgical patient care. The weekly departmental rounds at UCSF were exceedingly well organized by the chief residents. Dr. Wilson would typically sit near the front of the room. I was in awe of his vast wealth of clinical knowledge and his astute reasoning in the face of problematic cases. He was cognizant of the recent literature on virtually all topics in neurosurgery. His responses were razor sharp, and his manner of imparting information was respectful and courteous but often layered with humor or innuendo.

Dr. Wilson also established “neuroradiology rounds,” where the neuroimaging for his upcoming cases would be presented by the neuroradiologists, a highly talented pool of professionals, and where Dr. Wilson would very frequently cast pearls of wisdom to all those in attendance. In reviewing the neuroimaging studies of his patients, Dr. Wilson confirmed in his mind how he was going to manage each case. The efficiency with which he organized his day was a life-long lesson for me.

At UCSF, I worked towards a PhD in Experimental Pathology under the supervision of Mark Rosenblum and neuropathologist Steve DeArmond. I was very fortunate to publish a series of papers on brain tumor research during my stay. Of great assistance to me was the personal attention I received from one of the editors in the departmental editorial office that Dr. Wilson had created. I fondly remember the number of times I went to this office to work with Stephen Ordway to prepare my papers for submission to a variety of journals. It was here that I learned about the importance of the economy of language, word selection, and manuscript formatting—lessons that I carry with me to this day. Dr. Wilson knew that to increase the productivity of his department, neurosurgeons would benefit from assistance with these “pro forma” aspects of manuscript preparation. Today, there are several neurosurgical departments that have similarly created editorial offices, but credit for these likely lies with Dr. Wilson.

I have the good fortune of sharing a number of publications with Dr. Wilson.⁴⁻⁷ When I sent him manuscript drafts to review, he always handwrote personal notes in red pen on the paper and provided me with cogent advice. At the end, he would always sign off as “CW.” In the 1980s, the UCSF BTRC was an amazing institution whose history has been well chronicled. It was the first center of its kind in the world for the comprehensive study of human brain tumors. All of this was made possible because of Dr. Wilson’s training as a neurosurgeon-scientist with a vested interest in experimental and clinical neuro-oncology. Several competing institutions arose to attempt to emulate the UCSF BTRC model including Duke University, MD Anderson Cancer Center, and Memorial Sloan Kettering Cancer Center, to name a few.

During my time at UCSF, I travelled to several national meetings of the American Academy of Neurological Surgery, Neurosurgical Society of America, and American Association of Neurological Surgeons. All neurosurgeons were anxious to learn about the latest clinical series from UCSF and to hear Dr. Wilson lecture from his vast and extensive experience. He could talk facilely on numerous topics in neurosurgery, including the surgical manage-

ment of aneurysms, gliomas, meningiomas, and pituitary tumors.

During my research fellowship at UCSF, I became friends with many of the neurosurgery residents in the program at that time. Dr. Wilson, and his faculty at UCSF, had a knack for selecting the best and brightest in the field, including Griff Harsh, Mitch Berger, Corey Raffel, Stan Barnwell, Don Ross, Nick Barbaro, Jonathan Hodes, Robert Levy, Brian Andres, Josh Bederson, and Jim Baumgartner. A full listing of residents who trained under Dr. Wilson can be found at: http://neurosurgery.ucsf.edu/index.php/about_us_previous_residents.html. It may be that the 1980s was a “golden era” in the UCSF neurosurgery program as many of the resident graduates have gone on to become chairs of departments of neurosurgery and leaders of organized neurosurgery in North America and around the world. During this era, the academic output of the Department of Neurosurgery at UCSF was unparalleled under Dr. Wilson; and the BTRC was a jewel in its crown.¹

Dr. Wilson did not have time for many hobbies, but he enjoyed playing stride and ragtime piano. In addition, given his prior accomplishments in athletics, he remained physically active throughout his life, much to the detriment of his hips, knees, and other joints. He required numerous joint arthroplasties throughout his life, given the extent to which he embraced ultra-marathon long-distance running both for pleasure and in competitions.

I had the great pleasure of seeing Dr. Wilson operate on a pituitary adenoma when Robert Levy was chief resident in 1987 and on an anterior communicating artery aneurysm on the same day. Both procedures were performed with alacrity and finesse. Dr. Wilson was as efficient in the operating room, as he was with every other aspect of his life. He was among the first to employ the use of overlapping or simultaneous surgeries to maximize the efficiencies with which his large patient practice could be cared for. On 2 or 3 days each week, Dr. Wilson would perform up to 8 major cases each day, by virtue of his operating in 3 different rooms each day. Overlapping or simultaneous surgery has become an important topic in the recent neurosurgical literature,^{2,3,8} but it is probably fair to say that Dr. Wilson was one of the earliest proponents and masters of this approach to neurosurgical cases.

It struck me that Dr. Wilson had the kind of innate intellect and drive that would have made him successful in any profession he chose, whether it be law, business, engineering, or academics. Thankfully, for all of us, he chose the field of academic neurosurgery.

After 3 years of research studies, I completed my PhD and made an appointment to meet with Dr. Wilson before my departure to Canada. He graciously agreed to meet with me. As we sat down in his office, he looked at my CV and kindly stated: “Jim, you sure made a lot of hay while you were here.” I thanked him for the compliment and for granting me the opportunity to study at the BTRC. There is no question in my mind that my research training experience at UCSF set the stage for the academic career I pursued afterwards. The friendships and contacts I made at UCSF have been invaluable. These were defining moments in my career. As I left UCSF and California, and drove across the country with my brother back to Toronto,

FIG. 1. Photograph of Dr. Charles Wilson (*center*) shown with his wife Francie Petrocelli (*left*) and James Rutka (*right*) at the Honored Guest Dinner, Congress of Neurological Surgeons' 2010 Annual Meeting. Figure is available in color online only.

I thought that if I could ever build anything like Dr. Wilson, such as a brain tumor center, I would indeed consider myself a successful neurosurgeon.

Over the past 20 years, I kept in touch with Dr. Wilson from time to time. I was amazed at how he remembered me and all that I was doing in Toronto. In 2010, during the Congress of Neurological Surgeons' annual meeting in San Francisco, I made sure to have my photograph taken with Dr. Wilson and his wife Francie Petrocelli at the Honored Guest Dinner honoring Dr. Dan Barrow (Fig. 1). And I am glad I did.

Over the past 5 years, Dr. Wilson was eager for his past trainees and colleagues to come visit him. He was grateful for the time that they spent with him. He expressed a wish not to be forgotten. At the most recent AANS annual meeting in New Orleans, Mitch Berger, Chair of the Department of Neurosurgery at UCSF, and Mike McDermott, vice-chair, organized a gathering of Dr. Wilson's former trainees and colleagues in the La Chinoiserie room at the Windsor Court Hotel. So many neurosurgeons spoke passionately about Dr. Wilson's influence on their lives and practices. From their many comments and reminiscences, I gleaned that Dr. Wilson and his incredible talents for program building, as exemplified best at UCSF, will never be forgotten.

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Disclosures

The author reports no conflict of interest.