"Do you want some water for your dog?" I stopped as I heard the voice call down from the road. It was a hot August afternoon in southeastern Arizona, and we were walking up the South Fork Cave Creek Canyon Road from Portal toward the Forest Service building. Looking up, I saw Dr. Findlay Russell standing at the driveway of his home, the Bar-M Ranch. As my black Labrador downed several gallons of water, Russell invited us back to join him that evening for “drinks on the veranda.” Over daiquiris, with the spectacular Chiricahua Mountains as the backdrop for an impressive sunset, Russell talked of snakes, venoms, academia, and the desert. For this budding toxicologist, it was a rare opportunity to discuss science and life away from the hustle and constant interruptions that have characterized much of life since, and I have never forgotten Russell’s mentoring and friendship at such a critical point in my early graduate career nearly three decades ago.

Findlay Ewing Russell was born in San Francisco on 1 September 1919, to William and Mary Jane Russell, but he spent most of his early years growing up in Los Angeles. As detailed in the Oral History Project at California Institute of Technology (Caltech) Archives (Cohen 1994), he attended grammar school at Santa Barbara Avenue Grammar School and then completed his public education at Foshay Junior High School and Manual Arts High School. Like many of us “herper types,” he had an interest in venomous and poisonous animals in high school, an interest that would lie dormant but not dissipate. Awarded a scholarship after graduating, he initially attended the University of Southern California (USC) but finished his bachelor’s degree at Walla Walla College in Walla Walla, Washington. He worked for a short time as a chemical engineer in Ohio and then joined the Army during the Second World War, serving as an army medic in the Okinawa Campaign. He received a Purple Heart and two Bronze Stars during his time in the military and left in 1946 after an injury. At this time, he received treatment for an all-too-close encounter with a neonate Southern Pacific Rattlesnake (Crotalus viridis) bites on rather delicate parts of the male anatomy, received while using outdoor toilet facilities. In those days before well-established regional Poison Centers, Dr. Russell served as an important consultant and source of information on emergency treatment for envenomations, and he became a leading world authority on the treatment of snakebite. Fortunately for me, and my bewildered attending physician, Russell was only 45 minutes away from the hospital where I received treatment for an all-too-close encounter with a neonate Southern Pacific Rattlesnake (Crotalus oreganus helleri) when I was a teenager. Although I did not know him personally then, I benefited from his near proximity and the treatments developed to aid my recovery.

While at USC, in spite of his considerable workload and in addition to his medical degree, Russell somehow found the time to earn a PhD in English. He also began work on his house in Portal, Arizona, spending as much free time as possible at his ranch there, away from the demands of emergency medicine, research, teaching, and other duties which occupied his life in Los Angeles. By the early 1980s, in fact, the call of the desert proved to be too much to resist. Russell joined the faculty of the University of Arizona College of Pharmacy in Tucson in 1981, where he remained until his retirement in 2006.

Russell was the first president and a founding member of the International Society of Toxinology (IST) in 1962. He and colleagues coined the term toxicology to distinguish this branch of study from the broader field of toxicology, and the society they established is dedicated to the study of venomous animals and their venoms, as well as toxic and poisonous plants, microbes, and fungi. Russell helped establish the Society’s journal Toxicon,
which published its first issue in October 1962. He was editor of *Toxicon* from its inception through 1969, when Dr. Philip Rosenberg assumed that role. He was a frequent contributor to the new journal, with more than 80 publications over a 35-year span; his first paper in *Toxicon* was published in the inaugural issue in 1962 (Russell et al. 1962), and his last was published in 1997 (Russell 1997). His many contributions to the Society were commemorated at the 17th meeting of the European Section of the IST held in September 2011 in Valencia, Spain. When the IST hosts its 17th World Congress on Animal, Plant and Microbial Toxins in Honolulu, Hawaii in 2012, Russell would undoubtedly be pleased with the venue and to see how the Society has grown and matured over its 50-year history.

From his first publication listed in PubMed in 1953 to his last in 2006, he published over 160 papers on a variety of topics concerning venomous animals and their venoms, and envenomations. He also contributed many chapters on venoms and treatment of envenomation in medical, pharmacological, and toxicological textbooks. Russell published numerous books, and edited many more, but the book most familiar to herpetologists, physicians, and toxinologists is *Snake Venom Poisoning* published in 1980 (and reprinted in 1983 with corrections). Though nearly 30 years old, this classic text still contains much useful information on the basic biochemistry of venoms, sequelae of envenomation, and treatment of snakebite (if one overlooks the rather bizarre treatment of “Hobbies” at the end of the book). In this landmark publication, he made a strong case for avoiding fasciotomy as a routine treatment for severe edema/swelling often accompanying rattlesnake and other viper bites, and he was a tireless champion for the use of massive quantities of antivenom to counter the necrotizing and potentially fatal outcome of snakebite and other envenomations. Though there have been many changes to emergency health care and tremendous improvements in supportive treatment, the basic approach advocated by Russell remains the standard for treatment of snakebite.

Over the course of his life, Russell was the recipient of numerous awards and recognition, including the receipt in 1974 of the Skylab Achievement award for his work with NASA. He received an Honorary Doctor of Laws degree from the University of California, Santa Barbara, in 1989. In 1992, the University of Arizona College of Pharmacy established the Findlay E. Russell Distinguished Citizen Award in his honor and named him as the first recipient. He was made an Honorary Member of the Society of Toxicology in 2000 and was awarded the Loma Linda University Alumnus of the Year in 2011. He was a Fulbright Scholar, a visiting professor at many universities throughout the world, and a consultant for the World Health Organization, Doctors Without Borders, and the National Science Foundation.

Russell passed away in Phoenix, Arizona, on 21 August 2011, just shy of his 92nd birthday. Less than a month before, I had again stood on the porch of his ranch in Portal, this time to pick up reprints and photographs from Dr. Russell’s work given to me by his son, Mark Russell. Standing there that late summer afternoon, I had the opportunity to reflect once more on the career of a man who was a tremendous influence in his field of medical toxicology. Like many, Findlay was a complex person, at times brilliant beyond imagination, at other times arrogant beyond belief. He could rapidly alternate between astonishment and vexing to his colleagues. However, his contributions to the field of toxicology were beyond question. I found him to be a considerate and intellectually stimulating individual, and I am grateful to have had the opportunity to know him. He is survived by his children—Christa Russell Cessaro, Sharon Russell Boyle, Robin Russell, Connie Russell Lane, and Mark Russell—as well as ten grandchildren, and one great-grandson.

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**LITERATURE CITED**


