OBITUARY

In memoriam of Clark Darwin West, MD July 4, 1918–January 11, 2014

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When Clark Darwin West, MD, earned his medical degree, pediatric nephrology did not exist as a specialty. He was one of the early and enduring pioneers who became an internationally recognized leader in the field. Dr. West passed away on January 11, 2014. He was 95.

West was born July 4, 1918, in Jamestown, New York. He might have been a farmer, like others in his family, but his mother insisted he choose another profession. West chose medicine—a fortunate decision for countless children who continue to benefit from his pioneering work in pediatric nephrology. West earned his MD at the University of Michigan in 1943. After pediatric residency training, he spent 2 years in the US Army, mostly in Japan. For fellowship training, he was drawn to Cincinnati Children's. During an interview only a few weeks prior to his demise, he reminisced, "I had heard that faculty in other centers were a little jealous of the facilities in Cincinnati. They were amazed that the walls in the animal quarters were covered with glazed tile. They called it the "country club". I was certainly not averse to joining such as institution and arrived in 1948." – beginning a remarkable

M. Lennon · P. Devarajan (🖂) Nephrology and Hypertension, Cincinnati Children's Hospital Medical Center, Cincinnati, USA e-mail: prasad.devarajan@cchmc.org relationship with the institution and subspecialty that spanned 65 years.

Following his fellowship training, West joined the faculty in 1951 and established the Division of Physiological Chemistry, which was renamed Nephrology, a division that he led for 36 years. His long, distinguished career was marked by many firsts. He was on the team that performed the first kidney transplant in Ohio, in 1965. He opened the first dialysis unit for children in Ohio. He established one of the first NIH-funded training programs in pediatric nephrology, and personally trained more than 30 fellows, many of whom now occupy leadership roles in the US and abroad. He was a founding member of the American Society of Pediatric Nephrology, and was elected president of that organization in 1974. More than 50 years ago, he wrote the proposal that won \$2.5 million from the National Institutes of Health to launch one of the nation's first Pediatric Clinical Research Centers. A few years later, he wrote the proposal that won funding for a second research building at Cincinnati Children's, which doubled office and laboratory space, quadrupled animal facilities, and allowed for a large influx of basic scientists performing cutting-edge pediatric research.

Our community perhaps remembers him best for his seminal and ground-breaking basic and translational research contributions for his work that exemplifies the extraordinarily productive link between patient care and research. He absolutely loved working in the lab, learning new methodologies, and developing even newer ones, and applying that knowledge to improve patient outcomes. "I thought of my primary role as an investigator, and an investigator who has as his raw material the patients that he saw in the clinic. I was quite conscientious in seeing every patient that came", he recalled in reflections a few weeks ago. His early research was on renal physiology, but over time he made the bold switch to immunology because it was becoming apparent that many kidney diseases were of immune origin. "The switch was not without a lot of retooling, not only of the laboratory but also of my brain. I have, however, never regretted the decision," he said. "We had the jump on other pediatric nephrologists in that we had a well-equipped laboratory in which we developed new tests. We instituted immunoelectrophoresis, a then new method that had the potential of detecting and measuring 40 different proteins in blood".

West and his colleagues were the first to develop a method to quantify complement proteins. West's work provided the methodology for the detection and diagnosis of hypocomplementemic glomerulonephritides, and for the classification of types of membranoproliferative glomerulonephritides. He laid the framework for the use of complement profiles and C3 nephritic factor measurements in the diagnosis, management, and prognosis of these vexing and potentially devastating disorders. He and his colleagues performed the first therapeutic clinical trials for these disorders, with protocols that are still used even today to combat hypocomplementemic kidney diseases. His research has resulted in over 170 peer-reviewed publications in high-impact journals, including *Science, New England Journal of Medicine*, and *Journal of Clinical Investigation*, which stand testament to his pioneering discoveries that have forever changed the lives of thousands of children with immunologic renal disease. International recognition for his achievements came from the bestowing of the very highest honors in nephrology, including the John Peters Award for Excellence in Research from the American Society of Nephrology, the Henry Barnett Award from the American Academy of Pediatrics, and the Founder's Award from the American Society of Pediatric Nephrology.

Although he officially retired in 1989, West continued to actively conduct research, publishing his last two manuscripts on novel methods for measuring C3 nephritic factor in 2008. A few months prior, he had received the call from ASPN regarding his winning of the Founder's Award. He took the call from his office, while submitting a new patent application for C3NF measurement. He was 90. On January 11, 2014, our community forever lost one of our most celebrated members. His memory and achievements will be treasured for generations to come.