OBITUARIES

REMEMBERING ROBERT POPOVICH, PHD

Robert “Bob” Popovich—co-inventor of continuous Ambulatory peritoneal dialysis (CAPD), a founding member of the International Society for Peritoneal Dialysis, and pioneer of peritoneal dialysis (PD) kinetic modeling—passed away 2 November 2012. He will be greatly missed by all who knew him.

Bob was born 9 January 1939 in Sheboygan, Wisconsin. He was lovingly called “Papa Turkey” by his family and many close friends. Bob spent his childhood in Sheboygan, where he attended Sheboygan North High School. He subsequently received his Bachelor of Science degree in chemical engineering from the University of Wisconsin–Madison in 1963, his Master of Science degree in chemical engineering from the University of Wisconsin–Madison in 1968, and his Doctor of Philosophy degree from the University of Washington in Seattle in 1970. He pursued that doctorate under the direction of Belding H. Scribner, MD, and Professor Albert L. Babb, during a period when the Seattle group accomplished important work on dialysis adequacy, including the “square meter-hour” and “middle-molecule” hypotheses.

After his PhD studies in Seattle, Bob moved to Austin, Texas, where from 1972 until 1992, he worked as a professor at the University of Texas–Austin in the department of chemical engineering. His focus was biomedical engineering, and he was honored to receive the E.P. Schoch Professorship in Engineering during his career at the University of Texas. Many of his students at the University of Texas went on to become doctors, surgeons, professors, and research scientists.

During his time in Austin, Bob developed a professional research partnership and longtime friendship with Austin nephrologist Jack W. Moncrief, MD. The two partners integrated principles of biomedical engineering with analyses of dialysis kinetics and adequacy. From their collaboration, there emerged a new approach to the calculation of the PD mass transfer-area coefficient. Together, they conceived and put into practice a new

Bob Popovich in his office, 1981.

approach to PD known eventually as CAPD. In addition to many other contributions, the two developed the Moncrief–Popovich implantable PD catheter. Much of their collaborative work was later done through the Moncrief–Popovich Research Institute that they created in Austin, Texas. They also conducted pioneering work on a peritoneal artificial lung, peritoneal membrane plasmapheresis, and ultraviolet light sterilization of PD exchange connections.

Among all of Bob’s professional accomplishments, the one that he frequently said he was most proud of was the

Bob Popovich (right) and Jack W. Moncrief (left) accept the American Kidney Fund National Torchbearer Award in 1989.

first time that he and Jack used CAPD to achieve adequate chronic dialysis in a newborn infant. That baby, born with kidney agenesis, arrived on their hospital doorstep at only 7 days of age. Initiation of CAPD, education of the family, several years of dialysis with CAPD, and a subsequent kidney graft donated by the mother allowed the infant to reach adulthood and to become an elementary school teacher. Bob fully understood how that success story made clear that chronic dialysis was available in future for infants who would otherwise die without it.

In the 1970s, Bob also served as a bioengineering consultant to Karl D. Nolph, MD, and his team at the University of Missouri. The Missouri group was studying PD solute transport and ultrafiltration kinetics in clinical studies and in rat and *in vitro* models of PD. Bob and wife, Lou, would stop in Columbia, Missouri, on their way to visit relatives in Wisconsin. On one such visit, Bob and Lou arrived at the Nolph home when Nolph son Kristopher (then 8 years old) was celebrating his birthday with a party. When the party guests learned that Bob was from Texas, they immediately assumed that he must play football for the Dallas Cowboys. (The boys did not know much else about Texas at that time.) Bob did not dissuade them from their belief, instead offering to play football with them outside. Bob quarterbacked, and the boys were all hugely impressed that Kristopher Nolph had the

quarterback from the Dallas Cowboys attend his birthday party. That story is just one demonstrating how Bob's warm and fun-loving persona complemented his work as a brilliant biomedical engineer. He always seemed to have a smile on his face and a twinkle in his eye.

It was a very natural transition when Bob, with Jack Moncrief, invited Karl and the Missouri team to join them in a study of patients on CAPD sponsored by the U.S. National Institutes of Health. That work led to many collaborative publications on CAPD. In 1981, the same group teamed up to coordinate the National Institutes of Health CAPD Registry, with the data coordinating center in Austin, Texas, and the clinical coordinating center in Columbia, Missouri.

In addition to the award already mentioned, Bob was presented—again together with Jack Moncrief—a Lifetime Achievement Award in Peritoneal Dialysis at the 1989 Annual Dialysis Conference in Dallas. Together, both also received the prestigious National Torchbearer Award from the American Kidney Fund at the 1989 Annual Dialysis Conference. They were the very first recipients of those awards, which became annual presentations to others in the years that followed. In 1995, Bob and Jack were also the first recipients of the Belding Scribner Award presented by the American Society of Nephrology.

Bob is survived by Lou, his wife of 31 years, one daughter, four sons, and five grandchildren.

The career of Bob Popovich exemplifies how successful and productive collaborations between biomedical engineers and clinicians are indeed possible. His life also demonstrates the lasting friendships that can develop from scientific collaborations. Jack and Karl both benefited greatly from working with Bob as a collaborator, but also from having Bob as a friend.

In a telephone conversation with Karl several months before his death, Bob was still enjoying what life offered despite having just one mobile limb after a stroke. He could operate his computer with one hand, and he still had his vision, hearing, and speech. At that time, he articulated his sage advice for all of us still living, saying, "Karl, you just do the best you can with what you've got."

We no longer have Bob with us, but we will always remember his positive "can do" approach to any challenge, and his advice to do our best.

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