PREFACE

Oral history has its roots in the sharing of stories which has occurred throughout the centuries. It is a primary source of historical data, gathering information from living individuals via recorded interviews. Outstanding pediatricians and other leaders in child health care are being interviewed as part of the Oral History Project at the Pediatric History Center of the American Academy of Pediatrics. Under the direction of the Historical Archives Advisory Committee, its purpose is to record and preserve the recollections of those who have made important contributions to the advancement of the health care of children through the collection of spoken memories and personal narrations.

This volume is the written record of one oral history interview. The reader is reminded that this is a verbatim transcript of spoken rather than written prose. It is intended to supplement other available sources of information about the individuals, organizations, institutions, and events that are discussed. The use of face-to-face interviews provides a unique opportunity to capture a firsthand, eyewitness account of events in an interactive session. Its importance lies less in the recitation of facts, names, and dates than in the interpretation of these by the speaker.

Historical Archives Advisory Committee, 2008/2009

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ABOUT THE INTERVIEWER

Kevin P. Lally, MD

Dr. Kevin P. Lally graduated from Tulane University School of Medicine in 1980. He finished a residency in general surgery at the U.S. Air Force training program in Mississippi in 1985. During his residency, he completed a research fellowship in infectious diseases at the Channing Laboratory in Boston. Following completion of his surgical residency, he went on to finish a residency in pediatric surgery at the Childrens Hospital of Los Angeles under the direction of Dr. Morton Woolley. He then served as the Chief of Pediatric Surgery at the Wilford Hall USAF Medical Center from 1987 to 1991. In 1991, he joined the faculty at the University of Texas Houston Medical School where he has remained. Dr. Lally is currently the A.G. McNeese Professor of Surgery and Chairman of the Department of Pediatric Surgery at UT Houston as well as the Surgeon in Chief at the Children’s Memorial Hermann Hospital. Dr. Lally is also the training program director for the pediatric surgery residency at UT Houston. Dr. Lally is currently the secretary of the Surgical Section of the American Academy of Pediatrics. He has been a member of the section for 20 years.

Dr. Lally first met Dr. Fonkalsrud while training in Los Angeles in the 1980s. Dr. Fonkalsrud has been a role model for Dr. Lally and countless other pediatric surgeons, especially those with an interest in an academic surgery.
This is Kevin Lally. I’m conducting the oral history for Dr. Eric Fonkalsrud, the 2006 recipient of the [William E.] Ladd Medal. We’re conducting this interview at the American Surgical Association meeting on April 24th of 2008. Good afternoon, Rick.

DR. FONKALSRUD: Good afternoon, Kevin.

DR. LALLY: Rick, I just wanted to go through some of your background to start with. Maybe you could tell us some of your family history, where you were born, and something about your parents.

DR. FONKALSRUD: Fine. The name Fonkalsrud goes back more than 250 years, and is believed to derive from “fornkarl,” which was a type of Norwegian troll, and “rud,” which is a small community. My father was born and raised in southern Norway on a farm, not far from Oslo. He received his engineering degree in Germany, which is where he met my mother. She was from Darmstadt, Germany, where he studied engineering. They got married shortly thereafter in Norway. Because of the depression in Europe at that time and the inability to find work, they decided to emigrate to the United States. There had been a large emigration to the U.S. during the late 1800s and early 1900s. But after World War I, there was another big boost because of great inflation and unemployment. Their names are listed on the wall at Ellis Island where immigrants had to stay for several days for evaluation. My father’s first job was as a structural engineer working on the Holland Tunnel here in New York City. There were several Norwegians that were also working on that project. My parents then moved to Baltimore where I was born in 1932 at Johns Hopkins Hospital.

In 1934 the family moved to Tennessee, first to Knoxville and then to Chattanooga, where Father worked as a civil engineer designing bridges associated with the dams that were being constructed across the Tennessee River. This was under the TVA [Tennessee Valley Authority] project which was developed after the Depression by President [Franklin D.] Roosevelt. During that period I enjoyed traveling with my parents throughout the south, to the Smoky Mountains, touring many of the scenic areas in Tennessee and Kentucky, and visiting distant relatives in Ohio and Idaho. Being an only son, there were very few other relatives around. My parents’ relatives were all in Norway. We have been unable to identify any of my mother’s relatives who survived after World War II. I enjoyed attending school and participating in sporting activities and Cub Scouts. But as I look back at that time, I recall being quite upset about the severe racial discrimination. There were separate restrooms, water fountains, the back of
the bus for minorities, and that was something that my parents and I had never encountered before. This practice was quite prevalent at that time.

In 1942, shortly after the onset of World War II, the family moved to Seattle, Washington, where my father worked with the Columbia Valley Authority to design and construct bridges and dams across the Columbia River similar to the TVA. This program, unfortunately, was reduced considerably because of the costs of World War II and cutbacks in government funding. During that period I recall my parents sending CARE packages over to Norway after the Nazi invasion. Germans really wanted all Scandinavians to help in their plans for the world; but the Norwegians were quite upset about what the Germans were doing, and they sank the first German battleship in World War II in Oslo Harbor with an old torpedo gun that was built well before the turn of the century.

I attended two years of grade school and four years of high school in Seattle. I had a paper route for two and a half years. I recall that many of the kids in the Seattle area weren’t familiar with the southern drawl, and I think I had a pretty severe one. As a result, several would ask me to just say something. [Laughter] So I learned to change my accent a bit. I remember my parents took me skiing, as soon as we got to Seattle, as a young teenager. My father had been a ski jumper in Norway. So before I ever went downhill skiing, he put me on a little jump to start learning jumping.

DR. LALLY: Was that your first time on skis?

DR. FONKALSRUD: My first time on skis was in 1943. I became increasingly involved with cross-country skiing. At that time we had high school ski teams that competed in the local mountains. I became the cross-country and jumping champion for two years in high school and was captain of the ski team. I really enjoyed the competition. Also learned to do competitive downhill and slalom. My first skis were left over from the Tenth Mountain Division in the military, which were used in Europe during World War II. They were very broad and heavy, had no metal edges, and had straps to hold the boots down.

DR. LALLY: And were these for cross-country skiing?

DR. FONKALSRUD: No. This was for downhill and slalom. Cross-country skis had already been developed in Scandinavia, Sweden, Finland, and Norway and were long and narrow. So that was a little different.

While in high school I was also on the varsity track team, where I ran the mile. I played first-chair clarinet in the school band, and enjoyed Boy Scouts, particularly summer camps. Outside of Seattle, across Puget Sound,
the spectacular Olympic Peninsula with beautiful forests, rivers and mountains was an ideal location for outdoor activities. The water’s a little cold for swimming, but it’s an absolutely marvelous place for kids in the Scout movement. I spent two or three summers there. Very enjoyable. Eventually I got very interested in first aid and safety. I ended up with the Eagle Scout Award with three palms for extra merit badges.

DR. LALLY: Where did you go to college?

FONKALSRUD: The University of Washington. Before I entered college, I had to undergo an emergency appendectomy when I was 16. That sort of tweaked my interest in surgery and medicine to some degree.

DR. LALLY: Do you remember much about that? They were done a little differently then.

DR. FONKALSRUD: Yes, it was. I remember I was doing some summer work selling magazines from door to door, and I developed acute abdominal pain and lay down in the front yard of one of the people I was trying to sell magazines to. These nice people called my father, and he came to pick me up and took me to the hospital. Shortly thereafter I underwent an appendectomy. It wasn’t ruptured, but apparently it was acutely inflamed. I still remember the surgeon who operated on me, and got to know him as a member of the Pacific Coast Surgical Association in later years. Very nice person and good surgeon.

DR. LALLY: So that got you interested in medicine and surgery or just medicine?

DR. FONKALSRUD: Well, medicine in general. I wasn’t too aware of the differences at that point. And not all surgery was performed by surgeons in those days. So that appendectomy experience did get me somewhat interested.

Well, in college I worked in the Safeway produce warehouse in Seattle loading trucks that delivered to various cities in western Washington. For some fun and income we picked berries, beans, and other crops in the greater Seattle area while in high school. There were busloads of high school kids that would go out and spend the day at various farms in the area. We occasionally ate more berries than we picked for the farmers there. But this was a very nice place to meet other kids from different schools. One summer I worked in a lumber camp on the Olympic Peninsula with the Simpson Timber Company as a chokerman.
I attended the University of Washington for four years and received a BA degree in zoology in 1953. While at the UW, I was a member of the freshman ski team and then got involved with the rowing crew. No high schools had competitive rowing in the area, so everyone started out at about the same level of experience. I was fortunate enough to be in the freshman boat that won the national championship the first year.

DR. LALLY: Did you have to travel much?

DR. FONKALSRUD: We had two major races each year. One was against Cal [University of California, Berkeley], and the other was the nationals. We rowed all year long just to get ready for those two events. And then I was on the varsity crew for three years. When I was a junior, we won the national championship varsity race near Syracuse, New York, and so that was a great experience. In those days if you rowed in a race and were the winner, you got the T-shirts from the corresponding oarsman in the boats from all those that were behind you. So I have a trunk full of T-shirts back home. It’s in storage somewhere. I enjoyed the camaraderie of fraternity life very much.

DR. LALLY: So you had decided somewhere in college that you were definitely going into pre-med.

DR. FONKALSRUD: Yes. I think that gradually occurred in the last years of high school and first years of college. So my curriculum at the University of Washington was pretty much a pre-med course. I was accepted to the University of Washington School of Medicine after three years, after we had won the national championship crew race. The dean in charge of admissions for the UW happened to be a graduate of Johns Hopkins [University School of Medicine]. And, he asked if I wouldn’t like to have another year of crew experience and maybe I could get in somewhere else nationally? That was very sage advice because I did stay for my senior year and then was admitted to Johns Hopkins. At that time there were very few from the northwest who had attended Hopkins.

DR. LALLY: So you were born in Baltimore, but you really didn’t know the east coast that well.

DR. FONKALSRUD: No, I had only been there a year and a half or so when I was very young.

DR. LALLY: So this is really moving away from home.

DR. FONKALSRUD: It is a long distance. And I recall when I first arrived in Baltimore; I was surprised at the tremendous slum area around
the Johns Hopkins medical center. The hospital was somewhat small compared to its present status. But the faculty were absolutely wonderful. I enjoyed being away from home for the first time. At first I was somewhat intimidated by the high scholastic caliber of my classmates, but enjoyed our friendships very much. The social activities in Baltimore, the [Maryland] Hunt Cup races, the debutante balls, the Baltimore Colts football games in the days of Johnny Unitas and others were very enjoyable. I didn’t have much funding or money at that point and I sort of earned my way through medical school. I was business manager and eventually president for our medical school fraternity, a local group called the Pithotomy Club, which means “to tap a keg.” The Pithotomy symbol was drawn by Max Broedel, one of the first major medical illustrators in the US. We had a Pithotomy show each year, which was a risqué parody of the faculty. It was very popular among the students, residents and faculty. Nurses weren’t allowed in, but medical students were.

DR. LALLY: And I’m sure they served beer.

DR. FONKALSRUD: Well, they served more than that: mint juleps and several other very nice concoctions.

In 1955, after my second year, I took a five-week fellowship in pathology in Edinburgh, Scotland. And then I spent three more months traveling in Europe, going from one end of Europe to the other, spending about two and a half weeks with my relatives in Norway. Since I had no close relatives in the United States, this was a very exciting time for me.

In 1956, in the summer, I worked with two surgeons—both were Hopkins grads—in a community hospital in Palmerton, Pennsylvania, which is near the New Jersey Zinc Company, which was an industrial area. They were very busy surgeons, so I just sort of went along with them and helped in the ER [emergency room], the OR [operating room] and taking care of patients on the wards. It was a very rewarding experience. And then I began working with Dr. David [C.] Sabiston [Jr.] who had just finished his surgery residency at Hopkins. I worked with him in his research lab performing myocardial re-vascularization studies, which was primarily to put a graft between the aorta and a tunnel in the left ventricular myocardium to encourage new blood flow to the myocardium. An interesting experience which certainly got me very interested in surgery. Dr. [Alfred] Blalock’s technician, Vivien Thomas, worked with me and taught me technical skills.

DR. LALLY: So was that laboratory experience what made you decide to become a surgeon?
DR. FONKALSRUD: Probably a combination of factors, that along with my earlier interest in medicine. And also the fact that Dr. William [F.] Rienhoff [Jr.], one of the most senior surgeons in the Baltimore area, had four sons, and one of them was a classmate of mine, and we were roommates for two years. So I had quite a close association with surgery from many angles, which had some influence as well. I’m not sure my parents were excited about me going into surgery, believing that internal medicine or family practice might be better. But I have always been glad I did make that choice. Also I did some work in endocrinology with Dr. Sam [Samuel] Asper, who was in charge of endocrinology at Hopkins at the time, working on projects with hyperthyroidism. He eventually went to Lebanon to be chief of medicine at the American University [of Beirut]. He was a wonderful and inspirational person. The studies with Dr. Sabiston eventually ended up as my first two publications as a medical student.

With all this experience, I became increasingly interested in surgery as a career, and was fortunate enough to receive a Halsted internship at Hopkins in 1957. Hopkins had a very strict pyramidal system. We had 18 interns; four went on to be R2s, and two went on all through the program.

DR. LALLY: That’s pretty steep.

DR. FONKALSRUD: That’s pretty steep. I got to the level where there were four of us at the R2 level. And then Dr. Blalock called me into the office and said, “You’ve done a fine job, but we just don’t have a spot for you next year. What would you like to do?” I asked him, “What do you think I should do?” “Well, one of our very best past chief residents in surgery from Hopkins is Dr. William Longmire [Jr.], who has just started his department of surgery at the University of California, Los Angeles.” And I said, “Well, that sounds fine to me if you think that’s a good place.” And he said, “Yes. Hold on a minute. Let me get him on the phone.” So he called him directly, and I heard Dr. Blalock tell Dr. Longmire, “I have this fine young resident here, and I think he would do a good job for you.” Dr. Longmire said, “Fine, we’ll take him.” And that’s all it took. He took me sight unseen, and I’ve always been very grateful for that.

DR. LALLY: How many people were in the residency at UCLA at the time?

DR. FONKALSRUD: There had been three or four chief residents by the time I got there. And so the program had just opened. We arrived in 1959. The hospital [UCLA Medical Center] did not open until 1955.

DR. LALLY: Okay. So it was all new.
DR. FONKALSRUD: Yes, it was all new, brand new. But while at Hopkins, there were several surgeons that had a great influence on me: Dr. Blalock, of course, and Drs. Henry [T.] Bahnson, David Sabiston, Frank Spencer, William Rienhoff, Warfield M. Firor, and Mark [M.] Ravitch. Ravitch was still operating there; very interested in pediatric surgery, but did a lot of colon and rectal work. I had an opportunity to work with him on quite a few cases.

DR. LALLY: Now, was this around the time when Sabiston or Ravitch had worked on the endo-rectal dissection?

DR. FONKALSRUD: They had done some work with an ileoanal pull-through, a straight pull-through, using a fairly crude technique for removing rectal mucosa. In fact they dissected down very low and tried basically to sew the ileum to the anus. We took care of a few of those patients then; they weren’t terribly happy. So that procedure got put on hold for several years.

The faculty at Hopkins were really wonderful to their interns and residents. Dr. Bahnson was particularly interested in skiing. Since I had done quite a lot of skiing in the past, he would catch me on a Friday afternoon, and say, “Hey, Rick, let’s go up to the mountains in West Virginia.” “Okay. When shall we go, tomorrow morning?” “No, no. We’re going after I finish rounding tonight.” And then we drove for about five hours, slept in the car, and then went out to be first in line at the ski tow. Came back that night. And then he made rounds again. He was just amazing with his resiliency and ability to do so much.

I became increasingly interested in cardiac surgery because of Drs. Bahnson, Sabiston and Spencer and others. They were just getting started with the open heart operations there that began in the late 1940s. And this was now the early 1950s. The mortality rate for an aortic valve replacement was something like 85 to 90 percent—

DR. LALLY: Wow!

DR. FONKALSRUD: --mortality and not survival.

DR. LALLY: Yes.

DR. FONKALSRUD: So it was pretty crude at that time. We did a few more lab studies with the cardiac faculty evaluating hypothermia and myocardial preservation techniques in the dog model. I also became very interested in plastic surgery at that time. Dr. Milton [T.] Edgerton [Jr.] was the chief of plastic surgery, a very dynamic person. At that point transplantation was only being considered. But it was the plastic surgeons
that were doing kidney transplants in animals and limb re-implantations. We had a couple of patients that had arms that were traumatically amputated and had to sew them back together, all done by plastic surgery. Reconstruction of hand injuries and so forth. That just fascinated me. So my plan was eventually to come back to Hopkins in plastic surgery.

During my internship year, I was fortunate enough to have a blind date. My roommate studied at Columbia, and he was engaged at the time. So he said, “My fiancée is coming to town, and she has a friend that works here in Baltimore as an occupational therapist.” And I said, “Sounds fine to me.” And that’s how I met Peggy [Margaret Zimmermann]. She was working with children with cerebral palsy at the Children’s Rehabilitation Institute [since 1982 Kennedy Krieger Institute], which is across the street from Hopkins. So that was very convenient. So after the decision was made to move to Los Angeles, I asked Peggy, “Would you be willing to get married and join me in the west?” And to my great delight, she said she would, despite her parents’ suggestion that I finish my training and then come back and see if we were still meant for each other.

DR. LALLY: Was Peggy from the east coast?

DR. FONKALSRUD: She was from Philadelphia and we got married in Philadelphia in 1959. She was very supportive of my pursuing my career, and was willing to come to L.A, so far away from her friends. She had only been to California once with her parents as a little girl. So it was wonderful of her to do that. We then had a honeymoon in Puerto Rico and then drove to Los Angeles to begin our lives together. We were both very impressed with the many bright and enthusiastic and friendly people in the greater Los Angeles area. And we got to know quite a few people through the medical center, church and other community activities. One thing we were concerned about was the very bad smog in Los Angeles.

DR. LALLY: Even in 1959?

DR. FONKALSRUD: Yes, in 1959 the smog was so severe that every day the ozone levels were indicated on the radio.

DR. LALLY: Wow!

DR. FONKALSRUD: The city had periodic smog alerts when they would temporarily close down certain industries. At that point the gasoline that was used in California was standard throughout the country. Shortly after we arrived, they upgraded the quality of the gasoline to emit fewer fumes. And that really dynamically changed the environment. So now, many years later, we haven’t had an ozone alert for 40 years or so.
When we first arrived at UCLA, we found the hospital had just been completed in 1955. And it was pretty hard to even get the funding for that. Rumor has it that Dr. Elmer Belt, who was a prominent urologist in Los Angeles, had been the urologist to Governor Earl Warren. Governor Warren was having his prostate examined, and Dr. Belt mentioned that, “You know we really need some more funding for this new medical school down in Los Angeles.” Warren was reported to have said, “Just get that damned finger out of my butt, and I’ll give you anything you want.”

[Laughter] So we received $8 million to build the medical center. And just to give you an idea of the escalating cost of health care, we are now just completing the new hospital, which has only a few more beds than the original one, and this cost $1.3 billion, in contrast to the $8 million for the original construction. But, with about 300 beds and only four years of residency training completed at UCLA when we arrived, we found it to be a very friendly and very, very busy institution.

The faculty was quite small. Dr. Longmire and his wife, Jane, enthusiastically welcomed us when we arrived. And the small, full-time faculty only included four other surgeons: Drs. Wiley [F.] Barker, and Jack [A.] Cannon, who did primarily vascular surgery; and Drs. Jim [James V.] Maloney [Jr.] and Don [Donald G.] Mulder, who did cardiac work. So Dr. Barker took care of quite a bit of the GI [gastrointestinal] work, and Dr. Longmire did the rest of it. I recall learning so much about the vascular surgery that this area became of great interest at that point.

DR. LALLY: Yes, it seems like there was a good history for vascular surgery around there at the time.

DR. FONKALSRUD: Yes. Drs. Cannon and Barker were two of the first to develop the technique of endarterectomy. Before that time there had been very few grafts used of any kind. And then about that same time, in the late 1950s, Drs. [Michael E.] DeBakey and [Denton A.] Cooley and other surgeons in Texas began using prosthetic grafts, which eventually took over from the endarterectomy. In the late 1950s and early 1960s, we were doing aortoiliac, carotid, renal, and coronary artery endarterectomies. Grafts were used on all major vessels and aneurysms.

During my first year at UCLA, I spent time with Dr. Maloney in his cardiac lab working on projects studying protein denaturation, and also the breakdown of fats by the pump oxygenator system. We found that when you run blood through an oxygenator, it denatures many of the proteins and it also breaks down the fat. We found that the blood bank did not pay attention to whether a donor for blood had just eaten a big meal or whether they had been fasting. If one eats a big meal and then donates blood, there is
a great increase in chylomicrons in the circulation. When you collect this 
blood and then put it in the oxygenator, it breaks down the chylomicrons, 
and you get some toxic end products. And when you infuse this blood into 
the circulation (we did these experiments in dogs), they went into shock.

DR. LALLY: What kind of oxygenators were there at the time?

DR. FONKALSRUD: Well, first they were bubble oxygenators and 
disc oxygenators.

DR. LALLY: Right.

DR. FONKALSRUD: The bubble oxygenator was a little harder on the 
blood than the disc oxygenator. The disc had a long cylinder and a whole 
group of little plates that would spin around and that would carry the blood 
around through an oxygenated field. So those were interesting studies. And 
during that time, one of the lab associates was Dr. Michael Trede. He was 
from Berlin. His chief in Berlin, Professor Fritz Linder, moved to 
Heidelberg to be the chief there. So eventually Mike went back to Heidelberg 
and then eventually became chairman at the university [University of 
Heidelberg, Mannheim Faculty of Medicine] in Mannheim. He was a cardiac 
surgeon as well, just like I was. But he gradually focused his interest on 
gastrointestinal surgery and developed one of the world's largest groups of 
successful pancreatectomies for carcinoma. An excellent teacher, wonderful 
person and our families became very close to each other. Our kids have been 
close with their kids. Mike and I climbed Mount Whitney shortly after we 
got here and our families went to the Winter Olympics in 1960 in Squaw 
Valley together. If you can believe it, it cost us $7.50 per person to get into 
the Olympic venue.

DR. LALLY: [Laughs] It’s different now.

DR. FONKALSRUD: We saw the ski jumping, the giant slalom, the 
speed skating, figure skating, and some of the cross-country. It was all in one 
little area. And it was just a remarkable experience.

Also, working with a new member of the faculty just recruited from Penn 
[University of Pennsylvania], Dr. Don [Donald B.] Rochlin, who was the first 
oncologist at UCLA, was exhilarating. He was particularly interested in 
treatment of peripheral melanomas by perfusing with some of the toxic 
agents that were used at that time. If one gave the agents systemically, then 
one caused great toxicity. But if you put a tourniquet around the thigh and 
perfused the leg through the femoral artery and removed the outflow from 
the femoral vein, you could get higher concentrations of the drug to the 
tumor while minimizing systemic toxicity. And that was a very common
technique back in the early 1960s. So we did quite a few animal studies as well as patients with isolated limb perfusion.

Then one of the residents, who happened to be a herpetologist, suggested, “Well, why don’t we try this for snake bites, too?” So we got some anti-venom, which can cause some toxic effects given in large dose. We perfused dog legs that had simulated rattlesnake bites with concentrated venom, to the point where we had a standard model. The vivarium personnel were not very happy with the results of all this. But we did find it worked, and so we treated a few patients with the anti-venom perfusion. In fact, the military used that technique for about three or four years until they found a better antidote.

Dr. Paul [I.] Terasaki had just been recruited by Dr. Longmire to do some work on autoimmune studies. We worked together studying pancreatitis as a possible—at least in some cases—autoimmune disease. And so Terasaki helped me get that project going. That was the first paper that I presented to the Society of University Surgeons.

DR. LALLY: And what year was that, Rick?

DR. FONKALSRUD: This would be about 1961, I think, or so. Dr. Terasaki eventually went on to develop the tissue-typing technology that has been used worldwide. He just retired a few years ago; a wonderful person with tremendous contributions to the field of transplantation. And then I did some studies with Dr. Wiley Barker, studying antibody-induced colitis in dogs. The thinking was that maybe ulcerative colitis could be an autoimmune phenomenon as well. Well, if you give an autoimmune serum to an animal, it will cause colitis, but we don’t know that that’s the reason that humans get ulcerative colitis. At least we had a dog model with colitis, which we could treat. By the time that I finished the four years of training at UCLA, I had published 16 papers.

DR. LALLY: That’s a lot during a residency.

DR. FONKALSRUD: Well, it was a stimulating place to work. A lot of opportunities. Peggy and I had our first two babies. In 1961 the first was Eric, Jr.; and in 1962, Lynn, our daughter. And we enjoyed doing many things together: swimming, skiing, traveling to many interesting places in California and Nevada. In those days we had small little apartments. When we got a new baby, we had to move to a bigger place. So we moved three times in three years.

DR. LALLY: All pretty close to the hospital?
DR. FONKALSrud: All pretty close; all within about five to ten minutes.

Dr. Longmire was truly an excellent technical surgeon. He was also a very good teacher and administrator, and an outstanding inspiration and mentor to residents. He was sort of like the godfather for us. He taught us by example and not by intimidation, yelling or throwing instruments. He was a person that won respect from everyone.

DR. LALLY: He was the chairman for quite some period of time.

DR. FONKALSrud: Yes, he was. He came in 1948, and then was sent over to Germany after the war to help in the military in Berlin. That’s how he met Dr. Fritz Linder and developed a relationship of rotating some doctors from UCLA to Berlin and vice versa. So it was certainly great in that respect. What was interesting is that Dr. Longmire always seemed to be around to see his patients. But then we would read that Dr. Longmire had just been president of the American College of Surgeons and then in charge of the [American] Board of Surgery or just been visiting professor in many other areas in the country as well. We couldn’t figure out how he got everything accomplished in his busy days.

Well, anyway, during the last year of my four-year residency at UCLA, we had a large group of babies that came to us with congenital anomalies and other deformities that required repair. No one on the faculty really had much experience in dealing with these small patients. Dr. Longmire had, I think, the first report of four successful TE [tracheoesophageal] fistulas operated upon with survival, including one preemie. So that he was certainly a very skilled technical surgeon. But he was interested in many other areas. His major interest was pancreatic-biliary surgery. But he also did heart surgery. In any event, we got a copy of Dr. [Robert E.] Gross’ textbook [Surgery of Infancy and Childhood], which was published in 1953, where he had many good illustrations and more of a “how-I-do-it” technique based on his experience in Boston. And so we often took that down to the operating room, and we did the operations the way he did it. Fortunately, they worked out pretty well.

But it was clear that we needed someone who had a focused interest in babies and children in the university setting if we were going to teach others there. When I completed the residency, it was both in general and in cardiothoracic. As a senior resident, we had six months in general surgery and six months in cardiothoracic. I became board certified in both.

DR. LALLY: Okay.
DR. FONKALSRUD: There were a couple of things that happened then. Because of the research activities, I decided pretty much to pursue a course in academic medicine at that time. I received an award from the American College of Surgeons through the Mead Johnson & Company. It was a three-year award which provided funding for many of the research studies. And also I became one of 25 Markle Scholars-in-Medicine selected in 1963. The Markle Foundation was started I think in 1927. There were over 110 medical schools in the country, and each school selected someone to represent their school. Then we had a national interview. Mine happened to be at the Broadmoor in Colorado Springs. Others were in Mont-Tremblant in Canada, and in Williamsburg [Virginia]. We were in group sessions and participated in many discussions on subjects unrelated to medicine. We had interviews with various people; some were from the Canadian government, a couple of congressmen from the U.S. Others were CEOs of corporations; such as W.P. [William Parmer] Fuller from the Fuller Paint Company [W.P. Fuller & Co.] and others. So it was an interesting experience. And I was fortunate enough to be one of the 25 selected. That included not just surgeons but internists, pathologists, anatomists, biochemists and others.

DR. LALLY: So it must have been pretty competitive.

DR. FONKALSRUD: It was quite competitive. But it was sort of an interesting challenge. It really made it possible to continue with further training. Annual Markle Scholar meetings, including spouses, were held until the 1980s. When I was an intern, my income was $26 a month, but we had free food and free housing; so we didn’t need much else unless we wanted to go out and eat or get a hair cut. And then when I was chief resident at UCLA, it was $3,000 a year. And with two children and thinking about further training, this Markle scholarship really made it possible to pursue this goal. Dr. Longmire, at the end of my final year, suggested that maybe I ought to consider going into plastic surgery because the chief of plastic surgery was going into private practice, and they needed a replacement. When I told him about my interest in children’s surgery, he thought, “Well, that’s a good opportunity. Let me see if I can find someone that might help you with that.”

DR. LALLY: When you went out there, you had a strong interest in plastic surgery.

DR. FONKALSRUD: Plastic surgery and cardiac surgery.

DR. LALLY: Somewhere along the way you got interested in doing pediatric surgery.
DR. FONKALSRUD: Because there was such a need for it at that time. We had two cardiac surgeons out of a six-man faculty. We probably ought to have someone taking care of children. So it seemed like a good opportunity. And Dr. Longmire’s idea was to have a spot on the faculty for me if I took that training and I came back. So in any event, I remember that he took me to the meeting of the American Surgical Association in 1963. And Bill [H. William] Clatworthy [Jr.] from Columbus, Ohio, happened to be there. He said, “I want you to come over and meet Bill Clatworthy.” And so we got to meet each other, and he said, “Yes, we’ll take you next year.”

DR. LALLY: [Laughs] And that’s it!

DR. FONKALSRUD: No match system at all. Based primarily on recommendations and interview. So that’s how we decided to go to the Columbus Children’s Hospital for a pediatric surgery fellowship.

DR. LALLY: So what did Peggy say when you said you were going to Columbus?

DR. FONKALSRUD: Well, she was very gracious and indicated that, “if you feel this would be a good idea, well, let’s do it. It’s actually closer to Pennsylvania where my folks live. Maybe we’ll get to see them more.” So she was very supportive. At that time, there were only eight fellowship programs in North America, so we didn’t have a large number of choices.

We were expected to be in Columbus, Ohio, on July 1st, 1963, but I couldn’t leave my job as senior resident until June 30th. So we jumped in the car—it was all packed—when I stopped working at UCLA, and we drove as fast as we could across the country. We got to Columbus, and I thought I’d better go right in the hospital and get checked in. I put Peggy and our two children in a hotel, and I didn’t bother to take down the name of the hotel. I just remembered how to get back there. And when I got into the [Columbus] Children’s Hospital, they said, “Where in the hell have you been? You’re supposed to have started two days ago. And now you have to stay here for the next two days.” So I couldn’t remember where I’d left Peggy. I just knew how to drive there. And she wondered where I was. Eventually I called her and got home exhausted after two days and two nights. Our initial stay in Columbus seemed to be more influenced by getting tickets to the Ohio State [University] football games than getting housing for Peggy and the kids and myself. But eventually we had a nice time there.

Probably one of the most important features that made our stay enjoyable was the excellent residents who were taking the fellowship training there at the same time. I overlapped with [H.] Biemann Othersen, [Jr.], who went to
Charleston [Medical University of South Carolina]; Al [Alfred A.] de Lorimier, who came to UCSF [University of California, San Francisco School of Medicine]; and Marc [I.] Rowe, who eventually ended up in Chicago and then Pittsburgh; and Dr. Dick [G.] Ellis, who started the program at [Fort Worth] Children’s Hospital in Fort Worth, Texas [now Cook Children’s Medical Center]. They were all very bright, enthusiastic. We would sit in our office and analyze everything that Dr. Clatworthy and Dr [E. Thomas] Boles [Jr.] and other members of the faculty would do and relate them to our own ways of providing care. I think I actually learned more from them than anyone else in my career. We’ve all been very close friends since that time. We often meet at APSA [American Pediatric Surgical Association] meetings for dinner, all four couples. So it’s been a nice experience.

DR. LALLY: So what was the training like at the time? It was the early sixties. Anesthesia support was not what it is today.

DR. FONKALSRUD: The Children’s Hospital had a quite well-organized anesthesia, emergency room and other patient care areas. So that was one of the main advantages in training at a children’s hospital. Physicians and staff who work with little babies and feel comfortable. The use of pre-op rooms to get patients ready for surgery so that you don’t waste time cleaning the room and then bring the patient in. It can take an hour and a half to two hours in some hospitals to have the turnover. Here it was only 15 minutes or so.

DR. LALLY: So most of your fellow chief residents went on to pretty well-known academic careers as well. It must have been an interesting time.

DR. FONKALSRUD: It turns out that all five of us became president of APSA. So that was a very bright group. We encouraged and inspired each other to do quite a lot.

DR. LALLY: You did an early paper on surgery in the pre-term. This is back in the 1960s. And you’re going to have to try and translate this back to UCLA, but you didn’t have the same level of support.

DR. FONKALSRUD: Yes. Most of what I wrote about regarding babies when I was at UCLA was challenging case reports. I had a case of tracheal agenesis, and that took quite a bit of work to put it back together with very few reports anywhere in the literature about that. There were a few other unusual anomalies as well. While in Columbus, I had an opportunity to review a large number of the hospital files in the evenings when I was on call. I would sit in the record room and look through charts and put projects together. I think we wrote another eight or ten papers while
I was there for 18 months. So it was really a great learning experience. The hours on call took its toll. I had only been in Columbus for four weeks, and I developed bilateral, lower-lobe pneumonia.

DR. LALLY: Oh!

DR. FONKALSRUD: And so I stayed home one day and came back to carry on. But I think we each supported each other. Al de Lorimier told me that he didn’t open his suitcase for at least a year. He was ready to leave at a moment’s notice. [Laughter]

DR. LALLY: Was Dr. Clatworthy an easy person to work with?

DR. FONKALSRUD: Clatworthy was a very good technical surgeon and a great teacher, but a bit temperamental. But we learned a large amount from him and from each other. Dr. Tom Boles and Tom [Thomas S.] Morse were also there, and they were good teachers, too. But Clatworthy was an extremely bright person, very innovative, so he was a good mentor for us. And he was very interested in developing the field of pediatric surgery nationally and did quite a lot to develop the pediatric surgery residency training programs in the US and upgrade them and have review committees go around to evaluate them. He was one of the first to develop the residency review program.

I completed the fellowship in December 1964, and then we moved to Philadelphia with Peggy’s parents for about three months. During that point I had decided to visit all the existing children’s hospitals in New England and the East Coast and Midwest. So I spent a couple of days in each to see what type of research and special patient care each was doing and where they were going. I met contemporaries like Dale Johnson at CHOP [Children’s Hospital of Philadelphia], who has been a close friend ever since, and many others. I spent a little time in [M.] Judah Folkman’s lab at Boston Children’s [Children’s Hospital Boston]. He was doing some excellent pioneering work with angiogenesis back in the early 1960s. I returned to the full-time faculty at UCLA in the spring of 1965. I was given a full-time academic appointment. As I reviewed the pediatric surgeons in practice around the country, I think I was probably the sixth or seventh full-time academic surgeon at a university hospital devoting a career to pediatric surgery. Shortly thereafter our third child, David, was born.

DR. LALLY: Yes, this was a different career path than most people were taking in the sixties.

DR. FONKALSRUD: Yes. If one was interested in surgical care of children, one stayed in a children’s hospital. But there was something about
the university hospital that offered so many opportunities. If you look at the papers that were presented at the early meetings of the [American] Academy of Pediatrics, they were largely reviews of clinical experience with Wilms’ Tumor or TE fistula or any number of other index cases, or even case reports. The university hospital has the advantage of having full-time biochemistry, physiology and other academic departments, with so many different laboratories and research programs. And that’s where I think my interest really was, bringing pediatric surgery more into the research level. And participating not just with pediatricians with clinical papers, but getting out into the big national surgical societies and bringing pediatric surgery into the mainstream of surgery.

DR. LALLY: Well, obviously down the road that’s had big implications. But at the time it was definitely unusual.

DR. FONKALSRUD: Yes. The general view of most adult surgeons was that one just uses smaller instruments, and the operations don’t take as long. And then you let the pediatrician take over all the care before and after operation. All you have to do is operate. Most of us felt strongly after our pediatric surgery training, that the care both before and after operation is a major part of the advances in pediatric surgery.

DR. LALLY: So then you started as a brand-new faculty at UCLA and obviously the first pediatric surgeon there.

DR. FONKALSRUD: Yes. The first year was pretty slow going. I recall I was not only on call for pediatric surgery, but for surgery in general. A few weeks after I arrived back at UCLA, I was referred a patient with a ruptured aortic aneurysm. It had been a few years since I had repaired one, but no one else was available so I had to take care of that one. Fortunately, he survived. And then Dr. Longmire referred me an older gentleman with an inguinal hernia. I said, “Well, Dr. Longmire, shouldn’t I focus more on pediatric surgery?” He said, “That’s right. You’re supposed to do that.” [Laughter] So the first year there, there were a little under 50 cases that I operated on.

So I had quite a bit of time to spend in the research lab. At that time, when I had traveled around the country, I noticed that there were some unusual types of operations being used for treatment of biliary atresia. In Philadelphia, Dr. [Julian A.] Sterling put little hollow silver needles with holes into the liver and sort of tapped the liver to let the bilious fluids out. If I told you some of the other techniques that were used in the 1950s, you would probably think we were in the 1800s. But combining cardiac surgery, which I did for several years at UCLA, with pediatric surgery, there was
enough clinical experience to remain proficient. A surgeon doesn’t like to lay down the knife too long.

DR. LALLY: No.

DR. FONKALSRUD: Otherwise you forget how to use it. So back in those days I got into the research lab almost daily and found that dogs only cost about seven dollars and fifty cents each to operate on. And so we became very interested in ways of correcting biliary atresia. The first step was to study the lymphatic flow from the liver. Patients who have cirrhosis produce a huge amount of lymph flow out of the liver, so there are large lymphatic channels. If you operate even today for biliary atresia, you will see a large amount of lymph fluid. So we attached a Roux–en–Y limb up to the liver to collect this lymph fluid and actually performed this technique on a few patients. This was probably a very early type of Kasai procedure but with a different thought in mind to correct the problem. We even took off the tip of the left lobe of the liver and sutured the Roux–en–Y limb to it in a few patients, like Dr. Longmire had done for treatment of obstructive lesions in the main bile duct for adults. After a few of those studies and a few operations, we decided to get deeply involved with liver transplantation.

DR. LALLY: So it was biliary atresia that got you interested in liver transplantation?

DR. FONKALSRUD: Yes, very much so. We did several dog studies and a few with pigs and there were many aspects of the physiology to evaluate. At that point organ perfusion solutions were very crude; you just put saline in the artery and hoped something good came out the other end. We found that when you perfuse an organ like the liver and then let the venous effluent that comes out be infused into another animal, you could kill it. The recipient goes into profound shock. There is something toxic that the liver produces when it is ischemic. We wrote a few papers about sorting those factors out and then developed techniques of using an internal vascular shunt to help with the liver transplant operation. We did our first human liver transplant in 1966. Dr. Tom [Thomas E.] Starzl did the first human transplant in 1963, so this was three years later. And we did four transplants from 1966 through 1968. I think we were the third group in the country to perform human liver transplants.

DR. LALLY: A lot of challenges to that at the time.

DR. FONKALSRUD: Well, there were, but then I got busier with clinical practice. When I was in the research lab, I would often get a call: There’s a baby that has a severe congenital heart defect. You’ve got to come
down immediately. And I would have to leave the lab technicians to finish the experimental operation.

DR. LALLY: So those first transplant patients, there was imperfect immunosuppression at the time.

DR. FONKALSRUD: We only used prednisone and Imuran. That’s all that was available, and that’s all that was used for kidney transplants at the time. The cyclosporine era with other immunosuppressive drugs began in the 1980s, which was ten years after I stopped doing liver transplants.

DR. LALLY: And UCLA had obviously a very, very busy liver transplant program.

DR. FONKALSRUD: Yes. Dr. Ron [Ronald W.] Busuttil was one of our residents who came after the time when I had performed the first few liver transplants at UCLA. He did a fellowship in vascular surgery and was very interested in portal hypertension. He then asked me if I would mind if he picked up the liver transplant program. I said, “Go for it. I’ll help you because it’s something that ought to be pursued.” And so he has now taken over pretty much from Dr. Tom Starzl at Pittsburgh as the program with the largest number of cases and best results.

DR. LALLY: Right.

DR. FONKALSRUD: There were several other smaller studies which we performed at that time. Babies who need an atrial septal defect for palliation of transposition of the great vessels, need to have an operation to enlarge the patent foramen. The technique that was commonly used at that time was somewhat crude. We found a small septatome instrument which had been used by gynecologists to core out the cervix for biopsies, and we managed to insert the instrument into the atrial appendage, pull the two edges of the cone together, and core out a little plug of the atrial septum. This procedure helped these blue babies quite a bit. I performed about 15 of these operations on patients with good results, in addition to the many dog experiments. It was an interesting time to combine some cardiac as well as liver transplant surgical experience. Over the ensuing years I performed more than 600 cardiac operations including more than 100 open procedures with cardiopulmonary bypass.

One of my other interests was with other types of tissue transplantation. When I had visited Boston and Philadelphia, there was considerable interest in finding immunologically privileged sites for transplantation. One of the areas that had been considered was the bone marrow space. If one can take a specific tissue and place it into the bone marrow space, it might not be
rejected in the same way as if it were placed under the skin or somewhere else in the body. One of our good friends from church was a dentist, and he had a dental drill that he was no longer using. I began drilling holes in rabbit femurs and then placed morselized thyroid allografts into the bone marrow space, plugged it up with a little bone wax to seal it, and then checked the grafted sites several months later. The thyroid tissue was not completely accepted as a graft, but it was not rejected either. There was minimal inflammatory response around the thyroid tissue, and the follicles were preserved. We published a few papers about this experience. I was interested recently that a surgeon in Jerusalem had called and said, “We found your published papers, and we are using your technique now, and it’s working well for us now.” This was just a year or so ago, and we are looking forward to hearing more about his studies.

DR. LALLY: Wow!

DR. FONKALSRUD: Back in the 1960s, most intravenous infusions were given through peripheral veins. One used a rigid needle and inserted it into the veins; most hospitals made their own IV solutions. In order to keep the IV solution sterile, a little acid was placed into it to prevent the dextrose from caramelizing during the sterilization process. The pH of D5W [dextrose 5%], for example, may be approximately 4 or lower. If one places a solution with a low pH into a peripheral vein, the endothelial cells will be damaged right away and produce phlebitis. We then performed a large clinical study on patients with a couple of nurses working with us. We found that if one buffers the IV solution with sodium hydroxide just as the solution is infused, one can reduce infusion phlebitis markedly. This technique was then used commercially by Abbott Laboratories who produced the buffer called “Neut,” which was available for several years.

We then became increasingly interested in the treatment of colitis in children. When I was the chief resident, I had a few children with severe colitis on whom we performed a total colectomy but left the rectum in, hoping we could do some type of reconstruction using the rectum in the future. We then went to the animal lab and removed the colon and removed the mucosal lining of the rectum in several dogs. Initially we just placed some concentrated sodium hydroxide beneath the mucosa to burn out it out. This solution damaged the rectal muscle a little too much, so we eventually injected saline with epinephrine between the mucosa and muscularis, which allowed us to strip the mucosa out easily without damaging the muscle. We then pulled the ileum down through the rectal muscle cuff and sutured it to the anus. It became apparent that those dogs had almost constant diarrhea, just as Drs. Sabiston and Ravitch had found several years before. So we then decided to make a pouch out of the distal ileum and bring that down through the rectal muscle canal and suture the end of the pouch to the anus. We
made what is called an S-shape pouch and later developed a more streamlined pouch called the “lateral pouch.” The presence of the pouch appeared to slow down the volume and frequency of stools, and it gave the dogs much better continence. So their bottoms weren’t red all the time and the vivarium staff were very pleased.

We published our first paper on these studies in the late 1970s. The S-pouch technique was also used in the UK [United Kingdom] by Sir Alan Parks, who was one of the first to popularize the ileoanal pouch procedures in humans. We also performed canine studies to show that if one removed the rectum for other than malignant disease, e.g., Crohn’s disease or ulcerative colitis, and one was not able to perform a pullthrough procedure with ileoanal pouch, one can just remove the mucosa, close the upper end of the rectal muscle, and leave a little drain extending to the anus. The rectal muscle will gradually close and leave a solid core. This technique avoids damage to any of the nerves that extend to the bladder, the genitalia, and other pelvic tissues. One can thereby reduce some of the major complications of proctectomy. We performed this procedure on over ten patients successfully.

DR. LALLY: So you started doing restorative proctocolectomies in the 1970s?

DR. FONKALSRUD: The late 1970s. By 1980 we had already had our first clinical patient reports published.

In 1965 I received my first research grant, and in 1966 the first NIH [National Institutes of Health] R01 grant, and then a CAPS [California Association of Professional Scientists] research grant in 1966, and another NIH grant in 1968. Several smaller grants were then received and eventually a large NIH R01 grant on lung transplantation was provided in 1971. So from liver to bone marrow to lung transplantation. I was encouraged by Dr. Longmire to pursue all of these areas. It is interesting that now UCLA with one of our younger faculty has one of the largest lung transplant programs in the country.

DR. LALLY: Wow!

DR. FONKALSRUD: Dr. Abbas Ardehali, a very skilled young thoracic surgeon has developed our clinical lung transplant procedure extensively at UCLA.

In 1966 we finally purchased a home in Santa Monica. We have remodeled it four times over the ensuing years, but we are pleased to still live there, and encourage many visitors to stay with us.
DR. LALLY: You found a place you liked.

DR. FONKALSRUD: Yes, after moving five times during six years of residency, it was nice to settle down.

DR. LALLY: Well, that would’ve been pretty close to the hospital for you, right?

DR. FONKALSRUD: Yes. It’s about 15 minutes. And then our fourth child, Robb [Robert W. Fonkalsrud], was born in 1967.

Back in the late 1960s there was considerable enthusiasm about forming new surgical societies. One of the first was the Pacific Association of Pediatric Surgeons [PAPS], which was founded in 1967. Dr. Steve [Stephen L.] Gans, who was the first editor of the Journal of Pediatric Surgery, worked at Cedars-Sinai [Medical Center], and I had invited him to be on our clinical faculty at UCLA, and we became good friends. He was the main stimulus to organize the founding of this society based on his many travels to Japan and Australia. I was pleased to serve as the first treasurer in 1967, and eventually became president in 1984.

During this period, we also were able to spend some time with our four children. Peggy and I were chairpersons of the Church Family Life Committee. This was for young couples with children, which arranged activities and outings and that type of thing. That was centered at our Methodist Church in Westwood, and I was also an usher there for many years.

DR. LALLY: So you were in the Pacific Association because that was an important organization to integrate some Asian surgeons and Australasian surgeons into more of the international community.

DR. FONKALSRUD: Very much so. The idea was to focus more on the Pacific area instead of Europe. Most of our major surgical societies had been affiliated with the UK or Scandinavia or other European countries. So this new association brought in the Japanese and Taiwanese. The Australians and surgeons in Mexico were founders as well. It really has become a great organization. PAPS has done quite a bit for pediatric surgery in all of the countries in the Pacific area. Some members have contributed considerably to the underserved countries, including Dr. James Warden, who developed a program for bringing surgeons from remote areas to the annual meetings.

DR. LALLY: So I guess we have other organizations to talk about. You were early in and helped found the PAPS, we have others, too.
DR. FONKALSRUD: Yes. Let me just mention a little more about some of the other local activities. We became very active with the Indian Guides with our three sons and with the Boy Scouts program in Santa Monica. Since I had been an Eagle Scout in Seattle, our boys all became enthusiastic about the scouting program, which was very popular in our community. They all eventually became Eagles. I became the parents’ chairman for two years, which involved on one occasion taking 75 scouts to Asia for three weeks and living with families in Taipei, Tokyo, and in Hong Kong. That was a great experience for all, but it took a little time, and was a nice break from my surgical activities.

DR. LALLY: I bet.

DR. FONKALSRUD: Another activity was to direct the Scout troop in what was called the “Bloody Monday Disaster Drill.” This consisted of 12 sites where there had been major simulated accidents including fires, auto crash, earthquake, a tree having fallen over on top of a few people, and many other severe accidents with numerous injured persons. We were able to get the community fire department, police department and the community hospitals to work with us in evaluating the scouts on their performance. We had several moulages, which we had obtained from the Army Medical Corps. So the victims, there were about 60 of them, really looked like they were in bad shape, blood spurting from many sites, agonizing screams, and so forth. That was a very good experience for the scouts and their families. I was able to get several of our surgery residents to participate in this program, and they enjoyed it very much. The scouts became very knowledgeable about first aid and emergency care, including CPR. I was in charge of this disaster drill event on three separate occasions over a ten year period.

We published our first paper on liver transplantation with clinical experience in 1968, which was one of the very early ones. And then we published several papers concerned with animal lung transplantation. We emphasized the importance of ventilating the lung while it is perfused. Up to that time, most surgeons had just perfused through the pulmonary artery. If one ventilates the lung as well, then one can obtain a much better functioning lung transplant. So there were several studies to evaluate function after lung transplantation. We had a large series of beagles and primates that we obtained from the OB/GYN department.

DR. LALLY: Now, the primates, were they kept on the campus? Or did you have to go somewhere else for them?

DR. FONKALSRUD: They were kept on the campus in the vivarium. Primates were the hardest to treat with immunosuppressive drugs. If one
gave them a banana with some Imuran in it, and they would eat the banana down to the Imuran and throw the Imuran back at you. So they were clever little rascals. Like Curious George, I guess.

Then we became very interested in congenital lymphedema and various lymphatic malformations in children. Few physicians appeared to want to treat these problems in the community, and I guess when I wrote a paper or two about our experience, we then became inundated with a large number of these patients. So we had a large program of lymphatic disorders, which was very challenging.

We then became very interested in the management of portal hypertension in childhood. We had a large number of clinical cases referred to us at UCLA, in view of Dr. Longmire’s interest in liver disease. We presented some of our data together with Dr. Nate [Nathaniel] Myers from the Royal Children’s Hospital in Melbourne, Australia, in a paper that I presented at the American Surgical Association on the management of portal hypertension in children. Many portal to systemic shunts were used. Dr. Clatworthy had previously developed the popular mesocaval shunt.

DR. LALLY: So you were still by yourself at the time.

DR. FONKALSRUD: Still by myself, yes. Well, with my loving wife and family.

DR. LALLY: Yes, I understand. [Laughs]

DR. FONKALSRUD: Let’s see. I received the Golden Scalpel Surgery Teaching Award from UCLA in 1968. I was a founding member of the American Pediatric Surgical Association in 1969; and that was a great experience. We had our first meeting of a handful of surgeons just deciding how to organize pediatric surgery in the United States.

DR. LALLY: I’ll bet that was a lot of fun at the time.

DR. FONKALSRUD: It really was. It was an outstanding group of pediatric surgeons, many of whom are still very close friends. Drs. Tom Boles and Lucian Leape were two of the primary movers to develop this society.

DR. LALLY: Right.

DR. FONKALSRUD: And they are both still very close friends. I was extremely honored to become president of APSA in 1989.
In 1970 we began performing some laboratory studies with fetal surgery. One of our research fellows from Germany, and I studied gastric secretion in the dog fetus following stimulation of the mother with various secretagogues. If one can stimulate gastric secretion in the adult human, can you also stimulate the fetus to produce more gastric acid? And you can. We wrote a few papers summarizing our data on this subject.

In 1971, I was made a member of the NIH Surgery Study Section. This is a four-year commitment with three major meetings each year, that each last about 48 hours. I was the primary reviewer of almost ten grants for each meeting. If there is anything that educates one about what is going on with surgical research in the U.S., it is reviewing and critiquing the NIH grants in detail. Some of the giants of surgery were on the Study Section, including Dr. Tom [Thomas G.] Shires who was just eulogized today; he and I used ride back to the airport after the Study Section meetings. Dr. John [S.] Najarian, Tom Starzl, [W.] Gerald Austen, James Thompson, Ruben Gitties, Sy [Seymour I.] Schwartz, Hank Bahnson and a few other surgeons were at these meetings.

DR. LALLY: Quite a group.

DR. FONKALSRUD: Very bright and stimulating surgeons.

DR. LALLY: Now there weren’t many pediatric surgeons involved in NIH study sections.

DR. FONKALSRUD: I believe I was the first pediatric surgeon to be a member of an NIH study section. There haven’t been many since to the best of my knowledge.

In 1967, I was a founding member of the Association for Academic Surgery [AAS]. Dr. George [D.] Zuidema, who was chairman of the department of surgery at Johns Hopkins at the time, was the one who had the concept of developing that as a junior society to the Society of University Surgeons [SUS]. One maintained active membership in the SUS until the age of 45. The AAS maintained active membership up to the age of 40, but one could become a member of the AAS while still serving as a chief resident. With SUS, one had to wait a couple of years after the faculty appointment in order to be accepted. The SUS had limited membership, whereas the AAS was more inclusive.

DR. LALLY: Right. So that grew pretty rapidly.

DR. FONKALSRUD: That did grow very rapidly. The AAS was founded in 1967, and I was very honored to be elected president in 1972.
This was a good way to get pediatric surgery more involved in the mainstream field of general surgery.

DR. LALLY: I think we’ve only had one other pediatric surgeon as the president of the organization after you.

DR. FONKALSRUD: I believe that Drs. Brad [W.] Warner, Henri [R.] Ford and George [K.] Gittes were president of the AAS or SUS in more recent years. I became deeply involved with the SUS, first as a member of the executive board in 1969, and then as secretary for three years beginning in 1972, which was followed by serving as president in 1976. These activities with the SUS provided me a great opportunity to observe what was at the cutting edge in academic surgery throughout the whole country.

DR. LALLY: And even then, in 1976, there weren’t that many pediatric surgeons involved in the SUS, were there?

DR. FONKALSRUD: Just a few: Drs. William Clatworthy, C. Everett Koop, William Kiesewetter, Thomas Holder, and Jud [Judson] Randolph and perhaps one or two others were members. And then Drs. Jay Grosfeld, Marc Rowe, and several other pediatric surgeons were elected. Forty-five is the age one becomes a senior member and many pediatric surgeons weren’t well established until after age 45.

One of the interesting experiences with the SUS was when I was chairman of the Tripartite Meeting, which is held every three years, with the SUS, the British Surgical Research Society, and the European Society for Surgical Research. In 1976, we held it in Philadelphia at the Bellevue-Stratford Hotel. The first cases of Legionnaire’s disease were identified at the Bellevue-Stratford just before the meeting. There were hardly any Americans who volunteered to stay at the hotel, but all the Europeans did stay there, and as far as I’m aware, no one became ill. That was a very interesting experience. The meeting actually was a big success.

In 1970 we began a program for treatment of myasthenia gravis in children at UCLA. We had a very good neurology staff who followed both children and adults. We had a fairly large group of patients to work with; this program is still very active currently. Thymectomy improved the status of the majority of pediatric patients with this disorder.

In 1970, Dr. James Maloney got me interested in computers and the possibilities for use in medical education. In 1970 computers were very crude and large big mechanical objects that took a great amount of space. We designed a program where one could place the simulated history of a patient in the computer and then lead a student on various pathways for
diagnosis and therapeutic interventions. A large list of options were provided on a sheet given to the student. For example, what does one do when a child is struck by a car? You can order a chest x-ray, head scan, or a large number of other tests. What blood studies should you order? The results from each test were provided and the student must interpret the data. Eventually the patient either gets well, experiences complications or possibly dies. The medical students were very fond of this program.

DR. LALLY: Wow! That’s very early.

DR. FONKALSRUD: Yes, I presented the results of this study at an annual SUS meeting.

DR. LALLY: Must have been with punch cards at the time?

DR. FONKALSRUD: No, we just sat there with the computer and the student and we had a sheet providing the many choices to make. It was quite interesting and challenging for the students.

In 1971 I was elected to the James IV Association of Surgeons as the Traveling Scholar. This association was developed after World War II by a few distinguished surgeons in the UK and a few in the US. They decided that they just did not know what new advances in surgery were being made in each of the other countries. They decided to have one scholar each year go from the US to the UK and visit each of the major academic programs and give a talk at each hospital and stay for a couple of days in each site. Simultaneously, a scholar from the UK came to the US and traveled in the same manner. In 1971 I was selected by the American College of Surgeons to serve in this capacity. We had four children at that time, the youngest being four, and the oldest ten years old. Peggy said, “Well, I can’t do that with our young children,” and I responded, “Oh, come on, we’ll do it and have a good time.” So we took all four children over to Europe and it was really a very marvelous experience for all. I believe I gave about 28 or 30 lectures. Peggy and the children met a large number of very nice families and we greatly enjoyed so many beautiful and historic sites. We concluded the trip in Norway with a visit to my many relatives before returning home. A report of my experiences together with comparison of the health care in the UK and the US was published in the journal, Surgery.

DR. LALLY: Was this during the summertime?

DR. FONKALSRUD: This was during the early summer and it was over a two-month period.
At that time I was still somewhat tweaked by vascular surgery because Drs. Barker and Cannon were still working at UCLA. So we began to do some studies to determine what injures the endothelium in vessels; such as what happens when one irradiates an artery or a vein; in particular what happens to the endothelium? So we obtained a scanning electron microscope and began a program to evaluate the histologic appearance of radiated arteries and veins. Placing venous grafts into the arterial circulation also causes great changes in the endothelial cells. Are the endothelial cells the same in the artery as the vein? No, they’re not. The endothelial cells are replaced with appropriate new cells. And there were several studies, all resulting from perfusion of arteries and veins with various solutions. Which solutions injure the vessels more? Is this something that could affect transplant rejection? And it certainly is. If one perfuses with a concentrated electrolyte solution, it has a great likelihood of injuring the endothelial cells. So we had several papers published on these general subjects. Some of these studies are still of some interest to transplant and vascular surgeons.

Our first two Research Fellows came to work in our laboratory at UCLA in 1966. Between then and 2002, we have had 56 research fellows, 28 from other countries. I believe the largest number came from Japan, a very nice group of surgeons to work with. Several stayed in our home for periods of time, so we got to know many of them well.

My first visiting professorship was in 1967. I went to three different medical centers in that year; and by 2001, I had been the visiting professor in more than 80 medical institutions. Over the next few years I wrote many clinical papers concerned with malformations and various other disorders which occur in children.

In 1971 I was greatly honored to be elected to membership in the Society of Clinical Surgery; I believe as the first pediatric surgeon in that group. That is a small group of academic surgeons with an active membership of 50. Approximately three new members were elected each year, many of whom are department chairmen and many who had great involvement with the SUS. Drs. Brad Rogers, Tom Krummel and Brad Warner and perhaps another pediatric surgeon are members now.

In 1972 we purchased a 27-foot motor home together with Dr. Jim Maloney, our cardiac surgeon at UCLA. His family had four children and so did ours. Over the years we took many trips including visits to the Grand Canyon, Yellowstone Park, and many areas in Canada.

In 1975 we took our family to Spain, London and Norway for two months where I was visiting professor at the Madrid Children’s Hospital [Hospital Materno Infantil] and then spent a month in an exchange lectureship.
between UCLA and the Hammersmith Hospital in London. We then went back to Norway and the children had a great time with our many relatives. Visiting these European countries was a very educational and enjoyable experience for our entire family.

Over the years our children became very good skiers and we managed to get to several skiing destinations in the United States and Canada a few times each year. I eventually had to work to keep up with them. One of our skiing highlights was when I took two of our sons for a week of helicopter skiing in British Columbia on three separate occasions, together with Dr. Dale Johnson from Salt Lake City.

In the late 1970s, we began our clinical studies with the endorectal ileal pullthrough operations for benign diseases involving the colon and rectum.

In 1978 we published one of the earliest papers on home TPN [total parenteral nutrition] using Broviac silastic central venous catheters. Dr. Marvin [E.] Ament, our chief of pediatric gastroenterology, had worked in Seattle where Drs. [Belding] Scribner and [J. W.] Broviac and others were developing various shunts for renal dialysis. Dr. Ament began to apply these silastic catheters to children with nutritional deficiencies. We presented a paper at the American Surgical Association meeting summarizing our clinical results with central venous catheters.

We became interested in the treatment of gastroesophageal reflux [GER] in the mid-1970s. There had only been a few papers written about GER in children; Dr. Randolph wrote one of the earliest papers on the subject. Our pediatric GI staff kept identifying more and more patients with symptomatic GER, so we had a large series of patients very quickly and I became very interested in the surgical repair for them. We subsequently found that some cases of GER may be part of a dysmotility disorder of the upper GI tract, as Dr. Tom [R.] DeMeester and others working with adults had suggested. Many patients may have GER plus gastric dysmotility with delayed gastric emptying, especially the neurologically impaired kids. So we began to apply a type of pyloromyotomy, or modified pyloroplasty without opening the mucosa, but with transverse closure of the muscularis, which added only about five minutes to the operating time. This procedure relieved gastric outlet dysmotility and enhanced gastric emptying, which reduced the frequency of fundoplication breakdown. We used this procedure for about 35% of children undergoing fundoplication.

DR. LALLY: And you had a fairly large series of infants, didn’t you?
DR. FONKALSRUD: We did have a large group of infants; in fact, in the last few years we had approximately 350 patients three months of age and younger. It is interesting that if one reviews the recent literature, there are more children being operated upon in the early months of life and fewer undergoing operation as teenagers. I believe that I performed almost 1000 fundoplications at UCLA.

DR. LALLY: Right.

DR. FONKALSRUD: We had a very good pediatric endocrinologist who brought quite a few intersex patients to us at UCLA. We became very deeply involved in the surgical management of intersex deformities, particularly in females. In the past, most females with adrenogenital syndrome with an enlarged clitoris would have it resected, or a portion of it removed. We expanded on a technique which was initially reported by Dr. Judson Randolph by just mobilizing the clitoris extensively and tucking it under the pubis with sutures such that no part of it was removed. The incision was made through the labial sulcus so that there was no visible scar. When we interviewed several of these patients ten years later, they still had near normal sensation and seemed to be well-functioning females.

We had a large number of gastroschisis patients over the past three and a half decades. There had never been a survivor with this deformity at UCLA when I joined the faculty in 1965. We have now found that these anomalies are more common than many of the other major index anomalies in newborn infants. We have noticed over the years that if one compares the size of the abdomen to the size of the eviscerated bowel, some will allow the intestine to be placed into the abdomen very easily and one can close the muscle and skin primarily. In another group, which includes more than half of the patients, if one attempts to push the intestine into the abdomen and close the muscle and skin with great tension, one will compress the vena cava and elevate the diaphragm, causing serious complications. So for these patients the prosthetic silo has been used for one or two weeks to allow the intestine to gradually decompress and then fit into the abdomen. In another group of approximately 25% of infants with eviscerated bowel, it is so edematous and large that one can’t began to get the abdomen closed primarily, and a silo may have to be used for as long as month or more. This disproportion of the volume of eviscerated bowel compared to the size of the abdomen appears to be very helpful in deciding what type of surgical repair should be used for the babies. Our overall mortality for gastroschisis patients has been less than 5% in over 220 cases.

DR. LALLY: You also did some rabbit studies on gastroschisis.
DR. FONKALSRUD: Yes, we did. To determine the effects of urine and epidermal growth factors on the eviscerated bowel, in a series of fetal rabbit studies.

Most pediatric cryptorchid males were repaired by pediatric surgeons for years until the urologists became more active in pediatric urology. In 1981, I wrote a textbook on the management of cryptorchid testes with the assistance of several contributing authors. Dr. Clatworthy performed this operation with great technical skill.

In the early 1980s, ambulatory peritoneal dialysis for end-stage renal disease was just being developed. Working with our nephrologist at UCLA, we developed some new techniques for dialysis with fairly good outcomes, and we wrote a few papers on this subject.

From 1984 to 1988, I was pleased to serve on the executive committee of the Surgical Section [Section on Surgery] of the [American] Academy [of Pediatrics] and became chairman in 1988.

In 1985, we initiated some studies with Dr. Sean Mulvihill, one of our bright surgery fellows, to study in-utero supplemental fetal feedings in a rabbit model. One could place a small tube down the fetal esophagus and feed the fetus to determine if one could enhance the growth, particularly if the mother wasn’t providing adequate nutrition. We were able to demonstrate that fetal feedings did enhance the fetal growth considerably.

We also studied the benefits and effects of long-term intraperitoneal nutrition in a rabbit model in 1986. If you place IV fluids into the abdominal cavity, will the body absorb it? Can the peritoneum absorb fats, amino acids and electrolytes through the omentum and the peritoneal surface? Or will it just remain there? This idea resulted from what Dr. Robert [M.] Zollinger did at Ohio State [University]. After he performed certain abdominal operations, he would fill up the abdomen with some saline and dextrose, and then close up and say, “There, that will take care of him for a few days.” [Laughter] So this was an interesting group of studies.

We then had a surgical research fellow who spent a year in our laboratory and also looked up our clinical experience with esophageal replacement for patients with esophageal atresia, long-gap atresia, and certain other disorders including dysmotility. We had about 35 colon interpositions and were quite pleased with the way they functioned many years later. We have performed well over 50 by now, and I believe that there has been no mortality.

DR. LALLY: Is that that paper by Dr. Stone?
DR. FONKALSRUD:  Dr. Marshall [M.] Stone, that’s right.

In 1986 I was elected to a society called the International Surgical Group. There are 50 active members from the United States, Europe and the rest of the world. We meet in the US about once every three years, and then in Europe or Canada or somewhere else in the other years. This has been a very nice group of surgeons to be with, with very educational scientific and most enjoyable social activities. Dr. Jim [James A.] O’Neill [Jr.] is the other pediatric surgeon in that group. I was local arrangements chairman in 1993 and treasurer for ten years.

We carried out several studies with Dr. Tansu Salman from Istanbul, studying the morphologic effects of unilateral cryptorchidism on the contralateral descended testes. We know that if one has an ischemic testicle on one side, that it will have an adverse effect on the contralateral testicle and one probably should remove the abnormal testis. Similarly, the cryptorchid testis should be placed into the low scrotum at an early age to avoid causing damage to the contralateral gonad, or one should consider removing it, particularly if it is dysplastic.

We also carried out several studies, both clinical and experimental, evaluating various treatment protocols for neuroblastoma.

In 1988, Dr. Matthias Stelzner joined us from Germany after I had given a few lectures on the ileoanal pouch studies at a large meeting in Heidelberg. He was a resident in Cologne at the time. Together, we worked with Dr. Jared [M.] Diamond, who was on our physiology staff at UCLA. He is an outstanding person and has written three superb books: one is called *Collapse [How Societies Choose to Fail or Succeed]*, which is very popular now. Another is *Guns, Germs, and Steel*, which has been made into a television series.

DR. LALLY: Right.

DR. FONKALSRUD: Dr. Diamond won a Pulitzer Prize for the latter book. His son had neonatal necrotizing enterocolitis, and we were able to successfully operate on him. He is now over 18 years old, and he is also a great scholar following in his parents’ footsteps. Working together, we did quite a few nutrient absorption studies in dogs with the ileoanal pouches. First we wished to determine what happens to the cells in the ileum when the colon and rectal mucosa is removed. The ileal mucosal cells gradually transform into more colonic appearing cells with longer cell length, but without villous folds. They tend to flatten down. We also performed studies to evaluate bile acid, electrolyte and amino acid absorption from the ileal
pouches compared to normal colon. We also demonstrated that ileal pouches
do not have peristaltic contractions. And so all these motility, nutrient
transport and other physiologic function studies we believe may have been
helpful in the development of the ileoanal pouch procedures used clinically.

In 1989 I was elected president of the Pacific Coast Surgical Association as
the first pediatric surgeon. In the same year I was president of APSA and
the Lilliputian Surgical Society. The Lilliputian Society is a small group of
pediatric surgeons with 25 active members largely from the southeast. It has
one day of local clinical presentations of science and one day of visiting the
host’s local environs. It is a very nice group.

We eventually developed techniques for reconstruction of these ileoanal
pouches that were not functioning well. Surgeons were using S-pouches, W-
pouches, lateral pouches and J-pouches. If they did not work satisfactorily,
most surgeons would remove the pouch and perform a permanent ileostomy.
We were referred a large group of these patients; we would lift the entire
pouch out of the pelvis, reconstruct it and then bring it back down through
the rectal muscularis to the anus. We found the reconstructions to be
somewhat complex, but very helpful in avoiding a permanent ileostomy.

DR. LALLY: How many patients did you end up working on like
that?

DR. FONKALSRUD: Well, as far as redo operations, probably more
than 70.

DR. LALLY: That’s a lot.

DR. FONKALSRUD: And I performed a total of about 750 ileoanal
pouches.

In 1979 I was very pleased to receive the Golden Scalpel Award for teaching
surgery at UCLA medical center.

In 1990, we carried out some further fetal rabbit studies to evaluate intestinal
function after in utero esophageal ligation with Dr. Terry [L.] Buchmiller,
who trained with us in general surgery and worked in our lab for two years.
She is now at the Boston Children’s Hospital [Children’s Hospital Boston] on
the faculty. She was able to establish a model in the rabbit, which has a
bicorneuate uterus and four fetuses in each limb. The second one from the
end is always a runt. She found that if one could infuse nutrients into that
runt while still in utero, that it grew to be as big or larger than all the other
fetal rabbits in the uterus. She has really done a superb job with her studies
and is still working in the same general area in Boston.
In the early 1990s, I became increasingly interested in patients with chest wall deformities, which many other surgeons had not paid much attention to, especially in older kids. Until the early 1990s, most children with excavatum or carinatum were operated upon during the first five or seven years of life, regardless of the absence of physiologic symptoms. A large group of these patients were referred to us, at least 70, who had recurrences when they grew up to be teenagers. They were very difficult to reconstruct. We have come to the conclusion that surgeons probably should delay operation for pectus deformities until the child advances into the adolescent growth spurt, unless they are having severe symptoms, in which case one might have to operate earlier.

DR. LALLY: They also developed modifications of the technique.

DR. FONKALSRUD: Yes. As I began to retire in 2001, I placed a web page on the Internet indicating the symptoms of pectus deformities and options for surgical repair. Whereas we had performed 18 to 20 cases a year for more than two decades, we increased to 110 or more cases each year shortly thereafter. So we had an opportunity to analyze in detail what we were doing, and how best to modify the technique to improve results and reduce morbidity. The traditional Ravitch repair removes all the deformed costal cartilages and attempts to save the perichondrial sheaths. If one doesn’t close the perichondrial sheaths, one will obtain a large sheet of regenerated bone covering the entire chest wall. If one closes the perichondrial sheaths, the regenerated bone is localized in the desired position but may be calcified and osseous in structure. In this case, one creates a type of rigid cylinder instead of permitting normal movement of the cartilages with respirations. So we began leaving the central part of the deformed costal cartilages present and took out about a centimeter and a half from either end of the perichondrial sheaths.

DR. LALLY: Right.

DR. FONKALSRUD: We anticipated that this would serve as a stimulus to enhance cartilage growing from both ends. We placed little chips of autologous cartilage into the perichondrial sheaths where we had removed the segments and that seemed to enhance cartilage growth. But a few patients still had some movement between the costal cartilage and the ribs laterally or the sternum, so we believed that it probably was best to suture them back together. Eventually we just took out the appropriate amount of cartilage from either end so that one could lift the sternum up or push down as desired and then sew the cartilage back to the corrected sternum and ribs again. That has worked out quite well in our experience, which includes almost 1200 pectus operations.
We performed studies with Dr. James Dunn, former research fellow in our laboratory, who is now on our faculty in pediatric surgery. He became very interested in intestinal stem cells and how to lengthen the small intestine in patients with short bowel syndrome. He removed the mucosa from the colon, and placed small intestine mucosa in its place, to determine if it would function as small bowel. He now has an R1 NIH grant and is making good headway with this program.

In 1970, I was elected to my first editorial board, the *Archives of Surgery*, a ten-year appointment. I have served on the editorial boards of 13 major surgical journals during the subsequent years and still remain on six boards including the *Annals of Surgery*, *American Journal of Surgery*, *World Journal of Surgery* and *Journal of Pediatric Surgery*.

I was very pleased to be elected to honorary membership in the Polish Association of Pediatric Surgeons in 1992; the Deutsche Gesellschaft fur Chirurgie, the German surgery society, in 1994; and the Japanese Society for Pediatric Surgeons in 1998.

When I finally retired about a year ago, we had published over 455 journal papers, 123 book chapters, 191 abstracts, seven books, including the 5th and 6th editions of *Pediatric Surgery*, working with Drs. O’Neill, Rowe, Grosfeld, and [Arnold] Coran. They are some of the hardest-working and erudite individuals I have ever met. We sort of tweaked each other to complete these projects.

DR. LALLY: A number of your former Ohio State graduates.

DR. FONKA LSRUD: Yes, Drs. Grosfeld, Rowe and O’Neill are all from there.

My parents both died in the early 1980s. Although I had been a competitive swimmer for years, I then took up jogging and cycling, and then participated in over 30 triathlons, often taking one of our research fellows with me. My father had purchased a forest up in the state of Washington in the early 1940s and hadn’t really done very much with it. He had cut a few trees every now and then but had not planted any. In the late 1980s I went up to take a look at the forest and it was a mess. All the old growth trees had been cut down in the 1920s, and no one had ever planted any new trees in their place. So what grew up were several good conifers, but also many undesirable trees with almost no value. There were many alders, maples and cottonwoods, and other shrubs that can’t be used for very much other than firewood or pulp. So I first converted this land to forest land instead of residential property. The county assessor who evaluated our property was a forestry major from
Washington State College and he became very interested in our forest. I was able to recruit him to help me upgrade the forest over the subsequent years. We obtained a grant from the Department of Natural Resources to assist with the forest refurbishing program and eventually hired a logger to cut specific trees and brush. Over the last 18 years, we have planted over 150,000 seedlings and have filled in all areas that did not have good productive trees. Now some of the trees that we have planted are 60 feet or taller. The forest now has a large number of elk and other wild animals, and a large variety of birds.

DR. LALLY: What kind of trees did you plant?

DR. FONKALSRUD: Douglas fir, western red cedar, and for those areas that have root rot, we planted German larch. Larch is an evergreen which drops its needles in the wintertime and in the spring buds out like a flower. It lasts for about eight months and then becomes dormant again. They make very good lumber, which is used in northern Europe quite extensively. I was surprised to be named Forest Farmer of the Year for western Washington in 1997. I go up to our forest in Washington about eight or ten times a year to plant seedlings, prune trees, and thin and clear the forest as necessary.

DR. LALLY: So pretty active there.

DR. FONKALSRUD: In 2003, I was elected to the Johns Hopkins University Society of Scholars. They have about ten to twelve new scholars that they take in each year from all fields of education, medicine and other disciplines. I was very honored by that. I received the UCLA Medical Alumni Professional Achievement Award in 2003. Then the Herbert Coe Medal for Lifetime Contributions in Pediatric Surgery from PAPS. Dr. Herbert Coe was the founder of the Surgical Section of the Academy, and he trained with Dr. [William E.] Ladd and then went back to Seattle and was the founder of the Children's Orthopedic Hospital [now Seattle Children’s Hospital]. He is sort of the godfather of pediatric surgery in the west.

DR. LALLY: Right.

DR. FONKALSRUD: I was very pleased and honored to receive the Arnold M. Salzberg Mentorship Award from the Academy and also the William E. Ladd Medal in 2006.

I retired from my position as chief of pediatric surgery at UCLA School of Medicine in 2000 after 36 years. Dr. Jim [James B.] Atkinson, one of our former general surgery residents, took over and has done a very good job in that position. Then in 2001 I retired from the position of professor of
surgery above scale. I have remained on the emeritus faculty since then. I
continued to perform the chest wall repair operations until September of
2007 when I turned 75. I thought that I should probably stop operating at
that time before I got into some troubles. So, starting with less than 50 cases
a year, I ended up doing a little over 15,000 operations at UCLA.

One thing that I have probably had a slightly different opinion about than
many pediatric surgery colleagues is that if the patient passes the age of 18
and still has a problem that is common in infants and children, that patient
should have the appropriate operation performed by a pediatric surgeon
regardless of age. I believe that we are probably more capable of taking care
of these patients than are adult general surgeons. Such as with
Hirschsprung’s disease, imperforate anus reconstruction, pectus chest
deformities and a few other deformities. If a thoracic surgeon does one
pectus procedure every two to four years, he probably will not be as well-
qualified as a pediatric surgeon who does more frequent operations in order
to obtain a good result. It probably depends considerably on where one is
located. At a university hospital, one may have many more options than just
working on the infants and young children.

DR. LALLY: We’re going to go back to a couple of things that
we’ve covered. The proctocolectomy you’ve done, you did hundreds of these. I
think that was an important innovation in patients with colitis. You’ve gotten
some recognition for that as well.

DR. FONKALSRUD: Yes. In fact that was one of the main reasons
that the German surgery society made me an honorary member at one of
their annual meetings at which time I gave a one-hour lecture on that
subject. There were many contributors to restorative proctocolectomy from
the UK, the Mayo Clinic, University of Minnesota and a few other hospitals.
Eventually Dr. [Victor W.] Fazio from the Cleveland Clinic has become a
leading authority on restorative proctocolectomy. This is an operation that
probably is a little difficult for the average surgeon who doesn’t perform
major colorectal surgery frequently. One should perform this operation
several times each year in order to remain proficient. There are many
problems that can go wrong, even in today’s setting. The best current
reports indicate that about 50% of patients will have some complications and
perhaps 25% will require re-operation of some type. So this is a group of
high-risk patients, and they are not as simple as performing a
Hirschsprung’s disease pullthrough with an endorectal or Duhamel-type
procedure.

DR. LALLY: And you also got an award from the Colitis
Foundation for that.
DR. FONKALSRUD: Yes. In 2003 I was the “Man of the Year” from the Crohn’s & Colitis Foundation of Southern California for contributions to the development and clinical use of ileoanal pouches.

DR. LALLY: And the other thing I wanted to touch on, you had mentioned the Salzberg Award, but you didn’t go into much detail. A number of pediatric surgeons have come from UCLA that have been influenced.

DR. FONKALSRUD: One of the exciting features of being in the university is in mentoring and influencing the future medical students as well as interns and residents. When I received the Salzberg Award, I believe we had 15 residents from our general surgery program that had taken further training in pediatric surgery fellowships, which was a fairly large number at that time for a university hospital.

DR. LALLY: Oh, yes. I think so. So what would you say have been some of the biggest changes you’ve seen over the course of your career?

DR. FONKALSRUD: In pediatric surgery, I believe the care of the neonate and the preemie have been certainly some of the great advances. In the early 1970s, in Los Angeles and the state of California, actually, the Crippled Children’s Service would not cover financially any baby that weighed under 1500 grams.

DR. LALLY: Wow!

DR. FONKALSRUD: So those babies were just set aside and weren’t treated because neither hospital nor physician were reimbursed for care. It took a movement of parents and physicians to start getting involved with the legislators. Eventually they conceded that we could proceed to care for smaller babies. Now we can operate on 500 gram neonates or smaller. We just have to look ahead to see what the likelihood of their neurologic status will be in future years and come to ethical decisions about that. But together with the newer techniques, pediatric surgeons have been among the leaders in the development of laparoscopic and thoracoscopic instrumentation, as well as robotic surgical technology. I believe these will all play an important role, but we have to make sure that our surgeons can still perform operations using an open technique as well as with the laparoscope. If one gets into problems, he has to find his way out of them in a successful way.

DR. LALLY: And what do you see as a future for pediatric surgery?

DR. FONKALSRUD: The future for pediatric surgery is almost unlimited. It would appear that way with the newer micro and endoscopic
techniques for operating, the nanotechnology for monitoring, and other sophisticated equipment. The genetic aspects of disease, genetic modifications, in utero repair of malformations, and others are very promising. I believe we will have some further studies with those, but I believe there are many new advances which are still on the drawing boards.

DR. LALLY: Do you want to start all over again? [Laughter]

DR. FONKALSRUD: Well, it’s been a wonderful life, Kevin. I think so much of life is being in the right place at the right time. The 1970s, 1980s and 1990s were a wonderful time for physicians because there was sufficient financial support available to do almost anything you wanted. We put much of our clinical income into research projects. Together with the NIH support, we could keep going with almost any projects we felt might be productive. But it is very exciting to see what the younger generation is producing now, especially how active pediatric surgeons are in the overall field of medicine and surgery. I have great pride in the rapid advancement of pediatric surgery into one of the most highly sought after surgical specialties with increasingly important clinical and basic science contributions and leadership roles in all major surgical societies during the past four and a half decades. We have had a president of the American College of Surgeons and the American Surgical Association as well as presidents of SUS, AAS and several other major general surgery societies. This is the right direction, I believe. So we’re not just summarizing clinical experiences, but rather pushing back the barriers for exciting new investigative studies.

DR. LALLY: I think it’s changed a lot since you started, too.

DR. FONKALSRUD: Yes.

DR. LALLY: Okay, is there anything else you’d like to comment on?

DR. FONKALSRUD: Well, I believe the real joy now, as I’m still lingering on at UCLA, is to be with students and residents. The younger generation of surgeons is often so busy with clinical care that they need some of the old fogies still around to give them lectures and sit down and chat with them about their personal careers and options and so forth, and to serve as mentors for them. And that’s really a real pleasure. Being a pediatric surgeon is such a privilege that one almost feels that one ought to pay for the opportunity to participate in this field.

DR. LALLY: Oh, that’s true.
DR. FONKALSRUD: When one looks back and you recall from your general surgery years how hard you worked to do a Whipple operation for pancreatic carcinoma, and then found that the patient died a year or two later from metastases, that’s such a depressing feeling compared to seeing the 18-year-old healthy child that comes to your office after you repaired their esophageal atresia when they were a preemie. Many patients invite you to their weddings and send you pictures of their children in later years. Extremely gratifying.

Lastly, I am extremely grateful to my wonderful wife of 49 years for encouraging me to pursue my academic career and for her very helpful advice, steadfast love, and providing such loving care for our children. I am very appreciative of the love, patience and support from, as well as great happiness and enjoyable experiences with each of our four children throughout their lives. My greatest joy now is spending increasing time with our four children and six grandchildren, and having pride in the great accomplishments of our own children as well as our many former students and residents.

DR. LALLY: Yes, it is. Well, we thank you for your time today.

DR. FONKALSRUD: It’s my great pleasure. I appreciate the opportunity.

[End of Interview]
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CURRICULUM VITAE

Eric W. Fonkalsrud, M.D.

FAMILY

Born, Baltimore, Maryland, August 31, 1932
Married to Margaret, June 6, 1959
Children: Eric W., Jr. (1961), Margaret Lynn (1962), David L. (1965),
Robert W. (1967)

ACADEMIC DEGREES

B.A. in Zoology, University of Washington, Seattle, WA, 1953
M.D., The Johns Hopkins School of Medicine, Baltimore, MD, 1957

LICENSED BY THE STATE

Maryland (1957), California (1959), Ohio (1963)

POSTGRADUATE TRAINING

Surgery Internship, The Johns Hopkins Hospital, Baltimore, MD, July 1957-
June 1958
Surgery Resident, The Johns Hopkins Hospital, Baltimore, MD, July 1958-
June 1959
Surgery Resident, UCLA School of Medicine, Los Angeles, CA, July 1959-
June 1962
Chief Resident in General and Cardiothoracic Surgery, UCLA School of
Medicine, Los Angeles, CA, July 1962-June 1963
Fellowship Pediatric Surgery, Columbus Children’s Hospital (Ohio State
University), Columbus, OH, July 1963-January 1965

ACADEMIC APPOINTMENTS

Instructor in Surgery, Columbus Children’s Hospital and Ohio State
University, Columbus, OH, July 1963-December 1964
Assistant Professor of Surgery, UCLA School of Medicine, 1965-1968
Associate Professor of Surgery, UCLA School of Medicine, 1968-1971
Professor of Surgery, UCLA School of Medicine, 1971-1997
Professor of Surgery, Above Scale, 1997-2001
Professor of Surgery, Further Above Scale, 2001
ACADEMIC APPOINTMENTS (Continued)

  Founding Chief, Division of Pediatric Surgery, UCLA School of Medicine, July 1965-2000
  Executive Vice Chairman, Department of Surgery, UCLA School of Medicine, 1982-1988
  Emeritus Professor, Department of Surgery, 2001

BOARD CERTIFICATION

  American Board of Surgery, 1964
  American Board of Thoracic Surgery, 1966
  Certificate of Special Competence in Pediatric Surgery, June 1975
  Recertification in Pediatric Surgery, May 1984

AWARDS AND HONORS

  Eagle Scout, with 3 Palms, Boy Scouts of America, 1947
  President, Alpha Epsilon Delta (premedical honorary)
  Chairman, Pacific Northwest Medical Educator’s Conference, University of Washington, 1952
  Member, Oval Club, University of Washington men’s upper class honorary
  Member, University of Washington National Champion Crew, 1950-1953
  Member “Big W” Club, University of Washington
  Member, Purple Shield, University of Washington men’s activity honorary
  President, Pithotomy Club Medical Fraternity, Johns Hopkins School of Medicine, 1955-1957

RESIDENCY AND FACULTY

  Mead Johnson Award for Graduate Training in Surgery, American College of Surgeons, 1964-1967
  John and Mary R. Markle Scholar in Academic Medicine, 1963-1968
  Winner, Ohio Chapter, American College of Surgeons Annual Resident Essay Contest, 1964
  Sigma Xi, 1968
  James IV Surgical Association, Traveling Scholar in Academic Medicine to Great Britain, 1971
  Member, Surgery A Study Section, National Institutes of Health, 1971-1975
  Board of Directors, Franklin H. Martin Memorial Foundation, American College of Surgeons, 1974-1979
  Elected to AOA, 1977
RESIDENCY AND FACULTY (Continued)

Golden Apple Student Teaching Award, UCLA School of Medicine, 1968
Special Award for Excellence in Teaching, Department of Pediatrics, 1977
Golden Scalpel Award for Teaching Excellence, Department of Surgery, 1979
Distinguished Award for Contributions to Pediatric Surgery in Poland, from the Faculty of the Jagellonian University, Krakow, Poland, 1996
Forest Farmer of the Year in Western Washington, 1997
Recipient of Herbert Coe Medal from Pacific Association of Pediatric Surgeons in 1997 for lifelong contributions to the field of Pediatric Surgery
Recipient of “Man of the Year” Award for 1999 by Crohn’s and Colitis Foundation of America, California Chapter
Recipient of Arnold Salzberg Award for outstanding mentorship of pediatric surgical trainees by the Surgical Section of the American Academy of Pediatrics, 2000
William E. Ladd Medal for contributions to the field of Pediatric Surgery, 2006.
Elected to Johns Hopkins University Society of Scholars, 2003
Recipient of UCLA Medical Alumni and Aesculapians Professional Achievement Award, 2003

MEMBER OF SCIENTIFIC JOURNAL EDITORIAL BOARDS

Archives of Surgery, 1970-1980
Surgery, 1972-1992
Annals of Surgery, 1975-
Journal of Surgical Research, 1977-1983
Correspondence Society of Surgeons, 1977-1998
The American Journal of Surgery, 1982-
Journal of Pediatric Surgery, 1993-
World Journal of Surgery 1998-
Surgical Forum Committee, American College of Surgeons, 1973-1979
Journal of Pediatric Surgery (Turkey), 1987- 2005
Japanese Journal of Surgery, 1990-
Surgery in Childhood International, 1992- 2004
Medical Principles and Practice, 1993-2001
REVIEWER FOR EDITORIAL BOARDS

New England Journal of Medicine
Journal of Thoracic and Cardiovascular Surgery
Pediatrics
Annals of Thoracic Surgery

MEDICAL SOCIETY MEMBERSHIPS

American Association for the Advancement of Science
American Association for Thoracic Surgery
American Association of University Professors
Fellow, American College of Surgeons (Board of Governors, 1977-1985)
American College of Surgeons, Southern California Chapter
American College of Gastroenterology
American Gastroenterological Association
American Medical Association
Founding Member American Pediatric Surgical Association (Board of Governors, 1975-1978; President, 1989-1990)
American Surgical Association (Representative to ACS Board of Governors, 1977-1985)
American Trauma Society
Founding Member Association for Academic Surgery (Councilman, 1969-70; President, 1971-1972)
Bay Surgical Society (Program Chairman, 1969-1970; Board of Directors 1981-1983)
British Association of Pediatric Surgeons
California Association of Transplant Surgeons
California Medical Association
Chicago Surgical Society, Honorary Member
Collegium Internationale Chirurgiae Digestivae
International Federation of Surgical Colleges
Johns Hopkins Medical and Surgical Society
Lilliputian Surgical Society (President, 1988-1989)
Los Angeles County Medical Association
Los Angeles Pediatric Society
Los Angeles Surgical Society (Secretary 1987-1991; President, 1991-1992)
Los Angeles Transplant Society
MEDICAL SOCIETY MEMBERSHIPS (Continued)

Medical Research Association of California
New York Academy of Science
Founding Member Pacific Association of Pediatric Surgeons (Treasurer, 1967-1970; President, 1983-1984)
Pacific Coast Surgical Association (Recorder, 1979-1985; President, 1989-1990)
Pan Pacific Surgical Association
Founding Member Pediatric Surgery Biology Club
Societe International de Chirurgiae
Society for Clinical Surgery
Society for Surgery of the Alimentary Tract
Society of University Surgeons (Councilman, 1969-1972; Secretary, 1972-1976; President, 1976-1977)
Southwestern Pediatric Society
Surgical Section, American Academy of Pediatrics (Board of Governors, 1983-1986; Chairman, 1986-1987)
Founding Member The Longmire Surgical Society (President 1999-2001)
Town Hall (Los Angeles)
Transplantation Society

HONORARY SOCIETY MEMBERSHIPS

Polish Association of Pediatric Surgery (1992)
Deutsche Gesellschaft fur Chirurgiae (1994)

GRANTS AND AWARDS (29) from 1963-2007

Total funding $1,886,000.00
PUBLICATIONS IN MAJOR MEDICAL AND SURGICAL JOURNALS

Eric W. Fonkalsrud, M.D.


75. Fonkalsrud EW: Death and its relationship to organ transplantation. Plexus, UCLA School of Medicine, 4:20-21, 1969.


PRESENTATION OF PAPERS AT SCIENTIFIC MEETINGS – 1964

ERIC W. FONKALSRUD, M.D.


PAPERS AT SCIENTIFIC MEETINGS – 1965


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PAPERS AT SCIENTIFIC MEETINGS - 1967


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PAPERS AT SCIENTIFIC MEETINGS – 1992


PAPERS AT SCIENTIFIC MEETINGS – 1993


PAPERS AT SCIENTIFIC MEETINGS – 1994

1. Fonkalsrud EW: Acceptance Address for Honorary Fellowship into the Deutsche Gesellschaft fur Chirurgie, Munich, Germany, April 9, 1994.

PAPERS AT SCIENTIFIC MEETINGS – 1995


**PAPERS AT SCIENTIFIC MEETINGS – 1996**


8. Fonkalsrud EW: Long-Term Results Following Colectomy and Ileoanal Pullthrough Procedure in Children. Polish Association of Pediatric Surgeons, Krakow, Poland, September 20, 1996.


**PAPERS AT SCIENTIFIC MEETINGS – 1997**


**PAPERS AT SCIENTIFIC MEETINGS – 1998**


**PAPERS AT SCIENTIFIC MEETINGS – 1999**

2. Dunn JCY, Fonkalsrud EW, Atkinson JB: Simplifying the Waterson’s Stratification of Infants with Tracheoesophageal Fistula. Southern California Chapter, American College of Surgeons, Santa Barbara, CA, January 24, 1999.

**PAPERS AT SCIENTIFIC MEETINGS – 2000**

2. Fonkalsrud EW: Surgical Management of Ulcerative Colitis in Children. Surgical Section, American Academy of Pediatrics, Chicago, IL, October 29, 2000

**PAPERS AT SCIENTIFIC MEETINGS – 2001**


PAPERS AT SCIENTIFIC MEETINGS – 2002

PAPERS AT SCIENTIFIC MEETINGS – 2003
1. Fonkalsrud EW: Repair of Chest Wall Malformations. Operating Room Nurses and Staff Conference, UCLA School of Medicine, Los Angeles, CA, March 19, 2003.
PAPERS AT SCIENTIFIC MEETINGS – 2004

PAPERS AT SCIENTIFIC MEETINGS – 2005

PAPERS AT SCIENTIFIC MEETINGS – 2006

PAPERS AT SCIENTIFIC MEETINGS – 2007
PUBLISHED ABSTRACTS

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