

OREGON HEALTH SCIENCES UNIVERSITY HISTORY PROGRAM

ORAL HISTORY PROJECT

INTERVIEW

WITH

Dr. Stanley Jacob

Interview conducted September 24, 1998

by

Linda Weimer

SUMMARY

The interview opens with Dr. Stanley W. Jacob giving a brief account of his early years, then moving on to discuss his education, first at Ohio State University where he obtained both his undergraduate and medical degrees, and then at Harvard Medical School where he received his surgical training. The Korean War briefly interrupted Jacob's Harvard training; he served in the Japan-Korea theater before moving to Walter Reed and the Army Chemical Center in Maryland. While at Walter Reed, Jacob and Dr. Alton Ochsner, Jr., developed a novel curriculum in military medicine using goats to simulate war wounds.

Upon his return to Harvard, Jacob joined the faculty there, working under Dr. J.E. Dunphy at the Harvard Surgical Service. When Dunphy accepted the position as chair of the Department of Surgery at the University of Oregon Medical School, he asked Jacob to join him and head up a transplantation program at UOMS. Jacob agreed, and became an assistant professor of surgery; he also taught anatomy and physiology in the School of Nursing. He talks about his arrival at the Medical School, and about his collaboration with Clarice Ashworth Francone on the textbook *Structure and function in man*.

Since early efforts at transplantation were limited to identical twins, Jacob shifted his focus to organ preservation. In the course of his research, he came across the cryoprotectant dimethyl sulfoxide (DMSO); in tests, he began to discover the pharmacologic properties of the substance. An article in the *New York Times* and a spot on *60 minutes* brought national attention to Jacob and UOMS; the Medical School received 100,000 phone calls after the television program was aired, and additional phone operators were hired to handle the increase. Jacob talks at great length about DMSO, the controversy surrounding his research, and the therapeutic benefits of the drug he calls "the aspirin of our era."

Jacob also talks at great length about Senator Mark Hatfield. The two men have shared a four-decade friendship, and Jacob discusses Hatfield's political career as well as his contributions to the Medical School. Jacob's recollections shed light on the placement of the Veterans Administration Hospital on Marquam Hill; on Capitol Hill politics; and on the Medical School's growing reputation on the national stage. Jacob shares his conviction that no other "outside" person has had more of an influence on OHSU than Senator Hatfield.

Jacob does single out Bea Gerlinger, heiress to the Willamette Industries fortune, as an important financial contributor to the School. He also praises Dr. Clare Peterson, OHSU Emeritus Professor of Surgery, calling him "by far the finest intellect I've ever seen." Throughout the interview, Jacob speaks well of the Medical School and his career here, dismissing notions that the University was ever too "provincial" or that it lacked vision.

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Interview with Dr. Stanley Jacob
Interviewed by Linda Weimer
September 24, 1998
Site: Dr. Jacob's office
Begin Tape 1, Side 1

WEIMER: This is an oral history interview with Dr. Stanley Jacob. The date is September 24, and we are in his office, and my name is Linda Weimer.

One of the things we're asking all of our interviewees is a little bit about their biography, so if I could ask you where you were born and where you were raised.

JACOB: I was born in Philadelphia, Pennsylvania, January 7, 1924. I only lived in Philadelphia, Pennsylvania, for about two months, and my family then moved Ventnor, New Jersey, which is a suburb of Atlantic City. You've probably heard of Ventnor when you see the Monopoly board. Ventnor Avenue was where I actually lived. I remained in Ventnor until the age of fourteen, and then in Youngstown, Ohio, fourteen to eighteen. Then I went to undergraduate and medical school at Ohio State, took all my postgraduate training at Harvard, was on the Harvard Medical School faculty, and came to what was then the University of Oregon Medical School in 1959.

WEIMER: When you went to your undergraduate college, you mentioned that you took premed courses. Had you already known that you wanted to be a doctor?

JACOB: You know, the truth of the matter is, which I always try to tell—if I would have had my druthers, I would have been a lawyer. As I look back on it, that would have been an incorrect move on my part. My father had a great influence on me, and he used to say that he just knew in his heart of hearts that I would be a happier person as a doctor, and so I listened to him and went into medicine, and that was some of the best advice I've ever had.

WEIMER: How did you find medical school? This was in the forties?

JACOB: I graduated high school in 1941, and then I went to Ohio State and got both my bachelor's degree, my BA—I majored in political science. I wanted to major in something outside of the conventional premed because I felt that I wanted to leave college with a bachelor's degree in something outside of medicine, because I knew that from then on in my concentration from an academic or learning standpoint would be in the medical arena, and I wanted to have a little bit of knowledge outside of medicine.

And I went to medical school at Ohio State. I wanted to go to Harvard Medical School, but, quite frankly, I could not afford it. I worked my way through premed and medical school. In that era scholarships were not available like they are today, and I worked

until three o'clock in the morning, waiting tables. And at the outset I lived—they had dormitories for people under the Ohio State University stadium, and it cost \$2.50 a week, and that was room and board, and everyone had to chip in and do the cooking and do the cleaning and so forth. And I paid my way totally through premed and medical school without any help. I came out not owing anything, but there were many days when I worked until three in the morning and then got up at six to do a little bit more studying and go to school, and that was a seven-day-a-week program.

In that era everyone in medical school was in what we called the Enlisted Reserve Corps of the Army, so I had a uniform and I had to do—[laughing] they were still teaching World War I tactics, and I was in the horse-drawn artillery, and I remember a couple of times when I was thrown from my horse.

But be that as it may, I was influenced by my professor of surgery, who was a man named Robert Salinger, who was truly one of the great surgeons of that era. I did my first research as a medical student with Dr. Salinger on peptic ulcer disease. At that time it was more of a surgical than a medical problem, which it has now become. And he took a liking to me, and he said that if I wanted to excel in academia, I had to get into the Harvard environment. He pointed out that 80 percent of the people in academia in that era were Harvard trained or Harvard faculty. And he made it possible for me to get all my training at Harvard and to get onto the faculty. He didn't make it totally possible for me, but he was a great help to me. He did the same thing. He graduated Ohio State, and then he went to Harvard, got all of his surgical training.

The last time I saw him, interestingly enough, was when he came—he was not only a surgeon, but he was probably, among doctors, America's leading expert on roses, and he came to head the Rose Festival parade about 1962 or '63. That's the last time I saw him. A very bright guy and a man who had a strong influence on my life.

WEIMER: When you went to Harvard, then, it was basically for surgical training?

JACOB: For all my surgical training, and then I stayed on—I was appointed instructor in surgery at Harvard Medical School, and I planned to stay at Harvard and continue my work. I was in on some of the very early work on transplantation. In fact, the first transplants were done in 1954 between identical twins by Dr. Joseph Murray, and I just happened to be in the vicinity.

But I took an interest in transplantation. When I went to the Korean War, I asked for Korean War service since I hadn't served on active duty in the Second World War. Everyone had to take two years, and I asked for Korean theater service, and I was given Korean theater service from '52 to '54, but the Korean War ended after one year. The way it worked was that the individual spent one year in Japan and one year in Korea. And I wanted to be in a MASH unit because, as a surgeon, I felt I'd get a lot of experience. But I was assigned to the 279th Convalescent Hospital, and we saw the injured three days, so we did a lot of delayed primary closures, things like that. In that era it was more like trench warfare, like the First World War,

but there were days when we'd have a thousand casualties, and I learned a little bit about war injuries. One of the things I learned was that every war, it seems like we had forgotten the lessons of the previous war.

And so when the Korean War ended, I was approached by the head of the medical service of the U.S. Army, who said that he had noticed that while I was at Harvard I had done basic work on the bacterial factor in shock, and they were very interested in that. And he asked whether I would take an assignment at the graduate school at Walter Reed and the Army Chemical Center in Maryland for my last year, because he said I could sit in a MASH unit in Korea, but there wouldn't be anything to do. So that made sense to me, and I was assigned to the graduate school of Walter Reed at the medical center and duty station down at the Army Chemical Center in Maryland. And that was a great year, because I worked with Alton Ochsner's son, and his dad started the—

[Phone rings, tape stopped].

But the other thing that I was interested in was—well, I went back to the Army Chemical Center in Maryland and graduate school at Walter Reed, and I drove between the two institutions. And I was interested in the fact that we tended to lose the lessons of taking care of war wounds between wars—between the First World War and the Second World War, between the Second World War and the Korean War—and that when doctors came into the service, particularly surgeons, they didn't have a prayer as to how to take care of shell injuries, high-velocity missile wounds, and the like. And so in addition to the work on the bacterial factor in shock, Alton Ochsner, Jr., and I designed techniques on goats which were used for at least twenty-five or thirty years to teach all of the doctors who came into the service the correct way to treat war injuries, and I think that was a minimal contribution.

When I came back from the Korean War, I decided—at that point, Dr. J. Englebert Dunphy, who was professor of surgery at Harvard Medical School and whom I considered one of the great surgical teachers that I had ever had the privilege of knowing, took over the Harvard Surgical Service at Boston City Hospital, and he asked if I would like to come down and work with him. And I thought that was a real honor, and I went down and I finished my surgical training with him, and I ran the surgical research setup with Dr. Dunphy.

And he was a fine teacher, and that's how I came here. During that era, in 1957, there was what was called the Kemper Foundation Research Scholarship with the American College of Surgeons, and every medical school was allowed to nominate one candidate, and I was Harvard's nominee. And it paid salary for three years. The salary they paid at that time was, like, \$6,000 a year for three years. They selected one person in the country. But the interesting thing about it was that Harvard—when Harvard nominated me, they had to agree that even though I was an instructor in surgery, I'd be automatically tenured if I won the Kemper Foundation Research Scholarship, which happened. So I was a tenured instructor.

And, then, at that time Dr. Dunphy was offered the position as chairman of the department of surgery here. At the same time, he was offered the position of head of the

department of surgery at the University of Michigan Medical Center in Ann Arbor, Michigan. And he called me to his office, and he said that he had accepted the job here, and he asked if I would like to come along and head the transplantation program here at our school. And in that era there really wasn't—except for identical twins, there wasn't much in the way of transplantation. I mean, there weren't any identical twins. So I switched my interest to preservation of organs.

And while I was with Dr. Dunphy and finishing my surgical training—well, actually, while I was instructor in surgery at Harvard Medical School I had a combined appointment at Harvard and at MIT. And at MIT we designed techniques to, say, freeze a kidney from the inside out. That avoids the encircling shell of ice, which occurs. And water, as you know, expands as it freezes. And so what we accomplished was to lessen the damage of freezing an entire organ. But the organs never functioned. But it was a good experience, and it gave me a chance to work with people at MIT who—I always felt, in that era, that the brightest people that I ever met were, like, the physicists at MIT—

[phone rings, tape stopped].

They didn't have enough money to pay my salary. They offered me \$10,000 a year, and they were \$1,000 a year short. And so Dr. Dunphy said to me that if I were willing to teach anatomy and physiology to the students in the School of Nursing that I could get a thousand dollars from the School of Nursing and \$10,000— well, I had six thousand from my last year as the Kemper Foundation Scholar of the American College of Surgeons, and so anyway they dug up enough money. So I was able to get the other thousand. So for three years I taught anatomy; I taught surgery, and then I taught anatomy and physiology to the student nurses.

And what I found there was that, from my standpoint, there was not a good book on anatomy and physiology at a college level. And Dr. Dunphy had written a book for Saunders, which was and is the premier publisher of medical books. A fellow named John Dusseau was the editor of W.B. Saunders and Company at that time, and he came one day to visit Dr. Dunphy about Dr. Dunphy's book on physical examination of surgical patients. We had lunch together. Dr. Dunphy invited me to be with Mr. Dusseau and him at lunch, and it was an interesting lunch. Mr. Dusseau asked what I was doing, and I told him, and I happened to mention the anatomy and physiology class. And I said to him, "Mr. Dusseau," I said, "one of my problems is that I can't find a good book on anatomy and physiology." And he said, "Well, do you think you could write one?" And I said, "I might be able to write something about the gastrointestinal tract as a general surgeon, but if I got into dermatology and ENT and neurosurgery, neurology, I don't think I would be too strong." He said—

[Phone rings, tape stopped]

So he said, "Why don't you do this, Dr. Jacob. Write me a sample chapter." At that time we had a medical illustrator at this school. Her name was Clarice Francone, and I used to call her the last of the red-hot mamas. Clarice was in the last class of medical illustrators

taught by Max Brödel at Johns Hopkins in 1920. And Max Brödel, in that era, was the great medical illustrator in the world, and he taught a technique called half tone. I approached Clarice and told her about the possibility of writing a chapter for Saunders, and I didn't know whether it would be worthwhile or whatever. And she said, "Well," she said, "I'd like to cooperate with you, Dr. Jacob, on that." And she said, "If I were co-author," she said, "I'd be willing to take three or four years and devote time to doing four or five hundred illustrations." And I said, "Well, Clarice, I don't know whether they'll really want me or you or both of us. Once they see the first chapter, they may not think it's worth their while."

So I did write a chapter on the gastrointestinal tract, she did some illustrations which were superb. The writing was okay, it was satisfactory, but her illustrations were absolutely superb. And they saw the chapter and read it, signed a contract, and I wrote the first edition. It went through five editions, the last one being 1982, and then I stopped it because it was just too much work to keep up as a single writer with all of the physiologic changes. If you look at physiology books, you'll find that there are multiple authors. I was the single author.

The two good things which happened from the book were, first, that Encyclopaedia Britannica took an interest in the book, and they looked at it and asked me if I would be an author of one of their anatomy and physiology sections, which I accepted, and I thought that—in that era, Encyclopaedia Britannica was considered, you know, pretty good. And so I accepted that, and they gave me a set of *Encyclopaedia Britannica* for writing the section on anatomy and physiology of the cardiovascular system.

And the second good thing that came out of it was that in 1971 our second edition was the largest selling textbook in the medical profession, and in one year it sold a hundred thousand copies. Now, it doesn't seem a lot when you think about, like, a million copies of *Chicken Soup for the Soul*, but your market is just premed, prenent, preret, and students in schools of nursing, so you don't have the whole country or the whole world as a marketplace. It was translated into half a dozen different languages, and I was very pleased.

And it's interesting, when I go out to give lectures today, almost always there'll be some student who used my book, primarily from schools of nursing, and will come up to me and say, "Dr. Jacob, I used your textbook. Would you please autograph this for me?" And I say to them, "Did you enjoy it?" And they'll say, "The pictures were fine, the text was good. I thought it was a worthwhile book for me." "That makes my evening," I would say. And so that still happens. But that just gets off what I think you want to hear.

WEIMER: Well, to bring it back to Dr. Dunphy, who came from—

[Phone rings, tape stopped].

JACOB: Let me go back to Dr. Dunphy. Dr. Dunphy came here in 1959, and he called me down to his office, and he said he'd like me to come here to head the transplantation program and to head surgical research; and I felt honored that he wanted to take me to Portland. And I said to him, I said, "Dr. Dunphy, I thought you were going to go to the

University of Michigan. That was the rumor I heard.” And he said, “I almost did, Stanley, but then I went to the University of Oregon Medical School,” and he said, “I can’t tell you why”—

[Phone rings, tape stopped].

He said, “I can’t tell you why,” he said, “but I accepted the job as chairman of the Department of Surgery.” And I said, “Dr. Dunphy, you and I are friends, and you’re a smart guy.” I said, “Why did you take a job at a place called the University of Oregon Medical School?” He said— and I’ll never forget this. First I said, “Dr. Dunphy, what was it that attracted you there? Was it the fact they gave you”—

[Phone rings, tape stopped].

I said, “I don’t quite understand it.” I said, “Did they give you a lot of hard money for the department?” And he couldn’t answer the question. And I said, “Did they give you a lot of research space?” And he couldn’t answer the question. And I said to him, “Dr. Dunphy, a smart guy like you taking a position at a place called the University of Oregon Medical School, and you can’t answer fundamental questions,” and I smiled, and he laughed. And he said, “Stanley”—and I’ll never forget this. He said, “It’s just like falling in love.” He said, “You don’t take out a tape measure and measure the size of a woman’s breasts, you just know that this is where you want to spend the rest of your life.” And he took the job.

He only stayed here four years, and then he took the job, in 1964, down at the University of Cal San Francisco Medical School. And I was asked to go down there, but by that time I had fallen in love with the University of Oregon Medical School and I didn’t want to leave, and so I stayed here.

WEIMER: What made you fall in love with it?

JACOB: Well, I loved—for one, the people here. They were hard working, they were honest, they were— well, the people at Harvard were hard working and honest, but there were fewer people here. It was a smaller institution. We had maybe ten percent of the current number of people at the University of Oregon Medical School as we have at Oregon Health Sciences University. I think we may have had a thousand. We’ve got, what, like 9,000 here now.

And I liked living in Oregon. It was just a wonderful place to live. At that point in my life I had only one child, and I thought that would be a great place to raise my son. Subsequently, I had three other sons and a daughter, who’s my youngest, who’s a junior at Georgetown. But I’m glad I made that decision to stay.

And everybody was just so helpful, and I knew the names of everyone, and it was like a big family. If there were problems, I could go down to Dean Baird’s office or I could go to Dr. Dunphy, and I could present the problem, and they wouldn’t just see my lips moving,

they'd hear me talking. And when either one of them said, "Let me think about it and I'll get back to you in a week," invariably they would get back to me in the week. And it might not be with the answer I wanted or I had hoped for, but I won my share of victories. And then I was talking about, you know, we didn't have enough surgical research space, we didn't—you know, things that related to my work is when I went down.

Now, in 1960—the University of Oregon Medical School had not had very good luck with what was called the Markle Scholarship in medical sciences. I was nominated by the school as its candidate, and Markle Scholarship was a high honor. It wasn't just in surgery. They assumed that when you were nominated by your university that you knew a little bit about your chosen field.

[End of Tape 1, Side 1/Begin Tape 1, Side 2]

WEIMER: This is side two of our tape one of our interview with Dr. Stanley Jacob, and he was just talking about the Markle Scholarship.

JACOB: The Markle Scholarship, in 1960; and I was the nominee of our school. Our school had not had good luck getting Markle Scholarships. And what they did was, they didn't care whether you knew anything about surgery or internal medicine or ENT or whatever, but the hypothesis of the Markle Foundation was that people who were really going to college in academia were not people who could tell you how to do a gastrectomy. They were people who knew a little bit about cubism and modern art or the election of 1912, or they could talk about Bach and Beethoven. They knew something about the world in which we lived, outside of medicine; and that these were the people who were going to be the individuals who truly accomplished in academia. And the award was five years' salary, and I was lucky enough to win it. Actually, I had the highest grade in the United States.

WEIMER: Excellent!

JACOB: I was pleased, obviously, to get the salary for five years and to do well. But it was a good philosophy on their part.

Now, they went back, the Markle group, and they compared the individuals they selected versus the individuals that were turned down, and they concluded that their hypothesis was correct. Now, whether it was or not, I don't know. It was like a poll, you know. What did this individual accomplish, what did that individual accomplish?

Probably the most controversial situation I've ever been involved in and the school has ever been involved in related to DMSO. And because I was working with trying to preserve kidneys, I looked around for an inexpensive or, hopefully, a free source of DMSO. Now, DMSO was not a well-known compound. It had been synthesized in 1866, and it was a laboratory curiosity up to the Second World War. At the end of the Second World War there were about a half a dozen chemical laboratories around the world that said it was a useful solvent.

In 1959, there was an article in *Lancet* in which they took a dozen agents which tended to bond with water, and if a substance bonds with water it lessens the damage from freezing. They showed that DMSO was among the dozen which tended to lessen freezing damage— [Tape stopped.] —when red cells were stored. A man named Lovelock in Great Britain wrote that.

I went to the library and looked for my next road to follow to try to freeze a kidney for preservation for eventual transplantation, and I came across Lovelock's article and went through the different agents and tried to find inexpensive or, hopefully, free sources of any of them. The one that I could get a hold of was DMSO, from Crown Zellerbach. And I stumbled into some of the pharmacologic properties of DMSO. Then the University signed a contract with Crown Zellerbach before— I had submitted a publication on this, but the University signed a contract with Crown Zellerbach in December of 1963 to share royalties from the patents which were pending. It was a big story in Portland, but nationally nobody paid any attention. News usually travels from East to West, or at least it did in that era.

But, then, somehow or another the *New York Times* got a hold of the information in our first paper, and they did a front page story and said it was the most exciting thing in medicine. And that started a pilgrimage to the Medical School, and I think every major pharmaceutical firm in the United States came here and wanted to be involved with DMSO research. There were so many of them that the Crown Zellerbach Corporation gave a grant to Stanford Research Institute to pick the six of the best. The ones they picked were Merck, Syntex, Squib, Ciba-Geigy, American Home Products, and Schering AG in West Germany.

And they started to work on DMSO, and they were excited about it, and they all said that it had great potential, and they were in a horse race to get the information to the FDA. Three of them, Merck, Syntex, and Squib, did fifteen hundred studies on a hundred thousand patients, and they submitted what we call NDAs—which means new drug application, which means it's ready to be prescriptive—to the FDA in the spring of 1965.

The FDA had trouble grappling with DMSO because when we started the studies in '63-64 they were working under the new FDA law, which was called the Kefauver-Harris Amendment to the FD&C, Food, Drug, and Cosmetic Act. They decided the way to deal with an agent, a drug, a medicine, was to rifle it. One drug could be used for one indication. And that was the way medicine was going. But DMSO didn't fit that category because it was good for literally many, many more potential entities than one. We didn't know the reason then; we know it now. So the FDA, in November of 1965, halted the studies on DMSO.

Now, when the FDA halts studies on any agent, it's very difficult to get things going again. You know, I was sitting here in a little office, maybe even smaller than this. It was on the sixth floor of the Research Building. But finally I was able to move things off dead center. I went back to Salt Lake City each weekend to work as a medical director for a company called Research Industries Corporation. I didn't get any payment, although I was offered ten percent of the company for doing it. That was a mistake, because the company's stock, when

we got approval finally, in 1978, a dollar would have been worth \$200, so it was a 20,000 percent appreciation, and I didn't have any of it. The reason I didn't take any stock in the beginning was that I didn't want to be accused of having a financial interest when I was saying, "This is good; it's going to help interstitial cystitis." In any event, the FDA approved it for interstitial cystitis in 1978.

Now, you hear a lot of controversy about DMSO, but it's only truly controversial from an economic and a bureaucratic standpoint. There's no scientific controversy. Since our first paper there have been 55,000 papers in the world of scientific literature on DMSO, and they come from 125 countries, and each one of them has three or four authors and probably took six or eight months to complete. Now, if we had nothing but a liniment that goes on the skin, you wouldn't see 55,000 articles, mostly peer review journals. We just wouldn't have it.

What I've learned over the years is—I don't know, when people say, "Well, it's useless or it's toxic," I just say, "Well, I'm sorry you feel that way. Have you read any literature on it? I can send you some reprints," or something of that nature. And then I just accept it. It comes with the territory, as I see it.

But it is the aspirin of our era. When I came along with DMSO—if it had been in 1897 and I would have said to you, "I have this little white pill, and if you take this little white pill when you have a headache, the headache will go away; if your temperature is elevated, your temperature will come down; if you have rheumatoid arthritis, you'll find the swelling goes down, the pain is relieved; if you have bursitis, it's going to help you; it's probably going to prevent you from having stroke or heart attacks," you'd look at me and you'd say, "That guy's crazy. I'm going to get out of here." And that's what happened with DMSO. It was the aspirin of our era, and nothing was supposed to do that, and, yet, it did all these things. And now we can go back and understand why it did it.

A thousand years from now, DMSO will still be used because it's like the song "There is Nothing Like a Dame;" there's nothing like DMSO. It's a very small molecule; it's clearly the treatment of choice for central nervous system trauma. And I know you wouldn't get anybody but me to say that. For stroke, head injuries, spinal cord injury. And we've just completed some rat studies showing that in Alzheimer's there's nothing within a country mile in rats. Alzheimer's in rats; stroke, head injuries, spinal cord injury in people.

But the things that we're using—for instance, we're using various treatments for stroke, and we can maybe do something for a patient within three hours of stroke. With DMSO we can do something for a patient within sixteen hours. I mean, it's a whole new dimension. Now, I talk to neurosurgical people. They wouldn't understand this, and the reason is, they don't spend all their time reading 55,000 articles or whatever. But it will, over the years, reach its true usefulness because of its effect in the central nervous system for stroke, head injuries, spinal cord injury, and mixed with an agent called [tryptostiphosphate?] in Alzheimer's.

The other reason DMSO is important is that it's not a drug, it's a therapeutic principle.

And the principle is that one can use the skin as a route for the systemic absorption of medication. And until DMSO came along, no one was thinking in those terms. So that all the studies now, like the patches for smoking addiction, for cardiac treatment—that all came from the DMSO concept.

When I showed that it went through tissues—people are not using DMSO in the patches, but the idea. In fact, there's a German science award which is given for the most important medical contribution in the world, and I won that in '65, not for the pharmacologic actions of DMSO, but for the principle that the skin could be used as a route for system absorption. And almost always, except for that year—I won it for '64—the Nobel Prize follows the German science award. It didn't because the FDA halted studies.

But the fact that the skin is now used like oral or injectable and so forth, was the principle of DMSO, and it will be—as I say, it's a small molecule, it's very low toxicity. It's going to alter—Mark Hatfield is working with me on a little company here that we're trying to get started. We haven't had much luck yet. Mark hasn't had the time—of course, he knows everybody. But if we can get this whole thing with the central nervous system off the ground, it's going to be a real boon to mankind.

But Dr. Baird, who was the dean—he'd call me down, and he'd say, "Stanley," he said, "I've treated this patient," or that patient. "Let me tell you what happened." And he'd whisper in my ear, and he said, "Don't say anything that I told you this," he said, "because about 80 percent of the faculty thinks that you're not—the elevator isn't going to the top in what you say, and maybe 20 percent say, 'He may be right,' but," he said, "I know you're right." He was a great supporter. I'm glad they named Baird Hall after Dr. Baird.

Now, there is one other thing that might be an interesting story. I was on *60 Minutes* in 1980, March 23, and following that there were hearings in the U.S. House and the U.S. Senate. And Claude Pepper, who was head of the House Subcommittee on Aging, was my patient. He wasn't until I met him. I don't know if you know the name. He was at one time a Senator from Florida, and then he was a Representative. There have only been two times in this century when someone who died from the U.S. House of Representatives has rested in state in the Capitol—Representatives—and he was one of the two.

And he kept saying to me, "Stanley," he said, "What are we going to do to keep you working on this until you can help all the elderly people of this country who need your help?" And I said, "Well, one of my worries, Senator, is that when I get to be seventy, because of state law, I'll no longer be able to have my position; and without my position, I don't think I could make as strong a case for this being made available." And he said, "Well, that's easy. We can handle that." And what he did was, he passed the Pepper Amendment which knocked out mandatory retirement on the basis of age, and he passed it. It was signed into law in '86, and—he asked me for my age and everything—and he passed it so that I would make it by one week. And it went into effect December 31, 1993. In essence, it said anyone who—it had a lot of things in it, but one of the provisions was anyone younger than seventy December 31, 1993, no longer has to retire because of age. And that was a plus.

The other thing that happened when I did the *60 Minutes* was that—and Mike Wallace has remained a friend over the years. I got a call from his producer a few months back, and they wanted to do another segment on DMSO, and I didn't encourage them. When they did their segment on DMSO in 1980, Mike says that to this date—and it will probably not change because in that era cable was only like 10 percent listening audience; now it's approximating fifty. And there were 60 million people or more who listened to the segment on DMSO. And it's still the one segment, the DMSO, that *60 Minutes* has done which brought in more calls and more letters to CBS than anything else they've done in thirty years. And when you consider they've covered every major news story on earth...

But the funny thing that happened was that we had 100,000 telephone calls come in to the University in one week. Dr. Ransom Arthur was dean, and he called me down to his office, and he raked me over the coals. He was very upset. He said, "Stanley, you have interfered with the running of this school." He said, "Nobody can call in to the school." He said, "You've disrupted our telecommunications system." He said, "You're not the only faculty member of the school." He said, "Do you know how much money this has cost us?" And I said, "No, sir, I don't." He said, "Well, we had to hire twelve additional telephone operators, and they couldn't handle the calls." He said, "How are we going to pay for those twelve additional telephone operators?" And I said, "Well, Dr. Arthur," I said, "I have some funds. I don't want the school to have to bear any problems that I've caused." I said, "Let me know what it costs, and we'll pay for it," which I did. And I thought that was an interesting point, because I don't think any time for any medical problem has any university had 100,000 telephone calls in a one-week period. I don't think it's ever happened.

WEIMER: That's quite an impressive record.

I do have one question. How did you deal with the frustration, with the promise of DMSO and what you know it can do, and then the FDA bans it, then it's lifted, approved again, and then there are more good things happening, you get the *60 Minutes* segment, all the phone calls, and then you get dressed down by the Dean. How did you deal with the frustration?

JACOB: Well, you know, a lot of people ask a similar question when they interview me, and they say, "Is there any word that describes your feelings?" And the only word that I would use to describe my feelings over the last thirty-six years is sadness, and sadness not for me, but sadness for all the people who might have been helped with spinal cord injuries or stroke or head injuries who have not been helped because this was not available.

As I looked at it, if I was right, time would show that; if I was wrong, it didn't make any difference. So I didn't take myself, and still don't, seriously. I figured all I could do was to work as hard as I could work, and that's why I start at four in the morning, and try to do the right thing.

And I got in—I mean, I had really big trouble—I didn't even mention it. But I was

named the first fully endowed professor at this school on December 17, 1981, Gerlinger Professor of Surgery. On December 18, one day later, I was indicted by a federal grand jury in Baltimore, Maryland, for—there were three counts, and the counts revolved around illegal gratuities to a federal official. And I went through two trials in Baltimore in May and in October of 1982.

In the first trial, after two weeks, the jury came back two hours after the trial and started to ask the judge a lot of questions. And the judge, I had the feeling, was on my side because he didn't think I had done anything that was really wrong, and I didn't either. I thought I was innocent. I *knew* I was innocent. And he wanted this trial to end, and so he called the U.S. attorneys and my attorneys to his bench, and he said, "This jury is never going to understand this trial. What I want to do is call a mistrial and bring it to an end, unless Dr. Jacob objects." And my attorney said to me—one of my attorneys. I had four attorneys. You needed them for something like this. This was in a federal court, and the government spent over a million dollars investigating me. In that era that was a lot of money. Not as much as spent on the Clinton thing, but over a million dollars.

And so my attorney said I had two alternatives. One was to invoke the Allen Rule, which insisted that the jury reach a verdict, or the other was to accept a mistrial. So I thought about it, and I figured, I'm going to accept the mistrial and maybe that'll be the end of it. So I accepted the mistrial, and I thought that was the end of it, but it wasn't. In October of 1982 they came back to retry me, and two things happened. One thing that had never happened before in the federal judiciary and will never happen again, and one thing which had not happened since Civil War days.

We asked, when I was called back for a retrial in October, that the trial be moved to Portland because I had fifty witnesses who were going to testify, and I didn't have any money, I couldn't pay their way to Baltimore, put them up in a hotel. I just didn't have it. And the government argued, the U.S. government argued, that they, the U.S. government, could not get a fair trial against Dr. Jacob in the state of Oregon because they had polled the people of Oregon and I had a 75- or 80-percent approval rating in the state of Oregon. For whatever reference I had done or whatever I had accomplished or whatever, they could not get a fair trial. Now, the government. It's usually the defendant who claims that.

The second thing that happened was in the second trial, four days into the second trial, I was ready to testify—and I testified in the first trial—and my lawyer, my principal attorney, a man named Bud Finsterwald, came in, and I was sitting where I was supposed to be sitting, and he took *The Baltimore Sun* and he tapped me on the shoulder and said, "Come with me." We went upstairs, and Bud and my other three attorneys were there with about six or eight attorneys from the U.S. Justice Department, and the conversation revolved around the fact that—and I don't know why it happened—that they wanted to get out of it, but they wanted to save face. They knew in their heart of hearts that I didn't really do anything wrong, but they didn't know how to get out of it. And so this was not a plea bargain. Remember, this was four days into a trial, and this had never happened before in the federal judiciary, and it will probably never happen again.

[End of Tape 1, Side 2/ Begin Tape 2, Side 1]

WEIMER: We are on tape two of our interview with Dr. Stanley Jacob.

You were just four days into your trial, and they called you up.

JACOB: Called me up, and what was agreed on was that—see, I did loan some money to a medical officer at the FDA. I was the doctor for his wife, he asked me to be the doctor for his wife. And his son was a student at Sarah Lawrence in that era, and then he went to Georgetown Law School, and he didn't have money to pay the tuition. And he said, "Stan," he said, "would you loan me \$200, and then I'll repay you when I get my salary?" And I said, "Sure." And every time I went to Washington I'd go to his house because his wife was my patient. So the government accused me of an illegal—and that happened a number of times—illegal gratuity. They went all through my checkbook, and—to a federal official who was a doctor at the FDA.

So the way they finally worked it out between my attorneys and the government attorneys was that the district attorney for Baltimore, for the U.S. government, would stand up in open court and say that the government was dropping all charges against me and commending me for my good work on behalf of the community, and in return I would stand up and say that a reasonable person could infer that if I'd loaned money to a doctor at the FDA it could be seen as a conflict of interest. And my attorneys assured me, and it turned out that way, that that was a clearer vindication than a jury verdict of not guilty because the government dropped all the charges and commended me. Now, that's never happened before and will never happen again.

Some day I want to write a true story—I want to write a book, and the title is going to be *The Good Stuff: the True Story of DMSO*. But I don't want to write it until it's approved for, say, closed head injuries or a stroke or Alzheimer's, something like that. It is approved for interstitial cystitis, and it's used at every medical center in the United States when we do bone marrow transplants and stem cell and frozen platelets. It's the cryoprotectant agent of choice around the world. And I think I've got a lot of interesting stories to tell.

I don't think I've ever really felt frustrated. I felt sadness, and still do, every time a patient comes here. There isn't a week that goes by when I don't get a call from a parent of a quadriplegic, and the parent has just learned that—from somewhere, maybe the Internet; everything's on the Internet—that had DMSO been given early, it might have reversed the entire thing. And they say to me, "My son is now a week after an automobile accident which paralyzed him from the neck down. The doctors don't think he's going to have any significant recovery. Would DMSO help at this point?" And I have to tell them that only minimally. The time to give it is early after the injury. We're talking hours. But every week, maybe, a call comes through. Another 10,000 of these kids each year.

And since the game—the game's been played since 1965, and it's just a game. There

are 300,000—talk about people, there are at least 300,000 people, at 10,000 a year, who are paralyzed from the neck or waist down who might not need to be if they had DMSO. There are 400,000 stroke people each year. If you multiply that by thirty-five years—I mean, you know, we’re talking a lot of people who—and their families. Every one of my children carries a stroke kit in their cars if they were to be paralyzed from the waist down, or something like that. It’s given inter-muscularly at that point. You have to get somebody to do it because if you’re paralyzed from the neck down, you couldn’t do it yourself. The same thing is true of stroke. If you give it early, you’ll recover.

And it’s sad, because all these things, as I see them, are true, and, yet, I can’t even convince the people at this school. I don’t know if you saw the *Willamette Week* article on our work. But the thing that impressed the *Willamette Week* people was that they came up to do an interview, and they’d thought they’d come up to see a building with my name on it, or whatever, and what they saw was a little office across from the kitchen [laughter]. I thought that was funny. They did a good article. But I wouldn’t trade—I really love working at this school. I can’t think of a better institution. I just lucked out. I just happened to be in the right place at the right time, and I found—I was brought here, and it’s made my medical life happy.

I went back to my fiftieth reunion from medical school last weekend, and—actually, I graduated in March of ’48 from medical school—and everyone got an award, [laughing] and I got an award for having the youngest child of any other member of the class. That’s my little daughter, who’s a junior at Georgetown, and she’s the darling of my life. Had I not stumbled into DMSO and had all these problems, I’d have never met her mother, and I would have never had the opportunity of being her father.

And so as I look back on it, I’ve worked hard. I’ve had my health. I wish things, in a lot of ways, had worked out better and faster, not so much for myself, but for people who could be helped. But I’m lucky, you know. Overall, I wouldn’t trade places with anyone because there’s no one who has anything that I want or need. I wouldn’t trade places with Bill Gates, even if he has \$55 billion, because as I look at Bill Gates, I say, “So what? He’s not going to be treating people a thousand years from now.” Maybe I’m not either, but I think so.

WEIMER: You’ve given a lasting contribution to the world for people.

I have another question. You mentioned Sen. Mark Hatfield and his support, and he’s supported a lot of people and helped with financing here at the school, at the University.

JACOB: I know. I was instrumental in getting him to do that.

WEIMER: Tell me about your relationship with Hatfield and his relationship here with the school.

JACOB: I first met Mark in 1959, and he calls it a four-decade relationship. Not quite, but almost. Mark and I go back because he gave me the Governor’s award for the

Northwest's outstanding scientist. But Mark and I go back to his years as governor.

When he was making his decision to run for reelection in—well, the election would have been in 1996, but he was on his way—he was going to go to Silverton Hospital to make his announcement as to whether or not he would seek reelection to the Senate, and this was in December of 1995. I was in working, and the phone rang at about quarter of six, and I've talked to Mark so often, I know his voice. And I said, "Mark," I said, "why are you calling at a quarter of six?" This is just to show you what a class guy Mark Hatfield is. And he said, "Stan," he said, "I knew you'd be working." He said, "Of course, you're always working. You don't seem to do much else but work," he said. "But the reason I'm calling is that, as hard as you may find this to believe—I've been Governor of the state a couple of times and Senator since 1966, but I've only really made four true friends in my lifetime. I'm not talking about Antoinette or my children. I mean non-family friends." And he said, "You're one of the four." And he said, "I didn't want you to read it in the newspapers or to hear it on the radio or to watch it on television. I wanted to tell you myself that when I went to Silverton Hospital at eleven this morning, I was going to announce that I was not going to seek reelection to the U.S. Senate." And I thought to myself, what a class act that was.

Well, over the years I've talked to Mark, and I said, "Mark," I said—there are a lot of people who talk to him, but I don't think any of them except for me he would consider a friend, a real friend. He said, "The reason I consider you one of my four true friends is that you're the only one who has done things for me and has never asked me to do anything for them." And he said, "I owe a lot of health benefits to you, Stan." And I said, "Mark," I said, "You know, this school has the possibility of really going somewhere and doing something, but we don't have any money." And he said, "Well, Stan," he said, "you know I'm on the Appropriations Committee."

And the other thing was that my little daughter's mother, from whom I'm now divorced—there was a man named Jack Brandeis, and Jack was the single largest shareholder at Georgia Pacific. Jack headed Mark's fund drive for his first run at the Senate in 1966. I was not married to his daughter at that time. I met his daughter through her dad. Her dad died a young man, at fifty-six, from metastatic [unclear] of the prostate. But the fact that my former father-in-law had raised funds—in that era \$600,000, which was what he raised, was a lot of money in that era—not by today's standards—and he beat Bob Duncan. But I talked to him over the years. A lot of people did. Len Laster did; he had other friends here at the school.

But it's interesting. When Mark comes to the school, and he comes up to talk to me frequently, I'll say to him, "Do you want to talk to anybody else?" And he said, "No, Stanley." He said, "I just want to talk to you." And he'll come in and he'll tell me about his health problems, or tell me about a health problem of one of his friends, and he'll call me. And he and I are very close. And on this little company that I'm involved with, he'll probably be chairman of the board of directors. It's called [Pharma 21?].

We had one problem during that whole era when Mark was raising money, and that was when a hundred and seventy or eighty million dollars was appropriated for the Veterans

Hospital, and Bob Duncan—who was also a friend and a patient—Bob wanted the Veterans Hospital to be down near Emanuel. And Len Laster was president at that juncture, and Len knew about my association with both Mark and Bob, and he called me down to his office, and he said, “Stanley,” he said, “do you think you could talk Bob Duncan into allowing us to have the Veterans Hospital at our school?” And I said, “I don’t know, Dr. Laster.” I said, “I believe it should be here.” I said, “I’d be willing to try, because I think it’s in the best interest of the veterans for the Veterans Hospital to be here at the school.” And he said, “Could you call Bob and set up a dinner for you and he and I?” And I said, “Sure.”

So I did, and Len and I and Bob Duncan had dinner, and I explained to Bob why the veterans would be better off. And Bob was a friend to veterans. I said, “Bob, I’m a veteran,” and I said, “You’re a veteran.” I said, “You know, the best doctors in the state are here at this school.” I said, “The newest advances are coming from our school.” I said, “We’re pushing the frontiers.” And he said, “Stanley, do you really think that the veterans would get better care at the University than at Emanuel?” He said, “There are a lot of good doctors at Emanuel.” I said, “I know.” And I said, “Of course, there are. A lot of them were our students here, a lot of them I know, and they’re excellent doctors.” I said, “But I think, overall, the veterans will get better care here than at a non-university center. And around the country veterans hospitals are situated as peas in a pod with university centers just for that reason.” And he said, “You really feel strongly about that, don’t you?” And I said, “I really do.” And I said, “Bob,” I said, “I’d feel strongly even if I weren’t at this school.” I said, “You know that I am, because you come over all the time.” I said, “But I really hope that you can see your way to reduce or maybe hopefully cease your opposition to the Veterans Hospital coming to our school.” And he said, “Well, Stanley, let me give some thought to it.” And about a week or two later he backed away from pushing for the Veterans Hospital at Emanuel. And that’s the reason we have our Veterans Hospital here.

These are little things that not many people know. But they’re important to our school.

WEIMER: Oh, I think so. The behind-the-scenes interaction, the relationships between people—one dinner and a conversation will help persuade someone to either drop support or change support for something else.

JACOB: It may have been a factor in this way. I can’t say it’s the only factor. I don’t think it—I mean, the fact that he dropped his opposition—he represented, you know. I think that was a real plus for our school.

In terms of Mark, Mark has always been interested in medicine. He may be a frustrated doctor in some ways, and I can’t think of anyone who’s done more for our University than Mark. And when Mark got into a little difficulty himself, he didn’t have as many friends as he thought he had. One of the friends he had was me, and he called me on the phone, and I got a lot of people together; and I was instrumental in raising a defense fund for him, and he really appreciated that. So he and I have a close relationship, because he says—I don’t know who the other three people he considers his friends are, but I’m glad to

be among the four.

WEIMER: That's quite a compliment.

You mentioned that Senator Hatfield had done more for the institution than any other person...

JACOB: Outside of the institution.

WEIMER: An outside person.

JACOB: I meant outside. In my opinion.

WEIMER: In your opinion. What are some of the other things that he did?

JACOB: He gave the school not only a half a billion dollars, or made it possible for the school to get a half a billion dollars, but he raised the credibility level of the University around the country because everyone, you know, whether it was the president of Duke University or president of Harvard, would go to Mark's office and they wanted Mark's help, and he'd tell them about all the wonderful things that were going on at this school.

So it changed—he did more than any other outside person to change—a lot of people would have, in the early days, considered us as a horse-and-buggy school instead of as a frontier—outside the university. Now, granted that we had wonderful people; all of our presidents, all of our deans have all been, I think, great people. But that's how he raised—people started to look at the university, at Oregon Health Sciences University, as more of a prestigious university because of Mark.

And, as you know, Mark—one of the many things he's doing is that he's the executive director of the Lasker Foundation, which is the American Nobel Prize. And Mark wanted to join with me in the company as soon as he left, but the reason he didn't was that he never made any money in his life, and he had a lot of debts to pay; and this would provide him a good salary for a couple of years so he could pay his debts, and then he said that would take a load off his mind. Mark never made any money. He was totally honest all his life, totally honest.

But I think he enhanced the credibility level of our school at other institutions, because they had to come to him—plus what he actually did here on campus. And he would tell me. He said, you know, "So-and-So from the University of Cal San Francisco came. I told him about all the good work going on at Oregon Health Sciences University." In his office he had a great picture of our whole medical school. And he would point out the different buildings and what we were doing here—when I say we, I mean he knew the names of a lot of faculty people—what was being accomplished here. And he thought, well, you know, these people are really doing great work, they're fine scientists, their graduating medical students are some of the best young doctors in the country. And he would blow the horn for

our school to the presidents of the other universities. I think that helped us a lot.

Now, what else did he do for our school? Why, maybe a lot of things that I don't know about. Probably did. Oh, another thing he did was that he became the—[laughing] I shouldn't say this. I'll get into big trouble. He became the doctor for the Senate in the sense that I'd send him the good stuff, and whenever a senator had a problem, the senators would all come in and use the term, "Mark, can I get some of the magic stuff?" And Mark would make it available. And he said to me, he said, "You know," he said, "it's always helped me with the committee when I tried to get money for the school."

And, then, in the House, Tip O'Neill was a patient and a friend, and Tip used to say to me, he'd say, "Stanley," he said, "when I run again, give me a carload of that, and I'm going to take it back to my district and give it to everybody" [laughter].

But Mark, I don't think anyone on the outside—I don't know of anyone who did more for our school than Mark. And Mark started doing things for our school from the time he first went—he loved our school when he was governor, but he couldn't really do for our school as governor what he could do as head of the Appropriations Committee, or even as the ranking minority member when he was opposed during that '66 to '96, that thirty-year stint. And he had a good relationship with Bob Byrd, he told me. He said that, "Senator Byrd and I had an agreement," he said, "that if he were the chief, he'd see that the school was helped, when I was the chief, I'd—" He said, "The school is my pet project because you're doing things at that school to help the people of our state." And he said, "Bob and I have an arrangement that when he's head of the Appropriations Committee he won't knock down anything that I want for the school, and I won't knock down some of his things that he thinks are important when I'm chief of the Appropriations Committee." That's the sort of thing he'd tell me.

WEIMER: That's a very nice compliment for the school, that there is so much support.

JACOB: Oh yeah. He truly loved the school, loves it, really, genuinely. And he's very proud of the fact that his daughter is a graduate of our school; and he's always had good medical care here at the school. And he just thinks the world of this institution. Now, granted that he's gotten money for the Mark Hatfield Courthouse, and so forth. He's done more for our school, he told me—and I think it's true—than any other institution in Oregon. And he said, "Because I think you're doing things that are doing more to help people or Oregon than anything else."

WEIMER: Can you think of other people, outside the institution, who have done a lot?

JACOB: Bea Gerlinger. Now, Bea and her husband started Willamette Industries, and—I'm the Gerlinger professor. Bea was my patient starting in 1970, and Bea loved the school, and Bea's contribution to the medical school was and is the largest single contribution

from an individual in perpetuity that the medical school has ever received. Now, that was given in '84; it was \$5 million.

Now, they got more money from Jean Vollum—Howard and Jean Vollum—when Howard died. They got more money from the Vollum estate for the Vollum, but that wasn't—Bea used to say to me, "What can I do for the school, Stanley, because you've done so much for me?" And I said, "You know, what the school needs is money for scholarships for students, for student aid. We need some research funds, sure, but people don't usually give their money for scholarship aid, student aid." So she left the largest single bequest in her estate—as I say, she and her husband started Willamette Industries. It was approximately \$5 million. The interesting thing about it was, when it was given, the stock was at, like, sixteen dollars a share, and we probably sold at the time—three weeks later, four weeks later, it had gone up to fifty dollars a share.

WEIMER: Quite a big increase.

JACOB: Quite a big increase. And she used to say to me—I would go to see her and take care of her as her doctor. I used to go every night. And she used to say to me, she said, "Stanley," she said, "let me give you some financial advice." And I said, "Bea," I said, "you can give me any advice on anything." I said, "I don't know anything about finance." She said, "Keep investing—if you have any money—in Willamette Industries, because every time it goes to fifty, it'll split and then it always goes back up to fifty." And she said, "I've watched this ever since Lou and I started Willamette." So I think Bea Gerlinger I would name as a real contributor because she left to the school, too.

By far the finest intellect I've ever seen in my life in medicine was and is Clare Peterson. In a class by himself as an intellect. I saw no one at MIT, no one at Harvard who was as bright. Clare is my best single friend among the faculty here, and when Clare had a stroke, he asked me to treat him, which pleased me, because Clare knows more medicine than anyone who's active on our faculty. Talk to people like Jack McAnulty and ask him who the brightest person in medicine who's ever been here, and he'll probably tell you Clare also.

WEIMER: Tell me why people say that.

JACOB: One reason is that his undergraduate work—he got his degree in English literature, so he stayed away from premedical things, and if you see that—like he was president of Pacific Coast Surgical. If you read his Pacific Coast Surgical presidential address, there's nobody at our school who...

[End of Tape 2, Side 1/Begin Tape 2, Side 2]

WEIMER: We were just talking about Clare Peterson.

JACOB: If you have a problem, Clare can see that problem in a different way than anyone else at our school, and we have bright people at our school. Our president is a very

bright guy; Jack McAnulty is a very bright guy. But they're all intellectually a couple of rungs below Clare. As I say, I never saw anyone at Harvard or MIT who had the intellect that this man has. And it's not just his ability to write, it's his ability to reason, it's his ability to problem solve. One of the reasons I've gotten through is that every time I got into trouble [laughing] I would ask Clare—I'd tell him what had happened and ask him for his advice on how to handle it. And, you know, I don't think he ever gave me bad advice, and that's from 1959 until now. That's a long time. That's the same time I've known Mark, four decades. And I don't think any time when Clare has come in he's given me bad advice. And I've listened to him, because I always said to myself, "This guy is brighter than I am, and I'm going to listen to him."

WEIMER: That's a glowing tribute to Clare.

JACOB: But, you know, the crazy thing was that Markle made a mistake on him. Markle turned him down.

WEIMER: So Markle wasn't perfect.

JACOB: They turned him down, and I don't believe they've ever had anybody who knew more about everything than Clare; so they goofed on Clare Peterson, and he never got over that. It bothered him that the Markle people turned him down, because he and I talked about it on many occasions. He was happy, you know, when I was awarded it, but it hurt him because he felt, and I would agree, that the people with whom he was competing were not better than he, and I don't think they were. I don't think anybody was in 1948, when he was turned down. The year I graduated from medical school he was turned down by the Markle—he was their candidate that year.

WEIMER: I'd like to ask you—I know that time is getting short for you, and I appreciate the time you've given me, but there's been an observation about the University that at times we are much too provincial, too ingrown, too Oregon, that there's not enough vision. But, then, there are other people who say that we have had vision, like Dean Baird did have vision. What are your observations on that?

JACOB: Let's see. I've got three medical schools to choose among, because I've got Ohio State, Harvard, and here. I think there is this, as Bush would say, this "vision thing." I don't think we're provincial. I don't think so; I don't agree with that. I think there's as much vision here as I saw at Harvard or as I've seen anywhere, at MIT. We're not provincial. I think the vision content of this school and its people is as high as I've seen anywhere.

WEIMER: In what ways do you see that it has vision?

JACOB: Well, I think they had vision in that Dean Baird allowed me—despite the fact that just about every other member of the faculty wanted DMSO dead—he allowed me to go on with it. And when the history of this school is written, the one contribution over the last forty years which will remain, I think, in a class by itself is the DMSO and MSM. MSM, you

know, is fast becoming the most widely-used nutritional supplement in the world, and that's the byproduct, and that's the book I wrote for Putnam.

He allowed me—he stood behind me. And that was vision, because he knew it was truth. I think at Harvard—well, I don't know because I didn't come up with this at Harvard. I might not have been able to go ahead. But that, to me, took vision. So I see that as understanding the vision thing. That was vision as I see it in my own case.

Now, I'm not saying that there haven't been a lot of great contributions, but I don't think anything has been done since I've been here that will be remembered except what I've done, both positive and negative. I mean, there are a lot of people who still will say—this won't happen ten years from now—but who now are saying, oh, it's just a liniment that you put on the skin. They don't understand it. But if it wasn't for that vision thing, DMSO would have been dead. So from personal experience—

[Phone rings, tape stopped].

I don't know whether that answers your vision question or not.

WEIMER: I think it helped.

JACOB: Now, I know that a lot of times what I say may sound like braggadocio, but I see it as truth. You see, you won't find—if you look around, you'll see people who have, like, made a contribution. See how many of them have written a paper which has encouraged 55,000 additional papers. I don't think you'll find too many. Now, Fleming, with the antibiotics, cortisone, you know, but 55,000—Jim Watson with DNA. I think Watson's contribution was a great contribution to medicine for this half of our century, Watson and Crick with the DNA molecule. But when you come to 55,000 articles, that's a lot of articles. I mean, you'll see someone who writes an article and it may get a little bit of play in the local paper, or maybe even nationally, but it won't go on for thirty-six years.

WEIMER: That's quite a testament.

Is there anything else you'd like to add?

JACOB: No. I just appreciate your time, and I know how busy you are, and if I can answer—I know I didn't have the answers to every question you asked...

WEIMER: Well, we didn't touch on a lot of our themes, but I think we touched on quite a few of the major ones.

JACOB: I wish you good luck.

WEIMER: Well, I want to thank you again.

JACOB: I just hope I didn't bore the tears out of you.

WEIMER: No, no. It's been a pleasure. Thank you.

[End of interview]

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