OREGON HEALTH & SCIENCE UNIVERSITY

ORAL HISTORY PROGRAM

INTERVIEW

WITH

# *Ernest Alan Meyer, D.Sc.*

Interview conducted February 10, 2010

by

Lesley Hallick, Ph.D.

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Site: BICC Building, OHSU Marquam Hill campus

HALLICK: This interview with Dr. Alan Meyer was conducted on February 10, 2010, in the BICC building on the Marquam Hill campus of Oregon Health and Science University, Portland, Oregon, as part of the OHSU Oral History Project. The interviewer is Dr. Lesley Hallick, and this is tape number one.

Hi, Alan.

MEYER: Hi, Lesley. It's been a while.

HALLICK: It has. Not that long. The beginning, I guess, of such an interview is your beginning. So maybe you could start by telling us where you were born.

MEYER: Okay. I was born in San Jose, California. And I grew up in San Francisco for my formative years, through high school, through the Depression, until World War Two. My father was a newspaper man. The good news is that he was the literary editor of the *San Francisco (Chronicle?),* so I was surrounded by books as a child. The bad news for him was in those Depression years, it was a Hearst newspaper and he really didn't like the idea of working for Hearst. But in those Depression years, a job was a job.

HALLICK: I didn't know that. I didn't know you started out in San Francisco.

MEYER: Yes. Yes, yes. And then I went to perhaps one of the best high schools, still one of the best high schools in the state, Lowell High School, maybe in the whole nation. They've had a lot of Lowell graduates, including more recently Supreme Court Justice Stephen Breyer. But Carol Channing, another graduate, has given millions of dollars to their auditorium. So they have a lot of illustrious graduates. But at the time, I was immature and I didn't really study. I didn't learn how to study until I got to UC Berkeley after the war.

But the war came along. Pearl Harbor came. And in the city, they were really worried about Japanese submarines seeing the lights of the city and putting incendiary bombs in it. So the city of San Francisco at night in those days was dark. So we had to put newspapers in the windows and scotch tape them up. It was dark at night.

HALLICK: Really. Like London or something.

MEYER: Yes. I took a crash course as a fire warden. And I was a fire watcher. My post was high in the attic of a mansion up a hill. My mission impossible was to spot any fires as they occurred. None of them ever occurred.

HALLICK: Thank goodness. How old were you when Pearl Harbor was struck?

MEYER: Sixteen years old. So they speeded up my high school course in order to get us through by the time I was eighteen. Then I got to be eighteen, and I went off into the service. I went into the air force. Thinking I would fly. But when they saw both of my punctured ear drums, they said, "You'll stay on the ground, Meyer." [Hallick laughs]

So they made me a code clerk, a cryptographer. That was an interesting period of time. I was stationed on a little island out in the Atlantic, in the Azores. It's called Santa Maria. It's about a thousand miles off the coast of Portugal. Owned by the Portuguese.

In those days, you know, airplanes couldn't fly nonstop from America to Europe. And so the Azores was the ideal stop. So America had a deal with the Portuguese government to blast out an airfield on this tiny four by eight island. So there were a lot of planes going both directions. A lot of interesting things happened.

HALLICK: Why did they have cryptography at that location?

MEYER: It was part of a worldwide cryptography system. We just were in touch with everybody.

HALLICK: Wow. That must have been fascinating.

MEYER: It was fascinating. It was difficult. We were understaffed at the start, so we worked long, odd hours.

HALLICK: And were you intercepting radio signals?

MEYER: No. They were coded messages. And after the war, the code machines we were using looked surprisingly like the machines that they used after they showed the Enigma story, after the Enigma, the code machine that the Nazis had developed. The Allies managed to get and Enigma code machine and copy it. So a great big typewriter looking box in which every day you put in rotors, electrical rotors. And every time you hit a key, these rotors would move. The codes were, I was convinced, so complicated you should never try to break them.

HALLICK: [laughs] Maybe this has something to do with your current activities.

MEYER: I was telling Sara earlier about an experience where I encoded a message for the Secretary of State. And I could tell you briefly about that, if you wanted.

HALLICK: Sure.

MEYER: We were on the island one day in the code room, and word came through from Europe. At the time, Roosevelt had died. Harry Truman was the president. He had taken on as Secretary of State James F. Byrnes, who earlier was the governor of

South Carolina. And he was actually a Supreme Court justice. And he stepped down from his Supreme Court duty to be a Secretary of State. And he was going back and forth, shuttling to Yalta and to Potsdam. And word came through that he was coming back from Europe and he'd be stopping at our island, and he would have a message that he'd like encrypted for the president, Truman. And we should be ready. He was going to arrive, say, at twelve o'clock. And the officer looked around and he said, "Okay, let's go early. Everybody leave for chow and we'll leave one person here. Meyer will take care of the fort while we're gone." And I was by myself.

There was a little room in front of the code area with a small window for the outside world. And then behind me, behind another door, were the code machines. And nobody but nobody but licensed personnel were supposed to be back there.

But there I was by myself, and the Secretary of State's plane arrived far too early. And I looked up and I saw two shoulders and heads in this little window. One was obviously the commanding officer of the base. There was lots of brass on the guy's shoulder. And the other mans at that window I recognized as the Secretary of State.

And the commanding officer pointed at the door. He said, "Open the door, soldier." And there was a gun on the back of the door that I was supposed to grab and prevent anybody from coming in.

HALLICK: Amazing!

MEYER: I was frozen. And now the commanding officer becomes a little upset with me. He says, "Open the door, soldier!" And I was wavering. I chickened out. I opened the door. Secretary of State walked in. And not only that, he walked into the code room and sat down. Pulled out a fountain pen and a pad and he started writing longhand a message. I watched him. He handed the message to me. And I sat down and I encoded the message and sent it. About the time I got finished, the rest of our staff started filtering back from lunch.

HALLICK: Shocked.

MEYER: I didn't get court martialed, but they were probably embarrassed that they weren't around, either.

HALLICK: [laughs] Wow. What an experience.

MEYER: Yeah. It was memorable. I don't remember what Byrnes said in his message, but I'm sure it was a secret.

HALLICK: It's probably classified somehow.

MEYER: Yeah.

HALLICK: So how long were you on that island?

MEYER: Just a year. Just a year.

HALLICK: That's a long time to be on an island.

MEYER: Yeah.

HALLICK: And then you came back?

MEYER: Yeah.

HALLICK: To the States?

MEYER: I came back to the University of California. We were discharged. I came back to Berkeley. And enrolled in Berkeley in forestry. I had worked for a couple of years in the Forest Service, and an outdoor life looked like the thing to do. I majored in forestry starting out. But after about a year, I decided that maybe that wasn't much of a challenge. So I gravitated toward bacteriology.

HALLICK: Uh huh. So you were a bacteriology major at Berkeley?

MEYER: Yeah. I went into bacteriology. And in the department, a fellow named Sanford Elberg was chairman.

HALLICK: I remember that name.

MEYER: He may still be alive. He went on to become, I think a dean of the graduate school. He was very well liked. A little short man with a high kind of precise voice. He was kind of a driven man. He was interested in Brucella. Brucella and brucellosis and vaccines. Undulant fever, a disease that goes from cattle or sheep to people. So he in his laboratory was growing lots of Brucella organisms.

So we were taking a course from Sanford Elberg. Midway through this lecture course, he'd come in on a weekend to check his cultures. And he'd gone in to the walk-in incubator and he picked up a large Petri dish and the bottom of it fell out. And it had brucella.

HALLICK: Oh my gosh!

MEYER: So quickly, he was very ill. And so for the next lecture, the teaching assistant came in and put a tape recorder on the front desk and turned it on. And there was this rasping voice of Sanford Elberg who had taped the lecture in bed.

HALLICK: From his, oh my goodness.

MEYER: He was still going to give the lecture even though he was very ill.

HALLICK: He recovered, though.

MEYER: He did. He went on to become a dean of the graduate school. I graduated there with a bachelor's degree. You spent some time at Berkeley.

HALLICK: I did, indeed. Did you get to do undergraduate research there?

MEYER: Uh—

HALLICK: Or did such a thing exist?

MEYER: Just helping others. I never got into undergraduate research there. Just very busy courses. It was, those post-war years were competitive. All those veterans were back there, and it was really tough. But thinking about where to go for a master's degree, I went to Dr. Elberg and chatted with him. And Melvin Calvin was also on the faculty. And he was the fellow who got the Nobel Prize for photosynthesis.

HALLICK: The Calvin Cycle, sure.

MEYER: Yes. And so I talked to Elberg and said, "You know, Dr. Calvin just had a graduate student. His name is Moskowitz, and he just got a position at Purdue University. I think it would be wise…" And so Barbara and I, by then we were married—

HALLICK: We'll come back to that. [laughs]

MEYER: Okay. We can talk about that later.

We jumped in our car and drove to West Lafayette, Indiana, Purdue, where both of us spent a year earning our Masters degrees. I did mine in bacteriology with Moskowitz, working on a clostridium, Clostridium perfringens, the gas gangrene organism.

HALLICK: Right.

MEYER: One of the enzymes C. perfringens uses to cause disease is lecithinase and I worked on that. And Barbara did her chemistry Master's degree in the chemistry department. So after a year there, Dr. Moskowitz asked me if I didn't want to stay on for my Doctor's degree. In those days, you know, you took sort of a short step at a time. A lot of people didn't go for the PhD right off the bat.

HALLICK: Right.

MEYER: Dr. Moskowitz was a good enough mentor. But he had problems of his own, his wife. I don't know what you'd call it, whether it was bipolar or manic

depression. But his problems got into the laboratory and it was clear that it was not going to be a peaceful coexistence.

HALLICK: Oh, that's too bad.

MEYER: So I looked around for greener fields. And curiously, the only school I applied for was Johns Hopkins. And I was accepted.

HALLICK: Now was that also in bacteriology?

MEYER: Yes. Now I'd done my work in Clostridium perfringens. And I got to Hopkins and they said, "You're going to be working on Clostridium." And my professor, my mentor there, was a fellow named Carl Lamanna, whose achievement, he was a Cornell man, was to crystallize botulinum toxin, theoretically the most potent toxin known to man. So he produced crystals of this toxic substance, which were highly potent. But after he'd done it, after he'd seen the crystals, he realized he had two molecules, not one. One was a toxin molecule, and then another, maybe a carrier molecule, hemagglutinin that attached to the cell. So my mission impossible, should I care to accept—I didn't have any choice, I had to accept.

HALLICK: Yeah. [laughs]

MEYER: You know how that is.

HALLICK: Uh huh.

MEYER: I was to separate the toxin from the hemagglutinin. That's what I –

HALLICK: Oh my gosh. And the chemical structure of the toxin had not yet been identified.

MEYER: No. There were pictures of it. And I was sweating that out, too. But it was not at a time when they really had the amino acid structure and all that.

HALLICK: Right. Right. Well, let's back up a little bit and then we'll come back to Hopkins.

MEYER: Surely.

HALLICK: But tell us about Barbara. Where did she come from?

MEYER: Oh, Barbara grew up in Southern California. And all my kids and Barbara were all Phi Beta Kappas, and I never could quite do that. So she's the brains in the family. I say that she went to Berkeley. And she and I were sharing the same organic chemistry lab. And I was on this bench and she was on the bench in back of mine. And we were doing something with burettes—

HALLICK: Burette, yeah.

MEYER: She tapped me on the shoulder and she said, "My burette's broken. Can I borrow your burette?"

HALLICK: What a line!

MEYER: Yes. Yeah, I guess the first contact, she was kind of forceful. So one thing led to another, and we got married in 1950. And the rest is history.

HALLICK: When did you graduate from Berkeley? What year?

MEYER: 1949.

HALLICK: Okay. So you went to get your master's. Were you married in Purdue? Or did you come home?

MEYER: Yeah. We were married in 1950 and went to Purdue for a year. And then we went on to Hopkins and worked those years in Baltimore.

HALLICK: So you were working on the botulinum toxin.

MEYER: Yeah. the whole time. Yeah. You know, one milliliter of botulinum toxin was enough to kill more than a million mice. We'd grow it in these big fifteen gallon carboys, which were liquid. And it was very odoriferous.

HALLICK: And dangerous. So how did you protect yourselves in those days? I mean, we didn't have that kind of hood.

MEYER: That's a good question, Lesley. I don't know, and I haven't really studied it, but I don't know how common the toxoid was. We were not immunized. And I guess, you know, we were graduate students and would very likely be poisoned if we were splashed. So we were just told, "You be very careful. If you splash, let someone know."

Now the fellow in the lab next to mine, another student of Dr. Lamanna, working on a botulinum enzyme, did splash himself. And he quickly told Lamanna. And he took him across the street and put him in a hospital bed in Johns Hopkins.

One of the symptoms of botulism is diplopia, double vision. And so the student said repeatedly during the night the nurse would shake him awake and say, "How are you doing? Are you seeing double or not?" So he'd splashed himself, but he didn't get poisoned.

HALLICK: And you never did?

MEYER: I never did. But I think Fort Detrick, Frederick, Maryland, was not too far away. That's where the East Coast biological warfare place was located. And when they heard about Bob Millonig, I think they sent an ambulance roaring down with antitoxin.

HALLICK: An antitoxin, yeah. Interesting.

MEYER: So he survived.

HALLICK: Now did you collaborate with people at Fort Detrick during that time?

MEYER: I gave a talk up there but had no formal collaboration at Fort Detrick. But Dr. Lamanna, all his life, even after he left Hopkins, had army connections. He was quite an articulate, clever fellow. So he, with that army connection, never had any trouble getting anything he wanted. [Hallick laughs] Lots of mice, lots of chemicals. You name it.

HALLICK: Even in the shortage years right after the war.

MEYER: There it was. Yes. No problem.

HALLICK: And were you affected by the Korean War at all?

MEYER: No. That came later.

HALLICK: While you were at Hopkins.

MEYER: I should tell you briefly the cockroach story.

HALLICK: [laughs] By all means.

MEYER: It was called the Johns Hopkins School of Hygiene and Public Health, but it really wasn't very hygienic. The building was shot through with not only wild mice, but with cockroaches as well. You open a drawer and either the mice might go scurrying or you might see cockroaches or their egg sacs. It has since been cleaned up.

HALLICK: [laughs] What a place to work on pathogens!

MEYER: Yes. I tell you, it was a dangerous place. But you'd come in after the people had mopped the floor, if there was a puddle of water on the floor and you opened the door at night and turned the light on, it would be ringed by large cockroaches there to get a drink of water and they would scurry. They're really some of the largest cockroaches, you know, they were something to be seen.

HALLICK: And all resistant to botulinum toxin.

MEYER: I'll bet you they were. But Bob Millonig walked into his lab that was next door to mine one day. He was having trouble with mice. And so on his desk he had these mousetraps set up. He was intent on trying to catch them, to get rid of them. I'd come in that night and the place was empty. I don't know why I had reason to go into his lab, but I opened the door and flicked the light on. There were the traps. But on the floor there was this bunch of large cockroaches. I grabbed the largest cockroach I could catch and I put it into his mousetrap as if— [Hallick laughs] And I didn't say a word.

The next morning I was in my laboratory when Bob came and opened the door. And I heard this whoop. And he went running up and down the hall collecting everybody from offices on both sides. "Come see--

HALLICK: [laughs] Look what my mousetrap caught!

MEYER: "Come see the mousetrap that was big enough—" He was not very happy with me when I told him.

HALLICK: Oh, that's a good one. So your penchant for practical jokes started quite early, it sounds like.

MEYER: Yes. So from Hopkins, Lamanna was a good enough mentor to me. But he, during my tenure there, he took off for a year's sabbatical. He went to the Philippines for a year. And so we fired letters back and forth about my research. And that was fine. When my research was almost done, he announced that he was leaving the university. And I'd continue, I think he figured that I was essentially through, and I think I was, but he just left.

HALLICK: Where did he go?

MEYER: To the Western equivalent of Fort Detrick. It was called the Naval Biological Laboratory in Oakland, California. You know, just at the toll plaza there as you go onto the Bay Bridge.

HALLICK: Right.

MEYER: The Naval Biological Lab consisted of several big old two story army barracks. And that was where the Navy did biological warfare research. So Dr. Lamanna left Hopkins to become the director of this biological laboratory in Oakland. And when I was looking for a job after I got my degree, I immediately wrote to Lamanna and said, "How would you like to hire me?"
He said, "Well, come on."

So our next stop was Oakland. This was 1957, I think. And I worked there just a year. As it turned out that was a bad year for congressional appropriations. Because after

a year there, they couldn't continue to support me. So I had to find other work. I looked all over the Bay Area for a job suitable for a microbiologist. And there was nothing. I didn't like the idea of those Baltimore summers. I was looking for something on the West Coast. And in my travels, in my search for a job, the American Chemical Society was having its annual meeting, I think, in 1957 in the city.

HALLICK: In San Francisco.

MEYER: And I had gone over there to see about getting a job. And standing in the back of one of the lecture rooms I bumped into my uncle, Harry Sears. We recognized each other. He was then the chairman (professor emeritus) of the department. He still had an office in a laboratory in Mac Hall. So we chatted, and I told him I—

HALLICK: Now, tell me a little about Harry.

MEYER: Okay. Sure. He's my uncle. He was my uncle. He had married my father's sister.

HALLICK: Okay.

MEYER: And Harry Sears had gotten his degrees at Stanford University in chemistry and bacteriology. His mentor turned out to be a famous bacteriologist of that era. A man named Hans Zinsser.

HALLICK: Of the textbooks.

MEYER: Yes. Zinsser wrote a book called *Rats, Lice and History.* And he wrote the *Biography of RS.* He wrote several books. He was good at writing and explaining things to the laypeople. So his books were, I think, best sellers for educated Americans at the time.

HALLICK: Well he also edited, if I'm not mistaken, textbooks that we used.

MEYER: That's right. Zinsser's textbooks were used for years. So Harry Sears was working under Hans Zinsser at Stanford on salmonella. He was working on typhoid fever. And like Sanford Elberg, Harry Sears acquired the disease he was working with. So he was in Stanford Memorial Hospital suffering from typhoid fever when Hans Zinsser came to his bedside and said, "Harry, I've got a job offer at Columbia University I can't turn down. Do you want to go with me?"

And Harry [grunts], "Go ahead."

HALLICK: Don't feel too well? [laughs]

MEYER: "Go ahead, Professor. I think I'll stay here for a while." They didn't have antibiotics in those days. So Harry stayed on. He then became, in 1917 or '16, public health officer for the city of Berkeley, California, for a year or so. Then he

discovered that there was an opening for a job as a professor, chairman of bacteriology at a new medical school in Portland. And he applied and was accepted. So I think in about 1917, Harry arrived at 23rd and NW Killingsworth where the medical school consisted of a big wood frame building. And for one year, Harry Sears was the teacher of bacteriology down there. And the following year, he came up the hill here. So from about 1918 to 1956, Harry Sears was either the chairman or an emeritus member of this department.

HALLICK: And he must have been one of the first full time faculty.

MEYER: He was *the* first. There was just a handful in those days.

HALLICK: Yeah.

MEYER: So I think single-handedly, he must have taught microbiology to medical students, to nursing students. There were a few graduate students, one of whom was Lyle Veazie. She got her masters degree working with him. And then she stayed on. And she was to become the second member of the department later, I think in the '40s or the '50s.

HALLICK: So when you were looking for a job from the Bay Area, who was chair? Was it your uncle or was it Lyle?

MEYER: It was Dr. Frisch. Now this is what had happened. Harry I think had stepped down in 1956, and Arthur Wayne Frisch had taken his place. Department space was plentiful, and Harry still had an office and a laboratory. When I arrived, he proudly walked down the hall and opened his door and said, "Alan, this office, I bequeath it to you." He gave me his office.

HALLICK: [laughs] Oh!

MEYER: So the genetics in the family stayed on. So Frisch had come on in 1956. I think I've got that right.

HALLICK: As chair.

MEYER: As chair.

HALLICK: And was it called bacteriology then? Or microbiology?

MEYER: Bacteriology, still. It wasn't until later that the name changed.

HALLICK: And Lyle was a—

MEYER: She must have been an assistant professor or an instructor or something like that in those early years. So in the earliest years, the department consisted of Sears, and then Dr. Sears and Lyle Veazie. And together they did all the teaching. And then

Harry Sears retired, and Dr. Frisch came on board. And Dr. Frisch had both an MD degree and a PhD degree, from Wisconsin, I think it was. He was interested in blood groups and serotyping and legal aspects of blood groups. He was mostly kind of an immunologist. But he was kind of a self effacing guy. He liked to teach the medical students. But I think he didn't like, if I'm putting it too mildly, teaching the nurses. [Hallick laughs]

So when Harry saw me in that hotel meeting and said he thought that Dr. Frisch was looking for somebody in the department, Dr. Frisch was looking for somebody to teach the nurses, to take his place. And so when I was approved, I still remember standing in Mac Hall in the doorway of Dr. Frisch's lab. And he was standing there with a pipette in his hand. And I explained who I was. And he looked up from his pipette and said, his first words to me, "You'll teach the nurses."

HALLICK: Well you were teaching the nurses when I arrived. So that went on for a long time. [laughs]

MEYER: Yes, I was teaching forever. I wrote a textbook and all that. Yes. So it was decades. But it wasn't really all that bad.

HALLICK: Oh, I loved it. I can imagine.

MEYER: Yeah. You helped.

HALLICK: I like teaching nurses. They're so varied.

MEYER: Yeah. It's a challenge. Yeah.

HALLICK: That's interesting. Well, before we go on about the early days of when you were in the department, I have to pick up a couple of threads here.

MEYER: Okay. Pick away.

HALLICK: So Barbara was a chemistry major at Berkeley?

MEYER: She was a chemistry major.

HALLICK: And then she went on to get a Master's.

MEYER: She got a Master's. And then we got to Hopkins and the children started arriving. Well, actually, Manfred Mayer hired her first. He was a well-known immunochemist. And he'd written a book called *Experimental Immunochemistry* and he was involved with the Salk vaccine. And quantitative complement fixation was what he was into. But when he hired a technician, he gave them an exam first. He gave them the instructions and he wanted to know if quantitatively they shaped up. So he gave Barbara

a complicated test and she passed. So she worked for this well known immunochemist until the children started arriving.

HALLICK: And tell us about the kids, and when they arrived.

MEYER: Well, two children arrived during those years in Baltimore. When Barbara got pregnant with the third child, (she's got a mind of her own) she said, "Three children and another summer in Baltimore, I'm out of here!" She said, "You're close enough, Alan, to be finished with your degree. Come see me when you get to California." So she up and she left.

HALLICK: She actually moved to California before you did?

MEYER: She did. She went some months ahead. So she got off the plane and shook hands with her doctor. And then I think about a week later, she had our third child.

HALLICK: [laughs] And tell us their names.

MEYER: Martha, David, Paul and Matthew are the four children.

HALLICK: And Martha, David and Paul, then, were the first three. In that order?

MEYER: Yeah. And Matthew was the fourth. Interestingly two of them now, Martha and Paul, are both on the faculty; they're both professors at George Fox.

HALLICK: Wow. I didn't know that.

MEYER: And Paul is a physician. He's a child psychiatrist here in Portland, in Beaverton. And David married an artist and they're into things artistic. And they're making it on their own, I tell you.

HALLICK: As artists. That's a hard thing to do.

MEYER: Calendars and pottery. They're teaching a course in Italian.

HALLICK: Talented bunch of kids.

MEYER: And they play the harp and the guitar. And they're quite extraordinary people and all our children are living locally.

HALLICK: Yeah. And two in Newberg.

MEYER: Two weeks ago we just got back; we took them all, twelve of them, their children and grandchildren, to Mexico for our sixtieth wedding anniversary.

HALLICK: Oh my gosh!

MEYER: I wasn't going to mention that.

HALLICK: Congratulations! Well, why not? That's an amazing accomplishment.

MEYER: But I think the amazing thing is we've got four kids, the umbilical cord is cut, and they're all doing fine.

HALLICK: That's fantastic. Well, let's back up in time.

MEYER: Surely.

HALLICK: That was kind of a quick roll forward. So when you came to the Bay Area, Barbara wasn't working during that period. And you worked for a year.

MEYER: Yeah, I worked for a year at the Naval Biological Laboratory. And that's when I found out through Harry Sears, then, that there was an opening, possible opening in Portland. So that's when I got in touch with Dr. Frisch. That's when I got accepted. So in 1958, I came up here.

HALLICK: And started teaching microbiology to the nursing students?

MEYER: Yeah. At that time, the only other member of the department I haven't mentioned was Evelyn Oginsky. And she had been hired by Dr. Frisch. She, as you know, was a bacterial physiologist. She had graduated from Cornell. And with a fellow named Wayne Umbreit had produced in the 1950s probably the best selling bacterial physiology textbook in America. It was an Introduction to Bacterial Physiology (Umbeit and Oginsky). And if you took a course in bacteriology in America, that was the book to have.

HALLICK: That was the text.

MEYER: So she arrived here, she, with laurels. She was all right. She was articulate. She was short; I don't think she was five feet tall. She was slim. She was a go getter. She believed in research, collaborative research. And she started a group which was called the Chowder and Marching Society. And the faculty from the Medical School, from the Dental School, from Reed College, from Portland State, would meet at different members' houses of an evening, and they would talk about research. I was part of it. And Evelyn was part of that cabal. She was putting it together, and she made things go. That was the era of training grants. They were getting to be popular. She knew how to put those things together. She knew what to say. And she probably had some of your talents. She was good at that. She was instrumental in making the department go.

HALLICK: Now was she a faculty member recruited by Dr. Frisch?

MEYER: She was.

HALLICK: And she was chair at some point, wasn't she?

MEYER: No. Let me tell you about that.

HALLICK: [laughs] Okay.

MEYER: The word came that Dr. Frisch was going to step down. I think this was 1972. And the search would be on, that was not an era, I think, when women were all that strong in academia. And there was Evelyn Oginsky, with her name and her career. And I think, it's my belief that when she saw that there was a search going on and she was not even being seriously considered, she pulled up stakes and she went to San Antonio, University of Texas Health Science Center. And there she stayed until she retired. She came back for a year or so in the '80s. And they made her an Emeritus Professor. But she died shortly after that.

HALLICK: Right.

MEYER: But they done her wrong, I think.

HALLICK: Yeah. Yeah. It sounds like they didn't appreciate what they had.

MEYER: She was good. She was good.

HALLICK: So you came in 1958.

MEYER: I did.

HALLICK: She came after that?

MEYER: She came before. She was here.

HALLICK: Oh, she was here already. Okay.

MEYER: So she was here in '58. And then after that, let's see, I can tell you about Wallace and Barbara Iglewski. They came; they were here when you arrived?

HALLICK: They were. I came in '77. And they were here and had been here for a while. In fact, they were on sabbatical. I'm not sure if it was their first sabbatical.

MEYER: They went to Washington, DC on sabbatical.

HALLICK: Yeah. When I came.

MEYER: Well, Marvin Rittenberg came in during the '60s, an immunologist for a different department. I think he was with Bernard Pirofsky or somebody like that.

HALLICK: He was with Pirofsky. That's where, he studied immunology.

MEYER: But he came over. And one of his claims to fame is that one of his students was Mary Stenzel-Poore, who's presently the chairman of our department.

HALLICK: Right. And the associate dean for basic sciences.

MEYER: Yes. So meanwhile, back to the Iglewskis.

HALLICK: Yes.

MEYER: I think Dr. Frisch must have been notified during that period that money was available for another faculty member. So Frisch headed to the national bacteriology meetings to recruit a pathogenesis person. Somebody interested in how organisms cause disease; he came back triumphant and announced to the department that he'd found not one but two people. A man and wife combination. Don't be disturbed; neither one of them is a pathogenesis person. They're both virologists. But they can be trained. We'll be fine.

I think he really had his eye on Wallace. He thought Wally Iglewski would be the bacterial pathogenesis person. But it turned out that Barbara Iglewski's star was to shine much more brightly than Wally's.

So she arrived and she did good research. She published in the National Academy of Sciences. She became the President of the American Society of Microbiology. And she and Wally went on to Rochester, I think. But they both did a decent job.

HALLICK: Well she was working with Pseudomonas when I came. So she must have converted to bacteriology. Wally was still working with viruses. [laughs]

MEYER: Yeah.

HALLICK: Now when did you start working with Giardia?

MEYER: I had arrived in Portland. I had done my master's and my doctor's theses, both of them on clostridium. So I arrived in Portland, Oregon and had a kind of a niche carved out. I knew something about these organisms. I thought, "Well I'll look and see what's hot in clostridium." I'd gotten some pretty good ideas. And I'd sent off for the cultures. And I was beginning to focus on it. And this wasn't very many months after I'd arrived in Portland. Then I acquired an intestinal disease. I got diarrhea. I mean, everybody does that. But this had never happened before so long. It wouldn't go away. It was weeks. And I was losing weight. I wasn't bedridden, but I dragged myself in, I'd soldier on. I was at my wit's end. And the woman, the faculty member, next door in the university was Lyle Veazie. She was the parasitology person. And1 she's the one I spoke

to most often. Finally I mentioned briefly in passing that I was suffering from some kind of intestinal disease.

She said, "Alan, you've got Giardia. Bring me a specimen."

Bring me a specimen! Well—[Hallick laughs] I obeyed. I brought her the stool specimen. [laughter] Yes. It probably wasn't the first time she'd given that order.

So I brought her a specimen. And triumphantly she put it under the microscope. And there under the microscope were these swimming things that just boggled my mind. These were Giardia trophozoites. She said, "You've got this, this is the world's capital for Giardia. We've got lots of this here. So there you are. You've got it."

So I quickly went down to Dr. Trainer's student health service and got treated for Giardiasis.

HALLICK: So Dr. Trainer was the director of the student health service then?

MEYER: Yeah.

HALLICK: Oh my gosh.

MEYER: So nothing can get you to the library faster than being—

HALLICK: [laughs] Infected.

MEYER: The ironic thing was, I was infected with a protozoan. And I thought I knew all about microbiology. But one of the chores of this department then was to teach all the parasites. It was after World War Two. Soldiers coming home, everybody had parasites. They were common. And now going back a little bit, there I was at Johns Hopkins, which is kind of the fountainhead for parasitology, because students come from all over the world, from all kind of second world nations. So parasitology at Johns Hopkins was a requirement for all of us students. And I was required to take it.

And one day, working in the laboratory, my professor, bless his soul, Carl Lamanna came into the laboratory and said, "Meyer, you don't want to take parasitology, do you?"

And I said, "Huh?"

He said, "I thought so." He said, "I got you out of it. You're excused."

HALLICK: Oh my gosh! So you hadn't had a parasitology course.

MEYER: I didn't know what Giardia were. So I spent my life, my career studying a parasite that I missed studying when I should have. Really.

HALLICK: You know, I never took a virology course until I got this job and had to take one quickly before I got here and had to teach it.

MEYER: So you quickly, you became an expert. I wonder how often that happens.

HALLICK: I don't know. Probably, you don't usually confess, right?

MEYER: Probably more often than we suspect. So anyway, I went to the library and I discovered some interesting things about Giardia that really caught my attention. It was probably the first microorganism described by man. Because in 1684, there was this Dutchman, Anthony Van Leeuwenhoek—

HALLICK: Oh, of course.

MEYER: The man that made his own microscopes.

HALLICK: Right.

MEYER: And he looked at everything with them. Rainwater and sperm and blood and feces.

HALLICK: Sure.

MEYER: And he would write these great letters to the Royal Society of London.

HALLICK: With drawings.

MEYER: Yes. And he was infected with some of the organisms he was describing, Van Leeuwenhoek was suffering from diarrhea. And he looked and there were these organisms, "like a pissabed running up against a wall," he said. Which is like a sow bug. And he described them so thoroughly that most people who study Van Leeuwenhoek agree that it was probably Giardia, the first microorganism ever described. And so here in 1959 I was infected by an organism that had infected all of these people and one that had never been cultured. Never been isolated, never really been studied, because people thought there must be something mysterious about its relationship with its host. It lives in the gut. It attaches to the wall of your intestine. Does it get its nourishment from the human host? Or from the liquid? Or from the other microorganisms? It seemed too complicated and they just weren't fooling with it.

HALLICK: Interesting.

MEYER: And Lyle Veazie said, "You know Alan that would be an interesting thing for you to study, you could do that." You know? "We've got tissue culture now, and they've got other culture media." So I thought, I could do that. Why don't I take Giardia trophozoites, they swim, and they multiply. I could put them in a whole bunch of different culture media and watch them and see which medium supports them for the longest time. Pick that medium and then systematically I could change the pH, I could change—

HALLICK: Sure.

MEYER: And just extend the life of these organisms until finally, I could do that. It took me some years before we did it, but we did it.

HALLICK: [laughs] That's fantastic.

MEYER: I should backtrack a little bit.

HALLICK: Sure.

MEYER: One of the reasons that Dr. Veazie had a vested interest in this was because there was a Giardia epidemic in Portland, Oregon, probably the biggest one on record up to that time, in 1954 and '55. In all of those post-war years, the medical students, as part of their training would look at their own stool and they'd identify their own parasites—there were a lot of veterans back. And so there was Trichomoniasis, there was Giardia, there was Entamoeba. You know, all of them.

HALLICK: Sure.

MEYER: So this was good training. And they had records of the Giardia they were seeing. And suddenly in 1954, not only among our medical students, but all across Portland, suddenly doctors were reporting, "Our patients are ill, and they've got Giardia." But you know—

HALLICK: So the basic water system was contaminated?

MEYER: Undoubtedly it was. 1954 was a year when there was a lot of rain. The drinking water was cloudy. And when they chlorinated, the chlorine can be expended on the leaves, the organic matter that's there. And so the Giardia can get through. And we know now that beaver, beaver that live in the Bull Run watershed have Giardia and they can defecate and so contaminate the water. So I think in all likelihood, if you look at how epidemics are spread, to affect fifty thousand people, you just about have to have something like water as the vehicle.

HALLICK: Right.

MEYER: So although the people in the Portland Water Bureau will—

HALLICK: Denied it? [laughs]

MEYER: I should also tell you this, backtracking a little more. Oddly enough, even up to World War Two, Giardia was so common that the prevailing opinion among physicians was that it was common but not a disease-causing organism.

HALLICK: Really?!

MEYER: That was because about half the people who get Giardia infections don't have symptoms. They may spread them. So I was among the minority when I got ill. It took World War Two to change that, I think, to start the change. At that time, they got Atabrine for malaria, using that drug to successfully treat malaria. But when somebody came along with Giardia and malaria and diarrhea, they found that treatment with Atabrine not only cured their diarrhea, but ridded the patient of Giardia as well. So Atabrine changed the notion of Giardia being harmless, convinced people. So it was kind of a sea change. Kind of marked the—

HALLICK: Interesting. And it was used because of the malaria.

MEYER: It was used for malaria. And then kind of accidentally discovered that it killed the Giardia. So Atabrine is what I got when I went down to Dr. Trainer's office.

HALLICK: Uh huh. He'd give you some Atabrine.

MEYER: So now after the 1954-55 epidemic of Giardiasis in Portland, Dr. Veazie and Dr. Sears and another person wrote a paper describing the whole thing, but I don't think she'd submitted it at the time. But when I arrived, and when I was really starting to conscientiously look at Giardia, my interest was turning toward it, she dusted her paper off and she sent it in. I think it was to the *American Journal of Hygiene* at Johns Hopkins.

HALLICK: And when was this now? What year?

MEYER: This would have been in the early 1960s. The paper eventually got published.

So she sent it off. It was a beautiful paper with lots of charts and tables and statistics showing that people got Giardia. And the paper was returned. I was in her office the day the large envelope came back rejected. The editor of the *American Journal of Hygiene* didn't believe that Giardia caused disease.

HALLICK: Oh my gosh.

MEYER: And told her that she should have done statistics before, during and after the outbreak. Lyle Veazie threw it in the back of her drawer and said, "I'll never publish that."

HALLICK: Amazing!

MEYER: Years later at a symposium on Giardia, somebody in the audience raised their hand and said, "Anybody know anything about the Portland Giardia outbreak?"

I said, "Well, I do. I know there's a paper describing it." By now, Lyle had retired. "But the paper was written about that, and I think she would let you publish it if

you'd like." So the editor of the symposium got the paper and it finally saw the light of day.

HALLICK: And how many years between the original submission?

MEYER: It must have been at least a decade.

HALLICK: Wow.

MEYER: The last page of that paper was an official form, a report from the Director of Public Health in Portland. His name is Osgood, a physician, describing the report of diarrheal disease in Portland, Oregon, involving fifty thousand people. The report said "We've looked for viruses, we've looked for bacteria. We can find nothing. We note the extreme commonality, frequency with which we see Giardia." Last sentence, "We think probably an unknown virus caused this." He still didn't believe—

HALLICK: [laughs] He didn't believe his own work!

MEYER: I think somebody should have infected him.

HALLICK: Yeah. [laughs] Then he would have been converted.

MEYER: I think so. I was convinced.

HALLICK: Yeah.

MEYER: So anyway, that got us started.

HALLICK: Now in the meantime, Barbara's having kids and raising them.

MEYER: Barbara, yes. Barbara then, she went on, the kids were getting older and she was looking for things to do and another source of support. So she took a job teaching chemistry at Portland Community College. So her career, her early career was teaching, oftentimes nursing students, chemistry and biochemistry at Portland Community College at the Sylvania campus, for the most part. But after she retired, she came and worked on Giardia, and we went on sabbatical together where we studied Giardia in Costa Rica and in Romania and elsewhere. And in England.

HALLICK: And she worked in your lab after she retired.

MEYER: She did.

HALLICK: But how many years was she at Portland Community College?

MEYER: She must have been there twenty or twenty-five years, anyway.

HALLICK: Yeah. When I came, that's where she was, I remember. For some time, actually, until she retired. And wasn't that about the same time that John Kendall's wife was teaching auto mechanics there?

MEYER: She was. She was. They were good friends. She was an interesting person, too.

HALLICK: Yes, she still is, I think. [laughs]

MEYER: Did she ever tell you about the bridge she built?

HALLICK: I don't think so.

MEYER: The piece of property she had required a bridge. So I think she went to the library and studied how to build a bridge. Next time you see her, ask her. It was a large bridge, and she built it.

HALLICK: She decided to build a bridge?

MEYER: Yes.

HALLICK: Somehow I'm not surprised. Yes. John once told me that when he was Dean, his best advice on whether to hire someone they were recruiting was what his wife thought of the person at dinner. Don't quote me. [laughs]

MEYER: You know, that probably was astute advice.

HALLICK: She's very sharp. But anyway, that was a time when there weren't many faculty in chemistry or auto mechanics.

MEYER: Yes.

HALLICK: So the two of them must have been quite tough.

MEYER: Yes. Yeah. We can get to it later, but I think our department, Microbiology and Immunology has been blessed by the women that have served in it. Because I think their contribution has been more than the average department. There's been a whole string of very effective, productive women.

HALLICK: Well it's interesting when you're recruited into a department that has had women. It's not an issue. As opposed to a department that hasn't, where they're just not sure what to do.

MEYER: It's curious.

HALLICK: It was interesting.

MEYER: You have to break that mold.

HALLICK: So Barbara and Wally came in the early ‘60s. Is that—when did they come? In the ‘60s, sometime.

MEYER: Yes. That’s true. They followed Marvin Rittenberg. And then Barbara and Wally came. And then you came in what, ’77 or ’78?

HALLICK: I came in ’77.

MEYER: ’78. Let’s see, who else could I tell you about—

HALLICK: And Barbara and Wally were on sabbatical. So in the meantime, you were, by the time I came, you were working with Giardia.

MEYER: Yeah.

HALLICK: And I think you’d stopped self-culture. Or about then were asked to do that.

MEYER: Yes.

HALLICK: What was the story there?

MEYER: What was this? What are you reading from?

HALLICK: No, I’m not. I’m not. I’m ad libbing.

MEYER: I tried to culture from myself, but unsuccessfully and I gave it up.

HALLICK: So it was all in tissue culture.

MEYER: Oh, yeah. Well, putting the organisms in different media in culture tubes and watching them grow, a year was going by and we weren’t getting very far. In retrospect, one of our troubles was the organisms we used. The mouse seemed to be ideal host to work with. Because mice are small, they’re inexpensive. A lot of them have Giardia. So you can sacrifice one, take its Giardia out and study it. But it turns out there are lots of Giardia species, and Giardia muris of the mouse is much more difficult to culture than Giardia of the cat or the rabbit or the chinchilla or the human. So to this day, no one has succeeded in growing Giardia from the mouse in culture. There’s something—

HALLICK: Huh.

MEYER: I was beating my head against the wall studying mouse giardia for all these years. And then a report came out of Russia. A fellow named Karapetyan reported he had some preliminary success culturing Giardia. Very few people were studying Giardia in those days. And he had added some kind of yeast to his cultures. Some strange yeast. And his Giardia from the rabbit would grow for a little while and then they would die. So I thought well why not try yeast? We'll get the rabbit organisms. And instead of using his yeast, I went for saccharomyces. And we found out the Giardia and the saccharomyces would grow together, and the Giardia would multiply under the microscope. But that I would have to add fresh yeast every day including weekends.

Now that I had Giardia and yeast growing together, my next job was to separate the Giardia from the yeast. And that took some years.

HALLICK: Yeah.

MEYER: And finally I got them in pure culture. The organisms from the rabbit, the cat and the chinchilla. But I figured the organism people really will be interested in is the human Giardia. That took a couple more years, but we finally got the human Giardia growing axenically in pure culture.

HALLICK: And what trick did you have to employ to do that?

MEYER: I think we just modified the complicated media we had used all along, and just perseverance.

HALLICK: Kept trying things.

MEYER: Yeah. Trying.

HALLICK: So did the yeast turn out to be an important factor?

MEYER: Yeast, finally we could substitute the yeast with extract, yeast extract. So finally we could get rid of that. But what it was in those early days that yeast was contributing in the way of metabolism, I'll never know.

HALLICK: Right.

MEYER: But the fact was, it got our foot in the door. But my enthusiasm from the day one when I, why can't I do that, it turned out to be decades before we really—

HALLICK: Yeah. And so it would grow in the laboratory. And then what about excystation? How did—

MEYER: Oh! Glad you brought that up. [Hallick laughs] Alan Bingham, one of our graduate students, a very sharp fellow who should have gone for his PhD degree, but

he was averse to the idea. I don't know whether he was shy or what but there are some people who just shy away from going for that final degree.

HALLICK: Yeah.

MEYER: But this was a time when we could study Giardia trophozoites, organisms that were alive and dividing. But there was more to Giardia than that. Because when they left the body, the trophozoite rounded up and formed a cyst. The cyst that's in the water. And it is the form that gets transferred. And when they get transferred, the cyst is swallowed. And somehow, after it passes through your stomach, the cyst cracks open and curiously, it's got more than one nucleus. And then the motile organism emerges.

HALLICK: So the original organism is not a cyst that emerges from a person into the—

MEYER: Well, the organisms live as trophozoites, as motile forms in your upper small intestine, and they look like a pear cut in half. They're attached by a disk to the intestinal wall you're familiar with.

HALLICK: Right.

MEYER: And in the intestine they let go their grip. And as they're swept out of the small intestine, they round up and form a shell, the cyst form. And so in the feces, generally, a cyst is seen. And as the cyst, then, it can survive for days or weeks if the water is good and cold. Until it's swallowed by a beaver or a human, in which case, as it passes through the stomach, conditions there cause it to trigger excystation and new motile trophozoites emerge from that eggshell.

HALLICK: So, Alan—

MEYER: Now, we knew we only had part of the story. And so Alan Bingham took it upon himself to figure out how to get the organisms to excyst. And so he thought like a Giardia. He made a glass intestine. Let's see. When I get to the stomach, it's going to be pH three or four. And I'll be there for half an hour, now at 37 degrees. Now I go into the small—[Hallick laughs] And he did all this. He inoculated cysts into his glass intestine. And he changed the pH. And he watched. And lo and behold, there they were: the cysts excysted and motile trophozoites emerged. We took the photographs. He published in *Nature.* It was really a beautiful job that he did.

So we realized that we had a way now of telling whether a Giardia cyst, which you often find in drinking water, was alive or dead. You tell it by exposing it to acid and observing it. So now, all across America—

HALLICK: So it would excyst if it was alive.

MEYER: If it was alive, it would excyst. So now, for all these years in America, we've been using small quantity water disinfectants. You know, the tablets you add to water. Or we've been chlorinating water, and we've never been sure if we'd killed the Giardia. So we had a way of telling whether Giardia were alive or dead.

So quickly, Alan Bingham and Ed Jarroll, whom you may remember, tested small quantity water disinfectants.

HALLICK: Right.

MEYER: We collected from all of the stores we could find an assortment of small quantity water disinfectants, including the one that the Army uses. And we tested them, I think there were eight of them, and we followed the directions on the bottle. And not all of them killed the Giardia cysts. And one of them that failed to kill the Giardia cyst was the one the American military was using.

HALLICK: [laughs] Wow.

MEYER: So quickly, they changed the label on the bottle and they doubled the dose and it was all right.

HALLICK: And that must have been the entry for you into testing water systems.

MEYER: That's right. And about that time, there was the Cryptosporidium outbreak. In Milwaukee, Wisconsin, I think in 1992, there was an outbreak, not of Giardia, but of another protozoan, Cryptosporidium. Hundreds of thousands of people got diarrhea. And I don't know how many people died. More than a hundred.

HALLICK: Wow.

MEYER: And that was because crypto can be fatal in those with little or no immunity. And I don't think there's really any satisfactory therapy. So a lot of people who either had HIV or who were having transplants of various kinds who were immunosuppressed, died of this. And this alarmed the federal government. And they realized that chlorination as it's ordinarily used in public drinking water supplies was not doing the trick. It wasn't killing the Cryptosporidium. And so there came a federal edict that across America, everybody, all people who provide public drinking water will treat their water in such a way as to be sure that the Giardia and the crypto are killed. Which means that for some water supplies, like Portland's, which has not seen a cryptosporidium in years in this water supply, may be forced to treat its water unnecessarily. So that's the local fight that's going on now.

But nationally and internationally, there ensued a search for something, for some way of treating water other than chlorination. So people are looking at filtration. People are looking at ozonation. People are looking at ultraviolet irradiation. Different kinds of

chemicals are being studied. Some of these things are really quite expensive. Some of them are better than others.

It turns out, to my way of thinking, that ultraviolet light, you know about that, I suspect, looks like the cheapest and most effective way to disinfect drinking water. What they found out is that if you have drinking water containing Giardia cysts and you run it through a bank of ultraviolet lights, just passing it through, then enough of the rays will hit the crypto or Giardia cyst to inactivate the cell. It doesn't have to kill it outright, but you're just interfering with its metabolism, it can be quite effective. So, UV—

HALLICK: So it then doesn't reproduce?

MEYER: That's right. So I think now that is what probably most people, Seattle, Portland, will be using.

HALLICK: Interesting. Didn't you at one time have some work with somebody who thought just sunlight would be pretty effective?

MEYER: Yes. Oh, I could tell you about that. Solar disinfection. It's called SODIS. S-O-D-I-S. S-o- as in solar, and d-i-s as in disinfect, that's the name of the process. And I don't think they have the monopoly on it. I think a number of people are into this. A professor in Ireland, in Dublin. Kevin McGuigan is his name. And he is one of the leaders in the field. He discovered that if you take suspect drinking water that's reasonably clear, and put it in a container, it can be plastic 7-Up, Coca Cola bottle, and leave it in the sun for four hours or more, that usually is enough to destroy all the organisms in it. So it doesn't require any money. The bottles are in the countryside. And so this SODIS thing got started. And now the governments of Ireland, the government of Switzerland, I think, India is into it, and Professor McGuigan is studying this process.

But earlier on, a decade or so ago, he was doing a series of paper in which he was showing that sunlight, the solar disinfection, kills organisms. And he, by himself, he could show all the common bacteria were being killed by the sun. And now he wanted to show SODIS killed cryptosporidium and Giardia. And for crypto, he looked on the Internet and he found in either Spain or Portugal a group that could do that for him. He was kind of strapped for Giardia and then he called us wondering if we could collaborate. And yes we could. So he came here for a very hectic week or two in which we did research on whether or not sunlight kills Giardia cysts. And he did it—he didn't trust Portland sunlight. [Hallick laughs] There was an apparatus that came in a box as big as a card table. I saw the bill of lading on the airline. I think it cost several thousands of dollars to send from Ireland. But I went up and I wheeled it down into our laboratory.

And Kevin arrived and dismantled it and put his machine together. And we would provide the Giardia cysts and he would adjust his machine and put the Giardia cysts in the liquid, and expose them to precisely the conditions he needed. And then he would give us the tubes of the treated Giardia. And Barbara and I would race up to the animal

quarters and inoculate the mice to find out if the Giardia were still alive. [Hallick laughs] And he was right. Solar disinfection really—

HALLICK: It worked.

MEYER: So he published. And he was a kind man; we got a couple of papers out of that. He kind of capped my career. I think there were—

HALLICK: That was just a couple of years ago, wasn't it?

MEYER: Fifty or more years between my first publication from Purdue and this one. But anyway.

HALLICK: That's fantastic.

MEYER: So he continues to research solar disinfection. I believe it's the coming thing.

HALLICK: Yeah.

[tape change]

HALLICK: This interview with Dr. Alan Meyer was conducted on February 10, 2010, in the BICC building on the Marquam Hill campus of Oregon Health and Science University, Portland, Oregon, as part of the OHSU Oral History Program. The interviewer is Dr. Lesley Hallick. This is tape two.
Well, welcome back.

MEYER: Thank you.

HALLICK: We just covered kind of the history of the organism. Maybe we should go back to the history of the people.

MEYER: Fair enough.

HALLICK: Talk a little bit about it. You came to Oregon in, again, what year?

MEYER: 1958. And at that time, the department consisted of Arthur Frisch, the chairman. Lyle Veazie. I think she must have been either an assistant or an associate professor. And Evelyn Oginsky, the bacterial physiologist. And then I was number four. And in those days, we shared the teaching duties. It was teaching medical students, nursing students and the graduate students. And you were expected, if you could, to conduct research, as you do now, except I don't think there was the pressure then to get money and to do research that there is now. Teaching was more number one in those days. That was the faculty in those days. And then slowly the department expanded. And the Iglewskis arrived, Wallace and Barbara Iglewski.

HALLICK: And what was the department, before the Iglewskis arrived, where was the department located?

MEYER: It was in Mac Hall. It was up on the third floor of Mackenzie Hall. And the laboratories were up there. I remember a student named Kitzhaber.

HALLICK: [laughs] What kind of student was he?

MEYER: I remember he wore cowboy boots. We taught everything in those days. We not only were in the student labs but the lectures were shared. You had to be kind of jack of all trades. You taught, if you were a virology person, you taught the viruses. But we also taught bacteria. We taught immunology, fungi, you name it. Everybody was expected to be capable of giving all the lectures. And we did. So it was a good basic exposure to the breadth of microbiology. So we all did that in those days.

HALLICK: And this was in the late '50s and then through the '60s.

MEYER: Pretty much. And then Marvin Rittenberg and the Iglewskis arrived. And then you arrived in '77 or '78, as I recall.

HALLICK: I did, in '77. And so during the '60s, when did the department move?

MEYER: About 1970, '71, in there, just about.

HALLICK: And tell us a little bit about the construction of the basic science building.

MEYER: [laughs] Not much to tell. I can remember much poring over the plans, and laying out of laboratories. And that, at the time, it seemed like a very spacious place. But I imagine nature abhors a vacuum, and all of the nooks and crannies got filled up. So it got filled up. The nurses took over the old Mackenzie Hall quarters that we had, and life went on.

HALLICK: Ah. So the nursing department moved in behind you—

MEYER: That's right.

HALLICK: --as you moved into the new basic science building.

MEYER: Yeah.

HALLICK: Very nice. Well, when I arrived, the new basic science building, everybody had a lab with a lovely view.

MEYER: It was. Yes. And our office had a lovely view, too.

HALLICK: Yeah. That's true. So the department, you were hired as an assistant professor.

MEYER: No. As an instructor.

HALLICK: Really?

MEYER: Yeah. Here I was, I was hungry for a job. And so I was an instructor for a year or two. Little by little I worked my way up and then kept my nose clean. And then I think, finally about 1971 or '72 that I must have gotten tenure and then I made professor.

HALLICK: Ah. In '71 or '72?

MEYER: Yeah.

HALLICK: And what about your sabbaticals? You've had some pretty adventuresome ones.

MEYER: Yes. We've taken advantage of those. And I recommend it to anybody in academia. I don't know. You've got a sabbatical I think to Berkeley or somewhere once. But not enough, I'm sure. But we took one. During the period when we were really trying to get Giardia going, the International Center for Medical Research in LSU, Louisiana State University, had an International Center for Medical Research and Training. They had money in Costa Rica. So they had a medical facility there. And I realized Costa Rica was a place that had lots of Giardia. So we took a sabbatical. I think it was only three or four months. But we went down there for an intensive period where we put the children in a bilingual school where they were taught in both languages.

And where Barbara and I, now could obtain some Giardia cysts to put in culture. And this is what we would do. We had the use of a jeep. Roads were bumpy in those days. And as the sun was coming up, Barbara and I would pile into this jeep, go down to the San Juan de Dios Hospital. And we'd find the nurse, and she'd look over the roster and find a child with Giardia. And we followed her like ducklings up to the child's bed. The sun was still coming up. The kid hasn't had his breakfast yet. The nurse is going to get us some Giardia trophozoites now for our laboratory. The nurse had something like a Mickey Finn, called Noctec. The child's sleeping there, and she would have a little jigger of this liquid. And she'd hold the child's head up and give the child this little teaspoon full of liquid. The kid would become very agreeable. And then the nurse would thread a rubber tube through the nose down into, first to this—

HALLICK: Wow.

MEYER: Oh, I'm sure it was painless. I mean, it was a tube. Into the stomach. And then finally she would wait until the tube passed into the small intestine. And she

would put a syringe on the other end of it. And draw out some bile, as soon as this fluid became bile-colored, she'd know we hit home.

She'd extract some of this fluid. And quickly we'd run around the corner to the microscope. Make sure there were plenty of Giardia trophozoites. We would pile back into the jeep, go across town to the university, and start inoculating culture media. So that was Costa Rica. It was interesting. We saw a lot of the country.

HALLICK: I bet.

MEYER: And the kids can still sing the school song from the Collegio Metodista in Spanish. So it was- [laughs] it was quite interesting.

HALLICK: What year was that?

MEYER: This must have been about 19, I would guess '66 or so. And that was one sabbatical. And so we had seen, and we'd spoke, we'd seen the southern part of the western hemisphere. So we were looking for another sabbatical then, some years later. And as you know in sabbatical, you have to find somebody hopefully that will support you or at least accept you. So I was looking over what was available. There was something in Latin America. And then there was Romania. The National Academy of Science, which has quite handsome, generous stipends, offered two opportunities. Did we want to go back to Latin America or did we want to go to Romania?

I went to Barbara and I said, "Well, what do you think?"

And she said, "We've been to Latin America. Let's give Romania a try." So the Romanians were carrying on their research on Giardia. They were making their efforts, too. And we'd had communications with them. And so the National Academy of Sciences supported us. And they supported us handsomely, I should say. Before we went, they supported us in learning the Romanian language. So that summer, Portland State had a Romanian professor. So if you can imagine the Romanian professor up in the glass case and six Meyers, Barbara and Alan and the four kids reciting Romanian sentences to the professor, and he's telling us the correct pronunciation. So we got a pretty good tutorial in how to speak Romanian before we ever left the country. In addition, they gave us a place to live, which was pretty sordid, I'm sorry to say. And they paid our way over and back. They gave us a monthly allowance. They paid for our food. It was good. It was intense. It was arduous. It was long, hard work. But the Romanians matched our labors. They worked hard as well. We ended up with lots of publications. A textbook in parasitology we wrote in Romanian. And that was a productive time. Our daughter Martha met, she was of a marriageable age when we were over there. So she met a Romanian. And now our granddaughter Daniela speaks Romanian to her father and English to her mother. She still remembers how to speak Romanian. So there may be a moral to this story! Be careful where you go when your children are of marriageable age.

HALLICK: [laughs] Oh, that's wonderful.

MEYER: So that was Romania. We spent another year in London, at the London School of Hygiene and what is it, public health, or tropical medicine. And Barbara was up the street at the University College of London studying chemistry. And when she'd finished her studies, her lectures she'd come down the street a couple of blocks to help me in the laboratory. So those were interesting times as well.

HALLICK: And were the children with you in London? Or had they grown by then?

MEYER: They were not. By now they had grown up. So London was great. Every weekend, there was another museum, another theater to go to.

HALLICK: [laughs] And just the two of you.

MEYER: You've got it. You've got it!

HALLICK: For the first time in a long time.

MEYER: Maybe we go on a sabbatical to escape our kids.

HALLICK: [laughs] That's wonderful. So coming back to the years you were here, during the period of time that the department was moving into the new building, didn't Jules Hallum come along sometime in there?

MEYER: Yes. I can tell you about any of these faculty members you want. But as I was telling you earlier, when Dr. Frisch stepped down and the search was on for a new chairman, and Evelyn Oginsky left, Jules Hallum was the successor. He became chairman of the department; I think it must have been 1972 he came on board. He had a degree in chemistry, I believe. He was interested in persistent viruses. Jules Hallum was an interesting fellow. I pick my words carefully. He had been in the Marines. I think he might have been a Marine officer in World War Two in the South Pacific and he'd seen a lot of bloodshed. I think some of that military bearing stayed with him. And he was a taskmaster. He expected things to get done. And he drove kind of a hard bargain. He was an interesting guy and he required, I thought, quite a bit from the faculty. Among other things, he would require of us, you may remember this, Lesley, every year. I don't know if that was true of every department in the medical school or not, or just ours, but we were required annually to turn in an annual summary of our accomplishments. How many graduate students do you have? How many dollars have you earned for the department? What are the publications? How many speeches? How many students? All of that. And you turned this in to the professor, and then you sat with him. He was a difficult man to please. And I don't know if I can say much more than that. Anyway, we did our best.

But he left, finally, in, must have been 1991 or so, to retire. And he went on to become national, I don't know what the official title was, the ethics person for the United States. It was a time when we were anguishing over who discovered the AIDS virus, was

it the French or the American? And Jules Hallum was to become the ethics czar. And it was a political appointment. I don't think any human being could survive that. His half life was not all that long. But he went to Washington and retired from there.

When Jules left, he was replaced by Maggie So from California. And she brought with her several very productive people who I think still are with us. Jay Nelson, Fred Heffron. And I think her tenure was a productive one. I think generally she really did much for the department, its expansion.

And then when Maggie So left, she was replaced by Mary Stenzel-Poore.

HALLICK: What do you remember of Mary Stenzel-Poore's early beginnings?

MEYER: What do I remember? Just that she was one of Marvin's students. Not much else.

HALLICK: She actually worked at my lab when she graduated from Lewis & Clark for a couple of years. And then decided to go to graduate school. So we knew her when she was a kid.

MEYER: So you've had a hand in her development as well. I remember when we were having your farewell party over in the old library, Mary Stenzel-Poore got up and she explained how you really had helped her, bolstered her ego.

HALLICK: Well, she was always very talented.

MEYER: Yeah, she's capable, she's good.

HALLICK: So what were the studies that we were talking about at the break about the replication of Giardia? You want to say anything about that?

MEYER: Yep. Giardia is different. There aren't many protozoa, these organisms that have true nuclei that undergo fission that have, most organisms have a single nucleus. And Giardia, for most of its life, has two nuclei. So that when it divides as a trophozoite, as a motile form, those two nuclei divide into four. And then the organism divides into two individual organisms. That process confused me. And the other thing is, a cyst consists of four nuclei. And when it excysts, it gets assorted somehow, so two nuclei go to each of the two daughter cells. So I didn't know, really, what to make of that. And I came to you, and I knew that you knew a lot more about mitosis than I did, and asked you for some help and you gave me some papers to read. And we ended up doing research. And there were, I think, five of us finally on the co-authored paper. Your name and my name were there. I'm grateful that you put your two cents' worth in about explaining what happens to those nuclei when Giardia divide.

HALLICK: What I used those pictures to do is convince students that biology is beautiful. Because I don't think there's anything quite as pretty as Giardia dividing.

MEYER: I quite agree.

HALLICK: You know, a lot changed in the university during this period of time when you described the changes in the department. Do you have any recollections you'd like to share about changes in the university? Or maybe the relationship of the chair with the president, or other department chairs?

MEYER: Really, really not very much. From the time when Jules came on board, and when, you can just see by what has happened, when Evelyn Oginsky would not even be considered a contender for the chairman, now we've had a succession of female chairs. So certainly the pendulum has swung mightily. And I think women have been recognized and welcomed as people we want to consider as chairmen.

HALLICK: What about the relationship of Jules with President Laster or any of the other department chairs? Did you have interactions with other basic science departments?

MEYER: There's really very little I can contribute to that.

HALLICK: How about the growth of the department with respect to graduate students?

MEYER: Really, it's blossomed from those earlier days. Graduate students were quite rare then and numerous now. And that has been a real change.

HALLICK: You know, you might say a word about Dr. Bo Celnik. How did she happen to--?

MEYER: Bo Celnik?

HALLICK: I happened to talk to her this morning.

MEYER: You did? I haven't seen her for a long time.

HALLICK: How did she come to be in your lab?

MEYER: I don't know how much of this I should tell. She, I think we were looking for an extra pair of hands to work on the Giardia. This was a period of time when some money came along. I'll tell you a little bit about a little different research. And it had to do with the Bonneville Power Authority and salmon and salmon eggs. Maybe you don't even know this story.

HALLICK: I don't think I do.

MEYER: It turns out that when salmon, mature salmon, migrate back to the fish hatchery; females are taken out and stripped of their eggs. And the males are there. And the sperm is gathered. And they're mixed on the spot. And then the eggs are hatched and fingerling fish are raised and let loose. But some batches of eggs are really quite productive and other ones don't seem to work well at all. They were a puzzle to us. What was the difference in those eggs? And the question was, could those eggs be contaminated? Just as you can have a chicken egg that might be, you might find that it's got a worm inside of it, laid with the egg. Or a chicken egg that might contain salmonella. Is it possible that bacteria could be inside a salmon egg?

So we, with Bo Celnik and some others, by the light of day we drive up to the salmon hatchery near Longview, Washington. They would take the salmon out and we would collect the eggs. And we'd take the eggs and put them in thioglycollate or some other medium, aseptically, of course. And crush them and see if anything grew in the culture media. And lo and behold, we looked at the bacteria that were growing inside of the salmon eggs. And we published report on that. And that could be really one of the reasons why some female salmon are really not productive. But Bo Celnik was involved in that.

And she indicated that her mother was in Poland at the time the Germans marched in. And that they were quite a wealthy family. They had a mill and some buildings. They were Jewish. They saw the Germans, maybe the Russians coming. By then, Bo was a very small girl. Her mother didn't look Jewish. She looked like a German. So she found maybe a German officer and ended up marrying him. Did you know this part of the story?

HALLICK: A little bit.

MEYER: She went to these people with her daughter and said, "You can have the farm. You can have the mill if you'll bring up my daughter." So she said she spent the war in Poland, in a courtyard somewhere, where she could see the sun overhead but she couldn't see the street. She survived. She came to America. She had other stories to tell as well. But an interesting person.

HALLICK: Very. Well, your lab always had interesting people.

MEYER: There were. There were.

HALLICK: You might say a little about Ed, actually.

MEYER: Ed Jarroll. We got a grant and we were looking for a post-doc. And Ed was getting his degree from West Virginia. He was doing parasite work. And he applied and we accepted him. Ed was obese. I think he probably weighs 350 pounds or so. But he hasn't let that discourage his career. He's a dynamic fellow. He should run for public office, I think.

Ed arrived; he told me later that he got my signature, my approval to accept him, before he made the journey West. But anyway, he arrived, drove up in his car, and this enormous man got out. I'm very happy we hired him. He did a good job.

So for a number of years, during the time we were testing water disinfectants, and a lot of the time you were here, Ed Jarroll was a post-doc in the lab. Then finally he went off and got his own academic career. Now he's some kind of a dean in the state of New York. And doing very well.

HALLICK: Wicked sense of humor is my recollection.

MEYER: Yes. Yes. But good with words, and hardworking. Good with figures. Industrious fellow.

HALLICK: What is the Ernest Alan and Barbara Park Meyer Scholarship? Is that something that you started?

MEYER: Yes. Yeah. We realized, Barbara spent her career teaching at the community college, from which kids ordinarily, after a year or two, if they're industrious and have the money, will move on to get a degree in a regular university. And it's a tough row for these kids to hoe. Most of them are usually short on money. Barbara and I set up this through Oregon Community Foundation, I think, is the largest charitable organization in the state. It's enormous. And through them, we set up the Ernest Alan and Barbara Park Meyer Scholarship. And our financial advisor, starting it, we thought we'd take a life insurance policy so that when both of us were gone, well then the proceeds would fund these things.

Then he came to us and said, "You know, it's more satisfying, I think, if you give money away while you're still alive." He was very gentle about it, but it's true. And so we started doing that. So it started, it's not enormous. But for several years now, I don't know how many, every year we receive in the year a stack of these applications. These are all kids who have had at least a year in a community college who have, I think its 3.0 or a 3.5 average. They're doing well. And there's a financial need well documented. And they're moving on. You can tell how much money they need. And each year we give thirty-five of these away. And they're each worth a thousand dollars each.

HALLICK: Wow. That's wonderful.

MEYER: And the thank you notes are great.

HALLICK: So these are students going on to OUS schools.

MEYER: Oregon, Oregon State. For a year or two, I think we gave them out of state. And they're renewable. So I think if a student does well the first year, I think we give them $1500 the second year, just to pat them on the back.

HALLICK: That's fantastic.

MEYER: It's worked out well. It's satisfying.

HALLICK: I'll bet it is satisfying. Would you talk a little bit about some of your hobbies?

MEYER: Yeah. I suppose I should tell you about Scrabble.

HALLICK: Well, for sure. [laughs]

MEYER: It might bore you. I don't know.

HALLICK: I don't think so.

MEYER: Well, I played Scrabble way back when. You know, back in Berkeley when I was still a student there. But then that's something, if you really get interested in it, you spend too much time at it. So all during my academic career, I didn't play the game. Scrabble was not in my mind. But my sister, who lives in California, is an avid Scrabble player. And she's got this framed certificate on her wall saying, "Maggie Meyer is a Scrabble expert." They have Scrabble tournaments all over America. So that if you had the money, every weekend you could go to a different sanctioned Scrabble tournament—let's see, over Martin Luther King Day, I went for a three or a four-day Scrabble tournament in Reno. It's the Western Scrabble championship.

So, this was 1991, I think, my sister, after I'd retired. My sister announced that she'd come to visit us. And she had a Scrabble tournament in Portland. She arrived, stayed with us, and said she wasn't sure how she was going to get to the hotel. She didn't know her way.

And so I said, "Let me take you, Maggie." So I drove her there and parked the car. I thought I'd walk in, you know. I ended up playing and getting hooked. So since 1991, I've played Scrabble.

And like chess, it's a worldwide thing. You get rated after a tournament according to how well you do against other people. And I have to tell you, I'm middling. I'm not one of the experts. The experts are fully focused and they spend all of their time studying. I tell you, they're like monks. It's extraordinary. But I played last night. Every Tuesday night in Lake Oswego at the community center, people gather and play Scrabble. It keeps you thinking. It's enjoyable.

HALLICK: And what tournaments have you participated in?

MEYER: In national tournaments. I played in San Diego and Chicago. And I play several national tournaments every year, and a lot of local ones. So it's a fascinating thing. You meet some interesting people, as well.

HALLICK: I bet.

MEYER: You should, I recommend it, Lesley. I think you'd like it.

HALLICK: Yeah. [laughs] Maybe when I retire.

MEYER: That's right.

HALLICK: My recollection is you're quite the limerick creator as well.

MEYER: Uh, yes.

HALLICK: Tell us about limericks. What is it, first of all?

MEYER: A limerick? You know, what is this about, it's just a rhyme like, "There once was a lady from Cape Cod" There are some pretty ribald limericks out there. [Hallick laughs] Limerick is named after, I think the city of Limerick in Ireland. But I don't, beyond the fact that it's named after the city, I don't think that's really where they originated. But they're kind of humorous verses. And they're made according to very rigid rules about how many syllables they have to be, and what they have to say.

And so somebody got the idea of why not having an Oxford English dictionary in limerick form. So maybe half a dozen years ago, I was listening to National Public Radio over Christmas. And this fellow was talking about how they were getting starting with the letter "A" and they were going to have a dictionary of limericks. So every word in the dictionary will be defined with a limerick. And they would like people to contribute.

Well, that kind of attracted me. I think, they have workshops and all the rest. They don't accept anybody's limericks. They have to be perfect. And you send one in and they might give them to somebody else to fine tune or to improve or ask you to modify. I think I've got something like a hundred limericks in there. But I realize that I'm not going to be around to see that dictionary published. But it's kind of interesting.

And I have written some poetry as well. My sister is, she's a poet. She's a professional poet. And she edits a poetry journal for the whole Bay Area. It's called *Poet Talk.* It's a periodical. So once in a while I would submit a poem to her and she would publish it. And I've submitted a number of poems. You know, in the Sunday *Oregonian* they'll have a poetry section in the *Oregonian.* And I've published a couple of my poems there.

And then I think the *Christian Science Monitor* published one of mine. The narwhal, you know, I was so impressed with the findings about the narwhal's tusk that I wrote a poem about it. And the *Christian Science Monitor* sent me a check for my poem, thank you very much.

HALLICK: My goodness! Do you have your poetry on your curriculum vita?

MEYER: No.

HALLICK: Well, I think you should.

MEYER: Actually, in the textbook I wrote for nurses, I have several poems about parasites. Did I ever show you those?

HALLICK: I don't think so. I'm going to have to look it up.

MEYER: Yes.

HALLICK: That's fantastic. So the Oxford dictionary, to go back to that.

MEYER: Oxford English Dictionary, OED in Limerick Form, OEDLF. I think if you Google up OEDLF, it means Oxford English Dictionary in Limerick Form. [Hallick laughs] And there you'll see, they're probably up to the letter F or G by now. But you'll find, and if you look up Alan Meyer, you'll find my poems. But I wrote one about staphylococcus aureus and sent it in.

And the editor, he was encouraging me. He said, "You see very few of these that make you laugh out loud, but yours was one of them." So he was patting me on the back. Thank you very much.

HALLICK: That's an amazing goal. That's great. Are there any things that we didn't talk about that you think we should have? In terms of, especially the history of the university. Are there aspects in terms of how it felt to be here and how that changed? You came in the '50s, when it was a bit of a sleepy place.

MEYER: The whole tenor has changed. I think in the '50s, and maybe it was even before your time, I think the faculty and students saw a lot more of each other. If you worked every day in the lab and you walked up and down behind a student looking at his microscope and helped them and had that verbal interchange, you had, you began to know. At Johns Hopkins, one of the things I did was to help teach the medical student microbiology laboratories. And I was given the same kind of a sheet with every student's picture on it. We used to have those here. And the professor who ran that lab said everybody had to know every student's name. Not just to be able to recognize them, but to call them by name. so in the early days, there was a lot more of that. You knew who you were teaching. But as time has gone by, you know, it's become team teaching. You know you're given an assignment. You have to come in on a certain day or two, give the lecture, and then you're gone.

And there's not that rapport, not that exchange and the content has changed. Whereas in the early days, bacteriology probably took what, three or four months. And then we would talk about fungi, and then there was viruses. And then there was

immunity. And all of this might have taken the better part of a year. And in parasitology, the students had to know all the parasites. Now I think there's a single parasitology laboratory demonstration. Things like that. So the content of what we teach has changed so much with, I guess, what the judgment is that the students really need to know. That's changed. And our contact with the students has changed as well. It's become a lot more impersonal. But maybe that's a sign of the times. Maybe that comes with having to teach large numbers of students and having larger faculties.

HALLICK: It's a different approach.

MEYER: Yeah. It's a—

HALLICK: When you started teaching medical students, what was the curriculum like? Did they have classes for two years before they went into clinics?

MEYER: Yes. It was basic sciences. And those first years, there were just, there would be the four of us in the department. Frisch, Veazie, Meyer and Oginsky. And often, I think more often than not, the other three faculty members, during a lecture, would be sitting in the back of the lecture room listening so they'd know what was said and whether any mistakes had been made, et cetera.

And then, when the exam time came, the exams were made, ground out on stencils and corrected by hand. You'd be correcting eighty or ninety papers. And you wouldn't go home, whether it was four or five or six o'clock, until everything was done, until the grade curve was made and you'd decide what the grades were. So those were long, arduous days.

HALLICK: Interesting. And the laboratories for medical students.

MEYER: I don't know. I think I gave Sara Piasecki a copy of, and I don't know whether in your tenure we still used those. The student lab manuals were an inch or an inch and a half thick. Large laboratory manuals. In those days when the students were expected to streak the organisms out on a plate and to do the test tube tests to find out whether they were positive or negative. All of that stuff, that's long since gone. The students, I'm afraid, don't know that anymore. A machine does that, I think, doesn't it?

HALLICK: I believe so. [laughs] Yeah. Yeah. They had a more direct feel, for sure.

MEYER: Yeah.

HALLICK: Did you teach the laboratory microbiology to nursing students, too?

MEYER: Yes. We taught a large nursing class, sometimes two nursing classes a year. And so there's lots of nurses. And we taught all the labs. You helped out on some of that. I don't know whether you were involved in the labs or the lectures or both. But

those were the days I was kind of anal retentive, both with the medical students and the nurses. And really insecure. I don't think you are. But I would have to have, before I gave a lecture, I would have to type it out and have it in front of me so I could read it in case I lost my place.

So I found I had, after the lecture, I'd store it in a file cabinet. I found out after ten or more years that I had a complete file of every lecture with nurses. It's the whole spectrum. So I thought, well, why don't I just write a textbook? And that's what I did. Appleton-Century-Crofts published it before they went out of business. But it was a good publisher, and it was okay. I enjoyed doing that.

HALLICK: And you used it for nursing?

MEYER: We did. We did.

HALLICK: I remember. That was a great book. So what are you doing now that you have a little bit more time?

MEYER: It's mostly Scrabble. We still come in occasionally and meet our peers. A few of them. Harold Paxton still shows up, although I think he's not in the best of health. But we see him a good bit. We continue to live on the farm, tree farm in Newberg that you visited. You know where it is. I can tell you—

HALLICK: Are you raising Christmas trees, still?

MEYER: No. We are lousy Christmas tree farmers. If you plant row upon row of Christmas trees and then sell them at Christmastime and don't sell all of them, after a year or two, some of them have grown big. [Hallick laughs] Even too big, like Winnebagos. They're too big to sell. Then what do you do? Do you chop them all down and put new ones in? And I just hate to cut down a Christmas tree.

Finally, the state forester came by and we walked across the land. And he kind of shook his head and said, "You know, you can get a tax exemption not only from Christmas trees, but from timber. So why don't you just let this go?" [Hallick laughs] So we do that. So we're just watching the trees grow. And that is fine.

Now, what I didn't tell you was within the last couple of months while we were gone, a tree fell on our house. And it punctured the roof. And yesterday the appraiser came out from the insurance company.

HALLICK: Ouch.

MEYER: So we're going to get a new bedroom and new gutters, and it's going to be fine.

HALLICK: You should describe your swimming pool. It's truly unique.

MEYER: Ah, yes. Well, it's changed from the time, from the days when you were there.

HALLICK: Well, the original pool.

MEYER: The original pool was kind of a, it's large; it must be twenty by forty feet. And it was built by the farmer, who lived there, of concrete. And not precisely in dimension, but approximately right. And we would fill it annually. And it would get mossy. And it was open to the air. And so the trees, one of which fell on the house, would shed their leaves in it. And finally we did a couple of things.

Well, at the end of the pool is a pump house. It sits deep in the ground. And you have a pump and a filter. One summer we were, went, I think to Czechoslovakia. You have to have somebody to take care of your place when you're gone. And I thought what better person to have take care of the place than a medical student. We'll get a medical student, he can live there, and we'll have a finger on him because he's got to come back to school.

And so we found a medical student willing to live there. That was a mistake. [Hallick laughs] And take care of it. And it turned out that he didn't take care of the pool. And that was a year of a very cold freeze. And not only the pool froze but the pump house froze and pipes broke and the pump house filled up and everything was destroyed.

But it turned into kind of a nice thing for this fellow and his girlfriend for the summer. He had one summer of happiness out there on the farm. And he dropped out of medical school, too.

HALLICK: [laughs] He had a little trouble with his studies as well as his housekeeping.

MEYER: That's right. I think we provided him with an escape or something. But anyway, as a result of that, Barbara looked at that pool and we realized we really had to do something if it was going to survive. So a pool liner was the thing. So Barbara discovered, people have computers now. Why don't we get like a plastic liner, and they're really very professionally made. These fellows came out with their measuring tapes. And it's all odd measurements. Reluctantly so he did it. They must have put these measurements in a big machine or something. And it's like building a car, because the machine pumps out a swimming pool liner. He came back carrying the liner. And he very carefully put it in, and applied a vacuum and a suction over days. Now we have what looks like really quite a professional tile swimming pool. Actually it's a plastic liner. It holds water. It's been beautiful ever since. And they also put on a cover overhead to keep out the leaves.

When you ask what we're doing in our retirement, one of Barbara's principal jobs is pH and water clarity and all that stuff.

HALLICK: [laughs] The chemistry of the pool.

MEYER: We're supporting the pool supply people. Every time, they smile when they see us coming. What new chemical can we sell the Meyers today? But—

HALLICK: I remember it as a cement box.

MEYER: Oh, yes. It was a kind of a cement box. And I don't know if it was on that day or not that Jorge Crosa and his three children came out, whether it was Giselle, Nicholas and Paul, and they came out, they gave us a concert. We didn't mention the Crosas—

HALLICK: You should mention the Crosas, actually, because you had a unique relationship with—

MEYER: Yeah, Jorge Crosa, the Argentineans, Jorge is still a very productive member of the department. And his wife is still involved in teaching, I think, and in the laboratory. Jorge had come from Argentina, he had his wife, she has a PhD in astronomy. I think she taught briefly at the community college level. But I think her expertise is far above that level. I admire Lydia Crosa. Jorge works on vibrio, I think vibrio parahaemolyticus and these motile bacteria. Jorge was working in Washington state at the university. And kind of fighting for citizenship. I don't think he wanted to go back to Argentina. So he somehow through a senator managed to gain citizenship. And about that time, I've forgotten the year, it might have been in the '90s.

HALLICK: Well, before that, I think.

MEYER: Maybe the '80s.

HALLICK: Yeah.

MEYER: Well we had just built a house, a new house in Tualatin. We were kind of looking for renters. But Jorge and Lydia arrived on the scene. And they looked all over the place for a house. And they finally settled on renting our house. And they did. They had three exceptional children: Giselle, Nicholas and Paul. And Nicholas is a violinist who's gotten CDs and who's played in the junior symphony. But more recently, with the Pink Martini.

HALLICK: He's the first violinist.

MEYER: He's traveled all over the world. He's an exceptional person. So they would come out, bless them, and get Christmas trees. They've been good friends. I remember going over hill and dale with Lydia. She had to have a refrigerator for the house. And we went from store to store, from Penney's to Wards or whatever, until she found a refrigerator. So our relationship goes back that far.

HALLICK: Is that a signal that's coming from behind?

Sara?: It's ten after three.

Simek: Yeah, it's ten after three.

Sara?: We've got about ten minutes left.

Simek: I wonder if we might be able to talk additional questions.

HALLICK: Absolutely. Yeah.

Simek: I would be curious to know what your view is on the current great challenges in microbiology, in your areas?

MEYER: That's kind of a tough question. I think, and Lesley probably would be better able to answer that question than me.

HALLICK: No. You have a better perspective.

MEYER: But maybe you can tell me if you think I'm wrong. But in Giardia, and I suspect in a lot of microbiology, whether its protozoa or bacteria, the emphasis has kind of gone from looking at the organism in a kind of generic way to looking at the genetics of the thing. And I think they're really dissecting the organisms now. When we were studying Giardia, we were looking really at how to grow them and how does it cause disease. And now you look at the Giardia literature and they're really dissecting the genome and they're into things like clades and they're really looking at the DNA a lot more closely. So I think the emphasis, to my way of thinking, seems to be more on the kind of genetic aspects of a lot of these things. I don't know if you could make a general statement about what direction things are going.

HALLICK: Are the parasites today a huge worldwide problem in terms of disease?

MEYER: A few of them are. There's malaria. There's Bill Gates and the millions he's given to parasite research. Malaria is not going to go away. And the organism has got too complicated of a life cycle really for us to, I think, figure it out in short order. But maybe we'll luck out and maybe some of Bill Gates' dollars will go toward finding a vaccine or whatever. But there's that, malaria. But there are big diseases [glitch] problems besides malaria. Schistosomiasis and so forth. But as a group, I think parasitology seems to occupy a lot less of the medical curriculum than it did in the old days. I think the emphasis is just not there. But there's cholera. There's malaria. There's some of the big ones. Schistosomiasis.

HALLICK: And yet the disease prevalence is still great.

MEYER: Yes. All around the world. In Africa, in India, in China, in Southeast Asia, for sure, there are these diseases still there.

HALLICK: One character I remember, and I'm blanking on his name, but he was the grandfather of the chair of pathology. Do you remember who I'm talking about? He used to eat lunch with us. And he would come back from—

MEYER: I know who you mean. He had worked with Zinsser, actually. He mentioned that at the lunch table. He used to walk up the hill every day.

HALLICK: From Terwilliger Plaza.

MEYER: Yes.

HALLICK: Yeah. And he was in his nineties. What was his name? What was the chairman of pathology's name? I'm blanking on his—

MEYER: I wish I could tell you.

HALLICK: Retired about ten years ago.

Sara?: Don Houghton.

HALLICK: Yes! It was Don Houghton's grandfather.

MEYER: Houghton. You're right. Yeah.

HALLICK: And I don't recall his name. But he had some great microbiology and parasite stories from around the world.

MEYER: Yeah. There are stories to tell. People who've tried to carry parasites back from Africa internally and suffered the consequences.

HALLICK: In order to study them.

MEYER: Yeah.

HALLICK: What other questions did—

Simek: If you were starting out today, what would you like to tackle?

MEYER: Oh, boy. I think I'd look the whole field over first. When I arrived, Dr. Sears, he was more than gracious. And he would invite, he lived up on Dosch Road, looking over toward Beaverton. And he had a big house, a grand house, with a fireplace. And he'd invite Barbara and me and our children. And I'll digress a little bit. One of his,

David, his son, got an M.D. here. Looked so much like me that my son mistook Harry Sears' son for his father. But anyway, Harry Sears would feed us. And after dinner we'd go in his living room and there would be a roaring fire. And Harry would stand by the fire and warm his rear end. And he would wax on about, Alan, now you're starting on your career. He suggested, he said, "Don't get on the bandwagon, you know, everybody's doing it. Find a corner of microbiology that interests you that isn't really active. And more people are not interested in it so you can work at that." That's what he did. And I don't know whether I stumbled into it. Giardia was certainly not a bandwagon at the time that I got interested, but whether or not I did it, whether it was accidental or not, I'll never know. But it's an interesting question. I suppose if you were starting out now, would you even get into microbiology. I don't know if it's tougher getting into microbiology now than it was back then or not.

Oh, I could mention Harry Sears' youngest son. We had arrived in Portland, it must have been 1959, and Harry Sears' youngest son, David Alan Sears, Alan seems to be a family name, was just graduating from this medical school getting his MD degree. And the procession, process, was going to take place in the auditorium in the old library, and I was invited. So I sat there next to Harry and Huldah, his wife, in the front row, while the students, including David Sears walked across. And Dean Baird presented him his diploma. Or if your father was on the faculty, your father was permitted to give the student the diploma. That was the extra touch.

But here comes David Sears across the stage to get his degree from the dean and Harry nudges me and says, "Alan, because I don't have an MD degree, I can't get up there and give my son his—" But Harry wasn't bitter about it. But in those days, if you were an MD, you could give your son his degree. But not if you were a faculty member without an MD. I think times have changed.

Later on, when my son graduated from this institution, it was downtown in the public auditorium. And I think Leonard Laster was the dean who was handing out the diplomas. And the faculty were allowed to participate. So I was standing there in the row back behind Dr. Laster, waiting. My son came across to receive it. And I took that diploma and handed it to him. Then my son in a very loud voice, loud enough for President Laster to hear, he said, "Now, about that loan, Dad." [Hallick laughs] He's a card.

HALLICK: Now he's the one who's a physician now.

MEYER: Yes. He's a child psychiatrist, yes.

HALLICK: That's great. What about grandchildren?

MEYER: Oh, we've got the five of them. Daniela and, well, I won't tell you their names. One of—

HALLICK: So one is half Romanian.

MEYER: One of them, Martha, Daniela is, yeah. Her father is Romanian. And they live in Newberg. And Daniela is very much a lover of cats. And Cat Adoption Team is the name of perhaps the largest cat facility in the whole Portland area. They have hundreds of cats. And Daniela's been very, she's won big awards for her work on that, I can tell you.

HALLICK: That's great. And the other family that lives in Newberg, do they have children?

MEYER: Matt, he's on the faculty at George Fox, and his wife Melissa have two children, Madeleine and Marguerite. And they're both beauties and they're both teenagers, I'm afraid. They were on this recent trip to Mexico. And I'm telling you, they're knockouts. Their parents better keep a close eye—

HALLICK: Keep an eye on them. [laughs]

MEYER: That's right. They're very sharp. Yes.

HALLICK: Very nice.

MEYER: And one of the other granddaughters, Brittany, is interested in court reporting. There's a college in Portland where you can take that. I don't know what it, it's not typing. Apparently it's phonetic. Not quite shorthand. But anyway, there are very few schools that teach it. She's taking it. We're supporting her. And we hope that she's going to find her niche.

HALLICK: Maybe it was the cryptography stories when she was young.

MEYER: Yeah. Keep her busy.

HALLICK: Very nice. This interview with Dr. Alan Meyer was conducted on February 10, 2010, in the BICC building on the Marquam Hill campus of Oregon Health and Science University, Portland, Oregon, as part of the OHSU Oral History Program. The interviewer is Dr. Lesley Hallick, and this is the end of tape two.

[End of interview]