

AN INTERVIEW WITH JAMES AKAGI

Interviewer: Jewell Willhite

Oral History Project

KU Retirees' Club

University of Kansas

JAMES AKAGI

B.S., Bacteriology, University of Illinois, 1951

M.A., Bacteriology, University of Kansas, 1955

Ph.D., Bacteriology, University of Kansas, 1959

P-D, Western Reserve University School of Medicine, 1959-61

Service at the University of Kansas

Instructor, 1958

Assistant Professor, 1961

Associate Professor, 1964

Professor, 1967

Emeritus, 1995

James Akagi

Interviewer: Jewell Willhite

Q: I am speaking with James Akagi, who retired in 1995 as professor of microbiology at the University of Kansas. We are in Lawrence, Kansas, on September 25, 1995. Where were you born and in what year?

A: I was born in Seattle, Washington, on Dec. 23, 1927.

Q: What were your parents' names?

A: My father's name is Teiji Akagi and my mother's name is Yone.

Q: What was their educational background?

A: My father was a second son in Japan. The first son gets everything and the second and third and any females get nothing. Only the first son gets everything. My father's family was a Samurai family. The first son got everything, the Samurai sword, the home and everything. So the second sons of most of the people would emigrate. My father was one of them who came to this country, about 1919 or 1920, somewhere around there. My mother came later as his bride. They settled in Seattle, Washington. I have three older sisters and a younger brother. There are five of us.

Q: What was your father's occupation?

A: He ran a produce house, that is to say he would get all the produce from the farmers around Seattle and pack them up and ship them off to various cities. He also operated a grocery store.

Q: Did you grow up in Seattle?

A: Yes, I grew up in Seattle until I was 14 years old, just starting high school. And that's when World War II broke out. In 1942 we all had to go into these camps, so-called concentration camps in the United States.

Q: I've heard of that. Where did your family go?

A: To Minidoka, Idaho. That's just by Twin Falls. There were 10 of these camps scattered throughout the United States in the interior away from the West Coast with approximately 10,000 in each camp. There were a total of 120,000 Japanese on the West Coast, and they were all evacuated into these camps.

Q: That would be like a small town.

A: It wasn't like a town. There were barracks, barbed wire fences and guard towers and guards and everything. It was a concentration camp, as Roosevelt and Truman admitted. These were not just camps. These were what they would consider concentration camps with limited movement by the people involved. So we were in this camp up until 1945, three years.

Q: So you went to elementary school back in Seattle.

A: Elementary school in Seattle through eighth grade and I had just started the ninth grade when we were evacuated. So for the ninth, tenth, and eleventh grades, I went to school in camp.

Q: So you graduated from high school while you were in camp.

A: I was in the last graduation class in 1945 when I graduated.

Q: Did your father lose his business when your family went to the camp?

A: Yes, everyone that was evacuated had very short notice to evacuate. There were some who had only 24 hours. Some had two weeks. To get rid of everything in that period of time was virtually impossible. And so a lot of people were coming around buying material very cheaply, and the people had to get rid of their property for whatever they could get. There were some people who were fortunate to have some very good Caucasian friends who said they would take care of their property for them, which they did, until the war ended. But most of the people were left with nothing. Because of that, President Reagan signed in 1988 this entitlement to pay every person \$20,000, which didn't cover it all but it was some way of saying they apologize.

Q: Did your family go back to Seattle when you were released?

A: No, there was nothing for us to go back to because we had nothing there in 1945. Our family relocated to Chicago, Illinois, and made a new start.

Q: Did you have relatives there?

A: No, nothing.

Q: Your father just chose Chicago?

A: Well, not my father or my mother. By then the children took over. They (parents) were called Issei, the first generation in this country. We are the Nisei, the second generation. The second generation people are American citizens because we were born here. The first generation was not. Because of the law that was passed, they could not become naturalized or

anything. They were not citizens. The law was passed in 1924 or something saying no person from any part of Asia could become an American citizen or become naturalized. So my parents, like any other Nisei people's parents, could not own property. The property that they had, many Issei used to take it out in the name of their oldest child, in our case it was my oldest sister. Not only that, they couldn't speak English very well and our generation was slowly getting older. The average age (of the Nisei) at that time in 1942 was about 17, so we were not old enough to take charge of everything. Some people fought the evacuation and said they would not go. They were put in jail for the duration of the war. But because we were so young, we had to just go along with whatever they said. And then in camp it was the older children who decided what the family would do. And so my sisters decided we would go to Chicago. By then most of the parents just followed whatever their children told them to do, wherever their children told them to go. So we came to Chicago and I started college there in 1945.

Q: What school did you go to?

A: I went to a junior college in Chicago. At that time it was a junior college. Now it is a four-year college. It was called North Park Junior College at that time. I just took a general course. That first year you have no choice. You take certain requirements. I played baseball for the college.

Q: Had you played baseball before in the camp?

A: We played a lot in camp.

Q: I suppose, to have something to do.

A: We played a lot of baseball, a lot of football, a lot of ping pong, a lot of pinochle. We had a lot of time in camp because there was nothing to do. We had a lot of spare time and we learned to do everything. Most of the young ones my age, from 14 to 17, played a lot of sports. So anyway my first year in Chicago I went to college and played baseball. After the end of that year I was 18 years old and was getting ready to be drafted by the Army, because the draft was still on. So I went into the Army in 1946.

Q: Where did you go for your training then?

A: I went through basic training at Fort McClellan, Alabama. Then from there the Army sort of got mixed up on my records. My outfit went to Korea but I was left behind through a mixup. A very kind colonel knew that I came from the West Coast. He had fought with a lot of Japanese-Americans in Europe and he said he would like to do something for me. He said, "Would you like to go to the West Coast?" I said, "Sure. I'd love to go back up to Seattle." He said, "All right. You won't go with your company to Korea. I'll make orders for you to go to the West Coast." And so I stayed behind. But the Army got it all mixed up, like they always do, and I didn't go to the West Coast. I went to Fort Dix, New Jersey, in the opposite direction. They didn't know what I was there for. After three or four months of just doing nothing, they said they

would send me to school in the Army. And they sent me down to Fort Sam Houston in San Antonio, to laboratory school, where I came across microbiology, hematology, all the things you do in a medical lab.

Q: Were they training you to be a medic?

A: A medical lab technician, one who works in laboratories. So that's the school I went to, where I was first introduced to microbiology, that I found fascinating. The Army, just before I finished laboratory school, ordered me to go to Washington, D.C., to the Pentagon. Why me, I don't know. But they said I had to teach the people there how to do what they call venipuncture, take blood from people, because that's what we learned at the school in San Antonio. I was stationed at Fort Myer, Virginia, which is just outside of Washington. They sent me to the Pentagon every day with a staff car. So I got a ride every morning and I went down and I worked in the Pentagon drawing blood from people, dependents who were going overseas to join their husbands. They all had to have their blood tests. And they had no one qualified to do this. So that's why they got me. I was the one drawing blood from the people going over to Europe. And I taught the technicians there how to do it. Finally, they were in a position where they could do the blood taking without me. Then I was just stationed at Fort Myer and didn't have to go to the Pentagon any more after about three months. I was assigned to the Fort Myer medical laboratory, where I worked until my discharge in

1948. In 1948, after being discharged from the Army, I returned to Chicago and enrolled at the University of Illinois.

Q: Had you always expected that you would go to college?

A: Oh, yes. From the time I was very young my parents said I was going to college. One of my sisters also did. My middle sister is very talented. She is a violinist. During the war while we were in camp she went out of camp and went to Oberlin, to the music conservatory there and got her degree in music. She went on to play with the Kansas City Symphony, the St. Louis Symphony and got accepted by the Chicago Symphony until they found out she was a girl. It was all men, it used to be. Because of her name--she used "Terry"--they thought she was a he, until she went up for her interview and they couldn't accept her on the symphony because at that time--I don't know how it is now--it was an all-male symphony. She eventually married another person from the St. Louis Symphony and they went to Hollywood where they were playing in the movies and the TV and the Los Angeles Symphony. They were professional musicians. They are now retired.

Q: So you went back and went to the University of Illinois. Were you majoring in microbiology?

A: That's right. I got my bachelor's degree there. While I was there I met another graduate student at that time in the department who came from Kansas. He later on became a very well-known microbiologist, biochemist. He was telling me

about possible places to go, because in those years the general policy of people graduating from any university was not to go on to graduate school at that same university. They try to send you away. So I was looking for a place to go. He said Kansas was a pretty good place. And so I applied and got accepted at Kansas. I was still on the G.I. Bill at that time. Because I was in the Army for two years, I had a total of 36 months. It is the total amount of time plus twelve months that they give you. So I had 36 months of schooling. So I had one year to begin with and I had three years left and that was 27 months and I had one more year so I used that to come to Kansas in graduate school. And I came here and took courses here on the G.I. Bill. I didn't have any financial aid at that time, so after one year I said that since I had no financial aid I would go back to Chicago and work. I worked in a consulting laboratory for breweries testing beer, analyzing beer because a lot of breweries have microbiological problems. And I worked there until Dave Paretsky at the department here at Kansas University got some money and he got word to me that he had a research assistantship for me if I would come back to college. So the next year I came back and pursued a master's degree and then eventually a Ph.D.

Q: Was he your major professor?

A: He was my professor. He was my mentor.

Q: Did you write a thesis for your master's?

A: Yes, I wrote a thesis for my master's.

Q: What were you studying for your master's?

A: My major interest in graduate school in microbiology was biochemistry. I love chemistry, and so I applied chemistry to microbiology, which is essentially biochemistry. And so it was a biochemical problem for my master's degree, something about a protein I put together and a similar sort of thing for my Ph.D. I just followed it up and did a chemical problem for my Ph.D. I graduated in 1959 with a Ph.D.

Q: Do you remember any other influential teachers from that time?

A: Oh, yes. One person who was very influential was Dr. Ray Brewster, who was chairman of Chemistry. He was the one who really excited me in organic chemistry, and he was a very stimulating teacher. He was very, very good. Dr. McEwen at that time was another organic chemistry teacher. They just got me very much interested in chemistry, and instead of becoming a chemistry major I applied that chemistry to microbiology. Because of that, all my students went the same route that I did. They all had to learn their chemistry. So that was the basis of my so-called program in microbiology for graduate students.

Q: What building was that in at that time?

A: We were in old Snow Hall. We were doing all the microbiology work and teaching microbiology and everything. All the biological sciences were in Snow Hall, other than a couple departments, such as biochemistry in old Haworth. We were in

Snow Hall until 1969 when they built the so-called new Haworth Hall and we moved into that department in 1969.

Q: Did you teach for the first time while you were a graduate student?

A: Yes. My degree was in 1959 but I actually finished the work in 1958, just after the deadline. So Dr. Paretsky said he would keep me on as an instructor where I could teach that whole academic year until 1959, because that's when my degree was actually conferred. So I stayed on until 1959. During that year I was looking around for a postdoctoral position. I found one with Western Reserve University Medical School. So my postdoctoral year after 1959 was spent in Cleveland, Ohio, at Western Reserve, now known as Case Western Reserve. So I spent two years there furthering my chemistry and microbiology. I got introduced to a whole new group of microorganisms by a person, Leon Campbell, a very well-known individual. He later became the president of the American Society for Microbiology, which is a very great honor. But he was a young person who had lots of ideas and when I talked to him before I took a postdoctoral with him, he said coming over to Western Reserve would be very nice, that we could do some work together. I had almost committed myself to Johns Hopkins at that time. But at the last second I changed my mind and went to Western Reserve.

Q: Were you married at this time?

A: I got married one year into my post doc. My first year in

Cleveland I was not married. But my fiancée was here. She was a graduate student in the department of microbiology. And so I came back after the first year and we got married on August 3, 1960.

Q: What was her name?

A: Barbara Jean West. And we went back to Cleveland to finish my postdoctoral at that time. After my postdoctoral training, which ended in 1961, I was looking for a job because most postdoctoral training, like internships, are generally two years. After that one goes to a job. I was looking around and I was considering an offer I got from Northwestern but this is Chicago. I told you I had lived in Chicago for a while, and I thought that this is not the place to raise a family. So having known Lawrence for a while, and not only that, my wife's family were right in Missouri, so she was very excited about coming back here. Dave Paretsky at that time was chairman and he offered me a position here. So that's how I ended up back in Kansas in 1961.

Q: What were you teaching at KU?

A: I taught mainly courses in my field, which we called microbial physiology or microbial biochemistry. But all of us had to teach introductory microbiology. So I taught introductory microbiology. I taught microbial biochemistry. I introduced another course later on called applied microbiology because by then people were becoming interested in the applications of microbiology. So I thought I could use some of my prior

experience working at the consulting laboratory for breweries on how microbiologists could utilize their knowledge in analyzing foods as well as how to make wine, how to make beer, cheese and all this. So it was a course in which the lecture part was mostly biochemical but the laboratory part was actually making these products, like yogurt, cheese, wine, sauerkraut.

Q: That must have been an interesting lab.

A: The kids loved it. They enjoyed it very much. That was an undergraduate course.

Q: Did you teach some undergraduate and some graduate courses?

A: Yes. I taught undergraduate introductory courses, which I enjoyed very much, applied microbiology, and graduate courses until 1967. I came here in 1961 as an assistant professor. In 1964 I was an associate professor. In 1967 I became a full professor. In 1967 I also received a government research award, a research career development award. That award was that the government would pay the recipient's total salary, 12 months' salary, and the university would agree to hire someone else to take the recipient's place in teaching, if they wanted to.

Q: So that you could do just research.

A: That's right. I got this award for 1967 for five years and I got a renewal for another five. For a total of ten years I was on this research career development award in which I did not have to teach at all, just do nothing but research because

I qualified and competed well enough to get it. But I wanted to continue teaching, so I did teach once a year at least. I continued working in the classroom as well as in the research laboratory. It was a very good thing for ten years where I didn't have to worry about my salary. The university gained because they didn't have to pay my salary. And since Dr. Paretsky did not hire anyone to take my place in teaching, the university was able to save that money because I said I would teach.

Q: What was your research interest during this time?

A: My research after my postdoctoral training, where I got my introduction to this field by Leon Campbell. He introduced me to these very interesting organisms, bacteria that really had nothing to do with medical microbiology but were of interest in ecology. They are organisms that you find at the sulfur springs, those that give you that smell that's called H_2S , hydrogen sulfide. This chemical is produced by bacteria. These bacteria utilize sulfate and reduce it to H_2S . These organisms are called the sulfate-reducing bacteria. These are those organisms that do not grow in the presence of air. They must have what we call anaerobic conditions. Under these conditions they produce this gas. They were a very fascinating group of organisms because not too much was known, and so I got involved in this and decided this is what I want to study for the rest of my career. And so I brought this problem back with Dr. Campbell's permission to Kansas. The

other scientists in the building didn't appreciate it because when I worked with this the smell would permeate through the whole building. They were calling it Akagi's outhouse. I worked with this organism in Snow Hall and old Haworth. I got a lot of grant money for this, so I was well supported during my tenure as a faculty member at KU.

Q: Did you have publications?

A: Oh, yes. You had to publish to keep getting these grants. RCDA, the Research Career Development Award, made it possible for me to spend a lot of time in the research laboratory instead of the classroom. The classroom work was minimal compared to what I would have done. So I was able to spend more time in research. I had very good students who worked and produced papers. You had to. Even today you have to. We were fortunate in producing and publishing papers and we continued to get these grants. We got grants from the NIH, the Public Health Service, the National Science Foundation. NASA was interested in our problem, and so we got grants from various sources. I was on the editorial board for The Journal of Bacteriology, which was the main journal of the American Society for Microbiology. Because of that, I was able to keep up with a lot of publications. Being on the editorial board, you saw a lot of papers. So that helped me.

Q: Did you ever write a book?

A: No, I didn't. I didn't want to take the time to ever write a book. I contributed to three books. People who were writing

them would say, "Would you write a chapter?" For sure I can do that but I won't write a book. So I was able to write chapters and the last book is coming out this year. So it was very nice that I was able to finish my career with a chapter.

Q: I guess I forgot to ask you about your children. They were born here in Lawrence, I suppose.

A: I have two boys, one born in 1961 and the second one was born in 1963. The older one is now 34 going on 35. Both are unmarried, unfortunately. I can't talk them into getting married yet. The older one is with a government agency. He works for the Drug Enforcement Agency, what they call a DEA agent. He is in the Dominican Republic at this time working on various aspects of drug trafficking. The younger one is in Tempe working in real estate. They are both fine and I hear from them from time to time.

Q: You were at KU in the late '60s and yearly '70s when there were so many problems here. Did that affect you or your department?

A: No, not really. The only time that we were really involved during that period of unrest was when everyone in New Haworth had to watch guard at night. Remember that?

Q: Quite a few people have mentioned that.

A: We had to stroll the hallways and stay all night because the bomb went off in Summerfield right by the computer. So we were on guard. That's the only time I was involved. There were a few marches but I never took part in them. These

marches occurred and some faculty members were involved in these marches in the 1960's. That was a time when I was able to spend an awful lot of time in my research.

Q: I assume you didn't have administrative responsibilities, since your major area was research.

A: None until 1976. When Dr. Paretsky stepped down as chairman I was appointed as the chairman. I became the chairman against my will, really. I didn't really want it, but at the same time I said every person should try it once, so I said, "All right. I'll try it." So I was chairman from 1976 to 1985, when I just said, "I can't take it any more." My wife died in 1982. I was going to resign then, but at that time KU was undergoing some real severe budget cuts and I thought, "I can't let that stop me at this time." So I didn't resign and said, "I'll see this through." I stayed on until the budget situation stabilized and then I said, "Now I can resign." I stepped down as chair in 1985 and then in 1989 I was called back to become acting chair from 1989 to 1991. I figured that the only way I could get out of that was to go on sabbatical, so I went on sabbatical. Since then I've been out of the chair.

Q: Do you remember anything specific that happened while you were chair? What was going on in the department while you were chairman?

A: There were a lot of challenges at that time. The first nine years were not bad, trying to learn how to chair the

department. The most difficult part of chairing the department I found out was treating everyone equally fair. It's very difficult to do.

Q: You mean merit pay and things like that.

A: That's right. Even though you like some faculty member and you want to give that faculty member a good raise, if that faculty member did not produce, according to the criteria that you put down, then you cannot give that faculty member a raise. And some faculty member that you don't care for as much would get the bigger raise. It was the only way. You had to do it. I have lost some close friends because of that, but it was the only way I could think of doing it. I think eventually those friends realized that. At least I was honest about the whole thing. At least my conscience was clear. But that, I think, is a very difficult thing for any chair to do. And some people would come and ask you for a raise and you just could not, even though the raises were not that much and you would like to give it to them. It's very difficult because if you put down the set of criteria that you say you're going to use for raises, you've got to stick to it.

Q: The budget cuts must have been very difficult too.

A: The budget cuts were difficult. I tried to let the faculty decide what to do, but sometimes that didn't work out either. Sometimes they had some bad advice. And I should have used my own intuition in solving these cuts. But it was a good learning process. At least I can tell the chairmen now when

they would come to me, like the present chair, to ask me for advice, at least I was able to give that person some advice what not to do anyway, mistakes I made. It was a good experience, but something I didn't want in the first place. But I learned.

Q: You were on university committees, I suppose.

A: Yes, I was on quite a few university committees during my time, like Promotion and Tenure, the College Committee on Faculty Appointments, Promotion and Tenure. I was on that for a while. I was on Biomedical Research Grant Committee, The University General Research Grant, a committee on the budget for the College, a member of search committees for chairmen of various departments. Writing Across the Curriculum committee that I was on. I still don't know what that committee was all about. The steering committee for establishing the School of Religion in the College. I don't know whether I regret that or not. I was in charge of getting the School of Religion into the College. There were various committees that many people serve on. At the national level the University of Hawaii asked me to teach a course one time, and I was able to do that. I was a member of various panels for NSF programs, for postdoctoral programs. Editorial member and site visit member for the Department of Energy. And I reviewed work for various other publications. I was a member of panels for the Department of Energy and whatever grants they would be giving out, the usual things that I'm sure most people are involved

with.

Q: You mentioned that you went on a sabbatical. Did you have just one? Where did you go and what did you do?

A: The first one was in 1981. I went to the University of Hawaii. They invited me to teach and then I made some friends there while I was there. The person who was there in the biochemistry department was doing some work that I wanted to do in my laboratory. As a matter of fact, he contacted me and we had a collaborative problem going on, together with another person down in biochemistry, two people, Dr. Hersh, Dr. Hines, and I all collaborated with that person in Hawaii, because he was doing all the work that we didn't know how to do. So we sent him all the materials and he was doing the work there.

Q: Was this the University of Hawaii?

A: Yes. And so I decided to take a sabbatical in his laboratory to learn that particular technique. That was in 1981. And I was there from August on. But that was the year my wife became sick and she died in January of 1982. So the doctor called me back in December of 1981. So my sabbatical was cut short at that time. So I came back and went back to teaching and my chair. Then I had another sabbatical in 1991. I took that to get out of the acting chair position. I went to Germany.

Q: That must have been interesting.

A: Very interesting. I took it in the laboratory of my student who got his Ph.D. with me and went to a very well-known

biochemist and from there established himself as a very good up and coming young microbiologist. The German university saw this, so they hired him to become a professor. So he was now the big shot professor there and I said, "I'll go over there and do a sabbatical with him."

Q: What university was that?

A: The University of Bayreuth. I wanted to go back to Germany because I was invited there 10 years earlier in 1980 with an international conference, worked on some of the things I had been doing in my laboratory. And so they invited me, all expenses paid, so I had a free vacation there. I enjoyed Germany. My younger brother was in Germany for 30 years. He married a German girl and he was teaching American dependents in Munich, teaching in an American school. So he was there, and every time I went to Germany I would go see him. He took me around everywhere and introduced me to things. I love Germany and that's the reason why I decided I would like to go back to Germany for a sabbatical in 1991. It was a good opportunity because my student was a professor there.

Q: You belong to professional organizations, I suppose.

A: Yes, three main ones are the American Chemical Society, because I always enjoyed chemistry, the American Society for Microbiology, and the American Society for Biochemistry and Microbiology.

Q: Did you hold offices in any of these organizations?

A: No, I did not. The only office was at the regional level.

The American Society for Microbiology is made up of various regions in the United States and we all have our own group, like the Big Eight. So you would have the Missouri Valley branch of the American Society for Microbiology. I was president of that in 1972. And we all had to take turns. I didn't become part of committees on the national level. It just takes too much time away from your research. Research was my main interest. That's the reason why most people come to universities, so they can do the research. Being hired for teaching is a way of getting to research.

Q: You mentioned one former student who became a professor in Germany. Are there any other outstanding former students you'd like to mention?

A: Yes, there are quite a few students that went through my laboratory. One very bright student I had was from Korea. He got his Ph.D. and did some very good work and went from here and got involved in research and somehow got involved with a person who wanted to send him to medical school. In his postdoctoral years he decided to go to medical school and now is a very good infectious disease person at Temple University. I got another student from Korea who came to my laboratory about 15 years later and he said that that first student, whose name was Bing Suh...He said Dr. Suh was very well known in Korea and is an example of what a person can accomplish in America. He said it was very difficult for him to realize that he was in the very same laboratory that Dr. Suh came

from. And that one, named Jay Kim, got his degree and now he's chairman at one of the Korean universities. I had a student from Iran who got his degree and is back in Iran. He's chairman of microbiology at one of the universities there. Then Harold Drake is a professor in Germany.

Q: Oh, he was an American who became a professor in Germany.

A: Oh, yes. He was from Kansas. He speaks German with a Kansas accent. That was the amazing thing about him, because Germans tend to hire Germans. But he was just a plain old Kansan and made a big name and they hired him. He didn't know German, which he's very good at now. I was just over there this past summer after I retired. I went out to visit him again. He's doing very well. There are others. Tom Novitsky is CEO of a company in Massachusetts just outside of Boston, a leading company in the world on a certain analytical method they discovered, how to detect certain bacteria in crabs. It's become very important now medically because in people who have various infections, one of the bad things that can happen is what they call septic shock, the bacterial product going through your whole body and can cause death very easily. Doctors are very concerned about this condition. Well, this Tom Novitsky's company isolated a factor from what they call the horseshoe crab out there in the ocean. This component can detect very minute amounts of this toxic substance. Now it's everywhere in the world. He sends me postcards from virtually every part of the world, Russia, Japan, France, England, you

name it, he's been there because he had to go help set up a laboratory or set up a business there. So he's a big shot and he's now CEO there. My brightest student was a woman, May Chan. She came from Taiwan and she is now working for the Navy in China Lake, California, and she was so good that she has been put up many times as woman of the year for that section. There was some university unit right outside of Stanford. They offered her essentially an endowed chair, and so she called and asked if she should take it. I said, "Go ahead. Take it." But she didn't take it because she was with her husband, and her husband did not get any job over there. Her husband was a big shot at China Lake, so she decided to bypass it. But she was the brightest student I ever had. But the most interesting case about a student that was not mine but somehow came to KU...I used to tell this to my classes whenever we'd come to this part of the course. The person's was Satoshi Mizutani. Going back now to my postdoctoral years, I was in Cleveland and I was doing postdoctoral research there and another postdoctoral student was from Japan. His name was Sam Suzuki. And Sam and I were very close friends. All of us post docs were very close. Anyway, Sam went to Manitoba. He got a job in Manitoba, Canada, and I came to Kansas. Satoshi Mizutani was a student from Japan looking for a place to go, and he thought he would be more comfortable if the person he went to was Japanese. So he heard of Sam Suzuki, so he wrote to Sam Suzuki and said he'd

like to go there, but Sam said right now the department can't use any new students. But I have a friend in Kansas to write to, Jim Akagi. And Satoshi wrote to me and I was on the admissions committee at that time and he was just another one of hundreds that was coming in. So I said, "Why don't you write to me later on in the year and I'll know more about it." And I thought that would be the end of it. Well, he didn't forget. He wrote me at the end of the year and since we had some money, I said, "Okay, why don't you come over. We can give you a research assistantship." He came over and he was a very good student. He was working with another person but the interesting thing is that after he got his Ph.D. he was looking for a postdoctoral position. Dave Paretsky had just come back from Wisconsin from his sabbatical and he said, "There's a person up there named Howard Timmons who could use a post doc." He was applying to everywhere and one of the places he was applying to was Howard Timmons and Timmons invited him to come work with him. Timmons was a very interesting person. He was for five to ten years saying that the genetic material in this virus he was working with was RNA. Now everyone knows that DNA is genetic material and RNA is just another part of nucleic acid, similar to DNA but different. And everyone said, "You're crazy." As a matter of fact they were laughing at him and saying, "Who would ever think that RNA could be genetic material when everyone knows and it has been established that DNA is the genetic material."

Now Satoshi Mizutani goes to Timmons' lab as a postdoc. And pretty soon Satoshi is writing back to us saying that some very interesting thing will be reported at the Houston meeting and Howard Timmons would report it. And what Howard Timmons reported was he got unequivocal proof that RNA could also be the genetic material in this virus as Satoshi Mizutani found in his laboratory. And Timmons got the Nobel Prize for it. Satoshi did all the work because Timmons did not know biochemistry. He just had this circumstantial evidence that RNA was involved. But Satoshi went up there and because we trained our graduate students in biochemistry he was able to do the biochemistry that finally allowed Timmons to get the Nobel Prize. And so we are very proud of that. But there are many good students that went through my laboratory. I was proud of many of them.

Q: Were you involved in community activities in Lawrence?

A: Only when the kids were growing up. One almost had to. I was happy to do it, the Boy Scouts and the Cub Scouts as well as other things. We used to travel to various grade schools to demonstrate to them what microbiology is. We'd bring a microscope and these other things to classes where someone knew someone who knew my sons. It would be more or less a personal invitation. We used to advertise to teachers that if you want us to come by we will be happy to teach for one hour and give a demonstration of microbiology.

Q: That would be interesting to kids.

A: We'd let them look in a microscope and see why they shouldn't put coins in their mouths. We used to do that. It was a lot of fun. I think some of that is still being done by the department.

Q: Do you have continuing involvement with KU now that you've retired?

A: Well, with the department I'm still a member of some of the students' Ph.D. committees. Other than that, I told them let me at least for this first year--I just started my retirement three months ago--let me just enjoy my retirement and not have anything to do with academics. After that first year or two if I'm still here in Lawrence then I'll reconsider. But right now I'm not interested in doing anything for the university. I went to Germany, I went to Seattle a couple of times and I've been taking these trips.

Q: That's what I was going to ask you. What are you going to do now that you've retired?

A: Well, I'm going to do a lot of things that I've wanted to do. Our whole family has always been musically inclined.

Q: Do you play a musical instrument?

A: I'm the only one that does not have any music. But I would like to. I am ready to set up piano lessons. My older sister played the piano and my younger brother was a music teacher. So I would like to take piano lessons, which I will. I'm going to start as soon as I get my trips out of the way. Other things like bowling, I want to do bowling. I love

cooking. If there are cooking classes around, I want to take those. Cooking always fascinates me.

Q: Do you do Japanese style cooking?

A: Oh, yes. I can cook Japanese. I used to cook a lot when I was an undergraduate. I learned from my mother. And I've been learning from my sisters and whoever would teach me anything. A very close friend of mine, when we were graduate students I lived with Dr. Consigli from K-State. We were students here together. Well, as you can guess from his name, he is Italian. So I learned a lot of Italian cooking from him, which I still use, and Chinese cooking, which I learned. Cookbooks are one of my big things that I love to look at and learn from anyone. Not baking but cooking. And I'm going to get back to bowling and horseback riding, which I used to do a long time ago. If I run out of things I even am planning to go to bartenders' school, not to do that as a living, but just because I am curious.

Q: Oh, so you'll know how to mix your own drinks.

A: I was on the other side of the bar for all these years and I'd like to see what it is to be on the other side. I understand they have a bartenders' academy in Kansas City. So eventually I would like to take that course, just for my own satisfaction. Travel in the meantime.

Q: What is your assessment of KU, especially your department, past, present, hopes for the future, that kind of thing?

A: Well, the department was very, very good. We had a very good

reputation nationally and internationally. I was involved in its heyday. And then gradually the budget problems began and then during my tenure as chair we were hiring people, good young people. I guess they were too good, the people we hired.

Q: You mean they leave?

A: They left, yes. Other places wanted them too and we couldn't compete because KU doesn't pay very well. And so we started to lose people. As our department started going down and people were leaving, we were having a difficult time filling their positions, getting permission to fill their positions. And the strategy of the dean's office at that time was this. In 1968 because of various departments, biological sciences department getting kind of weak, very little enrollment. One way the biological science department could survive is to go in as a division, biological science division, which they proposed. So they called a meeting of all the biological sciences and said, "If you go under the umbrella of this division, you will be protected. The regents cannot look at you and say you are weak, we are going to get rid of you." But microbiology was very strong. We all had grants. We were publishing. We said we didn't want to go into the division. And the other biological science division was the department of radiation and biophysics. They said they did not want to go in. So every other department went in.

Q: And that became systematics and ecology?

A: That was one department, systematics and ecology. Physiology and cell biology was another department. Entomology was a department, botany was another department. Biochemistry was another department. All of them went into the division. Microbiology was an island. Biophysics was an island but eventually they got pushed into it. So then it was microbiology and the division. And every dean that came up, even when I was the chair said, "How come you're not in the division?" We didn't feel like we were weak. We could stand up on our own. We don't need the division. We are very happy the way we are and being successful, academically, researchwise, grantwise, everything. Our departmental budget was as big as the division's. Now that is not going to go unnoticed by people in the division. "How come microbiology gets so much money?" They just kept going to the dean until finally their budget started going up to where it should have been, because their budget was pretty low. But they always said, "Come into the division." We said, "We don't have to. We don't want to." And many people said, "Don't come in. It's not very good." Our friends used to tell us that. But anyway, from the dean's standpoint it would be much easier to deal with one person, the head of all the division, rather than one person plus microbiology. And so they always tried to get us involved and they said they would never force us to go in unless we ask to go in. So the deans were very good about that. Well, now we're coming up to 1989, etc. People

in the dean's office as people in our department moved said, "We don't have enough money to give you to hire someone new." People in the division were getting money to rehire any vacancies. And so another person from our department would leave and they would say, "We don't have any money." So from a full staff of 10 we finally came down to five, half. Now we were getting pretty small. And not only that, our enrollment is going up more than when we had 10. And we are doing all that with five people. Finally, the dean said, "You've got to come into the division. You have to come in or, you know, there are various consequences." So we were more or less forced. So we said, "Give us three years to phase in." In other words, we'll go into the division but let us still get our own budget. They (the division) wanted our budget, they wanted our money. That's what they wanted. So the dean said, okay, for three years we can handle our own budget, although we are in the division. This is the third year, as a matter of fact. So we came into the division two years ago and slowly are phasing in. And as soon as we joined the division, all of sudden we got permission to hire a lot of people. I personally don't feel that was right. The deans knew we were strong and they deliberately wanted to make us weak so they could tell us to go into the division. Because of that we are in the division now and I don't know how they are now. I'm glad I am not in the department right now because I don't think the future of microbiology is going to be that good.

And yet it is microbiology that is going to be one of the more important fields in the medical sciences. You can think of the genetic...all the things on DNA, the O.J. Simpson DNA evidence. All that started from microbiology. The whole science of that began in microbiology. This whole thing on the immune response, the HIV, that's all microbiology. The viruses are all microbiology, and nutrition, where we got all our information on vitamins and all of these things all started with microbiology. And now we are very well aware of the E Coli thing and hamburgers. Don't ever eat any hamburger that's pink. We tell our students that and the salmonella problem that you have to be careful with poultry. There are so many aspects of health that involve microbiology. So microbiology is still going to be one of the big, important fields. The biggest problem hasn't even come yet, and that's the use of antibiotics. The bacteria become so resistant to antibiotics that pretty soon from an ordinary scratch it can turn into septicemia, that is to say the whole infectious process. There is nothing you can do about it. No antibiotics will help. From a simple infection you'll die. I mean it can get to that point. Prewar, we call it pre-antibiotic era or pre World War II. I grew up in a period when there were no antibiotics. And I remember a friend of mine who got an earache and then a few days later he was dead. No antibiotics. You'd get a scratch and then it would become what they called blood poisoning at that time, and you could

die from it. There was nothing you could do about it because we didn't know what antibiotics were at that time. I still remember those times. And we are entering that period again because doctors are prescribing antibiotics for people who really don't need them. And people are asking for antibiotics when they don't need them and doctors will give them to them because they don't want to lose their patients. These people are just ruining this whole process.

Q: So you mean they will have to discover new antibiotics.

A: Well, yes. But in 1979 the Surgeon General made the statement that we don't have to worry about infectious diseases any more. Antibiotics will take care of everything. Let's concentrate on heart disease, let's concentrate on cancer, let's concentrate on this but don't worry about infectious diseases, bacterial diseases. That was one of the more stupid remarks to make because from then on until 1991 only one new antibiotic was developed by a pharmaceutical company. In 1992 there were only three. In 1993 back to one and in 1994 about three, when there used to be 10, 20 new antibiotics every year. But now in the past from 1991 to 1994 not even 10 new antibiotics came out on the market, which shows they're not doing any new research in new antibiotics. I think they're starting now, but we are a few years behind now, because they're realizing now that the ordinary, common bacteria that causes pimples, causes boils, now they are causing massive infection and killing people. Before they used to just treat

them with penicillin. They can't do it any more. And some of them, when you go in a hospital, 50 percent of every case of staph, staphylococcal infection is due to an organism that is resistant to every antibiotic except one, and they are trying to hide that antibiotic from this organism until they have to use it. If that organism gets resistant to that one antibiotic, which it will, then there is nothing you can do about it. And there are people dying from a common infection right now. And these are some of the problems, microbiology again. One of things about KU is that everyone was trying to protect their own field, which is good. This is human nature. People in the dean's office--there are so many biologists in there--they are trying to protect and help people in their particular field of interest and not help microbiology as much, when they should. So microbiology at this time will make a comeback, I think. The younger people that we've hired are very good. I am really impressed with the four younger people that we have hired in the past three years. They are very good. I just hope that they won't be ruined, not by microbiology but by certain administrative decisions. But if they are allowed to do as they want to do, I think these four plus maybe one more, my replacement, might help get the microbiology department back to the level where we were once a very well-respected department. I'm just hoping that this will be the case.

Q: Well, I think that's about it. Is there anything I didn't ask

you that I should have or that you want to add?

A: The 34 years that I spent at KU were very happy ones. I really enjoyed every year. It went so fast. It was so quick that it is hard to believe that I was here for 34 years. It has to do with when you're having fun, time goes by very quickly. It was all fun, really, the teaching as well as the research. Not only that, but the community of Lawrence is one that one rarely finds throughout the United States. I will have to admit that if the right place becomes available, I may go back to the Seattle area, back to my roots. I have a lot of good friends there from camp.

Q: Oh, you mean they went back.

A: Most of them did. Some of them I haven't seen in 40 or 50 years, but we still keep in contact. I would like to see them. It would be a very difficult decision if I were to find a place back there. There is ambivalence there. Or maybe if my son--my older son loves Lawrence and keeps coming back here--I may make a deal with him. "Do you want this house? You can buy this house. Let me go back to Seattle." Then I could come back and forth. But Lawrence has been a very nice place. If at all possible, I'd like to stay here.