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E. Charlton Prather: Good morning, Dr. Hartwig. It's a pleasure to have you here, and I'm very grateful on behalf of the University of South Florida and the College of Public Health that you would come and share your fruitful and delightful and exciting history in the matters of the laboratory and public health.

We have with us Dr. Eldert C. Hartwig, Jr., who was the long time director of the state laboratory system—the state public health laboratory system—and only very recently retired following, as I remember, thirty-six years, thirty-eight years?

Eldert C. Hartwig: Forty years.

CP: Forty years? I can't count. Following forty years with the state public health system. Doctor Hartwig, it's truly a pleasure to have you here.

EH: Thank you, sir. I appreciate it.

CP: What in the world got you interested in the laboratory?

EH: Well, it's something I've always been interested in. I can remember as a child, when I was in the Boy Scouts, one of the first merit badges I ever got was in public health.

CP: Really?

EH: Yeah. And it just sort of stuck with me over the years. And my desire was in microbiology later on. And it just seemed to be a pretty good marriage, so that's what I did.

CP: Ah. And as I remember, you went to the University of Florida?

EH: That's correct.

CP: And you— What happened there?

EH: Well, I started in 1948 and got my bachelor's in microbiology in 1952. And we were classmates as you recall.

CP: I recall very well, Dr. Hartwig. (CP and EH laugh) And pridefully, I might tell our listeners.

EH: And then in 1952, I stayed on for my master's. And you came to Jacksonville at that time for your master's here. At the time, the University of Florida and the State Board of Health had that cooperative agreement of this master's degree. And then in '53, I graduated and went into the military. And I was in the Army three years.

CP: Did you do laboratory in the military?

EH: Yes and no. I was very fortunate in the sense—which was of tremendous benefit later on—but when I went in, in 1953, it was near the end of the Korean War. And I was stationed at Brook Army Hospital in Fort Sam Houston. And we used to get a lot of burn cases from Korea and so on in there. But they had a radioisotope unit¹.

¹A branch of medicine that uses radiation to provide information about the functioning of a person's specific organs or to treat disease.

And there weren't but three in the Army at the time and that was at Walter Reed, Fort Sam, and at Tripler [Army Medical Center]. And there was no isotopes in civilian hospitals at the time, so I was able to get in on the ground floor. But it was a whole new career because the terminology was a lot different than anything you'd ever had before or I'd ever had before.

And so, I learned a lot about radioisotopes, and particularly thyroid evaluation and therapy and radioactive gall and bladder cancer, for therapy as well as the diagnostic part. But I was there the whole three years. And then later on, it became a real asset for a position that I had here for a very brief time.

CP: Really?

EH: (affirmative murmurs)

CP: And after the military, did you come back to the Florida public health system?

EH: I went back to school for a brief time. And then was employed at Southern Research Institute in Birmingham, working on antibiotic beers. Searching the media at which antibiotics were made for anti-cancer agents. And we used the micro-bacteria—bacteriology as the sensing organism. And I was there for about a year and a half.

I had made application for the state board of health at that time when I got out of the military, but there were no positions available. But I continued making applications and in December of '58, there were some positions available. They'd obtained a new research grant on the atypical micro-bacteria.

And I was the—there were three employed under that grant. I was the research bacteriologist, and Dr. Prather was the research epidemiologist, and Dr. Lewis, who at that time was the director of the TB hospital in Tampa, was the physician of record. And we were in that position. I was in that position for several years.

CP: Did you— When did you aspire to come back to public health formally? And did you were— Were you interested in public health generally or were you interested particularly in Florida public health?

EH: Well, I was interested in Florida, particularly. This was home.

CP: Yeah, you were born and raised in Jacksonville.

EH: Yeah. And I was interested in public health. I had visited the State Board of Health on several occasions as a graduate student at the University of Florida on tours that we made. And then it just sort of grabbed at me, and it's something I wanted to do.

CP: And you applied and you got back in '58.

EH: Applied and I eventually got back home. Yeah.

CP: Wow. Highlight your research with the atypical micro-bacteria. Don't they have a different name now?

EH: Yeah. Well, they were called the unclassified micro-bacteria at that time, and also the atypical micro-bacteria, so there are a number of synonyms. I don't know as the names specifically has changed. I mean, they've given some genus species names to some of them but—

CP: That were unidentified at that time.

EH: That were unidentified at that time, right.

CP: Yeah, and I think of *intracellularis*, that's particularly important with AIDS today.

EH: Right.

CP: And you have lived through it all.

EH: And *fortuitum* was another one. *Mycobacterium fortuitum*, which is a rapid-grower, that is sort of ubiquitous in nature. And is a problem for the immuno-compromised.

CP: But I didn't mean to distract you. What were the highlights of that research, and how long did you stay in atypical research?

EH: Well, I was first—I was assigned first to the TB hospital in Tampa. And it was there that I learned about atypical mycobacteria and TB in general. And it was a new experience for me in the academic background but not the practical aspect of it. I had some excellent teachers there.

CP: Mention one. One of your teachers.

EH: Well, Frank Dunbar. There's one.

CP: Frank Dunbar, thank you for reminding me.

EH: Was one of them. Betty McAlister was another and Robert Cacciatore. These are three of those who really were in on the ground floor. At that time, there wasn't much going on. It was a new discovery at Grady Hospital in Atlanta. And there was difficulty in identifying. And so, Florida was really in on the ground floor of identifying those. And some of the procedures that I developed then are still in use today.

CP: Really?

EH: So, yeah. They've gone on to some more advanced procedures and techniques but there are still a few of them that they're using today. Which is sort of satisfying, you know?

CP: Thank you. I hope that pleases you.

EH: It does. It really does. It feels really great.

CP: You mentioned Robert Cacciatore and I would find it amusing somewhat that you identified Robert Cacciatore as one of your teachers there. I want to recall that he was one of your classmates at the University of Florida.

EH: He was. He was. And that was very—

CP: I suspect you taught him some stuff too.

EH: Well, it was mutual. But he— At that time, he was an expert in TB bacteriology, which I knew nothing about. And so, I really picked his brains. And he's a good teacher.

CP: Good. Good. Good. I remember him with fondness, Dr. Hartwig.

EH: He was a real close friend as well as a mentor in a sense. And Frank Dunbar and Betty McAlister, all three of them were experts.

CP: As totally as an aside, give me a paragraph on Frank Dunbar.

EH: Frank Dunbar did not have much of a formal education; that is, advanced degrees or anything like that. But Frank had been involved with TB for a number of years. He had worked with the Trudeau Laboratory² in Saranac, New York I believe it was.

CP: Yeah. That's right.

EH: And I don't know how long he'd been in Tampa by the time I got there but he was the director of the TB laboratory at the time. And in spite of his lack of advanced education, he really knew TB bacteriology and was well known on an international scale for his—

CP: It's my impression that he was recognized internationally as an expert in TB bacteriology.

²Founded in 1884, the Saranac Laboratory for the Study of Tuberculosis by Dr. Edward Livingston Trudeau was a tuberculosis treatment and research facility. It would later be repurposed into the Trudeau Institute research center in 1964.

EH: Absolutely he was. Yes, he was. And I think the most he ever got was a bachelor's degree. I'm not even sure if he ever got that.

CP: No, as I recall, he did not.

EH: I didn't think so.

CP: No.

EH: But he was one of those old-time classroom bacteriologists that we used to envy, as you recall. (CP laughs) And I look back on it now, I says—and I think about the new people coming into the field today. And we had a working relationship with the University of South Florida at that time.

Well, later on, actually. And one of the things I used to teach the students was how to prepare media. And I've always said that the person that couldn't make media was not worthy of the name bacteriologist.

CP: I totally agree.

EH: But it was—as you and I know—we were student assistants at the University of Florida, when we were in school then. That's what we did all the time.

CP: That's what we did. Wash dishes and make media.

EH: I washed more tubes and made more media. Those were some great days. But I was involved with the identification of those organisms early on. And then they transferred me to Jacksonville to introduce the technology for identification of the organisms on a statewide. That time, it was just related to the TB hospital but they wanted it statewide so I was here another two years.

CP: That's the central state public health laboratory in Jacksonville.

EH: In Jacksonville, right. And Dr. Schneider was the director at the time. And I was here couple of years, I guess. Got it established and then they decided that I was not too bright, so they sent me off to school to the—

CP: (CP laughs) Wisely.

EH: —to the University of Pittsburgh, where I got my MPH [Master of Public Health] in 1962 and my doctorate in—doctor of science in 1965.

CP: And your doctor of science is in—what? Your major—

EH: Microbiology and biochemistry.

CP: Okay.

EH: But it was during that waiting period before I came back to school—went back to school that the radioisotope experience became useful. Because, at that time, there was a Bureau of Sanitary Engineering at the State Board of Health and they had a small lab component of their own dealing with the prevalence or the background radiological assay of Florida waters.

And the individual who had been doing that had resigned. And the one with experience in analyzing for radioisotopes or radioactivity, at that time, were not very many. And so, Dr. Schneider asked me to fill in there until they could get somebody, so I went over there. And I was there three or four months, I guess. And the problem I found when I got there was that there was no standardization and no records or anything else.

CP: Oh, boy.

EH: So I did all of that, got it all established and up and going. And then school started, so I went off to school.

CP: (CP laughs) All right.

EH: It was— But it really was a rewarding experience to be able to call on that earlier experience.

CP: I'll bet it was. Yeah. And you made another exclamation mark around your service with the State Board of Health labs.

EH: Right.

CP: By getting that established. And did they hire somebody to replace you?

EH: I left about that time. And it was also while I was gone, those three or four years in Pittsburgh, that there was a reorganization in the state government in the Department of Environmental Health. I mean DEP, the Department of Environmental Protection was organized and the Department of Natural Resources.

And so, the sanitary engineering piece went to the Department of Environmental Protection. And the shellfish program, which we had at that time, the bureau labs went to the Department of Natural Resources.

CP: Oh. Can you recall the year?

EH: Well, it was sometime between 1962 and 1965, but I don't remember exactly when it was because I was at school at the time.

CP: That's close enough. Close enough.

EH: So, when I came back—

CP: Did the State Board of Health promise you a job upon completion of your doctorate?

EH: Well, at that time, they had an educational policy where they paid you three-quarter salary and all expenses to go to school.

CP: Oh, man, that's nice.

EH: At least for the year, for the MPH. With the understanding that for each month you were in school, then you would pay two months back. You know in other words, double the time. Which was no problem for me because I was planning on coming back anyways.

CP: You wanted to come back anyway.

EH: But the following three years for the doctoral program was not supported by the state, but I was under a grant at that time at the university. So, I was able to stay on and—

CP: Marvelous!

EH: But then I came back in '65.

CP: You came back in '65.

EH: In December of '65.

CP: What position did you come back to? Coming back to radioisotopes, atypical microbacterium?

EH: No. At that—just before— Just a few months before I returned, Mr. Venners, who was the director of the Tampa branch laboratory died.

CP: Oh, as I recall, he had been there for years and years and years.

EH: Fifty years, fifty years. And but he had—he had died and I was employed to replace him. So, I came back as the director of the Tampa branch laboratory. Which is one of several in the state—

CP: You moved from Pittsburgh to Tampa?

EH: To Jacksonville for a brief orientation for about three or four months and then went off to Tampa.

CP: Oh, okay.

EH: And I was there thirteen years.

CP: As director of the branch lab?

EH: Tampa branch laboratory.

CP: As a total aside, Dr. Hartwig, I have in my possession for the coming Florida State Museum of Public Health and Medicine, the analytic scale. The first one bought for the Tampa lab, is in my possession.

That's just an aside and it'll end up in your Julia Street building here as a part of the museum artifacts. That's an aside, thank you. And you were there thirteen years. As I'm recalling, you constructed—are responsible for the new laboratory building there?

EH: At the time I took over Mr. Venner's job, the plans had been contracted. The first floor had been laid, but then I was there for the rest of it. And saw the construction of the Tampa branch laboratory, which eventually went to the Hillsborough County Health Department being located on the same block.

But yes, I was involved with the final construction and the organization of it and the furnishing of it. It was quite a challenge.

CP: But your experience apparently set you in good stead, because I want to recall that you had folks supervise the construction of a whole bunch of other laboratory buildings since then.

EH: That's true. A few years later there was the desire to construct a new laboratory in West Palm Beach. And I was involved in that from the predesign phase, working with the architects and—

CP: To lobbying for the money.

EH: To lobbying. (EH laughs) To lobbying for the money, that's right.

CP: Don't forget that part.

EH: And actually, that was quite an honor for me because that's normally something the state lab director would do. But he gave me full responsibility for it. And it was—

CP: Oh, this is while you were still in Tampa.

EH: Yeah.

CP: Oh, okay. Go ahead, sorry.

EH: I was still in Tampa. And so we finished it and I don't remember what years it was, it must have been the late '70s. And then we did some construction in Pensacola about that same time. And I was involved with that to some extent.

CP: Were you still in Tampa as director of the Tampa lab?

EH: Yeah, at that time.

CP: Okay, okay.

EH: Then after we moved to Jacksonville in April of '90— of '80, 1980, we moved from Jacksonville to—I mean to—from Tampa to Jacksonville—where I filled the position as assistant director. Which is not something I really wanted to do, actually. I was happy where I was and there was still some challenge—

CP: And you were director and now they're going to demote you to assistant.

EH: That's about the sense of it.

CP: Oh, boy, that'd hurt one's ego.

EH: But I was happy in Tampa. We had a couple of kids. And they were involved in school. And I had no particular desire to move, although there was always room for improvement and always new challenges. But it was sort of mid-career and it was, as you well know, you kind of wonder, well, what am I going to do for the rest of my life. You know, that kind of stuff.

And so, I wasn't particularly pursuing this position. And Dr. Schneider sent out an invitation for applications and I didn't send mine in. (CP laughs) But then he called me and there were no applicants that he was satisfied with in any way.

So, there was an APHA, or FPFA meeting, Florida Public Health Association meeting shortly—about that time. I think it was Daytona. And he called me to room with him. So, we went to the FBHA in—I believe it was Daytona. And we roomed together, and, of course, it was a set up. (CP laughs) And he persuaded me as he could.

CP: As he was loathed to do.

EH: Yes, he was. And he was very good at it. And it was to my advantage to go and head over to—

CP: And it was.

EH: Well, actually, it was. And as I thought on it, it was a good time to move, if I was going to move, because my son was just getting into senior high school. And it would be very difficult to move with him in the eleventh or twelfth grade, having gone through a class. So, he was just going into the tenth grade. So, that was convenient. And then there were some other things that seemed to be indicating this was a direction to go.

So, I put in my application and accepted. And so, I became—I came to Jacksonville on December the seventh, '79. And then the family moved down in the spring of '80. And I was the assistant director for that year. I had no idea at the time that I accepted the position that Dr. Schneider would be retiring.

But shortly after I got there, about six months before he retired, he dropped it on me. And I said, “Why are you doing this? You know, I don’t want that job. I’m just getting used to this one, you know.” I kind of liked the—the authority without the responsibility.

CP: Ah, yes. (CP and EH laugh) Ah, yes.

EH: It was kind of nice. But I tried to talk him out of it because Nathan was—Dr. Schneider—was a very good, close friend as well as a mentor and a boss. And we got along greatly. And it really—I really didn’t want to see him go. I wanted to work with him a while longer. But he left, and so, I assumed that position in July of '81 until I retired in February.

CP: Of?

EH: This year.

CP: Ninety-nine?

EH: Ninety-nine.

CP: Yeah. Eighteen years. Eighteen years as director of the lab. How long was Nathan director?

EH: I think he was director about 21 or 22 years.

CP: And then preceding him was a guy named Hardy³. Do you happen to remember how long he was here?

EH: Doctor Hardy came on board in the late '40s. Right after World War II.

CP: Forty-six, to be exact.

EH: And he was quite a mentor as well. And he encouraged me to go back to school as well as Nathan—I mean Dr. Schneider. And that was another life-changer. I didn't want to go back to school. I had been out of school ten years. And hell, I just didn't want to submit to that professorial-student relationship, you know. I pretty much knew what was going on and it was just— But actually, it worked out very well.

I had the advantage, because there were a lot of other students there at the time who were much younger than I, did not know microbiology; which I did, at least the basics. Now, that was about the time that, uh, DNA and RNA was becoming prominent. Because at the time that you and I were in school, as you recall—

CP: We didn't know about that stuff.

EH: There was no such thing as heredity and bacteria and let alone transfer of genes or all that sort of stuff. But at that time, Watson and Crick had just found out about DNA, and there was that. So, it was right at the beginning of that.

So, I had the advantage because I all ready knew the background. It was just a question of picking up on the newer stuff as opposed to some of the older—some of the younger students who didn't even know microbiology, let alone the other things.

So, it was kind of neat. Plus the fact that—and it's for which the program is designed to get people who are in the field and had been in it a while, the educational background for future leadership, as they do have now at the University of South Florida program.

³Albert V. Hardy MD

CP: Their leader institute.

EH: But at that time it was through other schools of public health, at the expense of the state. And it's worked out very well.

CP: Now back to your building. I got you off, we were talking, you participated in the construction of the lab in Pensacola, but that's not the end of your construction business.

EH: No.

CP: Come ahead.

EH: Well, we had been, for years, wanting to get a new lab here in Jacksonville. But we delayed it mainly because we needed them in the branch labs as well. So, we felt like, "Well, we can manage here."

CP: Are you talking about new buildings or expanded space?

EH: Both.

CP: Okay.

EH: So, we postponed it until we were satisfied that the Miami lab was adequate and the Pensacola lab and the Tampa lab and the West Palm lab. There was a small lab in Orlando, but there was no need to expand it at the time. So, we focused on a new lab here. And what a headache that was. (CP laughs) But we started about ten years before we actually got it going.

CP: Well that's par, isn't it?

EH: Yeah, we had— Well we had plans for it. There was some planning money put into it and we were only planning on two floors. And then the workload and the newer technologies were coming on board, which I hope we'll get a chance to talk about later on.

CP: We're going to have to. We're going to have to.

EH: But anyway, a lot of this new stuff was coming. We just needed more space. So, we added a floor. So, that meant we had to do some more remodeling. And finally one day, we got the money and got the contract and they started construction. But unfortunately this site was an old dump back in the earlier days of Jacksonville.

And after the fire, I understand a lot of the debris was placed to fill. Because this was a very low area at the time and it was a dump for the city. And so, in the course of putting in the foundations and the pilings, they ruptured a fuel oil drum. And EPA heard about it and they got involved. And two years later, after having cleaned up the site, sterilized the soil, brought it back, mixed it with asphalt to make a parking lot driveway, we resumed construction.

And it was— We had requested, I think it was twelve million dollars. And it actually cost about eight or ten [million dollars] by the time we got done with it. With all of the contract suits that came as a consequence of the EPA thing and it was a mess. But, eventually, we ended up with a three story building on stilts, over the dump and the flooded areas, because we're right on the creek, as you know. And when there's a—

CP: Yeah. The famous Hogan's Creek.

EH: Yeah. When there's a northeastern, the tide's high, it floods big time. So, we had to put it on stilts. At the same time, we had to renovate the Hanson building, which housed pretty much the laboratory space. And we had to vacate the old State Board of Health building, the one that's now being preserved.

CP: Yeah. Called the Julia Street building.

EH: Julia Street building. And in order to accommodate construction and to bring those people into the land because that—the Julia Street building had been condemned. We couldn't use it.

CP: How many years did you use it after it was condemned?

EH: Quite a few. (CP laughs) In fact, they had it condemned to the extent that they put an eight-foot fence around it.

CP: Oh, boy.

EH: And you couldn't enter it from the street, but there was the overpass between the existing Hanson laboratory and the Julia Street building. So, we did use the space for a while. But it was— To accommodate all that, we had to utilize the auditorium, as well. So, the large auditorium in this complex was made into laboratory space with temporary sinks and plumbing lines and electrical power lines until we got the building constructed.

That was about two years. And we also used an old storehouse that was across the street for virology during that time. So, we finally got it finished, though. And everyone moved in and it really, really is a nice laboratory. It was based on the open lab principle. As you recall, most of the time during the war years and shortly thereafter, it was all compartmentalized in a 10 x 20 module put out by the Centers for Disease Control, which we followed as being the more utilitarian.

So, we— In the construction that we had done before, it was pretty much cell space. You know, a little room here and there. But this was an open concept. And I liked that and wanted to do that because it gave a lot more open space. You didn't seem to get that closed-in space.

And while there are certain features of the laboratory that are quite critical, particularly when you're dealing with highly infectious organisms like tuberculosis or like rabies or something like that—we need one pass air and special types of engineering. We put all those rooms at one end so we wouldn't have to one pass air the whole building, just those particular rooms.

CP: Excellent, excellent.

EH: And not only that, but it gave the— The openness idea didn't lend itself to the crowding perception. But it also allowed us to move some spaces around. So, that while there would be a selected space for, say, sanitary bacteriology, if we felt that there was an expanded need or we needed to put something else there, it was more mobile so that we could shift it around. So, there's a lot of advantages.

CP: That was very innovative of the time, was it not?

EH: For the most part, I got the idea from—initially from the VA laboratory in Tampa. I visited there. We worked closely with the VA at that time. And I visited that lab some occasions. And it was a brand new laboratory with the open concept and I really liked it. The concern I had was the noise level. But it was not a problem and it's not a problem here.

Break in Recording

CP: Before our break, Dr. Hartwig, we were talking about the buildings. And we were on to the addition here in Jacksonville. What's the size of that building? You said it was three floors or four floors?

EH: It's three floors but it's on stilts. So, it's a four-story height, but it's only three functional floors.

CP: And you park state cars in the basement where they'll be first hit when the water comes up.

EH: That's about it. (CP laughs) But it's about 50,000 square feet.

CP: About 50,000 square feet. I'm trying to lead you on to a particular building in Tampa, but before we get to the combined College of Public Health state laboratory combined eloquence there, what other experience have you had with building buildings? I know that your last building was the laboratory at the College of Public Health.

EH: Well, that's one we were working on, but it has not been consummated as yet.

CP: It's been named though, by the way.

EH: Yes.

CP: Were you aware that the last legislature named it?

EH: No, I didn't.

CP: As the William Doc Meyers Building. The formal legislative act—

EH: He certainly—yeah, he certainly has made major contributions to public health over the years.

CP: He sure has, and I was pleased to read that.

EH: I can't think of a more appropriate name for that than anything else.

CP: Yeah. I was pleased. That's just an aside, forgive me.

EH: Right. When the department reorganized from the Department of Health—from Department of Health and Rehabilitative Services to the Department of Health—then there was some separation, of course. And so, the bureau labs—incidentally, there's only two bureaus that have continued to expand from the original State Board of Health.

CP: Oh, really?

EH: And that was the Bureau laboratories, which was organized 1903, I believe it was. And then vital statistics, I believe it was, in 1915 or '16, somewhere along there. But they still exist today as those two—still those two bureaus.

CP: As the bureaus.

EH: Now they've reinstated some of the original bureaus in different configurations, but to retain the name and still function as they were before, those are the only two.

CP: That's a good pearl. Those are good pearls, thanks for that.

EH: But at any rate, the New York Yankees bought the property on which the current TB—the old TB hospital in the current branch laboratory—Tampa branch laboratory and the Social Health Agency—a part of HR—were located. And so we had to move. And we had been looking all over Tampa for a site. The original thought was with the University of South Florida, but there was all kinds of problems on deciding where and whether this was appropriate.

And we had looked at the research industrial site on Fowler, I believe it was, and the University of South Florida, which had set aside a section of land for development for research in intercommunity kinds of activities to weld the relationship within the University of South Florida and the local community. So, we were looking at the blood bank, which was located in this site originally.

But then the governor, Governor Chiles, and his wife wanted to build an institute for children. And the school of public health was needing some laboratory space. They were having— They were limited in the number of grants they could get because of the lack of laboratory facilities, and that portion of grants that the federal government's looking for and sought.

So, it was a pretty good mutual arrangement in which the university could have some laboratory space, take advantage of our expertise. We would have a new building and some additional space to take advantage of the university involvement and contribution, and at the same time with the Chiles Center. And so we looked at different sites on the campus and had decided on a site on the northern part of the campus on Fletcher.

But it did not materialize. There was some money appropriated; we had eight million dollars appropriated for planning and construction of the laboratory. The university had some money involved as well towards this building of interest, in a particular building.

And I've sort of gotten out of it since I've retired but I understand now, they're back to the idea of—of the blood bank utilizing that space, which is large.

It would house the laboratory. It's not large enough for the Chiles Center or the university, but it does lend itself for expansion in construction and so on and so. I'm not familiar with the details since I've retired but it's an ongoing thing right now. And it's a very important project, not only for the university but for the state lab as well.

CP: I just want our hearers to be aware that you were instrumental in this cooperative relationship between the university and the state and the state laboratory system. And I think it is just a marvelous marriage for the—to be under the auspices of the College of Public Health there.

And to provide that expansion of their community laboratory by adding the test tube part of their community laboratory. And I think it's just tremendous. And I want our hearers to know that you were very much responsible for getting all that done. And I thank you, Charlie.

EH: Well, I was involved in it. There's others involved in it now.

CP: Of course.

EH: But it's been an interesting building career. I've learned more engineering and construction and architecture than I ever thought I'd ever know. And it's gotten to the point—

CP: Much more than you needed to know.

EH: —of designing and getting the see-through paper, putting on blueprints, and, you know, changing everything around. And I feel like I'm almost an accomplished engineer. Far from it of course, but there are some things that are unique features to a laboratory that are absolutely required and necessary that most architects are not familiar with.

And so, in all of the buildings, I've always insisted on a very close working relationship, and it's really paid off because we've done some things that would have been done

otherwise. It really makes for a better functioning, a more efficient functioning laboratory. It's worked very well.

CP: Yeah. You've made—you've made quite a mark on the construction of laboratory facilities in this state. And that's—I want our hearers to remember that point. Far as I know, there's no others under consideration at this moment.

EH: Not, other than the Tampa Branch laboratory.

CP: Yeah. And it will come. And we're all excited about seeing that done and I hope that you are going to be part of the dedication when that comes to pass.

EH: That would be nice. I would like to be a part of that.

CP: Yes. What did you name your new building in Jacksonville?

EH: The Albert V. Hardy Building.

CP: The Albert V. Hardy Building. One quickie little paragraph on who's Albert V. Hardy?

EH: Doctor Hardy started his public health career in Iowa as a public health officer. He was an expert and he's a physician, of course. He was an expert in enteric—enteric diseases, particularly the *salmonella*, *shigella* and (*amebiasis*?). He came to the state, as you've indicated in the early '40's, mid-'40's, at the end of the war, World War II, and faced a tremendous challenge in Florida, to establish a laboratory system.

Which he proceeded over the years to do, hiring the best that he could find with very limited resources. The unique thing about laboratory people is that they really feel they're making a contribution to public health, because the laboratory is central to just about anything you do in public health: specimens, surveillance, monitoring all involves laboratory in one way—to one degree or another.

And so, we've had to work very closely with other bureaus, other agencies, including state agencies as well as federal agencies: FDA, Department of Agriculture, or the EPA, the federal agencies, and of course CDC, as well as with all the county health departments. And our primary function, of course, is to provide the services to the county public health departments.

But Dr. Hardy had this vision and was able to muster a cadre of people who had a heart for public health and a heart for a laboratory, and were mentors in themselves, Doctor Hardy being the model, of course. And so, he was the director of the laboratory for the postwar years, and, probably as much as anyone else, established Florida as a high priority laboratory in the United States—public health laboratory in the United States.

In fact, the Centers for Disease Control would send new epidemiological investigation officers to Florida because of this marriage of laboratory and epidemiology and health departments to address public health. And so, Florida was an attractive assignment. And also—

CP: So, we were a training ground for federal epidemiology and laboratorians.

EH: Not only federal but in more recent years, in the last four or five years, for international. We've trained people here from Ghana, two or three from Ghana, two or three from India, Australia, South America. Of course, we're uniquely qualified for South American, Central American countries because of the bilingual—

CP: Yes. And we kind of stick down in the Caribbean ourselves, don't we?

EH: Well, we are. And that makes—that's the other thing that makes Florida unique. It's because we're a part of the Caribbean realm and experience public health problems that most states never see, or very rarely see. For example, parasitology; Florida does more parasitology than all the other states put together.

CP: Really?

EH: And the exotic new stuff, particularly from these third world countries that—they come in. So, we are uniquely situated to address these very public health issues. AIDS for

example, we have a large— Florida's number three in the nation for AIDS. And we examine close to twenty thousand specimens a month just for AIDS.

CP: I want to recall that you were the first state lab to do AIDS testing.

EH: Well, we were one of the first. When it was determined that this was a public health issue, there were some training given at the National Institutes of Health as well as CDC. And we were one of the first ones to get on board. In fact, we got on board very quickly and were able to build a reputation that is still very strong one in this state.

CP: And I want to think that you did some of the original field-testing for the validity of the western block [sic] test⁴. Was that not done in Tampa?

EH: No, it wasn't done in Tampa. It was done primarily here. There's three labs that were doing AIDS testing, or four I guess, primarily Jacksonville and Miami—well, actually only two: Jacksonville and Miami. Tampa was involved a little bit, at least on the culture side of it. But they were not in the mainstream of the AIDS testing. But between Miami and Jacksonville, we got about twenty thousand a month.

But getting back to the naming of the building, Dr. Hardy was able to bring together these people and really establish the bureau of laboratories as one of the foremost premier laboratories in the United States—Florida laboratory. And so, it was appropriate. And, I mean, he was my mentor—one of my mentors; he was one of your mentors—and so it was appropriate to name the building for him, because he had a very special love for the laboratory.

He later became acting health officer and health officer for a short period of time. So, I could think of no one more appropriate to name the laboratory. And that was our recommendation. And—

CP: I totally agree. I totally agree.

⁴Sometimes called a protein immunoblot, the western blot is used to detect specific proteins in a tissue sample. To detect Lyme disease, proteins are sorted by length on a gel substance and then probed with antibodies that will react to the specific proteins being sought. To confirm a positive HIV test, however, that process is done in reverse.

Pause in Recording

CP: And another one of your major laboratory buildings is called the Hanson building, I believe. Who was Hanson?

EH: Doctor Hanson also was an early health officer as well as director of the lab in the early years. I don't remember exactly which year it was. But this building, the Hanson Building, was built in '56, I believe it was, 1956. And it was a very good laboratory by those standards of that day. But the technology has advanced to the point that you need much more complex electronic and engineering facilities—

CP: Capabilities.

EH: —Capabilities to perform these advanced technologies. And so the building was not equipped for that. And so, we've had to renovate, or there is plans to renovate as a consequence of that. In fact, this year the legislature gave us—I think it was four—three or four million dollars to renovate this particular building. And what they will do is gut it; at least that what the plans were: was to gut the building except for the exterior walls and almost rebuild from inside.

CP: Really?

EH: Yeah.

CP: Where are you going to put all your laboratory stuff while that's going on?

EH: That's why I retired. (EH laughs)

CP: Oh, that's the reason you retired, I see.

EH: I don't have to worry about it. But that is a major problem. There's no question about it. It's the same problem that we faced before when we were doing some renovation. And it may require—in fact, it probably will require—reclaiming the auditorium again and maybe getting some—

CP: Probably even leasing some space.

EH: —Leasing some space, maybe some temporary buildings in the outside. I don't know how long it would take; probably a couple years, a year and a half, two years, I don't know. But—

CP: You keep referring to, or you've talked about, the changing technology over time. I'm old enough to remember the day since I was in bacteriology at the University of Florida, these modern folks have changed all the names of the germs. And I can't even keep up with the names of the germs. But your period of forty years in laboratory work, you've obviously had the opportunity to observe major changes in the technology available to us. Highlight some of those for us.

EH: Well, let's see. One of the earlier things—I mean, I'm talking about my bringing into words, director. One of the earlier problems that we had in the early '70s—well, I'm sorry, the early '80s. I came on board in July of '81. Shortly thereafter, there was a necessity to become approved as a Medicaid/Medicare laboratory. At that time, Medicare/Medicaid was becoming very prominent.

And to be paid, you had to have an approved laboratory, in which meant you had to be inspected by the federal authorities and so on. And so, we were able to meet those qualifications and standards, and we were one of the first public health laboratories in the United States to be Medicaid/Medicare approved.

CP: Really?

EH: And remained that for a number of years. Well, most of them now are.

And then, I'm trying to think of the major crises or events that occurred through the years. Shortly thereafter, there was a pesticide that was being used, ethylene dibromide, EDB, for nematodes in the orange groves. And there was the concern that it was getting into drinking water in the central part of the state. And so, the legislature— You know, the best thing that could happen to public health, as you've probably heard over the years, is a good epidemic.

CP: That's right.

EH: Because then they dump on you money, you know, to do what you've been begging for all these years. "Look, if you just give me some money, I can do this and that and the other", and nobody listens until there's a big outbreak. "Why didn't you do something?" So, anyway.

But that was a major event, insofar as the land is concerned, because the governor and his cabinet was able to generate some funds to establish an environmental laboratory dealing with chemistry. Now, we have the environmental microbiology, where we test water for the bacteria to make sure it's potable and drinkable. But there's another side of it, and that's the chemical side of it.

And so, now it's a big thing in public health and environmental arenas, is the amount of chemicals that are in water, pesticides, and herbicides, and even go into vegetable and crops now and fruits and so on. And so we were able, with the dollars that the cabinet and the legislature gave us, to establish a premier environmental chemistry capability, which we never had before.

And, in fact, the universities wanted to get involved with it, and the legislature insisted on that. And our concern was we didn't want them involved. Mainly because it required extensive standardization after EPA rules and regulations, and they just didn't want to do that. And to be able to compare data, you've got to make sure that the standards and everything is there.

Well, I think one of the universities lasted a week, and the other one lasted a month. And finally said, "We can't do this. This is something that is in the realm of public health;" which we told them to begin with but nobody would listen. But anyway, we were able to establish that ethylene dibromide was not a problem. Primarily, it had to do more with well—poor well construction than getting into the water. But we still monitor for that all these years later.

CP: You do?

EH: So, that was one of the things. And then, I guess, we expanded the infant screening activities. Initially, every infant born in the state was checked for phenylketonuria⁵, but then that was expanded by a reference group to include galactosemia⁶, hypothyroid⁷, sickle cell and the other hemoglobinopathies⁸. We started out with maple syrup urine disease⁹ as well, but in two to three years of running it, we never ran across a first sample so we dropped that.

CP: Oh, really?

EH: Yeah. And we're doing, recently, adrenal hyperplasia¹⁰. So, that's an activity. That is a major effort. I guess, probably, a fourth of our lab staff is devoted just to the infant screening activities.

CP: Really?

EH: (affirmative murmurs)

CP: You might let our hearers know that the technology is very complicated.

EH: Very.

CP: It's a very exacting chemical analysis and you use some rather sophisticated equipment to do that.

EH: Right.

CP: That was not even thought of when I came along. When I was in college.

⁵A birth defect that causes an amino acid called phenylalanine to build up in the body.

⁶A disorder that affects how the body processes a simple sugar called galactose.

⁷An endocrine disorder in which the thyroid gland does not produce enough thyroid hormone.

⁸A kind of genetic defect that results in abnormal structure of one of the globin chains of the hemoglobin molecule. Common hemoglobinopathies include sickle-cell disease.

⁹An inherited disorder in which the body is unable to process certain amino acids properly. The condition gets its name from the distinctive sweet odor of affected infants' urine.

¹⁰A collection of genetic conditions that limit your adrenal glands' ability to make certain vital hormones.

EH: Yeah. The phenylketonuria was something that was a very simple test, where you put some of the sample on a plate and grew organisms on the plate. And if the organisms didn't grow, then the phenylketonuria was—the phenylalanine was missing, which is a required growth factor for the bacteria. And so if the bacteria didn't grow, it wasn't there.

And so there was a hereditary problem in the newborn infant. Which is a very simple thing to do. I mean it doesn't take any great skill to do it, and the materials are very simple, very cheap. But when you get into hypothyroidism, galactosemia is similar to it, but they got a newer technology now which is much more sensitive.

And, of course, sickle cell has to do with chemical and physical properties. And that is a sophistication that we have not experienced before. But even in general microbiology, before it was a matter of selecting certain growth media to identify organisms. And by the pattern of growth in different kinds of food for the organisms, we could identify them.

Well, now it's gone to automation, it's gone to looking—extracting DNA and RNA and ballooning that to millions of copies and looking for that, which is much more specific; it's much more expensive and much more sophisticated, but it's much more definitive as well. And not only just general microbiology, but in TB bacteriology as well. In fact, that's probably the wave of future microbiology is in the—

CP: We'll be growing organisms. Yeah, you'll have to grow a batch, I guess.

EH: Yeah. Well, for identification, you wouldn't have to grow too many, because you're looking at the—the genetic component of the organism. And you can, by technology, reproduce the genetic material—

CP: Oh, you can?

EH: —without having very many organisms in just a matter of a day. And you'll be able to identify in a day or less.

CP: You've come a far piece since Pasteur.

EH: Right. But still— There still is the need for the growth of a large number of organisms, though, because of sensitivity studies. You still have to do that. What organisms—what antibodies and organism sensitive to, to treat the patient.

And that is still of an annual stage, although within the last couple of years, they're moving towards identifying DNA segments and fragments that are unique or they were—that make an organism resistant or sensitive. And so they're even moving into that area with genetic, molecular biology activities.

CP: You have seen massive changes.

EH: Oh, I mean it's—and, of course, AIDS came along and— But we've really seen this whole new world in science. And we think—

CP: And since you became director in 1980, there's this—it's just been phenomenal.

EH: It really has.

CP: The advance in laboratory technology. But move back to when you first began with the state laboratory system, it was not quite as fast, the change.

EH: No. Very laid back, very routine. And it was a joy. I mean, we were a family and we worked with one another, helped one another. And now, it's so specialized, you can't. Although we do do cross-training, the sophistication is not there.

CP: One set of technologists don't have a language to talk to another set.

EH: Exactly.

CP: Fascinating.

EH: And they've become specialists in a particular area. And so in the older days, in the earlier days, we could switch people around. It's pretty much the same principles, different organisms but much the same principles. But not anymore. You've got to hire specialists pretty much any more.

There's some things that don't change though, because I can remember one of the first annual reports that the first laboratory director wrote in 1903, are still a problem today.

CP: Oh?

EH: Yeah. (CP laughs) In reviewing it, there was two things that were in his first annual report that were major concerns to him. One was the health departments and the physicians do not fill out the laboratory slips completely. (CP laughs) And secondly, postal service; postage due, not putting enough postage on or improperly posting the specimens.

And I was talking to someone the other day. I says, "You know, it hasn't changed in seventy-five, well, ninety years now—ninety-three, ninety-four years. Still the same problems; still have problems with the post office and appropriate mailing. And we still have problems getting physicians and the health department to fill out the form." (CP laughs) So you know, some things never change.

CP: Well maybe we have some health department folks watching this tape. And why don't you admonish them to please fill out the forms?

EH: Well you know, the material—the information we ask for is meager. It's not that much. But it is extremely important for epidemiological follow up. For identification purposes, to say nothing that it's required by the law. And for reimbursement purposes; for Medicare, Medicaid, or any third party, they require certain information for being reimbursed.

And about 50% of our budget is fee or reimbursement. And our annual budget runs about, at least in the last few years, has been running about nineteen or twenty million dollars. And so half of that is \$10,000,000; you know thereabouts. And so, it's critically important that these forms be filled out. And if they're not, we can't get reimbursed and we cannot provide the services then that the health departments require. And they want—which we want to do.

CP: Yes.

EH: But—

CP: Hey, listeners from the health department, please fill out the lab forms. (CP and EH laugh)

EH: But it's true. And it's a burden. There's no question about it. But I mean, there's certain things you just have to do, you know?

CP: Yeah. Fascinating. Fascinating, fascinating. What are you doing in retirement?

EH: In retirement? Well, it's been about six months now. And I really have enjoyed it. I really was concerned. I didn't want to retire. I mean it's always been a challenge to—

CP: Nobody made you retire.

EH: No (EH murmurs in disagreement) it's always been fun, but forty years seemed to be a pretty good, round number as a goal, I guess. But you've said it yourself, pretty much: there's newer technology that requires the educational background that has gone beyond my educational background. And while I can administer, I'm getting further and further away from the science of it.

CP: Yes. And that bothers you obviously?

EH: It does, it really does, because I've always been interested in it and wanting to keep up with it, but it's just—it just is beyond me anymore.

CP: Yeah. I was brought up as administrator and never asked anybody to do anything you can't do yourself.

EH: Exactly.

CP: Yeah. That would bother me too, Charlie. Go ahead; I didn't mean to—

EH: It does. It really does. And then of course, there's the communication mushroom cloud. It's just expanding from, you know, (inaudible). There's also the regulatory activities that just really tie your hands. Not that there shouldn't be some regulation, but you know, the reliable, honest, tabletop microbiologist, scientist, they pretty much follow the—they have to be certain of their data.

And so, they have the appropriate controls and standards and so on. There's a lot of them that don't. But the bona fide ones do, and they recognize that. And so, there is a place for the regulation to make sure that it is, but it's really getting beyond what's reasonable anymore. And it's just a—it's become a very good—just a great burden.

CP: Hassle.

EH: So, I thought, you know, this—it's the turn of the century—

CP: Let some of them younger guys do that.

EH: —turn of the century, new governor, new secretary, it just seemed to be a good time to pass the baton. So, that's what I decided. I'm enjoying it, I'm having fun, and doing some of the things I've always wanted to do and never got around to it.

CP: Yeah. You and Patsy were going to go to the foreign mission field for a while. Have you got plans yet?

EH: No. Not immediately, although I am involved in a conference coming up. I was involved in a conference in February dealing with this kind of activity. And I've also been invited to participate in a mentoring fellowship kind of thing in Tampa in the end of August. Which I'm really excited about.

CP: Excellent. Do you speak Spanish?

EH: No.

CP: Okay. You've had a number of trips to Mexico. You haven't learned to speak Spanish yet?

EH: I've been to Mexico on one occasion, on a mission trip where we did some construction. And I'm not into construction, I'm not very good with my hands, but I always ended up being the painter.

CP: Well, every project needs a good painter.

EH: Well, I'm not a very good one. I get more on me than I get on whatever it is we're painting. And then I was in Brazil—of course, that's Portuguese—a number of years ago. I was a lay missionary for a few weeks.

But yeah, I'm excited about that. And it was reinforced this morning when I came in. Usually, I'd get up about quarter to five and come into work. But this morning I got up at 5:00. And I thought, "I don't want to do this. You know, I haven't gotten up that early since I retired." You know, I get up around 6:00, 6:30, you know, but 5:00? And then I hit that traffic coming this way. "I knew I'm glad I retired." (CP laughs)

CP: I wanted to make an observation about the laboratory. As I walked through your laboratory, it seems to me that about two out of three "technicians" we address as doctor. They carry a PhD.

When I was working in this laboratory, we didn't have a single PhD at that bench. The PhDs were all the bosses and they sat elsewhere. Talk about that transfer. Does this have to do with the increased technology? What proportion of the bench people here are PhDs or doctorate level?

EH: Well, it's not as high as you've indicated. We have about three hundred employees, I guess. We have a laboratory in Miami, Tampa, West Palm Beach, and Jacksonville. We have doctoral—

CP: You didn't mention Pensacola. Pensacola closed?

EH: No, Pensacola.

CP: Okay, okay, go ahead.

EH: All of those, except for Miami, all are headed by a doctoral level person. And that's mainly because the Medicaid/Medicare laws, it requires a doctoral level person to direct a laboratory.

CP: And one trained and experienced in laboratory.

EH: Absolutely. They have to— They have to be in the sciences and experienced in the sciences as having directed a laboratory before. At the bench, we probably have three or four. We have— When I came on board in '58, Dr. Schneider and I were the only two— well, Dr. Hoffer, he was the assistant director—the only three doctoral level persons at the time.

And getting certified for Medicaid/Medicare, we had to move to the doctoral director level, which we did during that time I was getting us approved. We've got, at the time I was here, the assistant. The two assistants that I had were doctoral level people, one of whom is the interim director now, Dr. Chan. Doctor Willis was the microbiologist director, as it were, and Dr. Chan was the chemist director. And we've got two or three in the lab but other than that, we don't have that many.

CP: Yes, I walked through. It seems to me there's a bunch of Ph—bunch of folks I have to address as doctor. I don't mind addressing to them as doctor; I'm just contrasting. You know, 'cause we— I started personally as an assistant to the laboratory assistant was, I think, my title. Assistant to the laboratory assistant and it seems to me, most folks around here were laboratory assistants.

EH: Yeah. (CP laughs) A lot of years. And the names have been changed, the different positions that they've had over the years. But you know, public health really—the public health laboratory is really the forefront of science.

CP: I totally agree.

EH: And the reason I say that is because new things come onboard. Like the EDB for example, or sickle cell when it became a problem, or—

CP: AIDS?

EH: AIDS, when it became a problem. The Hantavirus when it became a problem. You had to have—to be able to address those needs right now.

CP: That's right.

EH: And it's an urgency; you need that. So you need people that are trained, who are able to make that transition very quickly. And we have that here. We're into bio hazardous wastes now. We're into the terrorism activities now, and you've got to get involved and know some of that. We're getting trained in that now because we can make those transitions.

But the newer things first show up at state public health laboratories because that's where the rubber hits the road. I mean people are sick, I got to know what it is, what do you do in the hospitals. And the clinical laboratories—

CP: Send the specimens in.

EH: —are not equipped to do that. And so usually what happens is there's a new interest, such as EDB or something like that, and we scale up to do it. And we do it, get it established as routine. And then other interests come along and want us to do a few other things. And they take it over. For example, when I first came, the things we used to do is milk microbiology. Milk counts, whether the milk was pasteurized, and that sort of thing. And cell counts in milk.

CP: Quality control for commercial—

EH: Quality control and contracts for schools to make sure that the milk contractor met the specs and so on. That went to the Department of Agriculture. Then we were doing the sanitary engineering kinds of things, like the radioisotopes, for monitoring the background quality of water in Florida.

When DEP was organized, that went with them. At the time, we were doing shellfish, determining the shellfish quality in the waters. And there was interest in that in Department of Natural Resources, so that went to them. And we still, by contract, did water analysis for them insofar as pesticides and herbicides for many, many years.

CP: It doesn't make sense to duplicate that technology.

EH: No, it really doesn't. Once the technology is developed and it becomes routinized, then it's not difficult to just move it and let them do their own thing. And so, I've seen this happen time and time—

The same with drugs and narcotics; we used to do drugs and narcotics. Street drugs, they would bring them in, we'd analyze marijuana or whatever it was. And then the chemist would appear in court, giving testimony and so on.

Well, the Florida Department of the Law Enforcement came into existence, and so they took that function, although we retained the function for monitoring DUI breathalyzers for many, many years to make sure they were appropriately standardized, and then those people ended up in court a lot. And then that was transferred to FDLE just three or four years ago.

So, public health really is the innovator in getting new technology set up, becoming routinized, and then other agencies or other special interests who want to expand on it or have a more immediate use for it. And feel like it's not something that needs to be in another agency but in their own agency since they have responsibility for it as moved on.

So, we see things go and we see newer things come. And so it's been a very exciting experience over the years. I really feel like Florida, the state, has given me every opportunity to expand. And the other reason— The other thing that was of tremendous benefit to me was the Florida Public Health Association.

CP: Ah! Speak to that.

EH: I was one of the presidents back in mid-'70s, I guess it was, at the time that there was a constitutional revision. The first constitutional revision, when they took the State Board of Health out of the constitution.

CP: Oh, boy. That was the '69 revision.

EH: Was that when it was? Well, that was when I was president that year because I was (inaudible).

CP: Oh, you were. Congratulations.

EH: To no avail, on my account. But, you know, what goes around comes around. Now, we're back into health again. And it's a long time coming but it never should have been taken out in the first place.

CP: I agree.

EH: But it gave me an opportunity as the chief of the bureau of laboratories, I was the lowest appointed level. And so, I was too far down the hierarchy for anybody to pay a lot of attention to you.

But at the same time, being the professional laboratorian, there's not too many people you can get into that position. But I was high enough to have influence in writing rules and regulations and recommending to the legislators, laws that needed to be modified or changed.

CP: Good, good, good, good.

EH: And so, being knowledgeable in the area, it gave me an opportunity to really, I feel, benefit public health from at least from a laboratory perspective. And so that was a tremendous benefit. As a consequence of being involved with other associations. There's a consequence of my being director of a lab.

For example, there is an association of all state public health laboratory directors made up of my counterparts in all the other states. And we're very close. We know each other very, very well. And so whenever there's a problem in one state, we're familiar with what those problems are, and we can call each other and really get cross-pollination. And that's a tremendous asset to be able to do that and to work with CDC and some of the newer technologies that they develop as well.

But in the course of that, I was chairman of one of the—of the environmental health committee for that organization for many, many years. And I was able to interface with the Center for Environmental Health at the CDC. And was involved very heavily with the EPA and the new NELAC rules and regulations, National Environmental Laboratory Accrediting Conference.

There's the Medicaid/Medicare on the medical, clinical side but there was nothing on the environmental side. There's environmental labs all over the United States dealing just with environmental issues but no standardization, other than those that were directly related to the EPA, where they have certain standards.

And I really feel like that was a great accomplishment, to be a part of organizing that NELAC because it had international implications. There is no standardization body in the United States, which environmental laboratories could look to for accreditation. There was the National Bureau of Standards, but they were looking at the lead and asbestos and very few things. It was just those parameters, not the whole laboratory.

And the American Industrial Hygiene Association was interested in the same things. But again, it was not broad-based at all. And the laboratories—the environmental laboratories in the United States—were involved; wanted to compete the European market but were not able to because they were not standardized. And so they were restricted in the common market in Europe.

So, rather than have standards dictated by the feds, like they did at Medicaid/Medicare, the states and EPA worked together very closely, probably an exemplary piece of work, certainly unique. And a voluntary organization called NELAC, National Environmental Laboratory Accrediting Conference, is modeled after the weights and measures conference that's been around since 1907, I believe it was. Which is strictly a voluntary thing.

And I was in this morning. I stopped in to see the individual in charge of that program because they just had their fifth annual meeting in Saranac Lake, New York, and the State of Florida bureau of laboratories got a plaque; one of only five laboratories in the United States that is accredited under NELAC from the department of laboratories.

CP: Really?

EH: I'm really proud of that. But having been a part of it from the beginning stages and—I mean, just the talking stages and seeing it develop (inaudible). That was quite an accomplishment.

CP: Well, our hearers need to know that you were also chairperson of that conference for a term or two, were you not?

EH: Yes, I was. I was the second chair of that conference, which is a year term. And that was a rewarding experience as well.

CP: How many terms have you served as president or chairperson of the Association of State Laboratory Directors?

EH: Well, I was on the board of directors twice, which are three-year terms. And I've been on a number of their committees; but I was chair, I was the organizer of the environmental health committee. And was involved as a chair of that for about nine or ten years. I'm still a member of that committee.

CP: You had your hand full.

EH: Yeah, I was pretty busy.

CP: You were still trying to build buildings in Florida too, weren't you?

EH: Yeah, at the time over the years. Yeah. It's—

CP: Charlie, if you—

EH: It's been exciting. It's been challenging.

CP: For a young fellow about to go off to the University of Florida who thinks he might be interested in microbiology. Looking back on your history, and you have come a long way, you've made very significant contributions, both to this state and nationally.

And through your national effort, internationally in your laboratory terms, what kind of advice would you have for a young fellow coming along, if he aspired to be a laboratorian? You aspired to be a laboratorian; I don't think you ever aspired to be a laboratory administrator.

EH: No, as a matter of fact. I can remember one time; I was after my situation in Tampa when they transferred me here. When Dr. Schneider transferred me here, I was busy at the bench working on those atypicals, filling out those reports and everything.

And it was—I mean these assessments keep coming in. You know, you can't turn the faucet off. They keep coming in. And I was busy as I could be, and Dr. Schneider happened to walk by the way one day, and he said, "What are you doing?" And I looked at him. And you know, I don't know what—

CP: It was a bad day to ask you.

EH: It was a bad day to ask it. I don't know what possessed me. I mean I must have been out of my mind because if I had been in my normal mind I'd have never said anything like that. I said, "You know, you really got it good. You're director of the lab, all you do is walk up and down, don't do anything. And here we're sweating like crazy trying to get stuff out." And he kind of chuckled.

CP: (laughs) Well was that a true statement?

EH: That is. That—that actually happened, so help me.

CP: And I believe that. But I want you to move forward when you became director of the lab. You don't have nothing to do but walk up and down.

EH: That's right. But the thing is, that Nathan, you know, he just took it in his course and he kind of chucked as he does. And he says, "You just wait. One of these days you'll see." Neither one of us had any idea (inaudible) where I was. But I understood, in fact I do it myself. When I'd walk around just to get away from the phone. To get rid of all the pressure, just to walk around. But what would I—

CP: So, what advice would you have for—?

EH: I'm sorry?

CP: What advice would you have for a young guy? Or girl.

EH: Well. If you— I have mixed feelings about it. I'd tell 'em to get in another field.

CP: No. No.

EH: It's not a very lucrative field in the sense of dollars. It's a very lucrative field in terms of success and contribution—

CP: Personal satisfaction.

EH: — NS Personal satisfaction. It really is. And it is a challenge. I can think of no other places. Of course, people are bent to different things: Some to research, some to routine technology, technician kinds of things, others in administration and so on. But the thing about public—and I couldn't advocate any field other than public health.

And, of course, that's prejudicial. But the reason I say that is because it's of the variety. I mean, just something new is going on all the time. It's not routine by any stretch ima— It has its routine situations and things, of course. But research, once you establish a problem, it's just a matter of cranking out data, you know?

CP: Yes.

EH: And a lab technician in a clinical laboratory, they do the same thing day in, day out. You know, blood serum, looking for the same things, a limited number of things. And that would drive me up a wall. I'd be absolutely crazy. But in public health, something new always is happening.

There's true specimens coming in. When you're looking at those specimens, you have the opportunity— You are doing diagnostic in a sense, but it's more applied research. What do all these things mean as a herd phenomenon?

And there's always food poisoning outbreaks; everyone of them's different. There's always diarrheal outbreaks in nurseries and so on. There's the biohazard things that come up. There's the cyanide in the Tylenol that came up¹¹. And, I mean, I could just go on and on, naming these different things that came that really makes it interesting.

And each one's different and each one's a challenge. And the challenge to me has always been to hire the best people that I could, to encourage them to do what they needed to do, to provide the resources for them to do it, and then get out of the way and let them do their job. And the challenge has been to utilize the resources through the legislature, through contracts, through other things in spite of all the barriers, and make it work.

And you know, and that really is a challenge. And it takes a special person with a special vision to endure all the frustrations, to be able to do that. And that's what I did.

CP: You know the other side of your ultimate goal. Don't let the daily frustrations let you lose sight of where you're trying to get to tomorrow.

EH: That's exactly right. That's exactly right.

CP: Yeah. So, your advice to a young person just starting out would be to come through the table system, pick up your administration through experience. Would a course, masters in business administration been of use to you?

¹¹A series of poisoning deaths resulting from drug tampering in the Chicago area in 1982; the victims had all taken Tylenol branded acetaminophen capsules that had been laced with potassium cyanide.

EH: You know, when I got my MPH, they had no administrative courses at all: personnel, budgets, nothing like that. And yet, I mean it was public health, epidemiology and special courses but none in administration or supervision. None of that. And—

CP: Do you have—do you have some advice?

EH: So, it was by the seat of your pants. In fact, one of the things, when I went to Tampa, I asked Nathan one time, “What do you expect me to do? What is it you want me to do? How do I do this?” He says, “Just do what comes naturally and when you get out of line I’ll let you know.”

And I thought that’s a heck of a note. But I guess you can read all the books in the world on how to swim and go through all the motions but until you get in the water, you can’t do it.

CP: Good point. We have a message for the dean of the College of Public Health: are you teaching your future leadership basic tenants of administration and budget management, Mister dean? We got a message to the dean.

EH: That’s a good thought. Yeah. I think they’re doing that now more than they used to. But I didn’t have that background and so it was learning by the seat of your pants, your mistakes and so on. And you—

CP: Just a marvelous career Charlie.

EH: —just, you can’t look back on your mistakes. You’ve got to keep looking forward, you know. Mistakes happen to everybody; you’re not going to be perfect. Those things that you can change and do.

CP: Give us a paragraph on your family.

EH: Well—

CP: You got two kids and one wife. The same wife all these years too, I might note.

EH: Yeah. Yeah, we were married forty-three years in February—or January.

CP: Well, you better remember it.

EH: Yeah, right. January twenty-sixth.

CP: Hey, can you strike that part (inaudible)?

EH: And we're still on our honeymoon after all these years. My son is Kenneth, he's thirty-four now. He has his CPA and MBA and he works for CSX as an auditor for the corporate office.

CP: That's a railroad for the listeners. CSX.

EH: And travels around a lot and he's still single. My daughter is married with two kids.

CP: Two grandkids you got?

EH: A daughter, nine, and a son, almost—well a little over two now. Two in December, two and a half I guess now. And we're a close family. And we enjoy one another's company. And they've been very supportive over the years too. It's just been a marvelous experience.

CP: And your wife's name is Patsy, and it's my impression that she worked outside the home a lot.

EH: No. When we were first married, she worked for about ten years.

CP: Well, she had to. You were a student. How were you all going to eat?

EH: That's right. Bless her heart; she typed that dissertation more times than you could shake a stick at. We didn't have the computers that we have now. You know, it was the carbon paper stuff—

CP: You didn't save it on a disc.

EH: —and if you made one mistake, you had to start all over, you know; it really was. But she's been supportive over the years. She got her first social security check in February and she spent that thing a million times. I can't—

CP: Before she got it.

EH: Before she got it. (CP and EH laugh) And still spending that sums (inaudible) too.

CP: Good for her. Well, any footnote or final note, Dr. Hartwig?

EH: No. It's just been a challenge over the years. And I think if you're looking for a challenge and really enjoy— You need to really enjoy what you do. I had many opportunities to obtain a position elsewhere at two to three times the money that I was making for the state.

But I would rather get up and go in and enjoy doing what I do than hate getting up in the morning, going to work. And the lord's provided adequate for our needs. And we're not hurting and so it's been—it's really been a rewarding experience.

CP: Great. And the state has been rewarded because you chose to come and cast your lot with the state public health system. And on behalf of all the public healthers before and those to come, I say thank you very much Dr. Hartwig. And I thank you for taking the time this morning to share with us one of the most fascinating careers that I know about. And I am Skeeter Prather.

End of Interview