

OREGON HEALTH & SCIENCE UNIVERSITY ORAL HISTORY PROGRAM

a project of OHSU's Historical Collections & Archives

an interview with:

Lynn Loriaux, M.D., Ph.D.

interview conducted on: December 5, 2019

by: Peter Kohler, M.D.



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Interviewee: Lynn Loriaux, M.D., Ph.D.

Interviewer: Peter Kohler, M.D.

Date: December 5, 2019

Transcribed by: Teresa Bergen

[BEGIN INTERVIEW]

Peter Kohler: My name is Dr. Peter Kohler and I'm interviewing Dr. Lynn Loriaux for the OHSU Oral History Program. It is December 5, 2019. We are in the BICC building at OHSU. I'd like to start out this line of questions with how did you get into medicine?

Lynn Loriaux: How did I get into medicine?

Kohler: Yes.

Loriaux: That could take the entire hour.

Kohler: Well, let's cut it back a little bit.

Loriaux: Well I started in, I was going to be a forester. And I went to Colorado State. I should have been a trumpet player. I was good at that. But the forestry was, but I never met a happy ranger. In the summer time, I said, I should do something else.

And then I went into, so, I went into veterinary school. This is at Colorado State. You can do that after two years. And I had a lot of jobs there. I already had a wife and two kids and stuff. So, yeah, one of my jobs was washing scientific glassware in the nighttime in the department of biochemistry. And I'd go in there about midnight, one o'clock, and I would wash until it was all gone. Hurricane washer, all this stuff. I'd put it in there. Never saw anybody in there for two years.

Then one night, there was a forty-watt bulb out in the hall. I'm sitting there, washing this stuff. And the light went down a little bit. Somebody came in the door. Never seen that before. Never head it. Thinking, "man, this is probably not good." Some guy, does he have a humpback? I don't know.

And there's a guy named R. P. Martin. And he said, "Are you, are you Loriaux?" He pronounced it correctly.

I said, "I am. What have I done?"

He says, "Nothing. Rogan told me to find you." Rogan was chief of, I don't know whether he was chief, but organic chemistry. He taught. And he was a tough guy. But he had told R. P. Martin that I should be in a laboratory and be a scientist instead of being a hog farmer.

But I wanted to be a vet. So, here's what he told me. He said, "If you want to make your way in the world with whatever gifts you have, you're going to have to come work with me. If you come work with me, I will give you the same amount of money you make by the hour, but you work with me in a lab."

And I said, "Fine!"

He said, "What do you know about the lab?"

I said, "A lot."

He said, "You know nothing."

I said, "Try me."

He said, "Well, what's a scintillation counter?"

I said, "I'm not sure." Well, it's an electro balance. Well, I've not seeing one of those.

But he says, "You come start work."

And so, in the first six months, we got enough to publish a paper or two. He was interested in steroids, and I was interested in them because he was. But he wanted the enterohepatic circulation. And I knew all about that from my pre-vet studies and all that kind of stuff.

So, after about six months or eight months this is going on. We can stop at any time. Because it does lead to here today. He said, "Well, do you like this?"

And I said, "I do like it."

And he said, "Well, you have to go to medical school if you're going to want to do it. You can't do it from here."

I said, "I have no desire at all to go to medical school. I don't like those guys. I don't like the way they smell. I don't like what you do. I don't want to be there."

And he says, "You've got to do it."

I said, "I don't have any money."

He says, "We can fix that." How? He says, "Well, there's these new things called the M.D./Ph.D. programs. They're just getting started. There's a lot of schools around that are trying to get it started. Let's look at some of the early ones and see what happens."

He sort of bowed out then. But I went to the library and I did find one. I went alphabetically through all the medical schools. And I got down to Baylor, and they had one. So, I wrote them a letter. And they said, "Well, come on. It's true. But we don't know how it's going to... We're not sure we have the money. But come on down and apply as a medical student and we'll see what happens."

This is what I did. I rode the train. I was afraid of airplanes, and still am. But that was my first, that's probably the first I got away from the Rocky Mountains actually in my entire life. I got down there. As you might expect, I was late. But I went into this auditorium with a lot of young people in there. And they were being lectured to by this guy. And I walked through the door. He said, "Well, here's our lost applicant. Here's Lynn Loriaux from Colorado State University. Here's where he's from. Here's what his parents do. This is what he is." The guy knew me as well as I knew myself.

And then after, this is name of Schofield, you might remember him. And so, after that he took me aside. He said, "We really do want to start this thing. I can't give you the nuts and bolts of it, but if you come, it will happen."

So, I went. That's how I got into medical school. I had no intention of being a physician. The whole idea was repulsive to me. But I did want to do science on animals and people. And of course when you get into medical school, you get hooked, you know, and you do want to be a doctor. And then pretty soon I couldn't tell if I wanted to be a doctor or a scientist. So, that's sort of the perfect position. If you want to be a translational scientist and use human beings as your base, you know, experimental base. It was like perfect.

Kohler: So, how did you get then to Boston, to the Brigham Hospital, and go through the experience there?

Loriaux: Well, when I got up to the end of this thing. And there was a lot of pressure to go someplace. Well, there was a lot of pressure to stay at Baylor and not even do an internship. I didn't think that was wise. I figured that out all by myself.

So, I started asking around. And in Baylor, there was a guy, there was a person, one person for each of the Boston hospitals that had gone there and trained there. And they all wanted me to go to their hospital. So, there was somebody from, you know, the Boston City Hospital. There was somebody from the general, somebody from the Brigham, somebody from Beth Israel, if you wanted to go there. So, I actually hadn't heard of any of those things. I had no idea.

So, I made a plan to visit each one, one visit each one, on one visit. So, I went there. And by the way, I knew I could get into Baylor, so I wasn't worried about it. I was pretty sure I could get into San Francisco [unclear] ... and I was doing something that somebody else there wanted to, needed to do. [unclear] It was the time. So, I went to the Boston City. And I met this guy, the intern had a thick Germanic accent, a rough kind of a guy. And he took me to the ward, so there was a metal place between these two wards, female and male. It's elevated. You could look and see every patient. And while sitting there, you could read a magazine or watch them all day long. And they all had one disease. They all had a Sengstaken tube coming out of their nose. Remember the Sengstaken tube? You'd put down in there and you'd blow up, it's two bubbles on there, two balloons, you blow it up, pull it up. And then with tension, you close the varices and you hook that thing to a football mask. At first I thought it was a grotesquerie, you know, all these little guys with football masks and this tube sticking out. But they were all suffering with the same disease. Everybody he could show me had end-stage alcoholic liver disease. That didn't appeal to me.

So, the next day, I went to the General [Massachusetts General Hospital]. They seemed not to be impressed with anybody from Texas or New Mexico or something. They wanted me out. So, I got kind of on the end of a day. And this is how I got there. I'm just telling you, we're halfway through that, but it is kind of an interesting story.

So, I went to my first interview and I went in, there was this guy. And he was an unhappy guy in a little bitty desk. And he had books all over the place and papers on the floor. And he was quiet. And he said, "It says here you play the trumpet."

And I said, "That is correct."

He said, "Are you any good?"

I said, "Well, it depends on who was listening."

He said, "Can you play Haydn's trumpet concerto?"

I said, "I can. I can play that."

He said, "Whistle it." (whistles) "That's it. The second movement." And I whistled that. "The third movement. Not all the way through." And he said, "That's enough. You're excused." That was it.

Then I went to the second room and there were two guys in there. And they were upset. Actually, they were having an argument. One was suffused. He was not in a happy place. And he said, "This guy's been in veterinary school. He knows the answer to this."

The other guy says, "He doesn't know anything. He's an applicant here."

And he says, "Well, let's try." So, the nicer guy said, "What's the difference between milk fever in cattle and in human beings?"

For some reason, I happen to know this. And I said, "Well, I'll tell you, it is interesting. So, milk fever is hypocalcemia. So, when people get hypocalcemic, they become tetanic, you know. And it's a clear syndrome. When cattle are hypocalcemic, they become flaccid and fall to the ground. And will die there if somebody can't—"

This guy, "See? I told you so." "He doesn't know anything." He says, "You're excused."

So, that was the general. The last thing at the general was the guy that was Alex Leaf. He said, "Here's a stethoscope." And I took it. He said, "Do on me all the things you can do other than the heart and lungs with a stethoscope."

I put it on his head and then I pull it across the other side of his head.

He said, "What are you doing?"

I said, "I'm listening for the cracked pot sound."

And he looked at me and he said, "Did you find it?" And I said no. And he called all the guys walking by. "This kid says he can percuss my head and tell if I'm a crackpot or not." It was ridiculous. It ticked me off a little bit. But it tells if you have a fractured skull. So, I left there. That was done. I was running out on the Boston things. It was not going for me good.

And so, the next day I got to the Brigham. I think I was about ten minutes late. The lady was way unimpressed. She said, "Where do you get your clothes, Sears? You are all disheveled. What's happened?"

"I've been trying to get here for two hours! Took the MBA [MBTA, Massachusetts Bay Transportation Authority] the wrong way."

She said, "Well, that's an intelligence test in and of itself. Are you sure you want to go through all this?"

I said, "Well, I guess so. I mean, have you got a sandwich or something?"

So, she said, "There's a door here. There's going to be a guy coming out of there pretty soon. And he's going to take you ... you're going to go in. Now when you come out the next time, he's going to be there and he'll take you to all of the rooms. So, you'll get it done late, and I'm not sure it's going to do you any good, but try it."

The door opened. This huge guy came out. Beautifully coiffed. I mean, perfect suit. Links. The comparison was stark. And I was not winning. And he said, "You're the kid from Texas." That's what he told me. He said, "I'm Mitch," We'll call him Mitch, and he said, "I'm first of my class at Columbia. What about," I'm at Baylor, it's in Texas. He says, "It's a religious school, is it not?"

I say, "Oh, no. Not really."

"Well, it sounds like it. I mean, where are you in your class? Well," he said, "never mind. You're going to have a great time in here. You're going to love it."

So, I went in there. I sat down, it's a long oak table there and I sat there. And this guy at the other end, his name, "I'm Dr. Valee, Bert Valee." I knew that name. He had written the chapter on basic science in medicine in the Harrison textbook of that edition. It was an intense article. And he was going to be an intense guy. And that was not looking good for me. He said, "Sit down." So, I sat down. He said, "A nurse has just come up to you holding in her hand a

quart bottle and saying, 'There's a patient in such and such carrel there that drank antifreeze out of this thing. All of it. So, what are we going to do? What do you want me to do, doctor?'"

And I said, "Well," I asked, "Can I ask you a question?"

All right.

I said, "What is antifreeze, anyway?"

He says, "Ethylene glycol."

I said, "Okay. Well," I says, "is that toxic straight? Or do you have to metabolize it?" It has to be metabolized. I said, "There's an enzyme." And he said yes. I said, "Do we know the enzyme?" And he said yes. "Does it have a name?" He said yes. "Can I know the name?" and he said alcohol dehydrogenase. I'm thinking, that guy Mitch out there is okay. I got this. And I said, "Well, we're going to compete with alcohol for its bonding site on the enzyme. And by doing that for a long enough time, he'll get rid of the ethylene glycol. Which is toxic. It's oxalic acid." That had come to me.

And he said, "That's right." I started to get up but he said, "Oh, don't get up yet." I said, oh? He said, "What principle are you using here?"

I said, "I'm using the principle of competitive inhibition."

And he said, "How would you show us that? Come to the board."

So, I went to the board. And I remembered the Lineweaver-Burk plot. Can you imagine that? It was there. Miracle. So, I put it on there. And I put on how, he said, "Show us how these molecules will behave this way." I showed them. He says, "Okay, that's nice." And I started to go. "We're not to the question yet." And I said, okay. And I'm thinking, maybe Rich [Mitch] doesn't know what he's talking about. He says, "Can you derive from this the Michaelis-Menten equation just of the stuff you've shown here on the board?"

I said, "I probably can. But it may take me a half hour."

And he says, "Start." So, the KD was on there, you could see it. V Max was on there. I started putting it together. I got ten minutes in, I couldn't remember the concentration. He says, "Stop. That's enough for today. Goodbye."

And I left. And I'm thinking Mitch doesn't know what he's talking about. I mean, these guys have just ripped me one way and another. I was exhausted after that. And he says, "Come on!" There were like ten of those things. George Cahill gave one where I had to figure out what lactic acid did, once I had to figure out his metabolism. Another guy wanted to talk about acute intermittent porphyria. George Thorn wanted to talk about paraneoplasia. None of them cared that I knew anything, but they did care that I could figure it out.

So, I was leaving that thing completely blown out, trying to figure out how to get back to the hotel and get to an airplane to come home. And I said, you know what? This is like the perfect place for me. That's why Rogan liked me, because I knew the reaction mechanisms. I didn't know where I was reacting, but I knew how I did it. So, I said, this probably, this might be the place. And I began thinking about it more. That's the place.

What I knew is that my chances were poor. They chose thirteen interns. Half from Harvard, half from the rest of the world. And they did it on one day, on that Saturday that I was there. So, they saw twenty-six people, took out thirteen and that was it. That's poor chance.

But I got back and I started talking to these guys. I said I want to go there. He says, go to the general. I said, I want to go there. I liked the way they approached at least what I knew.

So, the day came to apply, and to rank. And I just put the Brigham, and that's it. Everybody said you lost your marbles, and I said, it's not the first time I've heard this.

So, the day came. Now when it comes, all the families are there, back four generations, and everybody's weeping or in euphoric state. And they pull these things out. They just put a list on the door. And there were, I think, sixty students in there. And there's this list one through sixty. And I wasn't going to go there. I mean, half of these guys were happy, half of these guys weren't happy. And I was pretty sure I was going to be unhappy. But I had a default plan. Because I was got to stay in the lab there.

I went up there and it said Peter Bent [Brigham] Hospital. It was a translational moment. That's how I got to Boston. And in the meantime, I had applied at the NIH to avoid being killed in Vietnam. They had these Yellow Berets. There was fifty of them a year they took. You were one.

Kohler: I was one.

Loriaux: And I was one. We were just a year apart. And so—

Kohler: The Vietnam War had actually not started, was not really our war at that time, so.

Loriaux: No.

Kohler: We came in later on.

Loriaux: Yeah. So, we went away for two years. And in that two years, everything got worse. And it was getting bad when we went to the Brigham. So, my basic training was medicine at the Brigham and science at the NIH. I mean, it doesn't get better than that, honestly.

Kohler: So, say a word or two about your time at NIH, and what you did and how you became expert in certain areas, in adrenal and so forth.

Loriaux: The key to my time there, so I was there twenty years. You were there shorter than twenty years, weren't you? You went to be a chairman.

Kohler: Nine.

Loriaux: Yeah. So, I stayed the twenty years and a day, it was the rigor that you were supposed to do. Well, I got interested in steroids with R. P. Martin, the guy at Colorado State. He was a steroid guy forever. Where you start [unclear]. And I was getting interested in androgens and estrogens and all these things. But you know, you couldn't measure them in those days. You couldn't do it. To measure five samples in the old-fashioned way could take three months. And you're just never going to get the data that you need to do these things. And in five months, you're not going to even [unclear] and it's not going to happen.

So, just before I left Baylor, my mentor and I got the idea that we might be able to make an antibody against a steroid if we could hook it up in the right way. So, he didn't know that I

didn't know, but he found a paper where a guy from Columbia, I'll think of his name, he had done it. And it was unclear that he had made an antibody, but he clearly had done the chemistry to do it. And it was all the chemistry I was familiar with. I mean, it was part of my thesis, and I knew that. And when I got there, nobody could measure, in the whole NIH, nobody could do [unclear] but I said I can measure testosterone. I said, what do you want? And he wanted testosterone.

So, me and a guy, a German guy, helped out. Eberhard Nieschlag, Eberhard Nieschlag, he's a famous guy in Germany now. And I made the conjugate with [unclear] here. And then Judy Vaitukaitis made the antibodies, the antibodies come back. I mean, unbelievable! You know, with a cc, you could resupply the world. There was enough stuff in there, and there was a high affinity.

And so, me and Nieschlag, my boss, Lipsett, didn't really want me to publish this, because he had hired a guy to do that thing, Kevin Catt. And he wasn't doing it. But he didn't want to anger Kevin Catt, who was more of a peer with him. And I was just a scrub coming in with this stuff in my hand.

So, Nieschlag said, "Well, we'll publish it in German."

And Lipsett said, "Publish it in German. That's great." So, that was the first real testosterone assay that was out there for people to make. And we put on the paper, if you want, we will send you one mil of this antiserum that will allow you to do the test. And we got thousands of letters. That paper became a classic. You know the gold classic papers? Because everybody who did that assay used our antibodies, so we got referred into everybody's paper. And so, I mean, it was a big step. Certainly now you could do tests on thousands of people.

Then the next thing was to make all the other antibodies. So, the next thing we made was cortisol. The next was progesterone E2, E1. DHEA, DHA, sulfate. We made all those antibodies, I made in that little lab there, 220 square feet. Intolerable when Nieschlag was in there, because he wanted to talk German all the time. Remember the Alamo stuff.

Kohler: Do you speak German?

Loriaux: Ja. Not well. So, that's how we got started. And then once that happened, it was like the perfect place here. Now I've got money. I've got the tools. I need somebody to let me do what I want to do and help me design experiments. And Mort stepped up to that. He made room for me. He told Kevin he wasn't going to be doing that, he's going to be doing something else. There's a long story about Kevin. We can go back to that. And then he began to let these guys the new Yellow Berets coming in, he let them come work with me. It was a farce. I mean, I'm not supposed to be teaching these. It's the smartest guys in their class. Oh, go be with Mort. But he liked it better if I taught them how to make assays in chemistry.

And so, that grew. And almost every endocrine lesion that hasn't already been taken care of at the NIH, plus some guy's on calcium, some guy's on insulin, all that kind of stuff, we did. Because we had the way to measure it. And that's how it got started.

Kohler: You had quite a following there of these new clinical associates who wanted to work with you.

Loriaux: Yeah, yeah.

Kohler: So, that should have been gratifying.

Loriaux: It was great! It was great. I kept telling them not to do it. I mean, we're not going to have time, Julio Pita, remember that guy, one of the smartest guys you'll ever come across, he was there. In the end, we had probably a hundred people in what then became a branch. The DEB, Developmental Endocrinology Branch. And we were publishing two papers a week. And it became a machine. And there was all things that everybody had wanted to do, but they didn't have the reagents. And we had the reagents, and nobody else had them. We would give them away. But the stuff, birds' nests on the ground, we were picking them up. You know, so why would anybody leave that?

So, the other thing I loved, right next to my office, on the other side, was a ward for twenty-six people. And they could fill it up with any patient I want, any disease, anything. It was unbelievable.

Kohler: That's a great setup.

Loriaux: It was great. I didn't know how good it was until I left, you know? But when you were there, I mean, you had an idea, you could make it happen. We discovered glucocorticoid resistance in human beings. There were two people we knew that had it in the world, and they lived in the Netherlands. And we told Mort we're sending an airplane for these two guys, bring them here. And he said fine. We brought them from the Netherlands for free. We put them in the place for free. Stayed there six weeks, eight weeks. We knew the answer. It's a new disease. I think we found five new diseases. If I sit down and figure them out, I could find.

Kohler: You should do that.

Loriaux: I probably should.

Kohler: You should.

Loriaux: Probably only you are going to be interested in it.

Kohler: I don't think that's true. So, you had a very successful career there.

Loriaux: At the NIH.

Kohler: You had a group really working with you, very productive, really doing exciting things.

Loriaux: Yeah, that was great.

Kohler: But you did decide to leave finally.

Loriaux: I did.

Kohler: And why was that?

Loriaux: Well, so part of it was you. I mean, we've been friends for a long time. And I always wanted to go be where you were the boss. Because I figured you'd cut me some slack. You know, you wouldn't be asking me to do ridiculous things. You'd understand what I was trying to do. And we could have fun and talk, go fish, or whatever. So, you went first to Houston, which I had enough of.

Kohler: San Antonio.

Loriaux: Well, there was Houston chairman of medicine. No.

Kohler: That was Arkansas.

Loriaux: Arkansas.

Kohler: Chairman of medicine.

Loriaux: Yeah, so you didn't go back to Baylor?

Kohler: No. I went to UT San Antonio.

Loriaux: I knew you were there, but you were dean.

Kohler: As a dean.

Loriaux: You were dean there. Well, that's where things, that's how I got the job, basically. I didn't like San Antonio. But I had just come from a place here. I had been giving some talks here. And at the end of it, Connor, Bill Connor, came up to me. And he said, "We need a president here. We can't find anybody." He said, "Do you know anybody good?"

And I said, "Well, in fact, I do." I'd just been at your house. And it was on a golf course. I don't think Judy liked it. Somebody didn't like it. It was not perfectly good for you. I think you had a boss that you didn't like. There are some guys, you're not meant to have a boss.

Kohler: We can edit this out.

Loriaux: No, you're leaving that stuff in there. You know, you were going to be creative and do stuff, and I think he was getting in your way. So, my take on that was, you were movable. And not only this, but to Portland, Oregon. So, if he moves there and still wants to offer me a job, I will go there.

Kohler: You were attracted to the area, also.

Loriaux: Well, I grew up in Santa Fe, New Mexico, Colorado. I'm a western person. And I always wanted to come back. I didn't want to end my days on the east coast. Although I mean, I was happy there. And it gave me unbelievable opportunities. It was a hard place to raise kids and this might sound strange, but I think it was too controlling for children, I guess I had like five kids or something by that time. And my view is they needed to live in the country and make mistakes. You know, if you're going to run with a sharp stick, it might go through your cheek. But you can't prevent all these things. You just have to let them happen. And control the damage. And they grow and I think it's better for them. They become independent of mind earlier than later. Where I lived in Maryland, no kid could cross the street without a person taking them. If you misbehaved in class, you know, my kids, you know, throw spitballs around, stuff like that, they went into sort of a glassine room, computer, anything you wanted to play with. Well you should have been going—I wanted to get back to the west.

Kohler: You had a reputation as a great teacher, I think, even at NIH, but certainly then after coming here.

Loriaux: Yeah.

Kohler: Was that, who are the people who were following you there? Was it the clinical associates, the so-called Yellow Berets, plus fellows and assorted others?

Loriaux: Well, so the thing is on that is that I like to teach. I mean, it wasn't ever, as long as I was comfortable with the subject. Because if I'm going to teach, I want to teach the right stuff. But I would sacrifice other things to do it. I liked to do it.

And at the Brigham, it was what you did. All the time, you're teaching somebody. There's two or three people around you and you can't stop. I mean, it's never. But it is teaching. That's why they're there. The NIH is quite different. I mean, everybody's sort of off in their own area. And they resent anything that takes their time, as a rule. They want time in the lab. That's what [unclear]. But somehow, and I started teaching them on rounds, and I'm making them to go. And we would present all the patients at the bedside. And they were interesting patients. Even ones that we didn't know anything about, we would find stuff out about them. And people, they gravitated to that. What they gravitated to is that I wasn't resenting this. I was looking for them to teach. And that was a different thing. That's what it was. And it was just a quirk of nature, I think. I'm still that way, honestly. I will do it. I will stop and teach something if I find some guy on the bus who looks like he has acromegaly we'll talk about it. (laughs) "Hi, what's your name? Do you speak Polish?" (laughs) Whatever.

And it is a big part of medicine is the willingness to take the time to teach your patients. That's what's wrong in medicine, honestly between you and me. I mean, no doctor sees, I watch these guys. When they go in the room, they turn and they look at a computer. And they work on the computer and they talk and they talk. The guys are afraid of them, they're afraid of the machine, they don't know what's going to happen, they don't ask any questions. If they do, they don't understand them, but they say they do. And they go home and it's a bad experience.

Kohler: You have along the way, both at NIH and then here, I presume, mentored many people who've gone on to do good things. What do you attribute that to? The same process that you use?

Loriaux: Well, there's a different thing there. So, the different thing there is if somebody, I learned a long time ago that the people you want to teach are the ones you should be teaching. And so, I will find the ones that want to learn. And then we just spend a little extra time, go see something strange that came in. And then they begin to do it. And then the people that, they all begin to do it. And that becomes, in rapid order, becomes a critical mass. I mean, you've got all these people that are outpacing me. It's not that hard. I mean, I've got twenty things to do. They've got each one. But it moves at their rate. That's what I had at the NIH I couldn't get anyplace else. I had to go to get anybody that I wanted to come work with, they didn't care. I could get somebody from Antarctica, if it was going to be good. We had a lot of people working there.

Kohler: I remember going to your office and it was so surrounded by people that you couldn't make your way in to see you. They're all waiting to do that.

Loriaux: That's right.

Kohler: And it's like chaos.

Loriaux: So, I would see them all every day. As often as they needed to see me. I would do it, and we would solve their problem. And I don't remember ever telling anybody that they didn't do a good job. They always did a good job with what the tools that they had. They didn't want to do a bad job. So, I mean, just be supportive. It's best if you're naturally that way. What this ended in is the first teaching award ever given at the NIH. The guy that was running against me—I didn't know I was running, but the other guy that was, Tony, what's Tony's last name? You know, he was an allergist. And you see him on television all the time. Tony, it will come to us.

Kohler: I don't know.

Loriaux: Edit this part out. Tony Fauci.

Kohler: Oh, yes.

Loriaux: Yeah. He and I were doing the same thing in different places.

Kohler: He's still there.

Loriaux: He's still there. And good thing. I mean, all the stuff, every disease that needs to be tackled, he tackles. So, it was, that's a guy, I had a bad surgical procedure at the naval hospital.

My blood crit went from forty-five to fifteen doing that thing. And I was not feeling good after. So, after a while I said, "I need to go see a doctor."

Mort said, "I'll get Tony to see you." Mort. And he did.

He did a thorough exam. He said, "You know, you're going to be all right. Somebody drew all your blood away for whatever reason." And he said, "But everything else is okay." So, you know, turned the corner for me. Just that. He didn't have to examine me or anything. Just telling me that somebody understood. I hand you, I trust you, I'm going to get He had it. He had the gift.

Kohler: You are, I don't know if you know this or not, I assume you do, that you are the longest-serving chairman of the Department of Medicine here ever.

Loriaux: Probably.

Kohler: And to what do you attribute that longevity?

Loriaux: I worked for not too much money.

Kohler: That will do it, I guess.

Loriaux: That will do it every time. If you take 40 percent off what the other guys are making. You know, I knew all of the chairs by then. And I would call them up, "How much do you make?" And it was always twice what I was making. But I was happy.

Kohler: So, the money did not mean that much to you.

Loriaux: No.

Kohler: Where you could have achieved a great deal of financial success doing other things.

Loriaux: Yeah. But I wanted to do, so I wanted to take the thing that we had at the NIH, my interview at the Brigham. I mean, you can live that way.

Kohler: Yeah.

Loriaux: And that's the way I lived at the NIH. And I could live that way here, but boy, it became a lot harder. It was hard here. Because people don't have. So, at the NIH, you have spare time. You can make spare time. You just take it. Here, there's another patient waiting for you. And that's the way this place, you know, it's the clinical practice that runs the place in terms of finance. It is the way. And having a really efficient practice, I mean, we've got one. We have a perfect practice. Just like that, the perfect practice, we make our division, now I'm head of Endo, our division makes more money on patients, all the rest of the specialty divisions rolled together. And see four times more patients. Because we decided to focus on that. Because getting, we could talk about research money here and research stuff. But it's taken a path here

that's, it's not the same as the NIH. It's quite different. There's a lot of pressure. People think you're losing money for the place.

There's not a lot of—after you left, you were the last guy that really understood science. It was a disaster when you left, by the way, in terms of the structure of the place. You just became another clinic. And nobody cared that there's things to find out and take the time to do it. And people who want to do that, I mean, it just went away. And it's still that way. Still gone.

Kohler: Still gone.

Loriaux: Still gone. It's not ever going to come back.

Kohler: Can it come back?

Loriaux: No.

Kohler: You don't think so?

Loriaux: No. So, what's happened here, and you'll know about this, the institution hung its hat on Druker. And he gets everything. Anything he wants, he gets. He doesn't have to pay taxes. I mean, he gets everything. Nobody else gets anything.

Kohler: But he has made great strides in the field.

Loriaux: Yeah. Yeah. Griff Ross, then nobody let him do anything. He cured metastatic diseases immunologically, the first guy. He got the Lasker Award, but nobody thought he was special. You know? What they did to Druker, he's a nice guy, don't get me wrong, I'm talking about what happened. He was deified. And so, where ever he went and whatever he did, and people made way. So, it takes generations for a thing like that to change.

Kohler: So, well let's keep focused on you.

Loriaux: Sure.

Kohler: What do you think some of your greatest contributions have been, either teaching or research-wise? You've already talked about the research. Teaching. You've been involved in the history of medicine and you have published a journal of your own. There are a lot of things that you have accomplished.

Loriaux: Boy, that's a hard question. I am happy about the product of my teaching, especially the guys at the NIH. I mean, they all went and did something. Lots of them, you know. And they rose up in places I won't get. And I did it on purpose. I wanted that to happen.

So, the other thing, you know, is all the time I was, so in research, I was research, research, research, you know. I didn't know what it meant, really, the things that I did. Each one was a thing. You'd do another one and do another one and another one. If you look back on

that, people will tell me that it is one of the more remarkable dossiers of science that they've ever seen. Particularly the kind that people can't do, which is translational. We could do it. In fact, it had to be translational or we weren't going to do it. I mean, we had this advantage, we could measure stuff. So, we had all the advantage. But if you look back, you know, well I had I guess five hundred papers by the time I left there. And most of them weren't any bad ones. There were some really good ones. But people still use those papers. If I write a paper, I go back to the old stuff. I didn't do that on purpose. I mean, it wasn't in my mind. There were a lot of guys at NIH were doing it on purpose. I was doing it because I was helping people in a way. I could go home at the end of every day, sit down and watch MacNeil Lehrer you know on PBS. And feel like I did something good today. Every day.

Kohler: What do you think, do you think that we are teaching our students now in such a way that they have this inquisitive mind and that they are looking at how to solve problems? Or do you think we're too caught up in the electronic medical records and it sort of draws people off in terms of their energy and interest?

Loriaux: As you know, here, we don't teach biochemistry, physiology, or anatomy. I can tell you, you can't make a good doctor that way. It's like driving a car. You can drive the car. But when it goes down, you might as well throw it away and get another one. That's what it is. So, it's a shell of its former self. It's a wisp. You can hear it. They ask for it. The dental students get better training than medical students. They get a full year of anatomy, physiology. And they know, they don't really need it. It's changed and now everything's supposed to be these whiteboards everywhere. They've got lecture halls called a large learning studio. I mean, you can't change what happens in there. If you do, it won't happen. Kids don't go to lectures anymore. If somebody records them all and they pass it around, they look at it double time. They turn it up double time and look at the lecture. So, I don't resonate with, I really can't teach, I teach the medical students what I want them to know and they get quite irritated because I'm taking away from them. Because they need to be learning about one of the fifty competencies that they have to know to graduate. And I don't want them to be my doctor. They have some really smart kids there. But they're not going to be my doctor. Because I know they don't fully understand what's going on, or try to. They're looking for an incompetency, somehow.

Kohler: How can this be changed in the future, do you think?

Loriaux: Oh, man. You know, I think you need an experiment. But it has to go at a good place. You could do this, let's say you did this experiment at Harvard. You'd take a class of fifty people. And twenty-five would do what they're doing now. Twenty-five would just go over here and have some books and some teachers and some patients. And just see what happened after four years. I mean, these guys will be changing the world. These guys will be making a bunch of money, you know? We need these guys. They're not there. That began at the end of the Vietnam War, even at the NIH, you know, is that the electronic medical record is a catastrophe, man. Guys like me, I don't know about you, but I can't type. And my body will not let me learn it. And it takes me forever! Almost I can't see the hardest patients. I go and I consult. It needs to have the experiment done. And they don't buy any books. And I don't believe you can read as

well. What happens if you have a book, so now you go over to Google or you have to read it. When you thumb through this thing, looking for it, you're learning. And the browse is one of the most powerful effects for learning known to man. Because you keep seeing, go back, go back. There's no such thing. Bonk, it's there. That wasn't what I want, and they try it again. It's totally different. We're not going to change that, I don't think.

I think we've got to get used to, I don't think we should go whimpering away. We could say okay, this is it, this is what it's going to be. I should want a doctor to take care of me. See, I promised myself when I was eighty, I was going to go to the doctor. I did it. It wasn't all that bad. But I chose the doctor who thought about things just the same way as I do. And he was telling me this stuff that I'm telling you while he's thumping my chest and all this kind of stuff. He's a good doctor.

So, everything, it's wild change. Physicians like me, you've engaged in this stuff. I mean, you engage with it. I don't engage with it. I run away and kind of keep on doing what I'm doing. You know, it doesn't help anybody. But I can tell you, that, well, let me tell you one thing. Here was have an elective. And the elective is called the bedside diagnosis. It's full. All the time you go, four times a year, five kids in. Give them the right kind of stethoscope, go see. I don't know anything, the kids don't know anything. Somebody else wants to give us these patients. But we walk away, we need to know. We can do that still. We can still do it. It's not too late. The kids still can do it, you know? They just have to have somebody that what they do, otherwise, it's not, what we want to do is find the patho-physiology of this. Mort Lipsett said, if you only have one course, it needs to be physiology. If you get physiology, you can be a doctor and do a good job. And he was right.

So, that's what I think. I mean, I think we're not doing them any favors. They're paying sixty thousand dollars a year to do this. I mean, if they don't pass the boards, they've got to leave. It's not a profession anymore.

Kohler: Well, what do you think the future of healthcare or medicine is in the future? I've heard you talk about this before. The role of specialists, generalists, primary care? It may be unfair to ask you to speculate on this, but we can always edit it out.

Loriaux: So, what's happening, what happens is if you begin to change the faculty. It all happens there. So, what we've done here, I don't want to give any names, but we've turned the faculty from people who understand their craft thoroughly, the teachers, they were the best guys. None of them are left. And what are young people, just learning how to teach, not knowing their discipline, everything depending on the competencies and the videos. Okay? That can go. What we've lost, see, nobody knows what a real doctor is anymore. You don't know. They don't know. Nobody knows what it means to go in, scared out of your wits and this guy's going to do something. He'll sit down. Nobody bothering you. And he'll talk for thirty minutes about what's going on with you. You can heal that person.

Kohler: Do you worry that there's over-reliance on laboratory tests and imaging studies and not thinking about what's going on?

Loriaux: So, in this hospital here, most of the time I will see these patients after they've seen the house staff. I can get the diagnosis on 90 percent of these patients for eighteen dollars, whatever. Just go in, look, listen, listen to the right place and you know. They've already got thirty thousand dollars' worth of images taken on them. And they're hooked up to some [unclear]. No. It's going to be very hard to change. It makes money. These guys, they make money on MRIs. They make money on unnecessary antibiotics. And they can even make money on certain pills. That's not what we need. We need to be not making money on that. Money needs to be him doing better and somebody pays me to [unclear]. It's inverted.

When you and I were young, the rest of the hospital worked to help us be better at what we were doing. Now, we're at the bottom of the pile. And these guys keep telling us the things that make them wealthy, and make them happy. At our expense. It's making us ... it's brutal. It's brutal for medicine. Those who have lived through it, it's a thing that you can't, everybody says there's just the one of me. And sooner or later we've got to get somebody like Tony Fauci who's one of us could do it, could get in there and could begin to change. But it's, the money kills us.

Kohler: Let me change the subject a little bit. There's an interest in diabetes versus endocrinology, or as part of endocrinology. Have you spent much time with diabetics and so forth as it becomes almost epidemic in this country?

Loriaux: Yeah. So, we see a lot of diabetics. And it's an endocrine disease. So, it's all into endocrinology. So, we don't separate them. We do separate them out in terms of money, because they get a lot of money. The regular endo doesn't. But still, everybody sees all different patients. I see a lot of diabetics. This is like everybody else does. But the problem here, as you know, is there's a tsunami coming of Type II diabetics. And it's going to be 120 million of them. And it's a thousand for every working doctor. I mean, we can't do it this way anymore. And so, somebody's got to pick up the slack.

And what to do? I can teach a pharmacist how to take care of a diabetic in a day and a half. If he can get to me for a while when he has [unclear]. There's thousands of them out there. We need to hand off. We can't do it. For us to just go on like we're doing is just ridiculous. We already can't do it. So, what has to happen is a lot of things have to happen. There has to be money for these people. Because somebody has to pay. Insulin can be six hundred dollars a month now.

Kohler: More.

Loriaux: More! It's a disaster. I raise bees. I have epi-pens, in case I get, I'm going to go down and die with anaphylaxis. You know, I have this pen. Six hundred dollars per pen. It used to be twenty-five. One summer, they went to six hundred. I said, that guy raising the. How can that possibly happen? How can we let these things happen? And the people who are supposed to be fixing it just argue with each other, and argue with, totally, so nobody has to stick their neck out at all. I mean, these are real people! You know?

Kohler: Right.

Loriaux: I want back. I'm not sure he's your favorite guy. But Obama had it right. And he was going at the right rate, at the right target, with the right attitude. It's pretty extreme, man, what's happened to us. It's disastrous. That's a different thing. We need to get rid of that. And then we need to address this in a way that we can take care of these patients. You can't just let them go home. And they don't understand. All the things we've been talking about. We've got a tidal wave of them.

Kohler: So, you think diabetes management will fall to pharmacists, nurse practitioners and others.

Loriaux: I think so. And they can do it well. You know, and they'd like to do it. I'd like to do it. But we can't just have one. There's a thousand of them for every one of us. Maybe five hundred or something like that. And if you tell all the drugstores everywhere. It's not hard. You just have to have a commitment, and know the few measurements you need, and you can do it. And there can be a central place where you just pump that data in and it will tell you if you're getting ready to make a bad mistake or not. We've got to quit giving these people these new drugs. New drugs are disastrous! This one that blocks your kidney from reabsorbing sugar. Can you imagine that? We give them, diabetics, renal tubular acidosis? It's unbelievable. You know, that's not what they say is better for your heart. I'm taking the rest of my body. My heart's going to take a hit on this one.

Kohler: Yeah.

Loriaux: And we do it. We let it happen. We've lost a lot of control.

Kohler: I'm sort of through with the continuity part. Is there anything that we think should be added in?

Steve Duckworth: Well, as I mentioned, it would be interesting to me to hear—

Loriaux: History.

Duckworth: About the history of medicine. You were one of the people that really started the History of Medicine Society here.

Loriaux: I sometimes don't understand this. But it's okay to know a whole bunch of other stuff, of other things, too. And it will help you. Particularly in the humanities. So, Hebbel Hoff, that's where I got the disease. There was a guy at Baylor when I went there. He was a physiologist. He was an identical twin of Ebel Hoff and Hebbel Hoff, who were the leading physiologists of their day. And why they came to Baylor—well, only one came. One stayed in Canada. Hebbel came. And he was chronically unhappy about most everything. But he was a very erudite guy. Had been a scholar, Rhodes Scholar, he'd done all these things. And he was just a brilliant guy. And he would make you learn it by asking you questions. See, so cholecystitis, he would say, "What

does that mean?" Nope, no. They still don't know what it means. They think it's some word. It's a language. And it's a language about medicine. If you're going to be a doctor, you really should understand these things. That there's three names for that thing. Or four names for this, or where it came from.

So, here's what he would do. Every Tuesday at noon, he would go into one of the lecture rooms at Baylor. There were just two of them. There was one on each side. There was one on his side was down there. He'd give a lecture on history. He'd just get up there and start talking. They were just unbelievably powerful. Only five people liked it. Only six people. I was one of them. Phil Kruger. Remember him?

Kohler: Yeah.

Loriaux: He died. Did you know? A week ago.

Kohler: No.

Loriaux: Nobody knows why or how. He was a good friend for us. He was there. He would never miss one. Nate Natelson would go. There were these guys that you would have known in your time. And they all became scholars. It was his example.

He came to a bad end. He got pretty, he got pretty demented, I guess we'll say. He was so smart that it was hard to tell he was demented. But he was. And he began to do things that got him in trouble with the modern ethic. But that's how I got started. And he showed me the way through Major's textbook, the Major's textbook of medical history. It's a two-volume thing. It's fantastic! Ralph Major was a guy in Kansas. They have a huge medical library there. He wrote this thing, which I don't think you can beat it. It's readable. So, I've read it a couple of times. And what I realize is, nobody knew anything. So, I'm going to be like Hebbel Hoff. Let's see if anybody comes.

Kohler: You're going to be giving lectures?

Loriaux: I gave them for years. How long have I been here? Thirty years? Twenty years? How many? 1990. Yeah? Twenty? Thirty years? Holy Toledo. That's a long time. I started almost when I first came. And pretty soon I would have the lecture rooms filled with people.

Kohler: And Don Trunkey, didn't he participate in that?

Loriaux: He did the same thing. And the number of surgeons were really outstanding at this. But they did their own separately. I just did, when medicine, I think I did it Thursday afternoon or something. Every day. Every week.

Kohler: But you also wrote historical summaries of some of the leading lights in endocrinology that were in your journal.

Loriaux: That's right.

Kohler: And that was always of great interest.

Loriaux: So, I made this journal. It was called *The Endocrinologist*. And it lasted for twenty years. I think it was twenty years. Yeah. But I said, I'm going to fix this for all the people out there. And I put another endocrine person on the cover and then wrote an article about them. At the end of that thing, that disease went down when all the money which was people advertising their products on the cover. When that money went away, I couldn't do it anymore. That was in 1997 or something when that happened. Disastrous. So, it stopped. But I had 120 of these vignettes, historical vignettes. And I said, why not make a book? It's premade. I mean, it's twenty-five years to get it. So, put them all together. Didn't use all of them. It's a good book. It's called *A Biographical History of Endocrinology*. You've got a copy.

Kohler: Yes.

Loriaux: Yeah. Have you read any of it?

Kohler: Yes.

Loriaux: It's a fantastic—never too late.

Kohler: Glad to hear that.

Loriaux: Yeah, people use it. I know that the people at the Harvard system, they make their students, or their assignment is that they have, there's 100 things, so it's two years, one a week. If they do it one a week, it's part of the graduation program to have read all these. And you get to keep the book. And that's good, that's a good sign.

Kohler: Right.

Loriaux: So, I was always interested, still am interested, any kind. I have a wall this big of Civil War, you know, I'm forgetting it now. But at one time, I probably knew more about the Civil War than most anybody. I read a thousand books. I can't remember anymore. Lee and Grant. That's a good place to start.

Kohler: It's down to that. Anything else that you feel like we should know about what your history here has been, or the background?

Loriaux: You know, we've probably tossed in all the things that make any sense. Our problem here is that this school wanted to be an academic powerhouse. It wanted to be that. And it started. And we got there. For one year, we had it. We had the money, we had control of everything, we had the curriculum, all that kind of stuff. And then you left. That's true. And when you left, there was nobody who held the feet to the fire. They didn't care anymore. Thank God you're not there telling them what to do. They can go home. Or they can go do whatever

they want to do, make businesses, make patents, all this kind of stuff. And it's on a trajectory. Our leaders here are not scientists. Most of them have never written a paper. I mean, it's not part of the ethic here. It might change, but these things can take a long time to go around.

Kohler: I'm more optimistic than you are.

Loriaux: Are you? Well, that's because I'm in there feeling the—

Kohler: Every day.

Loriaux: The acid every day. But I hope you're right. I mean, you're telling me that you see things changing, and that would be, that's excellent. So, yes. That's it. So, I'm pacing myself. I'm eighty, you know. There's not too many other books in me. Too many more. So, I'm sort of pacing it to get the things that I think are important, and need to be looked at the way we need to be talking about, and get them written before I can't remember what I write. Fuller Albright, you know, he was creative. He didn't know more than anybody else. He couldn't whistle a tune. He'd never read a book. But he had incredibly insightful ideas about how things worked. And then he got bad Parkinson's. And for the last ten years of his life, he was totally incapacitated. And he went to have a surgical procedure, ultimately which led to his death. But everybody asked him why, because it was experimental. He said, "You know what? I would go into my study at eight. And I would come out at twelve. And I could only think of one good word I wrote." He said, "I can't take it anymore." So, you know, he did something about it.

Kohler: It didn't work.

Loriaux: It didn't work. It was probably going to work, but it didn't work. So, when you get older, you know, when you're old, you got a new company, you're looking forward. You're not looking back. I'm at the stage probably where I'm sort of this ends, kind of how does it end? How do you end it? You just can't walk around, "Hey, come here, I'll teach you something." But my kind of teaching is not what people want. They want a video thing. And, so, there's no—

Kohler: It needs to come back.

Loriaux: It needs to come back. Well, I go in there, wander around. Nobody sees me, I don't see them. I say ok I'm going back up. See if I can write a good word this afternoon. All right, man.

Kohler: Well, I'd like to end this on a more upbeat message.

Loriaux: That's pretty good. That's pretty good. We're split fifty-fifty it's going to get better. It's not 100 percent.

Duckworth: I think that's it.

Kohler: Think we covered it?

Duckworth: Yeah.

Kohler: I think we went through most of the topics that we needed to cover. Well, I'm not sure we've captured completely the twenty-some years that you were here as a chair, and the fact that the department got better and better, in spite of the fact that there was not an ability institutionally to provide great financial support.

Loriaux: No. Nobody expected it to be different. But we thought, we had hoped that within the penury, we could be creative. With not too much money. You can be smart and not have any money, you know. But then that's, that attitude, that attitude, I was the only guy left with that attitude once you left. See, it was all designed around your idea. I mean, that was what we wanted it to be. That was the whole point. But then when you went, things were not quite, you didn't have enough time to get it so that that becomes the daily ethos, other than going out there and working on hair follicles or whatever people do to make money. So, yeah, no, that was an important thing. If you look at your life, you've probably done this, I mean, this is the best thing you ever did is do this when you came here. I know what you did before.

Kohler: It's nice of you to say that.

Loriaux: Well, nobody else will say it. Nobody's coming around to pat you on the shoulder and say, "Great job." In fact, you'll never remember anybody doing that, probably, in the entire time you were here. They'll tell you if they think you screwed up. How could you possibly have done that? Are you an idiot? Yeah, that's the way it goes.

Kohler: Sad commentary.

Loriaux: It is. It is.

Kohler: Well, I think we've sort of wrapped it up. Don't you?

Duckworth: Yeah. I think we can shut that down.

[END INTERVIEW]