OREGON HEALTH & SCIENCE UNIVERSITY
ORAL HISTORY PROGRAM

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an interview with:

Robert Bacon, Ph.D.

interview conducted on: May 18, 2004

by: Reid Connell, Ph.D.

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Site: History of Medicine Room
Begin Tape 1, Side 1

CONNELL: Good morning, Dr. Bacon. We are here at the Oregon Health Sciences University old library in the historical room. Today is Tuesday, May 18, of the year 2004, and we're here to interview you regarding your knowledge and your understanding of some of the history of the school of medicine and the Oregon Health Sciences University. So it's nice that you are able to join us this morning and look forward to this morning's interview.

Maybe we could start out by just talking about your early college years. We know that you are a graduate of Hamilton College. Are you the first college graduate in your family?

BACON: No, no. My father graduated from the same college in 1896, and I graduated in 1940. Hamilton College, a small liberal arts college in New York, a total of 425 students when I was there, but forty-eight faculty.

CONNELL: Forty-eight faculty. So you really had an interest in college and knew about the value of college through your undergraduate years.

BACON: Absolutely. And the liberal arts approach particularly I found extremely valuable. As somebody said about the college, Hamilton College trained me for nothing but prepared me for anything.

CONNELL: A good liberal arts education. Well, then, how did you find an interest in science to go on to Yale University and to pursue graduate studies there?

BACON: Well, I think it all started, basically, with my father. He was a Presbyterian minister but was aware of my sort of inquiring interest in things and how things worked out in the fields and the woods in the area where I grew up in the Adirondacks. In the Depression—I was about twelve, I think, at the time—he bought me a little toy microscope, which in those days was not a plastic little device with plastic lenses that were not—it was a real French—little French brass microscope, which I still have, by the way. I looked at everything that I could get that at.

Then, when I went to college, the faculty, wonderful faculty, they were important people at the time. The professor of biology was—Walter Hess was the—was, I think—he was an officer of one of the national associations, the American Society of Zoologists; and Earl Butcher, who later became dean at NYU, I believe, taught me histology and embryology; and it had a wonderful chemistry department, and so on down the line. And when I took—I almost had a major in English literature as well, and my professor who

taught Anglo-Saxon and then later Middle English and Chaucer was a classic scholar from Harvard. There were four students in the course, and we sat around the table, and it was like a graduate course. It was just a wonderful education.

CONNELL: So you really kind of centered in on the morphological sciences...

BACON: Yes, very definitely.

CONNELL: ...as opposed to the chemistry or physics.

BACON: Right.

CONNELL: You've always had an interest in kind of the biological sciences, is that correct?

BACON: Absolutely. Right from childhood, I think. Then, when I went to Yale, I thought about graduate school, because we had no money. My father contributed not more than a hundred dollars, I think, to my total eight years. And that was a problem now and then—I went hungry occasionally—but it worked, and I was fortunate in getting a fairly sizeable fellowship. The college had one fellowship for graduate study that would provide a thousand dollars—that was a lot of money then—for the first year in a graduate school somewhere, and I was awarded that my year.

Incidentally, I think my father's roommate received that first one, first Elihu Root Fellowship in Science, back in the 1890s, and I had the fortieth one, I think it was. It wasn't awarded during the war, First World War. There were some problems there.

But anyway, that got me to Yale, and I lived fairly luxuriously in the Hall of Graduate Studies at Yale the first year. But after the first year, things became pretty skimpy again. There was no such thing as—very little in the way of big grants and fellowships and that sort of thing. You had to—you weren't expected to receive a stipend of any kind the first year, at least, and if you proved yourself in what you did the first year, then you might get a teaching assistantship, fifty dollars a month, for the remainder of your time in graduate school.

CONNELL: Did you have a teaching assistantship?

BACON: Yes. And I was very fortunate. My professor of anatomy at Yale was Edgar Allen, the discoverer of estrogens, a wonderful scientist, a wonderful gentleman; a gentleman and a scholar, a true scholar. I have a friend at—a former student who is now chair of the department at Southwestern in Dallas in the medical center who told me a bit ago that he felt that many of his new faculty were not scholars but technicians. Edgar Allen and people like Danforth at Stanford—and Ross Harrison, who invented tissue culture was another one of my mentors back there. Wonderful gentlemen and scholars.

CONNELL: There were a lot of new scientific discoveries during that period, were there not?

BACON: Yes. A tremendous burst of discoveries, particularly among anatomists, at least, in the field of endocrinology. Almost all of endocrinology was done by—[unclear] endocrinology was done by anatomy faculty people.

CONNELL: And so your doctoral thesis centered around embryology.

BACON: Yes, it did.

BACON: The development of the heart, was it?

BACON: Exactly. The heart—well, embryology is magic anyway. You know how these things go. There's a lot of information now coming out about the guiding of cellular movement and the interaction of tissues and cells in—and the messages and transformation processes, induction, organization, gradients, and so on. All of those were thought about and talked about and speculated about, when I was a student, among the leaders in these fields.

CONNELL: So after you took your Ph.D. at Yale in 1944, did you do postdoctoral work then? What was your first appointment then?

BACON: Actually, in those days, postdoctoral—the postdoctoral concept wasn't really common at all. It was rare. No, my first position was an instructor, and that was where one started, always. My first position was not an assistant professor, but an instructor in anatomy at Stanford.

Danforth, Charles Danforth, another wonderful gentleman and scholar whose major contribution, I think, was the concept that hormones are intermediaries of genes, and a very thinking and wonderful scholar and person, he visited Yale when I was there. I was just finishing my thesis, and he visited Yale, and I was introduced to him, and about, oh, I don't know—I didn't realize it, but he was looking for faculty when he was visiting Yale. He needed a new person to teach embryology at Stanford in the medical school, human embryology. So about three weeks later I had a letter inviting me to come out there and join his faculty, which I did.

CONNELL: And how long were you at Stanford University?

BACON: From '44 to, I think, '51. Yes. In '51 I had sort of a—I was invited to come to Memphis, Tennessee, to the big medical center there for a year at least, and I spent a year there, and they wanted me to stay on for another year. At that time I received the invitation

to come to Johns Hopkins. Alan Graffman[?] was chair of the department at Hopkins at that time, and he wrote me a letter asking me to come, so I did that.

Hopkins was professionally a fabulous place to be, of course. I had the opportunity to plan research work with people like Harry Klinefelter, whose name is on a disease, and Lawson Wilkins, who wrote literally the first book on pediatric endocrinology. We had Blalock and Taussig, who did the first cardiac surgery, with interests in things that I was interested in. So professionally, it was terrific, but it wasn't a very pleasant place for starting out with a young family, small, very small, children, and pretty low income, relatively, at that time, I have to tell you. Even in the medical school at Hopkins the basic science faculty salaries were pretty slim pickings.

But the major factor to me was as a hick—I had grown up in the Adirondacks in upstate New York, out in the country—was the city of Baltimore itself, which at that time, in the early fifties, was a pretty grim place in some respects. As I've told others, the only time I ever saw anybody shot in my life was right outside my office window in Johns Hopkins Medical School. The police chased somebody down the street and shot him. And if you came back at night to work in the laboratory, unless you could park within sight of the door that you were going to enter, you didn't stay, you went home.

I hear, indirectly, that this is far from the case now, that things have changed a lot. Baltimore has been really renewed, apparently.

CONNELL: Yes, I understand that.

So, then, from Johns Hopkins, what was next?

BACON: Well, I had met Dr. Pearson, Anthony Pearson, who at that time was chair of the department here. I had some other offers from various places, actually most of them after I came here, but he needed somebody to teach embryology, and he invited me to come for a visit and to consider the position.

So I came out from Baltimore, and I had never been in the Northwest before. I'd been at Stanford, stayed pretty much close to home, San Francisco and Stanford and down to LA for a visit with friends, that sort of thing, but didn't really explore the coast. I came out from Baltimore—of course, I took the train, which was the way to do it then, and the Great Northern Empire Builder was like traveling in a nice hotel, you know. A fantastic way to travel. Well, I woke up in my little roomette, little bedroom thing, on the train, and in the morning—on the Washington side of the river, Columbia River, coming in—and looked out—I had a window, and there was Multnomah Falls across the river, and the peak of Mount Hood, dazzling snow-white above the forest, and I woke up sharply, and then came into Portland.

Dr. Pearson arranged for me to stay at the University Club for a few days, and I stayed here for about a week. I came up the Hill the first day, got out of the cab at the foot of the stairs, which are no longer there, where the street currently goes past the parking lot down the hill here, just around on the corner, and got out of the cab. At that time, that whole slope was covered with Douglas firs, the biggest trees I'd ever seen in my life up to that point. And it was May, the first week in May, and it was—all the rhododendrons were in bloom, and Dean Baird—I didn't know at the time, but Dave Baird was a real gardener. He had the place beautiful, every spot of it. The campus was, I think, easily the most beautiful in the United States, except possibly for Duke. But just an amazing place. No medical school had anything like this.

I walked up the steps, nice beautiful stone steps, to the upper level there, turned around and looked out, and the University Hospital had just been completed, and I could see out between University Hospital and the outpatient clinic there, and there was—it was a *National Geographic* blue sky, and Mount Hood was dazzling white, as it was before the present days of smog interfering with it so much, and I just couldn't believe my eyes.

Well, I spent the week and talked with Dean Baird and talked with faculty people, Jack Brookhart and various people in—Sears in microbiology and Ed West in biochemistry, and so on, and talked with students.

And one thing I did do that was I think unique at that time in medical schools here, while I was here Dr. Pearson one day had a meeting of the promotion board. I don't know whether that's still done. Each term, the faculty concerned with the teaching of a particular class met, the whole faculty met, and, with the registrar, went over the standings of the students and how they were doing and decided whether they should be promoted—most of them certainly almost automatically, but there were some who had troubles—decided whether they should be promoted or required to retake the course or to do some remedial work of some sort, or just leave. You know, be flunked out. So he said, "Why don't you come along with me and see how we do this." So I did. I sat up in the back of the little lecture room there, and the faculty was gathered down below.

I couldn't believe it. That faculty spent almost two hours, most of it involving considering just, I think, four students who were having real problems. One of the faculty would put up his hand and say, "Well, I think Joe's mother has been ill, and he's been spending a lot of time at home out there in Gresham, helping her out." And somebody else would come up with a suggestion. The idea was to try to find out what could be done to help these people.

Well, I'm not saying it wasn't done well at Hopkins, but in a similar meeting at Hopkins, the registrar—it took about fifteen minutes for the whole meeting. The registrar read off the grades, and that was it. Yes or—you were in or out.

CONNELL: So you found this to be a very nurturing environment.

BACON: I found this was a wonderful environment for one, as I was, who was very interested in teaching. I enjoyed the research, I played at it, I had a lot of fun with research all my life, but I had no big Nobel Prize dreams or anything of the sort, I just enjoyed the curiosity and getting a solution for a little problem, figuring out some biological problem. My main interest, I think, was in teaching. I did enjoy that, and, of course, the rewards come from the students that you teach.

CONNELL: So when you joined the faculty here, then, what kind of a teaching load did you have?

BACON: One other thing I want to say before I finish that first little part. I'll come to that in a moment.

At the end of that week, I had made up my mind, so I sent a telegram to my wife, to Irene back in Baltimore, one word: Pack [laughs].

Well, the teaching load was always a little heavy. The anatomy hours were long, and there were lots of them, and the—the courses were enjoyable. I did enjoy the embryology. I gathered a collection of fetuses and embryos from the hospital and from surgical processes and whatnot, and we had some pretty good histologic material to study in embryology, and it was fun. And I helped out in histology, and eventually, as embryology became more and more a part of gross anatomy, as the curriculum changed over the years, I spent most of my time in histology and then in the fall and winter terms of gross anatomy.

CONNELL: So you certainly took on more teaching responsibility by coming to the school of medicine here at Oregon...

BACON: Oh, yes, I did.

CONNELL: ...as opposed to Johns Hopkins...

BACON: Definitely.

CONNELL: ...where research was probably more emphasized.

BACON: Yes, it was, and the students were aware that that was the case. The research-oriented student who came to Hopkins had doors open to him; the student who just wanted to be a good physician had some—he was—the faculty just didn't really come out of their labs to teach very often. I'm not saying that judgmentally in a way, but they had things, they had big things, going in research, and that was their aim and a justifiable goal to do that job.

CONNELL: So the department of anatomy here in the school of medicine, what percentage of the time of that first year do you think that the faculty of anatomy taught?

BACON: Oh, my goodness, a lot. I don't think I have a figure to guess. Gee. At least the first couple of terms it must have been almost a third or maybe more of the total first-year curriculum was in the anatomy department, I suspect.

CONNELL: So in spite of this heavy teaching load, was there still productivity in research within the department?

BACON: I think so. It was a little slow-moving, but it was happening. Oh, my, yes, everybody had a research interest going. I think probably the major research in the department, one that was really supported well by grants from, I think, the Office of Naval Research, was Dr. Tunturi, Archie Tunturi's project on the auditory cortex, which was pretty pioneering, there's no getting around it, the way he used the—his room was—he had one room which was a computer, a large room, actually, for that purpose, was just a computer of that era. It was pretty much an amazing place. But everyone had research interests going, but they certainly weren't taking time away from the students, no question about that.

CONNELL: Well, I know that you spent a lot of time with students, as is indicated by the number of times that you received the Alan Hill Outstanding Basic Science Professor. Can you speak to that a little bit?

BACON: Well, I must say that was a major reward. That's the sort of thing that made up for the limited income that was—as a matter of fact, at that time I think Oregon had one of the three lowest basic science scales in the country, and so it was—but it wasn't a difficult situation financially, but the teaching—the rewards were certainly intellectual and I guess what you might call mental or emotional, whatever; anyway, great satisfactions internally with doing this sort of thing. Seeing a light bulb go on over a student's head, suddenly being aware of a new item that he'd never imagined before, a little parcel of knowledge, was really a very exciting and very satisfying sort of thing.

And also, I think making the student feel—I tried always in the first lecture of the year for the freshman class to try to make the student feel as if he was a colleague rather than somebody at the little lower level to—because I had to tell them always that, you know, We don't have all the answers to the sorts of things you're going to have questions about with respect to the anatomical sciences in this department, but we'll help you find out about them. That, I think, was a contribution I think that I could make in the first year, was to get the student to feel at home here, not as a slave or, you know, somebody driven by some kind of a force to get through this institution. I think that worked pretty well.

I served on the admissions committee for fourteen years, and that was—Dr. West at that time was chairman of the admissions committee, and one day in 1960 he came to my office and sat down by my desk, and in his southern accent he—I think he had a cigar, as he

often did. He said, “Well, son, how’d you like to do a little real work around here for a change?” That was my appointment to the admissions committee, which was a major demanding function for fourteen years, but, again, satisfying. And we got some very, very good students, superb physicians out of that crop along in that period.

CONNELL: So during time that you served on the admissions committee did the admissions committee go to the various college campuses...

BACON: Oh, yes, yes.

CONNELL: ...to interview, or did the students come to our campus?

BACON: Both. We did spend a week downstate. We spent three or four days at Eugene at the University of Oregon and then a few days over at Corvallis at Oregon State University and interviewed their students there, and then students from all over the country came—would set up interviews here, upstairs, actually, in the—some of them in the library here. But, yes, both of those situations occurred.

The whole committee moved down to Eugene in a hotel and had a room set up at the university for these interviews. They were really lots of fun. The committee worked wonderfully together, just incredibly, as a team.

CONNELL: So it was a group of you that would—as a group interviewing one student.

BACON: Absolutely. That was a little bit stressful on the student, to say the least, but every effort was made—when the student first came in and sat down at the table with these five other people around it, you know, it was pretty—he was often shaking, visibly shaking. But then our first step was to try to get him to relax a little bit and ask him about things he was interested in talking about, and then to get down to sort of the meat of things and having talk about his preparation and how we felt about the various classes he’d taken, and so on. And the letters of recommendation were quite important.

CONNELL: It’s interesting.

What percentage of the students were men and what percentage women? Were they predominantly men that were applying?

BACON: Oh, my, yes.

CONNELL: And the class that was accepted that matriculated, were they primarily men?

BACON: Yes. There were few women applicants, very few. That, of course, has changed. There are equivalent numbers now, as far as I know; maybe more.

CONNELL: In fact, in the class that matriculated in 2003, there was a majority of women students that are going into medicine.

BACON: I'm not surprised.

CONNELL: Well, I want to go back just a moment to the teaching activities. I know that during that time that you first came here that the school of medicine basic science faculty were also teaching in the school of nursing. How did that come about, and did that terminate, end, while you were on faculty?

BACON: Well, yes, that was the case. I think many of us had lecture sessions in the nursing courses. I did some of that in development, embryology. I think one or two people that I recall, particularly a little later in the program, Jack Keys[?] in physiology was—sort of became the coordinator for the involvement of medical school faculty in teaching nurses. I was particularly involved when the nurse practitioner program started and gave a histology course for those students who needed it for their research in preparation for the nurse practitioner program.

The nursing school was essentially a department of the medical school when I first came here—I've forgotten the names involved—and then eventually, of course, had its own chair and then eventually its own—became a separate school. The splitting off was—I think had some stressful interactions, produced some stressful interactions, within the nursing school and also with the medical school, some of the administrative activities.

CONNELL: I would like to come back to that particular issue of the school of nursing and the school of medicine relationship in just a minute, but I also want to go back to the anatomy department, the teaching and the research activities.

Now, it seems to me that when you arrived you were very instrumental in establishing a graduate program, and in fact had applied and received a national training grant. Could you tell us a little bit about that, please?

BACON: Yes, that did work out that way, actually. Jack Brookhart, in physiology, was particularly interested in graduate training, and he and I spent a good deal of time batting ideas around about how this might be expanded and developed in the institution beyond the limits of our two departments.

I've forgotten the agency's name, but it was a basic sciences sort of supporting program, the national institute of basic medical sciences, or some term of that sort. I don't remember the name exactly, but they had funds to help in graduate training in basic sciences. We were very successful and received a grant that we managed—that we kept for, I think, ten or eleven years, something of the sort. And, indeed, at the time that we—I decided that we shouldn't apply again, because there were some big policy changes

happening in Washington at the time, some major changes in the way things were being managed, and I felt that I didn't want to take on new students in the program who might be left...

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

BACON: ...independent autonomous institution, which, in fact, it was, really, functionally, with the idea of getting the school of dentistry and the school of nursing and the school of medicine into a single unit, functional unit, officially. And it worked out. It took a lot of doing and many, many, many committee meetings, but the committee that really did it was—basically grew from—well it was the persisting search committee for Dean Holman, essentially.

SIMEK: Gentlemen, excuse me. We need to stop you here. We're at a tape end. [tape stopped]

CONNELL: We were just talking about some of the committees that you served on and the search committees. I understand that you also—I remember an occasion where you served on a committee to search for a new chair of biochemistry to replace Ed West. What kind of experience did you have on that committee?

BACON: Well, it was—actually, I was less involved, I think, on that committee than probably most any of the others. But it was—it seemed to be a pretty solution to get a local—you know, get Dick Jones as chair. I'm not sure what the department felt about this. I don't know what—there was some stormy times in there, but I felt pretty secure about the way—you know, the way I felt about the chairmanship, and it seemed to work out.

CONNELL: It was very good, a very good outcome.

BACON: Yes, a very good outcome. There always are some—within a department there are always some little stormy churnings when a chairmanship changes, no getting around that. That always happens.

CONNELL: You were a prime candidate for—when you were acting chair you probably could have become the chair, permanent chair, of anatomy. Did you turn that down for a reason?

BACON: Yes. Well, it was just simply that I had—that the acting chair position convinced me of something I had long felt pretty sure about. I was not an administrator. I couldn't delegate. I would have done myself in, I think, if I had taken the chair position. And that's why I turned down the other remarkable offers that came. Offers of this sort come to someone during a career, and several really outstanding ones came during mine, and I just had a feeling all along that I would do the job as acting chairman, but it wasn't really my

thing. I had difficulty delegating and feeling—I don't know, I just wanted to do it my—you know, do it myself sort of approach, to things, and would be too much; it couldn't happen.

So, really, the search committee for the new chair in our department was sort of back and forth on a lot of—off and on, and finally they came up with the—I think a pretty unusual sort of statement that if Dr. Bacon felt that their nominee was one person that he couldn't really get along with, he should be offered the job himself [laughs].

So it was a little—but my family also, I think—I remember my wife, when I told her that I wasn't going to do it—she never indicated her feelings in the matter, but there were a couple of little tears when she heard that I was not going to take it, or these other jobs, too, for that matter.

CONNELL: You served on a search committee for the president. Was that—which president was that? Was that Bluemle?

BACON: Yes, and Laster.

CONNELL: And Laster as well?

BACON: I think both of these people were extremely capable and topnotch individuals. I think the choices, from the point of view of a search committee, were pretty reasonable. But one thing we probably really didn't take into account was the fact that, well, these were not in our, shall we say, the Oregon culture. They were people from way outside and had totally different feelings about how the interaction should be with the legislature, for instance. Dean Baird and Holman, and so on, had been so effective with the legislature, and I don't think the—I think that was a problem, certainly with Dr. Bluemle, I know. I was made very aware of that in one little incident that was—I don't know whether Dr. Bluemle is still around doing things or not, but he did have his problems with the legislature. Where he is now, I have no idea.

But those committees, in talking with the nominees, I think had a lot to do with influencing the outlook of those two presidents on how they were going to manage things when they got here in the sense of the directions to go. The search committee can have, I think—in a department or dean position or president, whatever, can have a lot to do with the direction that the institution is going to go, and I think with them it—sometimes it worked and sometimes it didn't.

But it was—anyway, those were interesting committees to be on, I must say.

CONNELL: You spent some time, I think, that was very interesting in the—it could have been the late fifties or the early sixties when we were developing the Oregon Regional Primate Research Center.

BACON: Oh, yes.

CONNELL: And there was—and how the leadership changed so very, very quickly. Could you talk about that a little bit?

BACON: Well, yes. The original founders, basically, who really started the whole thing with the primate center, were West and Pickering, Dr. Pickering in pediatrics. I believe it was pediatrics, wasn't it, that Don Pickering was in, and West in biochemistry. They were essentially sort of the local fathers of that institution.

Then, I don't really quite know—I was on the search committee for, and was the one I think who proposed—suggested Montagna when they were looking for the thing. I was so busy in the department that I spent a lot of time with other matters, and some of these committees, I must say I shortchanged them a bit, there were so many of them.

But I do recall that I think—I think Ralph Benson was on that one, but I'm not sure, and I—I had just looked into some of Bill Montagna's work on the testes, because that was an interest of mine on the histology and some changes in the testes with various hormones, and his—he really had done some remarkable work on the testes, so I looked a little more into his background and suggested him. He was a pretty powerful administrator of that agency, of that institution out there.

The early stages of that, I do recall—I don't remember the details because I wasn't really involved at that point when they first were getting the thing going, but there were—there was quite a remarkable struggle. That's all I know about it, basically, was that it was a really major project. It involved Pickering and West a lot in that period of time to get it to happen. But it was my impression that they were really the ones that made it happen. They were both well-known people.

CONNELL: As you indicated, Dr. West was a very unusual, remarkable man with tremendous influence.

BACON: He had influence everywhere he went.

CONNELL: You shared a story about Dr. West when you once had a meeting with him. Could you tell me a little bit about that?

BACON: Yes, I will. It maybe would give a little indication of his influence and how it worked. It was in connection with the admissions committee.

I had dropped in to his office one morning to chat with him about some committee matter, and while I was chatting with him there—he had this big, beautiful roll-top desk, and his universal white, wrapped-around lab coat and his cigar, and while we were chatting, the phone rang. He picked up the phone, held it up to his ear, and he said, "Well, hello, son. What's the matter, you sick? Well, you just stay home and everything will be all right up

here. When you get back, you can get caught up. You won't have a bit of a problem. So you just stay home until you get well, and everything will be okay when you get back. All right, son." He hung up. That was the dean [laughs].

CONNELL: Dean Baird?

BACON: Dean Baird.

CONNELL: Oh, that's great.

Bob, you also were involved in establishing a part of the Oregon donor program back in those early years, and the Oregon donor program has become such an important part of our health system today. Could you tell us a little bit about your early involvement in the Oregon donor program?

BACON: Yes. Actually, there's a historic basis for that involvement. Larsell again, Olof Larsell, I think, was the person who somehow, through the legislature, established, or got the state to establish, an official at the medical school who was responsible for cadavers, for bodies, that were of use up here in teaching and studies, various studies. That was known as a demonstrator of anatomy. The chair of the department was sort of automatically demonstrator of anatomy unless somebody else—unless the chair wanted to delegate that job to somebody else, give that job to someone else.

That person was to have the control or the direction of what was done and what bodies were accepted up here for teaching purposes and what became of them and where other institutions, if any, could use human bodies for dissection. That was up to the demonstrator of anatomy at the medical school to make those decisions. If another school for some reason wanted a cadaver and wanted to use it for some specific teaching purpose, it was up to the demonstrator to decide whether the resources at that institution were adequate to keep it appropriately in a place that was not publicly accessible and had good resources to maintain sort of the privacy of the presence of a body on a campus, because there are all sorts of people in the world, and these sorts of things can become a problem.

At that time, almost all cadavers that used in teaching anatomy were unclaimed bodies. Nowadays that's not the case. With social security the way it is, everyone is known. But in those days, a body found in the woods, or anywhere almost, was automatically sent up here, or was available at any rate. The demonstrator also had to decide whether it was acceptable as material for teaching. You know, if a body found—as a matter of fact, I think the basic rule is that any body that was to be buried or otherwise managed at the expense of the state was supposed to come to the medical school, or at least be offered to the medical school as potential teaching material. It was up to the demonstrator to decide whether that was acceptable or not. Of course, some bodies were found in the river, you know, and had been there for a long time, but that body had to be offered to the medical school by law. Of course, some of them were totally unacceptable, unusable.

But eventually, more and more interest in donation of bodies developed, and in about—it must have been in the late fifties, maybe. The *Reader's Digest* published a remarkable article about the need for bodies for teaching and encouraging people to donate, to look into the possibility of leaving their bodies to—a person to leave his body to the local medical school, wherever it was in the country. That article had tremendous impact all over the United States, and very promptly here there were inquiries, great numbers of inquiries, about the possibility of doing that. So one had to—in the department we had to sort of sit back and decide how we were going to manage this particular situation. It meant that the demonstrator of anatomy might have more duties than sort of routinely saying yes or no about a body coming to the medical school.

Dr. Pearson was the demonstrator of anatomy for a few years and had the help, the assistance, of a remarkable man here on the campus, Ernie Hage[?], Ernest Hage, who was basically what used to be called a deaner[?] in the department of anatomy. He was the one who prepared the cadavers and took care of the dissecting rooms and the material, the teaching material, for the students. He was a remarkable man here. We were very, very fortunate in him. He took seriously the responsibility of doing a very good job preparing cadavers for teaching purposes. And they were really remarkable; there's no getting around it. This institution was very fortunate in having—he was very thoughtful and creative about how to manage these things and the sorts of preservation to do.

Well, the number if inquiries became great, and the department secretary had a lot of typing to do with letters, and whatnot, in reply to inquiries, so it became a bit more of a job. I helped out when Dr. Pearson was chair and was official a demonstrator. He left quite a bit of that to me to do, and I got sort of used to it. When I was acting chairman, it was a full-bore job, and, actually, from then on I was the demonstrator of anatomy for years, through the time of Dr. Critchlow and the whole rest of the time I was here.

It was a very interesting relationship. The highest motivations were in those people. It was really very, in a sense, rewarding to have the interaction with some of these people who were highly motivated to do what they could for medical education in this way. Some of them were very poor people who couldn't really afford to have a funeral, for heaven sakes, but their motivations were such that it made it easy for us to accept these gifts.

You had to deal occasionally with family breaks, family positions. Some of the family might say that would be great, and other sisters and whatnot would just say it's absolutely dreadful, we can't do that. So there were differences of opinion, and those had to be settled one way or another, and sometimes the demonstrator got in the middle of firing from those sides. But some of the correspondence was very rewarding over time, and those worked out. I never had a persisting problem that I couldn't somehow get the family to make a decision one way or the other, a clean-cut decision.

CONNELL: As your role as demonstrator of anatomy you also became involved with the eye department, with the ophthalmology department here in the school of medicine,

and the Lions Eye Bank and from that spawned the organization which is the—which promotes the value of organ and tissue donation. How did you kind of become involved with that to bring that to the state where it is today?

BACON: Well, that's very interesting, actually, and some of that is well known and some isn't. The person who really triggered it was a nurse, Mary Ann Farnsworth, in the department of urology, the kidney transplant program. She mentioned—she came to my office one time and—I'd been aware of the donor situation for kidneys that was developing. I hadn't had direct contact at that point with the ophthalmology—with the corneal transplant thing, but I knew they existed, I knew the Lions Eye Bank was developing. But I think probably the original idea of getting these programs together—I'd thought of it but never done anything about it or pushed it until she sort of really began to think seriously land talk seriously about it. She came to my office a couple of times and we chatted about this.

Dr. Hodges and Barry were interested but didn't really want to get involved in that. They had their clinical work to keep them very busy and didn't want to be involved in putting together a new structure, a new organization. So Mary Ann and I got together with—we brought in the eye people on the Hill at first. And the Lions Eye Bank and, the Oregon Eye Bank—I think it was called the Oregon Eye Bank, I believe, the one on the campus—were sort of competitors in a sense. They really didn't see, shall we say, eye to eye. But it took some fairly long time to get that worked out.

Then along came the burn center at Emanuel, with the skin and bone grafting things, and whatnot, and I think even the—it seems to me the dental school had some interest in some of that collagen transplant, I think; at least expressed an interest. I don't remember how much they got involved in it, though.

So we invited people—Mary Ann and—she did the basic—the legwork. We invited people in each one of the programs to try to get together and meet, and we did that. We had a number of meetings, and things worked out very, very well. The longstanding problem between the ophthalmology departments involving the corneal transplant program, that managed to work. They didn't always, as I say, see eye to eye, but it did work, and eventually it, of course, got well established, was very well received by the public.

Mary Ann and I spent a great deal of time in Salem with the Department of Motor Vehicles on this donor symbol on the license, and that took a bit of doing because the political structure of DMV is complex. But it did work out.

We did an awful lot of traveling around the state, Mary Ann and I did, as a team, talking to groups about interest in being donors and had little slide shows about the related—fairly comfortable slide shows, not the cadavers in various states, but about the possibilities of being involved or being a donor in the program. We talked to school groups, we talked to church groups and various organizations up and down the valley, particularly.

I have on my wall a plaque that was given to me at a banquet downtown in—when was that? Nineteen seventy—at any rate, along in the seventies somewhere, in appreciation for my starting—with Mary Ann starting the donor program.

CONNELL: Well, you need to know that that's a terribly important program, and your example has been followed through, and I think now we have literally thousands of students, high school students, who rotate through the university, hearing about the organ and tissue donation programs.

BACON: That's great.

CONNELL: Bob, I'd like to turn our attention just now to a little bit about the university. I think it was about 1974, and maybe the year before, that we decided that we would break loose from the University of Oregon. Rather than being a school of medicine, a school of nursing from the University of Oregon, we decided that we needed to become more independent. What are your recollections about that? How did it come about, what were the controversies, what things did we have to overcome to become a university?

BACON: Academic tradition is very difficult to change, just generally. So any change that was as big and drastic as that is difficult to accomplish and takes time. A lot of people have to be convinced that—you know the old phrase. You keep hearing it in situations of this sort—if—what's this thing that says, If it ain't broke, don't fix it. Words to that effect. That's not said that way, but there's something of that in dealing with a long-established political relationship or administrative relationship.

I don't remember details but just sort of the general thing. I think one of the first people that suggested that possibility was in a search committee; which one, I don't remember. I think it was Ken Swan may have been the first person to mention that possibility in a committee meeting. In the search committees for the deans there always are discussions of—and I think he brought that up in one of those committees. He was an active committee person and a very effective one, and I believe he—he and Bill Krippaehne also, I think, was one who was for that.

How it grew from there is a little difficult to follow. I'm sure that Ken got around and talked about this after the committee decided—we chatted about this on the committees, and I don't remember which specific one it was, but we decided that it probably ought to be—we ought to get some soundings from people around the institution to see what they thought about this. As I recall, I think the nursing school was particularly strongly in favor of something of that sort. They had been so dependent on the medical school's—well, the dean's office for, not favors exactly, but to get things done sometimes at the administrative level.

But it just—it moved fairly rapidly after it got rolling, but it did take a lot—Ken got around and talked to a lot of people on the Hill to get opinions and feelings. I honestly don't remember the steps that went into the process after that, but I do remember that we—and there were a few people that really didn't think it was appropriate at this particular time. And, of course, Ken ran across people on the faculty who were kind of strongly against it.

I don't remember the response down in Eugene. I do recall one—and I may have mentioned this earlier, that one of the legislators that I dealt with in Salem commented—and this was before the university system setup—commented that the University of Oregon Medical School was the crown jewel in the state system of higher education, because they were very active in other things.

Larsell had for years been almost directly sort of in charge of graduate education in Oregon. At Oregon State, his word was law. I don't know what his position was that made it that way, but he decided on the qualifications of graduate students and evaluated theses and had a lot of impact. Linfield College even has a dormitory named after Larsell. He was very influential in getting people in the state to be aware of scientific education generally.

And since he came from the medical school, he had his impact on this institution as a medically important institution in Oregon. The people at Corvallis and at Eugene and other colleges around the state and their physician connections helped to develop the concept that this was *the* referral hospital in the state of Oregon. And that was really the first what you might call outreach impact, I suppose, of this institution, was that it was *the* referral hospital and the thing—a number of factors made the people and the physicians statewide aware of this. And I think one of them was Larsell's impact on science education in the colleges and schools of this state.

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

CONNELL: The dental school, when you first arrived here as a faculty member, probably was located over by the current Lloyd Center area.

BACON: Yes. It was in that—I think it was the Lloyd Building, or something, that big old column—big monster building over there.

CONNELL: It was kind of an independent...

BACON: It was.

CONNELL: ...organization, independent and not really aligned with the school of nursing and the school of medicine.

BACON: No, it was quite independent.

CONNELL: How did that come about, in your recollections, did it come part of the university and move up onto the Hill?

BACON: Well, again, I didn't have much interaction with the people in the dental school until they were up here. I can't give you any real information on that, except, again, there were some who felt—some in the dental school who wanted to stay independent. The facility was in pretty bad shape over there, no question about that. I do remember visiting it and being a little startled by some of the physical plant, shall we say, and they needed something else. But some of them wanted simply to rebuild over there and have an independent school.

As with all these changes, it took time and some battles to get the job done, but I can't really recall much about the details of that.

CONNELL: Well, during your tenure there was certainly a spurt of growth on campus.

BACON: Oh, amazing growth.

CONNELL: What new buildings and new changes did you see occurring while you were...

BACON: Well, of course, the first thing in physical plant that happened was—well, when I came here, the University Hospital had just opened; just opened. A shiny new, state-of-the-art building, and it was pretty classy and very well thought of statewide, of course.

But an important thing that was happening at that time, too, and I think this was the doing of Baird and West and Brookhart, probably, there was—there had long been what used to be called the town and gown problem, a differential between the practicing physicians downtown, the local hospitals and whatnot, and the academic institution up here on the Hill. There were some strong differences in opinion as to what should be done up here. The school was heavily dependent on clinical faculty, part-time clinical faculty, and at the time I came, at that visit that I came, it became very apparent that things were going to happen in which a lot of fulltime faculty were going to be added.

The dean was looking forward to adding more fulltime faculty, and that happened. And I could see that coming. People that I talked with in the faculty were just excited about what was happening here, and the whole atmosphere of the institution was very attractive to me. I didn't mention that when I was talking about the visit I had, but it was obvious, after talking with department chairs in basic sciences—and I met Ken Swan, and I don't remember who was the cardiologist, professor of cardiology at that time. A pipe-smoking gentleman. Damn, I've forgotten his name.

CONNELL: Griswold?

BACON: Griswold, yes, Herb Griswold. These people were all looking forward to more fulltime faculty in their departments, and it was—the whole atmosphere felt good. And it happened, you know.

A very important addition to the faculty was George Saslow. He had a great deal of impact. He was world famous and had a great deal of impact on other departments, making them—I don't know. He was, of course, a psychiatrist, and maybe he had his own clinical ways of getting people to feel good about things, but he did. There were new additions to—the fulltime faculty grew, and it was a tremendous growth period.

Doernbecher, when I came here, was the top one or two floors of what became the clinical lab building, or what was the—I've forgotten what it was called at that point. And then, when the University Hospital opened, it was moved over to the top floors of the University Hospital, and, of course, took off as an institution in its own right; a superb hospital, clinical situation. The place really grew.

It was still—when I came, it was small enough so that everybody pretty well knew everybody else. You didn't meet too many people in the hall from other departments that you didn't know, and that was very nice. As I mentioned before, I'm a small-town hick person from a little tiny town up in the woods, and it was just a great association to be in a faculty of that size and a community of that size. It was a community, it was indeed.

CONNELL: How did the downtown physicians feel about our going to fulltime faculty as opposed to having part-time people come up?

BACON: I think that the—it wasn't a popular move, I think. I think they appreciated the opportunity, or enjoyed the opportunity of being associate faculty up here. But there were individual differences. There were some that favored it to make it an institution that would continue to be a major referral institution for their patients, a resource for their patients. Some people looked at it that way and favored the strengthening of the fulltime faculty. But I think there are still some town-and-gowners out there, particularly as the institution has grown in the magnitude it has. Astonishing.

CONNELL: It certainly has grown.

So what is your perception of the—how the community feels towards the Oregon Health and Sciences University today? Do they feel that it's a tremendous resource to the state? What are your impressions?

BACON: Well, one thing that has happened, of course, has been the growth of other hospitals in the area, and this is still a major one, of course, for that sort of referral. But my information, or my feelings—I moved out of Portland, down to the coast, years ago, and so my information or feeling about the—or, my understanding of the feelings of a community feeling has been based on the people I know at the coast. I've become, down there in Seaside, Gearhart, Astoria, Cannon Beach sort of a lightning rod for information about

physician resources, and I've taught an awful lot of physicians up here. My total career, I think—I counted up one time and estimated that I've taught forty-three hundred physicians their basic development and structure of the human body. There must have been—I haven't counted them separately, but I think about at least three thousand of those were here on this hill. Many of them I remember, and we produced some superb physicians up here, I can tell you that; superb.

As a matter of fact, there's one little story about that. This may be a digression, but I think it's worth saying. A number of years ago, one student—actually, it was Lynn Witwer[?]. He went off to his internship back at what was at that time a major sort of an internship goal, Hennepin County Hospital in—I don't even know where it is, Illinois or Minnesota. Anyway, he went off to his internship—and it was also a favorite hospital for the Ivy League schools for internships. And he wrote me a letter. After he'd been there for a while, he wrote a letter back saying that—sort of describing the situation, and saying that when he arrived there, he said, most of the other interns were from big-name schools in the East, and he said, "I started out this internship with sweaty palms and total insecurity, and I soon found -" how did he put that? "I soon realized that I was as well trained as anyone there and better trained than most."

I have had that same response from students ever since. I've heard the same sort of thing. The clinical output, the clinical effectiveness of our people, our graduates, has been quite remarkable. I have strong feeling about that.

So, down at the coast I've been able to send people up here. One of my principal functions as professor emeritus, it seems to me, since I have developed other activities and interests, has been to send patients up here, or just to suggest that they go. I'm not a physician, I can't refer them officially, but I can tell them to—or suggest that they look to go to somebody here on the Hill, or elsewhere if they have a home somewhere else in the state, to—if I know the name of the physician, I can suggest it or not. I've had some very fine feedback from the patients who have come back, the people I know who have been patients up here and come down to the shore, back to their homes on the coast, some very favorable feedback to their attention and their care up here.

CONNELL: Over the years there have been numerous curricular changes that you've probably experienced and been a part of, as well as the growth of new and innovative programs. Could you tell us a little bit about your experiences there?

BACON: Well, when I came here, of course, the anatomy courses were a major—as we mentioned earlier, a major part of the curriculum in the first year; the dominant one. Over the first few years, a lot of things were happening in other areas. Physiological information and biochemical information was expanding, and genetics was becoming important, understanding of the gene and its workings, and those areas in the curriculum—they were beginning to feel a little shortchanged, I think. Some of the people in those departments were feeling that it was just—they weren't getting a fair go at getting some of

this to the students. As with any discipline, the people who are really in it, it's their home, and they feel strongly about it and feel that it's *the* item, you know, that the students should hear about. It's very difficult to back off when you've been teaching, and pretty effectively teaching, substantial, good, solid material to the student.

But in trying to be unbiased about it, to look at keeping a balance, it was necessary to cut back some on the anatomical sciences, I think. I've always hoped that it would not go too far, however. One can learn a great deal from videotapes, from computer assisted teaching and diagrams, and so on, but when a patient sits there in front of you, the diagrams kind of float out the window sometimes. They don't seem to be related in the early stages to what's in front of you, and if you need to put some steroids in the shoulder joint, you better darn well know your way around in that area. So the anatomical sciences will always be important.

I think this sort of a change in balance in curriculum has happened over the years in every institution around the country, but I do hope that we don't change it so drastically that we weaken the ability of a student to be aware of the variation and the sorts of variations that occur in the—have a basic, intuitive knowledge of where things are in the body, but be ready to be aware of the possibility of variations that they have to deal with as they dig in, do their surgery or do their physical examination or whatever.

Testing, the imaging testing, the radiology sort of fallout from all sorts of ancillary imaging processes has done a huge amount to simplify the physical exam, to the extent that I think some of that is being weakened, below what it should be. The medical graduate should still be able, in spite of the advantage of tests, expensive tests, to do basic things pretty cleanly and securely by the physical exam. Medical costs have been related a lot to the testing processes, there's no question about that, but a lot of that, it's too easy to say, Let's do this test, instead of really focusing on a patient and examining carefully the patient before doing that.

CONNELL: Have you...

SIMEK: Excuse me, Dr. Bacon, I'm sorry to interrupt, but why don't you take a sip of water. It seems like you're getting a little dry.

BACON: That's a good point. I am sort of dry now, so to speak, in more ways than one [laughter].

That was very timely. I would have become aware of it pretty soon. That's one of the problems of being an older type professor; somebody pushes the right button and it's going to get talked to, hoarseness or not [laughter].

CONNELL: So have you noticed a change, for example, and what is your opinion of the change of department names? Certainly, the department of anatomy that you joined in the fifties has been restructured, and, certainly, it's called differently today.

BACON: Right. Well, what amounts to the blending of structure and function at the molecular level and the genetic level, and, whatever, physiological level, has had some pretty—I think has been advantageous generally. Again, the problem of this sort of change is, I think, related to sort of the pendulum effect, going a little too far in one direction and maybe weakening something and then backing off. Keeping a balance is so important. And an understanding of the structure is still—the structure of things is still very, very important.

One thing that has happened in so many areas, the teaching of microscopic anatomy has gone pretty much to slides, Kodachrome, tape, videotapes, computer imaging, that sort of thing, and the student—one real advantage of having a student working with a section, let's say of pancreas or whatever, under the microscope and really using a microscope in the histology or microscopic anatomy lab, whatever you want to call it, that is the first place that a student, given a slide of a section of tissue, has to use diagnostic steps to figure out what it is he's dealing with. It doesn't have to be unknown, but every slide that he looks at under the microscope, when he first looks at it, is an unknown structure to him. And before he can come to the conclusion in his mind, in his thinking, his permanent image of what that organ, that tissue, is, he's got to study it carefully and find diagnostic features that tell him what that is.

I think it's very wrong to give up the use of a microscope and sections of human tissues to study somewhere along the line. That's the first real use of a diagnostic procedure in medical education. That's the first year and one of the first courses he does. He doesn't have to—he's got to look at it and come to the conclusion himself.

CONNELL: Well, as the university has grown, in your experience, was there ever a time when there was just as much space as anybody needed to teach and to do their research and have office space?

BACON: I don't think there's ever been that time in history. From the first hut up to the large institution, I think that there's always been expansion—the business of growth. Growth can sometimes become malignant, as every clinician knows, but—and if we get off on that subject very far, that's one of my pet peeves, in a sense, with our total world structure.

CONNELL: In your recollection, how did—when the university built the new research building, which is the north side of Mackenzie Hall, where did the funding come from for that? Was that from philanthropy, from private funds that were given to the university? Was it state money or bonds? How did we get the money to build these structures?

BACON: I'm not sure of that, but as I recall, that particular one was—part of it was federal funds. There were some other sources, but I really—I didn't deal with the administrative things. The only time I've really been involved in the development of the buildings was when the—at that time the new basic science building—I think it's still called

the basic science building—when that was built. There were plans, when the student carrels were built—each team of students had separate study rooms along the sides of the building there—I had the job of surveying the interests of the faculty and proposing video connections, video monitor connections, between different parts of the campus.

I had very nice plans for having each student's carrel over there with a monitor, a video monitor, and having it connected with examining rooms, with interview rooms, and a camera to be built into the upstairs over the surgery, in the surgical operating rooms, that sort of thing, so that the students could have that availability and would be able to see Dr. Saslow interviewing a patient, for instance, and to hear the conversation going on in that interview, if he was involved in that course or in that particular area of things.

It would have been wonderful to have some of that surgical viewing by the students in their carrels, and, for that matter, in the teaching lecture room over here when they were taking anatomy. But there wasn't enough funding to do the cable connections required at that time, so that never did develop, unfortunately. I put quite a lot of effort into that survey and that report. That was a fairly sizeable item.

CONNELL: Well, we had a couple of presidents that were influential in bringing about development. How did you see Senator Hatfield participate in our growth, as well as our former governor, John Kitzhaber?

BACON: Well, Senator Hatfield, of course, has had a lot of impact on a lot of institutions in the state of Oregon, the Marine Science Center in Newport and a number of other institutions. I'm not sure about—this should probably not be recorded, but I'm not sure about my feeling about some of it. He did some wonderful things for the state of Oregon, financially he did marvelous things. He got the center here, and that sort of thing, and did many things for the other institutions, for heaven sakes. But there were a couple of items that concern me about the way they were done, and I'm not sure whether that should be expanded on in this sort of an interview or not.

What do you think, Sam?

CONNELL: Well, I think—you know, I think you've expressed that, and I think that that's probably adequate.

You had a tremendous interest in marine science. It seems to me in your past that you had something with an idea of a marine science center down at Depot Bay. Could you tell us about that?

BACON: Yes. Well, when I first came here—I had been interested in biology, basic biological things in any creature, way back when I was a student, that sort of thing, but after getting into anatomy and doing the work at Stanford that I did on the hamster tumors with [unclear] Kirkman[?] down there I pretty much dropped all other interests.

I came up here, and Dick Lyons, who was in, I think, the first class I taught here, who later was a considerable influence himself in public health service, Dick Lyons took me down to the coast just to visit the shore down there, and we went down to Sunset Beach down near Cape Arago on a weekend. I had been at Woods Hole in Massachusetts back when I was a student. I had a summer scholarship that took me to Woods Hole, the center of marine biology research in the world at that time, and that was quite a remarkable experience. Back there, I got to see sea urchins and learn about things of that sort, and it was a fairly rare item to find one at that point.

I came out here and went down to the coast with Dick, and he took me to the coast, took me to the beach and to the rocky intertidal zone there, and the sea urchins were so numerous I almost couldn't avoid stepping on them. And one of the first creatures I saw was a huge sea slug sort of a thing, a keiten[?]—there was a big red gumboot, so-called—almost a foot long—crawling in the tide pool. The largest on the East Coast, the kietaplura[?], was about an inch long, inch-and-a-half long. I couldn't believe the creatures.

And at that time, or shortly thereafter, I became interested, just in curiosity, about differences between some embryological developmental processes and malignancy. There are a lot of similarities in the way cells behave. Some of that's been washed out with some of the new research, and so on, but there are similarities in the way that malignancy is the—was considered for a long time the loss of controlling factors to keep tissues doing their proper thing, which happens in embryonic development. Those rules are set down as the embryo develops. A stomach lining...

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

BACON: ...to keep tissues doing their proper thing, which happens in embryonic development. Those rules are set down as the embryo develops. A stomach lining cell stays that way and does that thing only. And that was before the impact of the genetic thing and the [unclear]gene concept and that sort of thing.

And I tried to get some eggs. I could get a few rat eggs from animal quarters[?] to do some things with, and even now and then, rarely, with Ralph Benson's help, a human egg. But with sea urchin eggs, you can get them by the, literally, millions, beakers full of them, and they can be synchronized so that you have them all in precisely the same stage of development as they go ahead to become embryos.

So I got interested again in marine biological materials, and we did have an aquarium up in my laboratory up on the third floor of Mackenzie, and it was a lot of fun. I did a lot of studies on the sea urchin embryos. At that stage, of course, when the cleavage is just beginning and the embryo just starting to develop, the genetic—the DNA is just beginning to have its effect before—at that stage there are almost identical processes going

on in all eggs, whatever species, human and sea urchin. There are minimal differences at that point.

CONNELL: I remember that you had developed a little building down at Depot Bay where you had kind of a, quote, marine science center where you had a bench, a wet bench, for sea water. And I remember it seems to me that there were lots of medical students who were very interested in this thing that came down and visited in the workshops that you held down there. Could you tell us about some of that?

BACON: Yes, I'll tell you a little bit about that.

Actually, Dick Lyons and I had talked about trying to have some resource down there that we could go to. This was before the marine science center, and the only thing down there at that time, there was a little laboratory for the fish commission and some special items like the oysters and that sort of thing.

Bob Van de Velde came up to my laboratory as a postdoc from Eugene, and I was interested in electron microscopy. His family was well to do, and he was able to buy some land. He wanted to buy some land on the coast up here. He was from Southern California. I think his father had imported first, and was responsible for the development of, the—what's the big—there's a lima bean farmed down in the southern part of California. I've forgotten the name of it. It has a particular name. He developed that bean, his father had done that. His father was a Belgian who came to this country. So they were wealthy people.

So Bob Van de Velde actually bought land down on the coast to the extent of about ten thousand dollars in Depot Bay, on the south part of Depot Bay, south shore of Depot Bay, between Depot Bay and Whale Cove, and built a cabin for his family, him and his family, down there, a little cabin in the woods. Irene and I bought a piece of the property, and Dick Lyons bought—each ended up with a third. Each third was an acre and a tenth right on the coast, for a total—the whole works was ten thousand dollars.

CONNELL: A bargain.

BACON: More than three acres on the shore. Anyway, each of our pieces had 111 feet on the ocean, and I was at that time pinching pennies, and I was extravagant, and I had no idea—every time I sent in a check to pay my share, I swore, Why did I ever do this extravagance? I can't afford it. Of course, it ended up making it possible for us to buy the house we have now in Gearhart, many years later. When everything sort of folded up down there, we sold it for a tidy sum, and it all went into the property we have in Gearhart now. Anyway, that's a personal matter.

But the little laboratory we hoped was going to make it possible to do some basic biology on embryonic development down there in that little laboratory. Bob Van de Velde

could finance these things, and he had the little lab built. An interesting builder; I think he was an Austrian.

SIMEK: Gentlemen, we're out of tape.

[tape stopped]

CONNELL: Well, Dr. Bacon, I want to come back to the department of anatomy, if I could. You know, I think in the twenties and in the 1930s, the Oregon School of Medicine here, University of Oregon Medical School, was well known for its neuroscience activities, and there were a couple of individuals in particular, Olof Larsell, Dr. Allen, and Dr. Anthony Pearson. Could you speak to the contributions that these two men made to the understanding of the nervous system?

BACON: Well, yes, indeed. Dr. Pearson, the chairman who invited me to come here, was a pioneer, perhaps even *the* pioneer in reporting and describing the development of the cranial nerves in human embryos. He had a remarkable collection of human embryo, serial sections of the nervous system, in very young stages that were unprecedented. And he was able to describe in detail the embryonic development of the cranial nerves. A very big step.

Dr. Allen I never met—I think he was gone when I arrived—but he was known for his work on what's called the reticular formation in the brain stem, to the point where it was—the reticular formation became known as Allen's Alley. You may or may not recall there was a radio program, Fred Allen, who every once in a while would take his audience down Allen's Alley and visit various people and talk with them. Lots of fun. So the reticular formation became known as Allen's Alley.

One time—Dean Baird told me about this—he said that—I've forgotten exactly the setup, but he and Allen were talking about—I think it was a New Year's Day that the dean was in, for some reason, into the school. In those days, the heat was all turned off on the holiday season, and the—and Baird happened to see that there was somebody else in the building there. There was Dr. Allen, looking at his slides at the microscope, all bundled up in his coat and his outdoor wear to keep warm. The dean said something to him about, "It's pretty cold in here. You ought to be home and warm." And Allen said, "Yes, it is cold, isn't it? But it was even colder Christmas day" [laughter]. He was much focused and really worked day and night on his—he was really intently working on this.

You know, there was another—well, and, of course, Larsell's stuff on the cerebellum, his information and study of the cerebellum, he was *the* world authority on it, I suspect. And his book became sort of a classic study of that—reporting and description of that.

At that time, in the early days, twenties, thirties, early forties, I think that probably the department of anatomy was the best-known feature. The anatomy department at the

University of Oregon was the department that was known worldwide, it really was, because it was, in a sense, a neuroscience center at the time. There weren't really such centers in a structural sense, but it was indeed, de facto, a neuroscience center here, very productive of sound and long impact research.

There are other features—this is, again, a little digression, but some of the faculty really did things that were really quite remarkable.

Bill Krippaehne, in surgery, a remarkable teacher. He had the privilege of removing my gallbladder back before they had any of the little scopes that could go in through a single hole. I gave him some fits with my connective tissue scarring over the arteries. But at any rate, he was a pretty remarkable person in many ways, in addition to being an outstanding teacher.

He had a microscope on his desk in his office, and he didn't just leave everything to the pathologist. He looked at every tissue sample that the pathologist had, that was made from the specimens that he had provided the pathologist. He had a separate set made for himself by a technician, a lab tech, and they were piled on his desk, his slides and his microscope. He didn't leave it up to somebody else to make a decision about that, he shared that decision making with the pathologist and would argue with him about a diagnosis just based on his knowledge of the structure of the tissue and the pathology. A remarkable man.

And, of course, Clarence Hodges, in urology, was a very well known—I can't recall the name of the man he worked with in Chicago.

CONNELL: Huggins.

BACON: Huggins, yes. Wasn't he a Nobel Prize man?

CONNELL: He was a Nobel Laureate.

BACON: Hodges was right in there with him.

We have another—well, an outstanding man from our department, who was a Ph.D. in the department, Richard Anderson, Richard G. W. Anderson, who was chair of the neurosciences—it has a broader name than that—at Southwestern in Dallas and was the one who worked with Brown-Goldstein, as the chemists got the Nobel Prize. Dick is the one who showed them where the cholesterol and the lipids went in the cells that were involved in the structure of the artery—they were changed—and has done some—he's much in demand around the world, lecturing. As a matter of fact, he's coming up here, I think, in October for a lecture. He has extended our name, no question about it.

CONNELL: Well, Bob, I want to thank you for sharing with us your experiences here at the Oregon Health and Sciences University School of Medicine. The years that you have contributed and the impact that you've had on students has been tremendous. You were certainly my mentor going through my program and were central to my success in my career, as you have been in many students' careers, and I just want to thank you so very much for the contributions that you have made to the success of the school of medicine here in Oregon.

BACON: Well, I thank you. It's been a—I can't imagine having done anything else with my career. It's been just wonderful.

Well, this trip we're taking to Arizona and back—we're going down to see my wife's family in Arizona, a quick trip down. We'll be staying on that trip down with two former students at different towns on the way down, and then we're coming back in a very slow trip, two weeks on the road, visiting wineries and friends in Oregon and California; California mostly on this trip. We'll be, I think, a total, going and coming, we'll be en route twenty-one days, and of those twenty-one days we will spend four—I think four nights in motels. The rest of them are with students.

CONNELL: Well, you recently had a birthday, and I probably don't need to mention which birthday that was, but I attended that birthday party, and there were students from years and years back. Some of your students who were in the five-year program are, in fact—were so well trained and feel so good about the teaching experiences they've had that they are coming back and teaching in the basic science courses as retirees and volunteering within the...

BACON: I think one of those is Slade Wilson.

CONNELL: Slade Wilson is coming back. So your imprinting of the importance of education has been well spread.

BACON: Well, as I say, thank you, and it's been great, the whole career.

CONNELL: Well, I just want to also mention for the record, and I'd like to have you confirm this, that you are still teaching and still very much an educator in that you're participating in the Clatsop County Community College and you give a marine science slide show, is that correct?

BACON: Yes. There are several things I've done. For years I did an elder hostel program. Well, I retired twenty-three years ago, and I've been doing things down there ever since. It's getting a little difficult now, my vision problem, but I have taught courses down there regularly in intertidal zone ecology and the ecology of the Columbia River estuary and miscellaneous sorts of things, and a lot about whales.

I became—well, we did some work on whales up here, actually. When we found out that sperm whales can dive down a mile or so and stay down for an hour and the heart rate goes down to one beat per minute, how does the heart muscle survive at one beat per minute circulating blood? So we felt that we should—there was a whaling station down at Hammond—of course, there are no more of those—but down at Hammond, near Astoria, so we tried to get some heart muscle from the sperm whales down there. Unfortunately, it just didn't work out. The tissue—it was impossible to get it fresh enough to do any looking.

Dick Lyons was particularly interested in the possibility of the whale having some sort of way of going to an anaerobic glycolysis, or something in the cardiac muscle or some way of bypassing the—lowering the need for oxygen for the heart muscle. That sort of thing has been worked out now. It's a different process entirely, and we couldn't do it because we just couldn't get fresh enough muscle tissue to work with.

CONNELL: I remember getting a call...

BACON: But I got interested in whales because I had a remarkable experience myself down there with whales on a vacation time, camping on the coast. Four whales stayed with me for three days down there, four of the big gray whales, and I got to tell them apart. They came right up as close as you are to me when I stood on the edge of the rock down there. Anyway, that's another story totally, but it had a great impact, because that whale was thinking about me just as much as I was thinking about her. It was a big female gray whale. But there were some others there, and they all did the same thing after this big whale saw me and did this. It was a wonderful, incredible experience.

They've got a brain they don't need. I wish some neuroanatomists would get at that brain. The sperm whale has a twenty-pound brain, ours is three. They could get by on one the size of their fist. They don't need it to operate that body. Dinosaurs had tiny little brains, some of them the size of a walnut. The spinal cord took care of their postural mechanisms. The whale, with the number of muscle fibers that one nerve enervates in a whale, they could get by with a minute brain. And they've been around for forty million years, not a couple of million like we have. They've got a memory; they do a lot of amazing things. And they're so totally adapted.

And after that experience of that whale examining me carefully and looking at—well, it was just like looking into the eye of a pet. I wanted so badly to communicate with that creature, and I know it wanted to do that with me.

Anyway, so I've done a lot of whale stuff down there. I've done a training workshop for the volunteers that appear at all of the state parks and the points along the coast from Washington to California during the migration time, when the grays are going to Baja to have their babies and mate. As one of my attendees said—I said something about they go down there to the warmer waters to mate and have their babies, and she said, "Oh, I do that too" [laughs].

Anyway, there are times when you can guarantee to see whales down there, and so the state parks department has a program, and I do the training for some of them, for about a third of the volunteers who work on that. It's a lot of fun.

CONNELL: Well, we hope that you'll continue doing that for years to come.

[End of interview]