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David Brooks: All right. It is June 29, 2006, and I'm David Brooks, the interviewer for the University of Montana's Oral History Project. This afternoon I'm talking with Rustem Medora and I guess, Mr. Medora, what I'd like for you to start with is just some of your personal and educational background and your road or path to coming to the University of Montana and Missoula.

Rustem Medora: I was born and raised in India and I came for graduate work to the University of Rhode Island where I got my Ph.D. in 1966. I arrived in Rhode Island in 1961, so I've been in North America since then. Off and on, I would make trips abroad, but I did my bachelor's and master's at the University of Gujarat, which is on the western side of India, and after doing my master's, finishing my master's, I taught for a year or so and left for the University of Rhode Island, where a famous pharmacognosist used to be the professor and dean of the Department of Pharmacognosy. Pharmacognosy is nothing else but the study of drugs obtained from natural sources, which is my specialty.

After finishing my graduate work at Rhode Island, while I was still—while I had still not officially received the degree—I was hired by Idaho State University in 1965 to teach pharmacognosy there while a fellow by the name of Frank Cole was on sabbatical leave somewhere in Egypt. So, I taught pharmacognosy at Idaho State and because my tenure was only for one year, I started looking around and was accepted as a post-doctoral fellow at the University of Nebraska and McGill University in Canada, in Montreal.

The letter from Montreal arrived first and I accepted it and then in a couple of weeks, I received a letter from Nebraska asking me to work in Nebraska. I would've been just as happy to go to Nebraska, but I spent one and a half years doing post-doctoral work at McGill University in Montreal, where my first child, my son, was born. Then while we were at Idaho, prior to that, when we were at Idaho, we toured around the northwest a little bit by car and fell in love with Montana.

So, I wrote to the dean asking if there was a position available, when I was about to leave Idaho and the dean said that they were looking for a guy like me, but the money had not been approved yet. So, off I went to Montreal and then after, almost a year and a half, I get a letter from the dean at that time, Dean Robert Van Horn, who said, would you care to come for an interview to Missoula, Montana? So, I flew in from Montreal in 1966 for an interview in February, I believe, and was pleased with what I heard and, of course, I was already in love with the area. So, when I got back there was a telephone message waiting for me that the dean and the faculty had accepted me as a new faculty member to the University of Montana.

So without much ado, I accepted the position and was to arrive here in September of 1967 to start the fall semester, but being a foreigner at that time and still changing my status from a student to a working class individual, I had to get a visa to enter the U.S. and the visa process took forever. At which point, I started making inquiries and I was told in Montreal by the consulate that they had no papers for me that I had submitted in order to get a visa. They'd lost my papers somewhere in the shuffle.

So, I started all over again and by the time I reached here it was November 23, as a matter of fact, November 23, 1967, when I arrived through a snow storm and crossing Butte was hazardous at that, on that day. It was about a foot deep of snow and in those days the roads were not as good as they are now. So that was my first experience coming to Missoula. It also happened to be, I believe, Thanksgiving Day. So, that was my—

DB: And you were driving yourself?

RM: Sorry?

DB: You were driving?

RM: I was driving myself with a little baby and my wife. Yeah, baby. My son was four months old, or three months old. Yeah.

DB: That's quite a welcome.

RM: Yeah. That was quite a typical Montana welcome. Not that it fazed me any.

DB: So, coming from India and having been in the university system there and then coming to North America and seeing both Rhode Island, Idaho State, Montreal, University of Montana, tell me what it was like when you first came to the university compared to either other North American universities or the university system you were used to in India.

RM: Of course, the curriculum was quite different, but I was already introduced to the curriculum while I was in Rhode Island and then again I taught some in Idaho. So, I had a pretty good idea of the curriculum. The laboratory classes in India, like in Europe and England, are more intensive and they do a lot of laboratory work, even now, compared to what we do out here in the United States. And in those days, the laboratory exercises were important because we used to make our own drugs.

We used to dispense and compound our own medications, compared to the pills and injectables that you get from pharmaceutical companies these days. So, a hands-on approach was very important and I was a little surprised and shocked that the hands-on approach was minimal here. Here means in the U.S. and Montana as well. But, other than that the curriculum

as an undergraduate was very similar. The curriculum has gone through many changes and maybe I should talk about that just a minute.

In the 1900s, a pharmacist got a license to practice pharmacy after two years of internship under another pharmacist, provided he had taken certain science classes in high school. So, after two years you could get a license to practice pharmacy if you were going to a school of pharmacy and had worked under a proctor, so to say. Um, that gradually changed to three years after high school and not even a high school diploma. You had to take certain classes in high school and that was good enough to enter the pharmacy profession.

And that again, so from two years it became a three-year program and subsequently, they required that you must, or you had to have, a high school diploma before joining the pharmacy program and I believe in 1933 or 1934, it became a degree program. So, you got a bachelor's degree after 1934 to practice pharmacy and that went on for a while and in 1950, in the early 1950s, things changed and the pharmacy became, the pharmacy program for a bachelor's program, became a five-year program. And I must say the University of Montana was the fifth in the nation, fourth or fifth in the nation, to switch from a four-year to a five-year program, which was quite something in those days.

But the reason I went back in history is the pharmacy program in India was already a five-year program when I arrived here in Missoula in 1967. So, there was not much of a difference, but being a British Raj when I grew up in India, we were under the British system of education and the British system paid a little more heed to laboratory work. Paid a little more heed to drug manufacturing techniques, which are practiced in pharmaceutical companies. And though we had an inkling of that in the early pharmacy education in this country, that has completely been eliminated from the curriculum. So, they used to call it Industrial Pharmacy and Industrial Pharmacy doesn't exist in any school of pharmacy in the United States anymore. Though we still do have some of that in most of the European and the Asian schools.

So, that is how the curriculum was different, but as long as we are on the curriculum team, I might add that in 1995 we changed from the bachelor's degree, five-year bachelor's degree to the six-year Pharm D [doctor of pharmacy] program. And the first graduating class, Pharm D class, was 1998-99, which is a six-year program after high school, two years of which is pre-education, pre-pharmacy education, and four years of which is intensive pharmacy education. Classes start within the school.

For those guys and gals who had a bachelor's degree and wanted to switch to Pharm D, we had a program which was referred to as an External Pharm D degree. So say if you were a pharmacist practicing in Livingston, Montana, with a bachelor's degree and you wanted to get a Pharm D degree, you could do it, do that part by correspondence, part by coming to the campus. And so we had an External Pharm D program which started in 1995 also and the last of which—the last of the External Pharm D class was taken—started in 2003 and that'll come to an

end now. So, all the people who are in the pipeline of the External Pharm D, when they are done, the program is done and finished with.

The Pharm D program is such that where you actually come to the campus and work after high school toward a degree continues as a six-year program after high school. So, that gives you an idea of how the pharmacy curriculum has evolved.

DB: Talking about evolving, I want to go back because before we started recording here, you mentioned that the University of Montana's Pharmacy program is about to celebrate its 100th anniversary, but then you said that in recounting that it was not until 1934 that pharmacy became a degree program. So, what was here as a pharmacy program from 1907 on?

RM: Okay. Well, I would have to go back even a little further than that in 1905. In 1905, and I may be off by a year or so, the Board of Pharmacy in Montana, which is the licensing board housed in Helena at that time and I think it's still there, requested the Board of Education, which is, which was equivalent to the Board of Regents now—so the Board of Education was asked to bring about a pharmacy program in the University of, in the University system. So, they approached Missoula and they approached Bozeman to have the program. Missoula said we'd love it but we don't have space for you guys. Bozeman said we have space for you.

So, the program started in 1907 in Bozeman and between 1907 and 1913, much before my time, there was a swap. There was an engineering program here on campus, U of M campus, and an engineering program in Bozeman, and the regents, rather the Board of Education said this is duplication; we don't have the resources to spread all over the place. So, pharmacy was brought here and engineering was permanently moved to Bozeman.

So, in 1913, Dean [Charles] Mollett, the first, one of the first deans, loaded all his equipment in a railway cart with an assistant and moved to Missoula and they were given a little spot in the old science building which, I may be wrong, but which originally was where the Honors College is now. So, the original science building is where they were given two rooms. One room was for the dean and the other room was the laboratory, the classroom, the whole gamut, and so that's how the program moved to Missoula.

So, at that time, until 1935 or 1934, I believe, they gave two diplomas. One was, I believe called PhG, which is Pharmacy Graduate, which was given after two years of work and high school background and then they gave Pharmacy Chemists, Pharmaceutical Chemists which was PhC, which was a three-year program, which you got after some courses in high school. In the fall—in the mid to late '30s, then the degree program was introduced. So, does that kind of—

DB: Yes.

RM: Give you a little background.

DB: Yes.

RM: In this report, you may find that.

DB: Okay. You know, the other thing I wanted to ask you is that you mentioned that the major difference between Indian-European pharmacy schools and American ones when you came was this hands-on approach lab time. Why wasn't that going on here, do you suspect?

RM: I wouldn't say it wasn't going on.

DB: Why wasn't it as intense?

RM: It was not intense, or I would say, it was intense till the 1950s. After 1950s with the pharmaceutical companies developing at the rate at which they were like, just to name a few, like Parke-Davis, Eli Lilly, and some of the old, old pharmaceutical companies of the U.S. More and more of the medication was available in the form of tablets, capsules, suppositories, tinctures, what-have-you. Ready-made.

So, the pharmacists were to compound in the old days. [Later, they] just bought it and dispensed it to the clients rather than go through the trouble of making it. So, the laboratory technique of—plus analyzing what you have made became less and less important because it was already done for you by the companies and so gradually that diminished.

But things have changed again just to fill in on—fill you in on it—there's a tremendous surge in herbal products all over the world, but now even in the United States, finally. And not all herbal products are manufactured by the big names, the big companies. So, a client goes to a pharmacist and says, I need a tincture of Echinacea, and if he doesn't have it on his shelf, he will either make it or send the client to some other pharmacist who may have it or will make it for him.

So, there is a rejuvenation, so to say, of the techniques of percolating and making tinctures and so on, which had almost died down to nothing until this rejuvenation occurred in the early '90, 1990s. And future pharmacists, if they cannot provide their clients with what they're looking for, will lose business, point one. Secondly, if they are not knowledgeable, it will reflect badly on them and if you talk to a pharmacist in any drug store or department store, he'll tell you—he and she will tell you—mostly she now. In the old days it was mostly men. Now there are more women than men pharmacists. They'll tell you that at least one third of the questions asked of pharmacists in a drug store these days has to do with herbal medication. And that is quite something.

So, if I'm a pharmacist in a drug store and somebody comes in and asks me about hoodia (?) and I say, "Gee, I don't know. I've never heard of that," it'll reflect on me as a pharmacist. So, the earlier these guys and gals get on the ball, the better off they will be.

DB: So, we've been talking about pharmacy and its larger picture in the United States or in India and how it was. Talk a little bit specifically about just your job when you first came here. What the department was like, what you were doing, your relationships with faculty, students, curriculum.

RM: Sure. A couple of things, again, I will have to look at history for this one. Dean Mollett moved from Bozeman to Montana, to Missoula, Montana. There were two faculty members in the pharmacy department. One was the dean himself, who was professor, dean, cook and bottle washer, and an assistant. That faculty number remained more or less the same through World War I and then during World War II or just there about, the number increased to three and perhaps four. When I arrived on this campus in 1967, we had six faculty. I was the seventh and the dean was the eighth. So, there were only seven or eight faculty. Also, I was the first Asian immigrant hired by the University of Montana.

There were foundations where America—Asian Americans—had worked here, but no Asian immigrants were being hired before I arrived. So, I was looked at with a little bit of curiosity and a little bit of doubt whether this guy was going to make it or is he here just because there was a vacancy? So, I was watched very carefully, not only by my colleagues on campus, but also my own department, my own school where I had to perform a little more than my buddies in order to prove that I could do it, which you often hear from women these days when they say if we want to compete with the men, we have to do a little more than the men are doing to show that we are capable of doing it. See, I was in that sort of a situation.

DB: You know I've heard a lot from people who were hired at that time reminisce about how congenial faculty was and that still it was a small enough school that you knew most of the people on campus. Faculty had get-togethers, very social. Were you part of that?

RM: Oh, yes.

DB: Were you accepted into that?

RM: Yes, yes. The faculty were congenial. We knew everybody on campus by their first name. We used to meet socially more often. We used to have a square dance group, the faculty square dance group that used to meet once a week, once every other week. I forget. There used to be a bridge club. People used to play bridge and I did go and play bridge a couple of times, but I'm not much of a card player so I gave that up. I was more interested in the outdoors, hiking and that sort of thing.

So, yes, you are right. The faculty was a little more social. People, although in different disciplines, respected each other. There was not too much fighting between departments. Off and on, of course, there was, but not as much as is going on now. And, uh, the more shocking part is that a lot of intra-departmental fighting going on in many departments. Thank God it's

not in pharmacy. That, I don't believe, existed. I may be wrong, but I don't think it existed at least not on the scale it is now.

And of course the most congenial person was President Bob Pantzer, who was a real great guy to work with and I don't know how, but he remembered our names and George Dennison does too. I'm not saying George doesn't, but even after he [Pantzer] retired, if I ran into him on the streets of the—he would know me by my first name. I doubt if all the deans and department chairs can do that now. Partly because the faculty has increased in number and partly because that rapport is gone. That rapport we used to have is diminished.

DB: Did it diminish simply because of the size of the school?

RM: Mostly because of the size of the school and each person, each dean and chair is looking out for himself, I guess more so than they did in the past. And I'm not trying to pinpoint any particular dean, including my own dean or chair. I'm not trying to imply that, but yeah, I think so. Generally speaking.

DB: Now you said that obviously the School of Pharmacy went from a faculty of two, including the dean, to seven or eight when you started. It's continued to grow throughout the years. You know, it's a fairly large prominent school. Why has it grown? How has it grown? Who has been behind that growth?

RM: Those are very good questions. Again, without naming names, I would say the previous administrations of pharmacy were satisfied with status quo. After Dean Van Horn retired, the dean who hired, the dean who hired me, Dean [Philip] Catalfomo came on board. He made minor changes when he arrived. For example, he introduced clinical pharmacy, a new program in the school, and things then again became stagnant and that stagnancy continued to a point where we were put on probation and in 19—in the mid-1980s, the Pharmacy College Review Board put us on probation. We were not accredited. We were put on probation with warning that we would not be accredited if certain changes were not made. In other words, we were on the chopping block and some of us were looking for jobs elsewhere.

So, Dean Catalfomo left for Wyoming. By that time, George Dennison had arrived and George Dennison, who had left the campus in 1966 after finishing his school here, truly believed in the school. Not only the University of Montana, but also the School of Pharmacy and with support from the Pharmacy Association, the pharmacists in the state, and I would say, a lot of guts, he went to the Board of Regents and the legislature and I believe got an allocation of \$400,000 to hire new faculty and bring about a metamorphosis in the school.

Plus, soon after he arrived he hired Dean Forbes, David Forbes, and both of these two guys got together and got the wheels turning to a point where things started to happen. As a matter of fact, I don't mind going on record for saying that when Dave Forbes accepted the job, I told him that you are very brave to take this on or you're mad to take this job, because, I mean, if the

school was without—I mean, if the school closed down, he was without a job too. Not only us faculty, but the new dean.

So, he laughed, of course, and we have talked about it often after that, but nonetheless, what I'm trying to say is Forbes came on board and he is a very hard working individual with a lot of foresight. He hired a new chair for the Pharmaceutical Sciences Department named Vernon Grund. So Vernon Grund and Forbes then took it upon themselves to make improvements and the ball started rolling. They hired good new faculty with research experience; faculty who had grants, faculty who were able to generate funds and that, uh, has brought about changes that you keep hearing about in the media.

For example, right now, we are the—out of 95, almost 95 schools of pharmacy in the country, we are fifth in the nation in obtaining extramural funding from the National Institute of Health, which is no small thing, but because we are a small state, a small town, a small school and we are shoulder-to-shoulder with all the big guys. So, as a matter of fact, they—some of them envy us. The large schools will envy us for having the resources we do have at this point in time.

DB: And how big is your specialty pharmacognosy in the school? And in the world of pharmacy in general, and the reason I ask that is because I grew up in Indianapolis, home of Eli Lilly. I've toured the facility. It's very—well, it's a sprawling underground facility. Laboratories that seem to me very industrial, synthetic. It's almost surprising to know how much of our modern pharmaceuticals still depend on natural plants.

RM: Yeah. That again—I would have to go back in history to bring you up to speed on it. The pharmacognosy as a discipline played an extremely large role in India, where I grew up; played an extremely large role in Europe where some of our, some of my professors were educated in India. That is [where] professors in India were educated. And so I came with a solid background in pharmacognosy when I arrived in Rhode Island to work under Dean Heber W. Youngken, who was—who not only himself, but his father as well, were well-known in the field and I think we did well.

Then pharmacognosy went through some changes. From the crude drug material, we started making extracts and extractives were sold. Some of these extractives were worked on to isolate the active principles and the active principles are sold in the form of tablets and ingestibles and because we are to isolate these active compounds and study the chemistry, phytochemistry, chemistry of plants, became a very important part of the pharmacognosy curriculum.

And during my tenure at the University of Montana, we evolved in that direction where in the old days we used to look at crude material and gradually do that from that to the extractives, from the extractives to the naturally found compounds in plants, and we evolved and evolved fairly well. What was happening at the same time and I would say between 1960 and 19—mid-1970s, the pharmaceutical industry was going through changes where the synthetic compounds

were being synthesized at a very rapid rate and some of the synthetics, particularly some of the synthetics that have been derived from natural substances, were getting into prominence.

So what I'm getting at is, organic, synthetic chemistry just took off like wildfire. And when that took off like wildfire, less and less attention was given to pharmacognosy to a point where it was also getting less attention in the curriculum. At the same time, pharmacy as a profession was evolving. From the derogatory term we hear that pharmacists are pill-pushers, the pharmacists were becoming more consultants to their clients rather than pill-pushers and because they were becoming consultants, a new discipline now referred to as clinical pharmacy evolved.

So, on the one hand, synthetic organic chemistry came up like a bomb. Clinical pharmacy evolved as a new discipline and so the older disciplines like analytical chemistry were thrown out of the curriculum altogether because we didn't analyze anything anymore as pharmacists. And [regarding] pharmacognosy, they said, gee, it's what the Greeks and the Romans used to use. We really don't need herbs and potions and so on.

So, eventually in 1979 or '80, they threw it out of the curriculum and at that point, I had two choices: to teach pharmacognosy as an elective or go and find a job elsewhere where they would accept me as a pharmacognocist. So, I would say literally between the late 1970s and the early 1990s, you can say pharmacognosy died and then in 1994, President Clinton signed an act known as the Dietary Supplement Health and Education Act of 1994, which was thrust upon him by nature lovers who were getting more and more interested in natural products. And when that particular act was passed, suddenly pharmacognosy became—came in the limelight all of a sudden and things have started to pick up again in my field.

The sad part is when I retired in 2002, though I do teach, I still teach, I was not replaced. So, if I dropped dead today, which is always possible after 70, there is nobody to replace me and some of my colleagues are knowledgeable, no doubt, in herbal products, but they don't have training in it. And they can read all sorts of books and documents and teach a class, but their hands are not dirty with crude plant material.

So, I don't believe they have the same enthusiasm, same gusto to teach it as I am, if I can blow my own trumpet.

DB: Well, speaking of blowing your own trumpet and getting your hands dirty with plants, what—you know, you mentioned one of the big revivals of the pharmacy department here, or the turnarounds was research faculty and grants. Talk a little bit about your own research and your time here or, and other significant research that's come out of this pharmacy department, but particularly your own.

RM: Okay. If you talk about my own, again, I would have to go back in history where when I arrived we used to teach many classes and research didn't play an important part. Dean Van

Horn said if you want to advance from an assistant professor to become a professor, you will have to do teaching, provide service to the community, and do research and we want you to be involved in research. So, naturally I said find me a laboratory where I can do research. Provide me with wherewithal to do research and I'll go to town. The answer was, we have no space for research. We have no money to support you, your research, and what you do will be on your own time. And in those days we had nine-month contracts and what he said was, you have the whole summer to do research and you can use the undergraduate labs to do your research in. What about the money? [He answered:] We have no money. Go and find your own.

So, naturally, with no mentor and no funding, it was very difficult to start a new research project and I struggled. I struggled for a long time. I continued to do research, but struggled and finally got some money from the Montana Heart Association. Got some money from a couple of pharmaceutical companies and did some research, enough research to publish a paper or so a year so that I would meet the requirements for which I was hired, but my teaching duties didn't diminish any and the space problem remained. Until finally I got to a stage where I said, you know, if I have no space and you expect me to just do research in summer, I might as well not do any. And at that point they asked me to empty out an old room where old equipment was stored and it is still there in the pharmacy/chemistry building, the basement.

I had to with my own hands, because I had no assistants, tidy up an old stock room full of old equipment, old papers, documents, you name it. I mean, it was filthy as hell, and it took me two years just to empty that room because you can't sell equipment that is obsolete in Montana. You have to store it somewhere. So you couldn't throw anything away. Anyway, to make the long story short, I finally got a lab of my own, which developed through the years, but one major holdup was, I had nobody in the School of Pharmacy interested in working with me on my research projects because they had their own battles to fight and their own research to accomplish.

So, I had to go outside the department and my specialty was studying medicinal plants through tissue culture means where you isolate plant cells and grow them in culture, in little Petri dishes and flasks, and I had nobody to do this work with. So, at that time, Dean [Richard] Solberg, who was the dean, at one time the dean of the College of Arts and Science and who was a botanist, and I discussed some projects, but then he was a botanist. As soon as he became a dean, a year after I started working with him, that stopped and so I had to look for other people to work with. Dr. Meyer Chessin, who is still around, agreed to work with me on some projects, sent me some graduate students who helped, who helped him with his projects, but we started to collaborate and then finally a breakthrough came where a fellow by the name of David Bilderback, a plant physiologist, decided to work with me, and a biochemist by the name of Galen Mills decided to work with me and so we had some small, by today's standards, piddly grants, which kept the research endeavor going.

But going to your earlier question, what was the highlight of your research, my research? And I would say the highlight was that for the first time in history, I was able to demonstrate through

my research that enzymes produced in the papaya plant can also reproduce, the same types of enzymes can be produced in tissue culture—in cultures made from papaya plants in the laboratory. Which by all standards was, was quite an achievement, but no takers. In other words, nobody who would support that sort of research.

So, the shortage of money continued and I had to scurry around asking people and begging people for equipment, supplies, what-have-you, but even today, I have small research projects going with other faculty who have some minimal interest in plants. But funding plant research, particularly medicinal plant research, is very, very meager on the national level. You have billions of dollars that go into NIH and I believe out of the billions, I think, I forget what the NIH budget is, but it's in billions. Out of that, about 90 million dollars go into natural product research. When we say natural product research, it also includes antibiotics that are made by growing molds and bacteria. So, it's a fraction of the NIH budget that goes into natural products.

So, that has always been the shortcoming in projects that I've been involved in. Now the tremendous advances that have been made in pharmacy right now, in the School of Pharmacy, have been in the area of pharmacology, and pharmacology, which also is a discipline taught in medical schools, has the upper hand in research projects. So, any research projects in pharmacology, especially pharmacology of drugs that affect Americans, such as [in treating] cardiovascular disease, diabetes, stroke, and now, of course, AIDS, that's where the money goes. Very little trickles into the natural products area, but I'm happy for the guys who have the money. I'm happy because that's what's brought about progress in the School of Pharmacy and it'll continue, but sooner or later I'm sure we're going to wake up at a time when natural product research will surface to a point where it'll also, hopefully, generate as much, if not the same amount at least, a little more money than it is possible to get at this point in time.

DB: It seems surprising to hear that so little money is committed to it when earlier you said, that pharmacists, over-the-counter pharmacists, will claim that almost a third of their inquiries are for herbal products and natural products. It makes me think of, you mentioned earlier that—you used the term nature lover, sort of pressed this issue on President Clinton. I associate that with also a time where environmentalism in a lot of ways turned its attention toward saving the rainforests. That became a very big issue and one of the reasons that it's always been associated with that is all the plant varieties, species of variety there, and, of course, you can't just say we need to save variety. You have to say, well, it could be worth something to us and I wonder how, if at all, pharmacists, especially someone in your position with an interest in plants have had to of been involved or speak out in that issue.

RM: I'm glad you have that question for me. The rainforests are dying, no question about that. There's no question that medicinal plants, along with the other plants, are being eliminated from the face of the Earth even before they have been identified or studied and forests all across the world, including our own forests in the U.S. have been cut down for lumber, for ranching, or to grow crops to feed our expanding population, but the biggest loss, which

nobody pays much attention to, is the intellectual property of the people from whom we learn about medicinal plants used by our ancestors. So, a very famous ethnobotanist at Harvard, who died recently, Dr. Richard Schultes. Schultes said—

DB: How do you, how you spell his—

RM: S-c-h-u-l-t-e-s. Richard Schultes said that—and he wrote a very nice article on burning of the Amazon [rainforest]. In it he says, “No doubt we are losing forests. No doubt we are losing plants. No doubt we are hurting nature, but what is disappearing faster than all of this are the shamans who have the knowledge, and the shamans are being driven away from their own environment. The shamans are being pushed into urban areas because they have nothing to live on, being pushed out of their own territory.” So, he says, the greatest loss is the loss of the shamans. Just like we lost the shamans or the priests or the—what I would call healers—natural healers in Europe, in Asia, and now in South America the shamans are dying and disappearing at a faster rate than the plants themselves, and with it the knowledge they’ve derived over a millennia is disappearing. Something that we’ll never be able to recover again.

So, you’re right in saying that yes, we are concerned about it, but the pharmaceutical companies should be concerned about it too. There is a slight catch there. The pharmaceutical companies are looking for money. If something brings money, they go for it. Otherwise, the shareholders would get a hold of them and the company would go broke. There are two things: one is something that Mother Nature produces cannot be patented. If you cannot patent a plant or a plant derivative from South America, then there is no money. So, the company, they’re not interested. That’s one thing. The other thing, of course, is that because there is more money, they’re not interested, but their money is where diseases that affect the rich is concentrated.

So, if there was a disease and one good example is malaria. Malaria kills approximately one to two million people a year abroad. Not in America. So, why should the American pharmaceutical companies invest money in finding a cure for malaria when Americans who can pay for their drugs, who can give them their revenue, are dying of heart disease and diabetes? So, selfishly, in a way selfishly, the companies are putting money where they can earn large sums of money such that they can tell their shareowners, look, we’ve made so much money. They don’t care a damn if 10 million Africans or Asians die of malaria and even if they did find a cure for malaria, they [Africans and Asians] can’t afford to pay the modern prices that American drugs demand, American pharmaceutical company drugs can demand.

Who can pay \$50 for one pill? There are some drugs on the market which are—cost \$50 a pill or \$50 per injection. When, in most of the Third World countries, the poorer ones, the annual income is about \$300 a year for a whole family. How can they afford one pill which is worth \$50 when they may have to take a hundred of those? So, for all those reasons, selfish and otherwise, in my opinion, we are not going in the right direction.

But that's the way it is and we are to learn to live with it or find a way out of it.

DB: So, I guess the end I would—I mean, we could certainly talk about the pharmaceutical industry for a long time, but how I'd like to end is just you—some assessment or memory or recap or things that we've left out that you find significant about your time here at the university.

RM: Well, again we would have to look at history for it. The school has come a long ways. We moved from Bozeman to Missoula. We had two faculty, one faculty and an assistant. From that, we have grown to approximately 50-plus faculty and about a 150 employees in the school, in a span of a hundred years. Unlike any other school in the University of Montana system, you can look at any college in any of the campuses, none of them have grown this size in this short of time. Especially after the 1990s when we were on the chopping block and Dave Forbes arrived and made those changes. So, that's very significant.

Equally significant is the fact that though we were stuck in an attic in the old science building with two rooms, one for the dean and one for the laboratory and the classroom. We finally moved in 1938 into the Pharmacy School—the Chemistry/Pharmacy Building, which was built in 1938. We shared that with chemistry for all these years, but the bulk of the building was occupied by chemistry.

In the last few years of Dean Van Horn's tenure, he kept requesting building funds which finally arrived, but with a catch. The catch was we don't have enough money for a pharmacy. We don't have enough money for botany. We don't have money—enough money for psychology. You will have to have a building which houses all three. Well, in the meantime, botany got shoveled into—with zoology—into biological sciences. So, botany was eliminated. Zoology was eliminated, and it all became the Department of Biological Sciences.

So, psychology and pharmacy were left. An odd pair, one has to do with mental health, the other with physical health, but we were sharing the same building and so we moved from the Pharmacy/Chemistry Building to the Pharmacy/Psychology Building in 1981. Then, after Forbes arrived and he realized that both psychology and pharmacy were full to the brim and space was required, he went out and found money to build addition to the Pharmacy/Psychology where you'll see a new part sticking out on the north side, which is one of the Skaggs entrances to the building. And the south side, which is the research wing of the pharmacy school—and that happened in 2000, the year 2000—and when he started hiring all these new people we talked about, space was gone again very quickly and now we're moving to the new addition for the Skaggs building in 2007, another jump of 50,000 square feet of laboratory space.

So, that's also quite an achievement. So, that's one thing we didn't cover and to—I must compliment both Dean Forbes and Dennison. Without these two it couldn't have happened and as I told you in 19—in the mid 1950s, we were on the chopping block. [It was the mid- '90s] We were gone. I mean it was taken for granted that we were in the last year or two of the school

because we were on probation and, I might add, the presidents in those days, Jim Koch and [Neil] Bucklew, who were in between and [Richard] Bowers—Bowers did try a little—but between Pantzer and Dennison, we had Bowers, Bucklew, and Jim Koch. None of them, and I can say that very vehemently, none of them were interested in pharmacy. None of them were interested in pharmacy and [came close to agreeing to] eliminate it. You see? So, had it not been for Dennison arriving and had it not been for Dean Forbes arriving on campus, you wouldn't be talking to me today. It's as simple as that.

DB: But you're going to be here to celebrate the 100th anniversary.

RM: Well, I hope so.

DB: That's quite a turnaround.

RM: Yeah. Well, I'll be here for the 100th anniversary—

DB: Thank goodness for their short presidential tenures with those three.

RM: And sadly to say, sadly to say, all three of them used this campus as a stepping block to other better things. [Bowers was forced out by the Board of Regents.] That's the sad part because many, not only presidents, but deans and chairs, often come here to use this as a stepping stone to get to bigger things and once—they're only looking out for themselves. They don't care a damn about Montana or the people or the school. They're looking out for themselves. Once they get to that state, they're gone. And we're left with nothing, quite often.

DB: Just by the number of years they've stayed alone, Pantzer and Dennison seem to be interested solely in the University and the long-term health of it. It's not necessarily a stepping stone.

RM: Yeah, and there are lots of complaints about Dennison not doing this or not doing that and there are bound to be complaints when you try to do new things, there are bound to be complaints and I'm sure Dennison has done things that, according to many, were not appropriate things, but at least things were not stagnant. Things moved. Things happened both—both with Dean Forbes, it was the same thing. Many unhappy people with these guys, but they made things happened. There was progress made, which we cannot say for many others.

DB: Great. Well, Mr. Medora, thank you for your time.

RM: Yeah, thank you.

DB: ...and your input.

RM: Thank you for asking me.

DB: It's been enjoyable.

RM: Yeah.

[End of Interview]