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Armitage, M.D., James

University of Nebraska Medical Center

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Transcribed by: Benjamin Simon
Oral History: James Armitage

Robert Wigton: It's my pleasure today to interview James Armitage, a distinguished graduate in the class of '73 of the university, who went on to be a internationally famous expert in Oncology and a number of posts at the university. He did his training here, went on to Iowa where he started the bone marrow transplant program; and then came back to Nebraska and started the bone marrow transplant program here. He also later was Chairman of the Department of Medicine, and then Dean of the college. And after that, returned to, I believe, his first love of taking care of patients. Jim, welcome and we're really happy to have to giving us some oral history today. So, Jim maybe you could tell us something the—about your medical training and... and your years at University of Nebraska and so forth.

James Armitage: Well, I was at the university in Lincoln from '65, after I gradua—graduated from high school in Kearney [Nebraska], until I graduated there in '69. And then, here, from '69 to '73, in the medical school. And... medical school back then was different than yours would have been, in that some of the horror stories in Anatomy were less than they were when you were there. But still Anatomy dominated your first semester in medical school. And then, other basic sciences for the rest of the two years, with the more clinical topics like Microbiology and Pharmacology being in second year. Anatomy for us was still—I didn't—it was my least favorite thing I did in medical school. And, fortunately, the tests were sufficiently hard that everybody got about the same grade, which was good for me. And I founded the Navy [Unintelligible] Branch; and a couple of my classmates and I would often leave Anatomy lab part-way through, go over to the gym where the student hall was, play basketball, come back and be there at the

end of Anatomy class. One thing I knew for sure, I wasn't going to be a surgeon. The... the rest of—I liked the rest of medical school. If I'd have had to do another semester of Anatomy, I probably wouldn't be a physician. But I liked the other classes. I... I was a Chemistry major so I liked Biochemistry. I really liked Microbiology and Pathology and Pharmacology. During that same time, we lived not too far from the campus. And Nancy [Armitage] was nursing here at University Hospital. So, making the money that we lived on. But I also worked at night a County Hospital. On weekends, mostly. And County Hospital used to hire medical students to work there, because we were cheap. They could have less ASCP [American Society for Clinical Pathology] trained techs that were... that were—cost more money. And I really enjoyed that experience. That's where I learned to read blood smears. Because I do differentials. They tell you to do that. Do urines, draw blood... A lot of interesting things. But you also got to hang around the Emergency Room sometimes. And—that's where I learned to sew people up. On weekend nights, they were happy to have a medical student come over who was dumb enough to want to do that so the interns didn't have to. I also knew Blaine Roffman, who was the pathologist there then, who let me go to autopsies with him, which was really very educational. It's one thing to read about a disease in a textbook. It's another thing to actually see it. To see the pneumonia, or the coronary artery disease, or the cancer. I really very much enjoyed that. Anyway, then, of course, the next year was all our required services, as it pretty much still is. And—

Robert Wigton: Did... did you have some fa—favorite faculty during that time?

James Armitage: The... Absolutely. The—when I—well, the third year was just getting to know the clinical faculty. And my favorite service was surgery, actually. Ward Chambers were assigned to surgery on the Clarkson side with [Eugene] “Speedy” Zweiback, who has just come

back from Houston, where he trained with Michael DeBakey. And those two months were amazingly fun. He was a fun person to work with. And we were operating at night and doing all sorts of interesting things, taking care of exciting cases. If it wasn't for the fact that I knew I couldn't be a surgeon, as a friend of mine said—he wanted to be a surgeon, but he felt he had the manual dexterity of a seal, was his line. And I probably was close to that. But that was my favorite service. Medicine... I liked Intro to Medicine, but the service itself probably wasn't as much fun as some others. Pediatrics is probably the one that I have the most distinct memories of, other than some of the fun things we did on surgery, because of I took care of a... illegal immigrants' child, who was called Delfino Infante. So, I don't know if that was really his name or it was just "Delfino Child," but either way. He had acute leukemia. And, because I had decided I really liked Hematology when I was working in the lab at... at County, I thought it was really exciting to help—be able to help take care of this child. And I kind of adopted him as my patient. And I really—it was, it was very—I learned a lot of watching these things happen. But once I wanted to start an IV on Delfino. And he spoke Spanish and I didn't, which made things a little bit more difficult. And I got him there and I got my IV in. It was back with the inter catheter—you put the plastic thing—the needle—the plastic was over the needle, you put it in, pull out the needle, and then hook it up. And I taped the IV up to the pole right next to me. And so, I got it in and I turned to pull that out. And Delfino, who thought that this wasn't that much fun, went for the door. And so, I dove to try to save my IV and the needle slipped out and went through my finger. And so, all I could think of was: he, at that moment, had a hundred thousand circulating leukemia cells. So, I had just injected untold millions of leukemia cells into my finger. This was before HLA [Human leukocyte antigen] was discovered. So, you wouldn't even

have had a reason to know that those poor leukemia cells stood no chance against my t-cells. But that's not what I should have worried about. What I should have been worrying about was the hepatitis B virus that he had. And so, I... I spent a lot of time going to the library and trying to learn about transferring leukemia with blood transfusions, which there actually were experiments on prisoners back then that were in the literature. But it was a silly idea. But I was worried about it. I was on Neurology ninety days later when I suddenly became so tired I couldn't do anything. And nauseated. And at night I wasn't feeling well. I was trying to feel—I could feel my spleen. And I—then Nancy said that I was jaundiced. And so, since I worked in the lab, I went over to the lab and did tests on myself. And I did have a high bilirubin—not very high. Like a four. So, she had pretty good eyes for icterus. But my SGOT was zero, which I thought made no sense. Which, of course, it didn't. And I went and asked Blaine Roffman, the pathologist, about it. And he said, “You're so stupid. You didn't dilute it.” And my SGOT was really about, oh, a hundred times normal. It was very very very high. And then, there was this new test that had just been discovered called the Australia Antigen Test that we sent the stuff for. And I was positive for the Australia Antigen, which is—was the original way to identify what we now know to be hepatitis B virus. So, I went to see Dr. Paustian, who was the person to see back then. And he said, “Oh, this is really serious. You've got to go to the hospital.” And I said, “Well, I really don't want to go to the hospital. Because I've been on medicine already and I know that you do liver biopsies on everybody with serum hepatitis,” back then, “and I don't want a liver biopsy.” And he said, “Well, we'll discuss that when you're in the hospital.” And I said that, “I might be sick and you'll be able to force me to do something I don't want to. I'm not going to go.” And he said, “If you don't go to the hospital, you're going to die.” And I said, “We'll see.” And went home. My

wife wasn't entirely pleased. Figures, she's a nurse. And, boy, I got sick. I got—I—if there was ever a "first you're afraid you're going to die, then you're afraid you're not," it was that disease. And... Couldn't eat for a long time. I became *glowing* orange. I have no idea how high my bilirubin got. But I don't know I've ever seen anybody more teric. Because I was dehydrated, because I couldn't keep anything in my mouth. I could have vomited every five minutes for the week—for about a week, period. Except, I quickly figured out that, unlike other times I was nauseated, vomiting didn't make you feel any better. It just was horrid. Anyway...

Robert Wigton: My wife in... in surgery, about the same time as you got...

James Armitage: Same thing.

Robert Wigton: ... hepatitis B, and she didn't want anything to do with the hospital. She wanted out every morning. [Laughter] So...

James Armitage: Well, I stayed away. I didn't get my—I avoided my liver biopsy. And I didn't die. So... But it was an interesting experience. I learned a very important thing afterwards. I had decided—I found two faculty, that you asked about, that were very important to me, when I knew I was interested in Hematology. One was Perry Rigby, who helped me present the first paper I ever presented and write the first paper I ever got to write. I had another one with Blaine Roffman and I had another one with Peyton Pratt, who was the very first hematologist in Nebraska—and very important to me. And it was Peyton who—I was doing laboratory tests on myself, because I could, because worked in a lab. And found out I had a low immunoglobulin level. And... and would periodically would have a high bilirubin. But I'd [unintelligible] for that. I didn't know that then. But the low immunoglobulin level made me worried I had some dread thing. And that's when Peyton Pratt told me some of the better advice somebody's ever given

me. He said, “Quit doing laboratory tests.” [Laughter] Was a test—advice I’ve tried to take since then. But, at any rate... Those two people really helped me get increasingly interested in Hematology.

Robert Wigton: We have a picture of you and Perry Rigby on a double-headed microscope.

James Armitage: That was probably during—around the time we got the paper and the—I got to present a paper at the Central Society in Chicago, back then. Which was—I was scared to death—but an interesting experience and a good thing to have done. And Nancy and I went together to it, and then Perry took us to the Playboy Club. I remember that. Which Nancy didn’t like as much as I did. But at any rate. Anyway, in the senior year I—a Senior medical student’s a pretty good job, as long as your wife’s nursing so you don’t starve. But—did a lot of—fun. I had courses I liked. It was an interesting year. And... didn’t change my mind about what I wanted to do. We looked around places to go for internship. And, for a variety of practical reasons, decided this was the right place. I, for a while, didn’t know if I wanted to be an internist or a pathologist. Because both you could do Hematology, but decided I liked patients. And did a medicine residency here. And... the—which is a big shock to go from a senior medical student to an intern. I didn’t like the fact that all of the sudden I was the one that couldn’t go home. But it was—I liked being a resident the second year better than the first year, when I was a supervisor. We had—during medical school, there was a job that used to exist over at Lutheran Hospital. I don’t know if you did it or not. But they would take five people out of each class. And so, there were five juniors, five seniors. And you covered Lutheran at night and on weekends. They hired you—they paid us seventeen dollars and fifty cents for being there from six pm to seven am the next morning. And they paid us thirty-two dollars and fifty cents to be there twenty four hours on

the weekend. And I—it was a job people really wanted. So, it was an exciting thing to have a chance to do. But—taught me a lot about American medicine that I didn't know. I always thought that that hospital should have had a sign over the door that said, "Abandon all hope ye who enter here." I—really some horrible things. I was once called to see a patient in the middle of the night. It was a young woman who had been admitted to the hospital the day before. She'd been there about twenty four hours. She was arrested. I bothered to learn how to do CPR, so I could try to help her. But she was dead. And I went to look at her chart and there was really nothing on the chart. There were no notes on the chart. There was only the obligatory admitting laboratory data that said that she had a glucose of... I forget—five hundred... ketonuria—ketonemia. Potassium of seven. And her only therapy had been IV of D5 half normal, one bottle every eight hours as long as she was there. So, untreated diabetic ketoacidosis. Medicine's different now than it used to be. Stuff like, I hope, wouldn't be able to happen today. Although, I'd have to guess you'd have to go look at all the hospitals to find out. The... Anyway. So, the residency was fun. I decided I wanted to be a hematologist—knew I wanted to be a hematologist. Looked around for fellowships and looked at several. And almost went to Wash U [Washington University] and didn't. Ended up going to the University of Iowa. And I'm happy I did go. I liked the people. It was a wonderful experience. I got to write a bunch of papers. You—back then, residents and then fellows had more responsibility than they sometimes do now, which I liked. The... the papers—I learned a very interesting thing about that. And that is that I had an idea for a thing we could go look up, review the data, and write a paper about it. And some of the faculty who I liked a lot—Pat Burns was particularly helpful to me—But I'd go show up to some faculty and they'd say, "Aw, that wouldn't really be interested—that way—it isn't worth your

time.” And about the third time, I said, “Well, I really want to do this.” And so I went and got the charts out of the medical records and collected the data and taught myself how to do life tables and log-ranks, since I could do—I had to do my own statistics. And wrote a paper. And when the paper was then submitted, accepted, and published, the same faculty thought it was their idea—actually was a really good idea. That was a good lesson to learn, actually. If you think something’s a good idea, maybe you should just try. When I went off for training—residency and then fellowship—Clarkson was run—the CEO was a guy named Jim Kennedy. And he was a good guy. Just a nice person. And he would identify medical students he thought he might want to have come back and practice there and pay us—I think it was five hundred dollars a month. But it seemed like an awful lot of money to us at that time, for Nancy and me. And so he paid me the whole time. Well, I got to the end of my fellowship and I really thought I liked the idea of academic medicine. But, in the end, thought I wouldn’t be an honorable person if I didn’t try coming back and practicing based out of Clarkson. And came back and joined Peyton Pratt, but a year or two before he had hired another guy named John Feagler. So—and Peyton really had backed out of it. So, John and I were really in practice together. And I didn’t like practice. Maybe there are circumstances under which I would have thought it would be more fun. But I didn’t enjoy it very much. And Nancy thought I didn’t enjoy it very much. I did it for two years. It was a good thing to have done, because we got out of debt. And... So, that was a good thing. And I had really learned a lot. I’d sometimes tell people that was my fellowship in the economics of American medicine. But at some point I got a call from the Chief of Hema, my boss where I was a fellow at Iowa, who said they thought I should consider coming back and join the faculty, because they needed a bone marrow transplant program and I could start it. Now that made little

sense, if you think about it. I'd been in private practice for a year and a half. And I'd never seen a bone marrow transplant, much less done one. Now, partly it wasn't as dumb as it might sound because there weren't very many people who could do them. There were only a few places in America they were done in the mid '70s. But the problem was—the reason I got that job offer, I learned eventually, was the University of Iowa was called by the governor about a Vietnamese immigrant who needed a bone marrow transplant. Had aplastic anemia. Child. And there were—the governor was very attached to this, because he had been a big champion of taking Vietnamese after the Vietnam War—all our allies that we kind of left hanging there. And a lot of them came to Iowa. Well, he was very disappointed when he called the largest teaching in the United States—the University of Iowa and Clinics was at that time. Fancy place—did all this neat stuff. And it really is an impressive place... To be old that they didn't do bone marrow transplants. And the governor allowed us how they were going to start. He might be embarrassed this time, but never again. And so, Hema[tology] didn't want to do it. And they had a division of Immunology that did want to do it. But Hema didn't want Immunology doing it, because it was Hematology. And so, I think I ended up—because I knew the bo—head of both, and they liked me okay—so, I was acceptable to both. And the Immunology guy thought maybe I couldn't do it, but at least they had a chance. And the Hema people I think thought I couldn't do it, but at least that'd make the governor happy. And when I got there, I found out it was one of those jobs that you'd get—once a—once a lifetime you walk into, where every—this is one of the fanciest hospitals in America then. There was nothing that wasn't available to you. I could go and talk to all the people who were doing it and make a plan about how to do it. Every resource was available to—to me. You'd had to had—be braindead not to be able to start a bone marrow

transplant program there. But nobody thought you could. So, when you did it, they thought it was a big deal. Even though maybe it wasn't quite as big a deal as they thought. Either way, it was an adventure. And Lyn Klassen, who's here in our faculty now, and I worked together to do this. And we decided that we were going to—we didn't know how to do this. I mean, we just got around and talked to people and collected their stuff. And so, we had observed it, but we hadn't really been responsible. And we thought maybe we shouldn't have house officers doing it when we really don't know the nuances of it. So, for a year, we were it. And we did it every other month. So, on January—sorry, on the first day of January, you came on. And on the—at eight o'clock on the first day of February, the other person came up. So, it was big. And for the rest of that time, you were it. There was no other physician. And I guess we learned a lot of the problems the residents of Iowa had during that time period. But it's a way to learn, except tiring. Bone marrow transplants back then were a pretty bleak business. And we—but we did it. And we survived it. And learned how to do it. These were all allogeneic transplants back then. I had—obviously, having to do something like that, you end up all sorts of stories about things. And when you—when you're doing that nobody knew had to do—it wasn't just that we were stupid, it was a new a field. And there were problems that no one knew the solution to. And so, I can remember more than one time, at three in the morning, sitting over there in the nurse's lounge of our unit, looking out, wondering what I'm going to do for this person next door, who I thought was dying. I didn't know what to do. Thinking, "I'm not smart enough to do this. If I was a good person I'd quit." I—it's—it could be a pretty tough business sometimes. Makes me more empathetic to surgeons. I'll tell you that. Feeling responsible for somebody and not knowing quite what to do about it. But lots of adventures came out of that, including my only time I've

ever been referred a patient by helium balloon. We did a transplant on a little girl from Sioux City. She was about the age of our oldest daughter. And so, we often—in fact, all our life—Nancy and I have become friends with patients and... People from far away, we'll go out to eat with, or have them to our house, or whatever. And so, we helped—this little girl would come play with Amy [Coughs] while she was in the process of having the transplant, which worked for her. It was fine. The—her classmates went to the... the football field in Sioux City—high school football field with all these helium balloons, to which they'd attached a note saying—I forget. I'm sorry, I don't remember the girl's first name. But—Sarah was in the hospital having a bone marrow transplant in Iowa City. It would be—it would be nice if you'd send her a note or call her. And then release them. Hundreds of them. And they went all over Northern United States, and then Northern Europe. And so, she had cards and calls from all over. But one of them landed in the back yard of a family in Michigan, who called her parents and said, "We're so happy for you that you're daughter has this chance to get well. Our son has acute leukemia and he does—can't have a bone marrow transplant. And he's gonna die." And the people from Iowa told the people from Michigan, "Well, he doesn't have to die. Just send him to Iowa City." So, the next day I got this telephone call from this pediatric oncologist in Michigan saying, "I just had this really weird call from my patient." And I said, "Well, you know, we're doing—because our research project that we tried to do was one of the first to start doing unrelated transplants." We did nine of the first ten unrelated transplants, actually, which were a bleak business back then. Let me tell you. But I said, "Well, we—" I told the doctor, "You send me the stuff and I'll look at it. Type the information and see if we could possibly find a donor." And I got the stuff in the mail and looked at it and said, "Here's the HLA typing and brother doesn't match." Flip the page

over and said, “Oh, we made a mistake. His brother does match.”

Robert Wigton: That’s very...

James Armitage: They made a mistake in the typing. His brother *was* an HLA match. [Coughs] So, I called the pediatric oncologist back, who then wanted that child in Iowa City or farther away from Michigan if he could have found it. Because that’s... well, that really wasn’t very good. But... So, I showed—kid showed up and he looked like a refugee from Dachau. [Clears throat] He had a... a disease I’d never seen before or since. Maybe you have. Well, your wife would have. Malignant external otitis, where a [Unintelligible] infection eats a hole down through your external ear canal and drains out your neck. Not very attractive. And the kid looked like—he just... he just was wasted and dying. And I said to the family, “This is a really bad idea. He won’t survive a bone marrow transplant.” They should take him back to Michigan. They didn’t want to do that. They said, “For the first time we have hope. Come on, let’s do something.” So, I gave him a chemotherapy treatment, which made him worse if anything. And then said, “Let’s go back to Michigan.” They said, “Lookit. Just do the transplant. Maybe it won’t work, but this is his only hope he has.” So, I—all my life I’ve believed that if a patient and their family wants something and you’ve explained as best you can what you believe is right, and they don’t agree but what they’re asking you to do is neither immoral or illegal, then you’re obligated to either do it or refer to somebody else who would. And so, we did it. On day zero of the transplant—you know, that’s the day the cells go back in—he developed an acute abdomen. I had the surgeons come see him. And they laughed at me, basically. And said, “You want to stop right on this wasted little child with no cells of any kind in his blood, other than what you’ve transfused,” and left. And so, we give him antibiotics and he didn’t die, and he didn’t die, and he

didn't die; and his cells finally started back. And his abdomen got better. And then, he developed severe hypokalemia from a potassium wasting nephropathy that I assume I caused with the carbenicillin. And he'd—he... I really thought he was going to die from that. To keep his potassium at two, we were giving him 20 [Unintelligible] an hour, IV, in this little child. But eventually his kidneys healed and got well and he went home. I saw the card from his parents that... that fall then, saying, "We just had to share this with you. A day we never saw. Johnny started fourth grade." So, bone marrow transplants have stories like that. They have some that don't have such a happy ending too. But... Anyway, I did that for those three years. And I got put up for—well, two things happened. Mike Sorrell and twice—had asked me about coming back to Nebraska before. And then, Mike asked again in the same year that I got put up for early promotion. And the Chairman of Medicine, who's a, actually, a really good guy, but a very committed laboratory scientist, Frank Abboud, removed my name and put on a laboratory scientist for that one slot they promoted early. And I shouldn't have known it, but somebody in the promotion [Unintelligible] committee was mad about it and told me. And so, the combination of that plus Mike Sorrell being persistent, and recruiting Nancy really hard, ended up—we came back to Nebraska. And that was the most important thing in my career that ever happened. Mike was the most important person in my career, because he gave me opportunities that I probably didn't deserve or wouldn't have ever had otherwise. I came back as his vice-chairman, which gave me the authority to do what I wanted to do, which was start a lymphoma program, which I couldn't have ever done in Iowa. And Mike also told me I didn't ever have to do another bone marrow transplant. So, he's not always honest. But it became apparent quickly that we needed the bone marrow transplant program. It would help us. I could—by doing other transplants, I

could use it to advance the interests of the lymphoma program. And I spent the next few years convincing some people they didn't really want to treat lymphomas anymore, because I had to see them. And the doctors around Nebraska that—we could do this together and work together and I wouldn't steal their patients, but would share tissue from the patient and their data. And that way we could all study all the lymphomas in Nebraska. And we'd have standard therapies and standard evaluations. And gradually people figured out I wasn't trying to do something mean to them. And we built a really neat thing. The bone marrow transplants gave people a way to refer patients to us if they failed. And for the longest time, we had done more autologous bone marrow transplants for lymphoma than anywhere in the world. We're probably now around 2,500, but we were the first places to this as a major thing. Anywhere in the world. And the—that really helped. We collected all this tissue and—well-annotated tissue on patients that allowed us to be the source of the first gene profiling studies in cancer. The last National Cancer Advisory Board—I—the head of the NCI had this young guy who wanted to do gene profiling and knew what we had this resource and ended up getting us together. And that's where the tissue—most of the tissue came for the first gene profiling in lymphoma. We were—had opportunity to write lots of patient papers about lymphomas, and some of the contributions were important. We probably have four or five hundred papers that have come out of this effort. It's really been exciting. I got to do all sorts of things I thought I'd never get to do. I've cared for a king and a sister of a queen... And all sorts of famous people in different areas that I never would have thought I'd get to do. Got all sorts of attention I probably didn't deserve, but got because of this effort. So...

Robert Wigton: And you travelled a lot.

James Armitage: And travelled a lot. I've flown three and a half million miles on United Airlines. I was on the Board of the French National Cancer Institute. Did a lot of things with people in Europe and in Africa that were extremely rewarding and interesting. It's been an exciting time. It was the best thing, as I said—to come back here was the best thing in my career. And Mike Sorrell made it possible. So, I will always think the world of Mike Sorrell. And I got—I followed him as Chair of Medicine, which I liked, being Chair of Medicine. And I was Dean for a while, which I didn't like as much as I liked being Chair of medicine. And I've liked doing the other things I've done. And I've had all sorts of opportunities to do interesting stuff, as I said, in Europe and here and in... Spent a lot of time in the American Board of Internal Medicine. A lot of fun things. I've been blessed by the opportunities that have happened in my career.

Robert Wigton: Well, Jim, this has been an exciting career for you. And for us too, to watch you and get all these honors and... and the amount that you've done. And I want to thank you very much for being with us today. And letting us into your career and your life this way.

James Armitage: Thank you. It's nice to talk to you.

END OF INTERVIEW

Benjamin Simon 9/8/2017