INTERVIEWEE: Nancy Andrews
INTERVIEWER: Jessica Roseberry
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PLACE: Dr. Andrews's office, Davison Building

ANDREWS INTERVIEW NO. 1

JESSICA ROSEBERRY: This is Jessica Roseberry. I'm here with Dr. Nancy Andrews. She is vice chancellor for academic affairs and dean of the Duke School of Medicine. Today is November 30, 2010, and we're here in her office in the Davison Building. And I want to thank you so much for agreeing to be interviewed today, I appreciate it very much.

NANCY ANDREWS: My pleasure.

ROSEBERRY: I wanted to ask you first of all about your background as an MD-PhD from Harvard and MIT, and looking kind of at the dual degree and how that might help as a dean leading the basic sciences and the clinical sciences if that—if you think it plays a role in that.

ANDREWS: Well, it's interesting because I think nationally MD-PhDs at least having come through the formal training, the joint program as I did, haven't been around for all that long. The program started in the sixties, but really most places didn't start until the seventies or later. But I think a disproportionate number of deans around the country are MD-PhDs. I think it is an advantage to have had training in both science and medicine, not necessary for the job but certainly understanding how scientific research works at a fairly deep level and having had intense exposure to clinical medicine and subsequently clinical practice I think are real assets for this job.

ROSEBERRY: One of the buzzwords that I hear a lot when I interview people is *translational medicine*, and I wonder if you can talk a little bit about what's going on at Duke in that realm, what that looks like?

ANDREWS: Well, so translational medicine gets defined in a lot of different ways, and I think first just to start with what it is. I think translation in general, not restricted to medicine, is taking some knowledge and turning it into practice. And so translational medicine for us means first taking basic science discoveries, which may be really fundamental biology and not have obvious implications for medicine although sometimes they do, and moving those discoveries into a different context where they can be used to develop drugs or devices or diagnostic approaches for human patients. But then translation can also mean taking knowledge about clinical practice or efficacy of drugs and translating that again into broader use of an agent or application to another population, and so translation happens on many levels. I think that Duke is particularly well poised compared to some other medical schools for doing translational work because it has strength at several different levels important in that pathway, from a basic discovery straight through to something that ideally will serve patients in many different environments around the world. So Duke has a great deal of strength in basic sciences, it has tremendous strength in clinical research, and also has a cadre of people whose specialty is understanding how to take information from clinical research and translate that more broadly into practice. So we fill the—if you like, the translational spectrum, better than some of our peer schools do. I think most of our peers have very strong basic sciences similar to what we have but only a few of them have the kind of strength in clinical research that we have and probably none have as large a clinical research effort

as Duke has, and here I think innovation and entrepreneurialism have been part of the culture for a long time, so all of those are assets in giving us special access to the translational spaces.

ROSEBERRY: Would your own research be considered translational, or is it basic?

ANDREWS: Well, that's where it gets complicated, because there's so many different definitions of what translational is. I think of it as basic in the sense that we study biological processes in mice in a laboratory, but it's also translational in the sense that what we learn in the mice has very direct implications often for human diseases and has led to pharmaceutical companies and biotech companies for example thinking about new therapies for diseases. I've been involved in some clinical studies both as a practicing pediatric oncologist where most treatment of cancer in children is—has for a long time been done as part of experimental protocols. Cancer in children is relatively rare, and so it's a longstanding tradition to set up the treatment in a way that will lead to answers about what's effective and will be along the lines of clinical studies, but I've also been involved in other kinds of clinical research. So I think for that first part, moving basic discoveries into clinical application, a lot of people would say what I do is translational, but it's not in the sense that we haven't made an effort in my lab onsite to try to develop new drugs or even new diagnostics, although some of what we've done has contributed to diagnostics that other people have developed.

ROSEBERRY: It sounds like that lab is still going strong here at Duke.

ANDREWS: It is. The lab is much smaller here at Duke. When I was still at Harvard I think at its largest the lab was more than twenty-five people, and here it's smaller, it's

fewer than ten people. So we have to be more focused in what we do but it's still—from my perspective still going strong.

ROSEBERRY: I wonder if I could ask you when you were a medical student getting that MD- PhD, what was different than about maybe what medical students are experiencing now?

ANDREWS: Well, medical education was very different, one thing that—different in a number of ways. One of those was that PhD students at Harvard sat in the same classes as medical students, and so the requirements for core courses for PhD students overlapped with the requirements for core preclinical courses for medical students. So we were all in the same room. I actually did my PhD work at MIT, and so it was different courses. Of course it was MIT courses, but I was able to place out of nearly all of them because of the medical training. That's no longer true. For some time now there's been a divergence of the core courses for PhD students and for medical students. The other really striking difference is that when I was a medical student we were in class five-and-a-half days a week, weekdays from eight in the morning until five in the afternoon and also Saturday mornings, and most of that time was in lectures. Some of it was in lab sections or small conference sections, but much more of it was lecture format than current medical education, which is much more interactive.

ROSEBERRY: And what do you—what will maybe some of the challenges be for medical students graduating from Duke these days? What does the future hold, maybe?

ANDREWS: Well, I think a big challenge is a different way of looking at the formation of a physician. So in my day we memorized as much as we could, and we were expected to have a lot of core knowledge about normal physiology, normal human biology, and

diseases. Well, of course in the last thirty years the amount of medical knowledge has increased dramatically, and I think now we focus more on helping our students understand the basics—the bases of diseases and pathophysiology but less on trying to memorize a lot and more on knowing the right questions to ask and where to look for information. Of course they still do memorize a lot and have to know a lot just to be able to ask the right questions and look in the right places for answers, but it's more on an active learning process and a framework for what kind of knowledge is necessary and where to find it and less on memorizing facts. There's also a lot more emphasis on working in teams with other medical students and with students from other health professions who are going to be contributing to the care of patients together with physicians in the real world.

ROSEBERRY: So a lot of collaboration it sounds like?

ANDREWS: A lot of collaboration and much less individual and more focused on again interactive experiences.

ROSEBERRY: Can you tell me about the new learning center that's coming here to campus?

ANDREWS: We're very excited about it. The learning center will start to be built very soon. We've already cleared some of the space necessary right next to the Seeley Mudd Building that now houses the Searle Center and the medical school library. The learning center will—I think the first real indications of construction will be early next year, that is in the beginning of 2011, and the hope is to finish the building in time for students who are interviewing in the fall of 2012 to at least see it, and if all goes well to actually have interviews in that building and have the admissions office in that building, maybe classes

as well, not sure yet. This is going to be the first building dedicated to medical education at the school of medicine in eighty years. The Davison Building where we're sitting now is the original medical school building, and at one point this was it, but now the medical school has faculty and students in as many as ninety buildings, maybe even more. And so it's spread out, but education takes place to a large extent in the original spaces that have been used for decades. And that limits how teaching can be done, and it also isn't as inspiring for students as it might have been decades ago. So the new learning center will be a fantastic new home for medical education with state-of-the-art classrooms, state-of-the-art 2010, 2012 technology, but also enough flexibility built in, in ways like movable walls and the wiring for—or maybe wireless at some point soon, but at least the opportunities for technology that it should be current and modern we hope for some time after it's built. It will meet a need particularly for MD students, students getting medical degrees, but we want the learning center to be open and welcoming to students and learners in all of our programs—including our PhD students, our physician assistant students, our doctor of physical therapy students, nursing students who have their own space, but I hope will want to use ours as well, and residents, fellows, postdocs, faculty. We really want this to be a place that feels like a center of the community. And one of the great things about the site—although in the beginning it was a bit hard to imagine a building going up there, one of the great things about the site is if you take a map of those buildings that are on the medical school or the university campus—we have some people offsite as well. If you take that map of the medical school buildings and go right to the center, that's approximately where the learning center will be. So it's going to be central for people in the hospital, in the outpatient clinics. It's going to be right next to the new

cancer center and Duke Medicine Pavilion, but it's also very close to Research Drive and to the administrative offices—I'm going to still be in the Davison Building—and to the nursing school, it's going to be more accessible there, so it's really in the middle of everything.

ROSEBERRY: Sounds like a program that you're excited about.

ANDREWS: It's been a great, bright spot for us in what other ways can be considered a difficult time I think with the general economy and how it's affected everyone including the school of medicine and the university.

ROSEBERRY: Can you maybe talk a little bit more about that aspect of things, of kind of what the situation looks like these days?

ANDREWS: Well, I think it's very tough everywhere, and in many ways compared to people who are trying to take care of families and worried about losing their jobs I think that we're a very stable environment. We haven't had to do across-the-board layoffs or anything drastic. And so there's a bright side, but I—this is really almost unprecedented in the history of the school of medicine to have a time when the general economy is in tough shape which affects our endowments and our investments and philanthropy. It also affects indirectly the National Institutes of Health which is the major source of research funding for our research faculty. And the NIH—National Institutes of Health—situation has been precarious for a few years now. So it's a very tough environment. I think what cheers us up sometimes is remembering that the school first opened in 1930 during the Great Depression, and I think that there are a lot of parallels, and certainly great things happened in the decades after that time, but we're facing a lot of challenges that are not

unique to the school of medicine or unique to Duke but make it much harder to do the things that we take for granted.

ROSEBERRY: What are some of the—switch gears just a little bit, but we've talked about the basic and the clinical sides of the school of medicine, and I wanted to ask you kind of what are some of the needs of both of those aspects of the school?

ANDREWS: Well, I think the basic sciences need continuous rejuvenation through hiring of young new faculty members. Hiring basic science faculty members is very expensive because they require funds to start up their laboratories and their research efforts. And so that's a challenge for us in tough times, although we're continuing to hire new people, which is very important. We also are quite short of research space, and this makes it difficult for us to bring in new scientists and also for our junior scientists to expand their research efforts as they become more established. So we're severely challenged right now for research space, but because of the economy I don't think we're going to have a permanent solution for that very soon. On the clinical side it's a little bit different. I think the challenge there is health care reform and what it's going to mean and having that out there. It's meant to fix some very serious problems in clinical medicine or in access to appropriate care, but at the same time it's going to undoubtedly change how medicine needs to be practiced and how services are paid for, and that's a potential threat assuming it continues on the course it started on. That's a potential threat in a way for the health system where our faculty do their clinical work. The health system has a very different economy from the school of medicine and has been doing quite well through the last few difficult years, which is a little confusing to our faculty

because the university side of their lives, the school of medicine, is severely stressed. The health system is continuing to have very healthy margins.

ROSEBERRY: Well, let me ask you how you would define your own leadership style.

ANDREWS: I think that when I think about my leadership style probably the first thing that comes to mind is having the right people around me. I'm not somebody who micromanages, who has to have a finger in everything. Rather what I like to do is find people who are a perfect fit ideally for positions working with me and give them the resources they need and empower them to think about the best way to do things in their domain. And I feel very lucky that I have a great group of people here in the dean's office, vice deans that I work with and department chairs that I work with a little further out, who are really good at what they do, who have great ideas I never would have thought of, who have perspectives on things that are really useful for me when we're confronting problems, who are not afraid to tell me what they really think and tell me when they think I'm wrong. And I value that a lot. I think that for me being able to work with people who cover all of our different aspects well but are leaders in their own ways is really important, and it's also important that they be people who are fun to work with, and I think that's really key to how we get things done.

ROSEBERRY: Can you tell me kind of what direction you see the school of medicine going in?

ANDREWS: Well, I think we'll go in many directions because we're pretty big and complicated, but I think we'll still be dealing with the challenges of the difficult economy for at least a few more years. No one knows of course, but we don't see much relief in our budget and the things that influence our budget probably for at least two or three

more years, maybe more. And so I spend a disproportionate amount of my time, we all do in the dean's office, thinking about how to very carefully manage our resources so that we will not only be able to deal with short-term, near-term issues, but also so that we'll be able to have the school be as strong as possible as things brighten up again and we have more opportunity to do new things. We're continuing to move forward. We have initiatives in many areas. That's probably in part a function of having such an entrepreneurial faculty, and we do what we can to help great ideas grow and blossom. So it's hard to pick just a small number of areas, but I think most of our attention is focused on making sure that we continue to be a strong research institution that provides an outstanding education for a very diverse group of students. Our faculty also of course, a subset of them, need to be outstanding clinicians and clinical teachers, and that's very important to what we do but the school doesn't manage the clinical operation, we just provide an academic home for faculty involved in the clinical operation.

ROSEBERRY: I wanted to switch gears just a little bit if that's all right with you. I know that you've often been asked about being a female in a leadership position, and I wonder if I could ask a few questions about that, maybe.

ANDREWS: Sure.

ROSEBERRY: Starting with: I know there was a study done at MIT about women in leadership and in faculty leadership in the sciences at that time, and I wonder if maybe you can comment on that study that was done at MIT?

ANDREWS: I remember that very well. It was done in the late 1990s after a small group of women faculty went to the administration and described ways that women were disadvantaged in the school of science, school of engineering. I think it was mostly in the

school of science, but I don't remember for sure. And I may have my dates wrong, but I think that this resulted ultimately in a larger study that was commissioned by the MIT administration that came out online and publicly, I think it was in March, 1999. That was a really important milestone I think for MIT for sure but I think for academics in general and particularly science with a lot of implications for medicine. I had been a student at MIT in the early 1980s, a PhD student, and so many of the faculty members who were involved in that were people who I had known as a student making it kind of real, more real for me. And I was still in Boston at that point, I was at Harvard, and that also made it more local and more real. That was a really important study, because I think that—in several ways. One was that the people who looked into things at MIT were able to document that women faculty were disadvantaged. Not only were there very few women faculty at MIT proportionately, but those that were there started out with similar resources to the men, but what the study showed was that as they moved higher and higher up in faculty rank, faculty stature, the disadvantages began to happen and compound so that over time what were initially relatively small disadvantages that the women had compared to the men grew because of the compounding and became more serious. And that was really striking because I'd never thought about it that way before, but I was at a point in my career where I was feeling that and seeing it happen, and so having that affirmed by a study, although it was at a different institution, had a big impact on me. I think another really striking thing about it was that the president of MIT at that point, Charles Vest, didn't dismiss parts of the study for being subjective. He listened, and he not only paid attention to the things that could be documented quantitatively but also to the stories that women faculty were telling about their experiences. And that was

really important, because I think that it's easy when you hear one person complain about something to think maybe it's just that person or maybe that person just had a bad experience. But he recognized that the same kinds of stories were coming up over and over again and gave them a lot of stock, and that was I think very valuable. He also took some very—he and other parts of the administration—put in place some measures to try to improve the situation for women faculty and improve diversity in general. And while MIT still has issues with diversity—I think we all do—what he did and what they did was very important at that point. And so I think it was a brave thing to let the study happen, to take its information as seriously as he did, and to put it out in the public and let MIT in a way air its dirty laundry to the benefit of all of us.

ROSEBERRY: Well, what is Duke doing to keep those problems from being compounded here institutionally?

ANDREWS: Well, this is—unfortunately trying to promote diversity for women and for other groups that are underrepresented in academics, in science, in medicine, requires lot of vigilance and continuous effort and I think is going to for a while. We do—some of the things that we do—there are many things that are done locally within divisions and departments, I think many of which I never hear about, but I'm glad to know that they're there. But at the level of the school, I've tried to include in the senior part of the administration always the people who brought the best skills to the job but a mix of people from different perspectives. And several of the most senior people in the next layer below me are women: not all, but some are. And in thinking about new department chairs, department chairs are very powerful individuals in a school of medicine, I've done—I've deliberately asked Ben Reese who is the vice president for institutional equity

to come and speak with the search committees as they begin their work of interviewing candidates for chair positions and selecting—helping me to select new chairs. Ben has been very generous with his time in coming over and presenting to the search committee different—his experience and experience of other places in how candidates who bring diversity may be overlooked or not given enough credit, and this has been really important I think in educating and reeducating the members of the search committees in how to try to first get the most diverse pool of candidates as possible and second to recognize that there are things that disadvantage some candidates in the culture of academics and academic medicine and to take that into account. Again, we've always gone with the best available candidate, but I'm very proud that of the eight new department chairs that I've appointed in my three years here three are women, which quadruples the number of women chairs from what we had when I arrived. Again, they're not chairs because they're women, they're chairs because they were the best candidates that we could find for the positions. But I think that this is a real credit to the search committees that they came up with a pool that included really outstanding women, and in three cases they rose to the top.

ROSEBERRY: You had mentioned some of those disadvantages that Mr. Reese talked to the search committees about. What does that look like, can you articulate?

ANDREWS: Well, this is an area where there is a lot of data. And I'm not an expert, but he is; I'm not. But there are studies that show that women's CVs for example sometimes look different from men's. So I'll just give you an example of what this might—what this might be. A young woman who is developing her career at the same time she's helping to care for children at home may not have the flexibility to go to give talks all

over the country, all over the world at meetings at other institutions that a man who has someone else doing quite a lot of the childcare at home or who doesn't have children might have. And so one of the items that people often look at on academic CVs is where a person has presented his or her work, and someone who has reasons to choose not to travel very much may have a very different-looking CV. They may have exactly the same academic stature but just not have as long a list of talks in other places. So that's one example. There are also different styles in publishing papers and how many papers or what the criteria for having a paper be ready to publish are, things like that. And there are also studies that show that—and again this is outside my area of expertise, but I've heard great presentations about this—studies that show the same product, a CV, a musical performance, can be viewed differently depending on whether the observer thinks that it's a man or a woman whose CV they're looking at or whose music they're hearing. And so there's a lot of data about bias. We all have it. We don't always know when we're showing it. And I think much of what Ben does is to help people remember those things and to remember—I'll give you another example. When I was still at Harvard and we were looking for junior faculty candidates, colleagues would come up to me and say the very best postdoctoral fellow in my basic science lab is a woman, but she's not interested in such-and-such a job. She's going for something less competitive, and I can't talk her into going for the job that she's really ideally qualified for. So the idea was that the women postdocs were underestimating their abilities and/or were opting out of what they viewed as more competitive jobs for other reasons. And so those kinds of things are important to take into consideration in looking at candidates and in trying to beat the bushes to get the best, largest, most diverse pool of candidates possible.

ROSEBERRY: On the flipside I know that you gave a talk at the NIH about how women can succeed. Let me see if I have—Women in Biomedical Research, Best Practices for Sustaining Career Success.

ANDREWS: That was a few years ago.

ROSEBERRY: Okay. (*laughter*)

ANDREWS: I may not remember any details from it.

ROSEBERRY: Okay. Well, just maybe what does it look like from the flipside? As a woman faculty member or a woman hoping to get into leadership or to balance work-life, work-family. Kind of, what are some strategies, from your perspective?

ANDREWS: Well, I think for women who choose to have children having help from a partner or a spouse or somebody else, being able to not feel totally responsible or primarily responsible for childcare is a major advantage. I've been very lucky that my husband has been at least as involved with our children as I have, and I think the children are better off for that and it's made a huge difference in what I've been able to do, being able to go to meetings or dinners in the evening without having to feel like I should be home with the kids. I try to be home with them as much as I can but knowing that somebody else was there being the parent, that I didn't have to be the parent 100 percent of the time, made a huge difference for me. So I think that it's—you don't always have a lot of flexibility in how you choose your partner or spouse, but I think that a—the partner or spouse, as we get to a time when they're more sensitive to the issues for women in academic careers or in any career it becomes easier. And I'm pretty sure that things were much easier for my cohort of women coming up through the system than they were for women who were even ten years before us because expectations had changed

significantly over that time. And I think it must be easier now; I hope it is, and I think that at some future time this will be far less of an issue, and people will wonder why it was such a big deal once.

(*this portion of the interview has been removed due to restriction by interviewee*)

ROSEBERRY: Thank you very much, Dr. Andrews—and just wanted to ask you if there's anything, as I kind of look to get a birds-eye view from your perspective, if there's anything I didn't ask you that I should have asked you or anything that you'd like to—

ANDREWS: Nothing I can think of, but it'll be very interesting someday, and this oral history may end up being a component of that, but it'll be very interesting someday to look at this period historically, because I think that it's a very unique period in American science, American medicine. And really a turning point for the country in many ways, precipitated by the difficult economy but at a time when other countries around the world are developing their science and technology very aggressively. And it'll be interesting to look back and figure out if we as a country and we as scientists and physicians made the right decisions now.

ROSEBERRY: Thank you so much, I appreciate it.

(*end of interview*)