

Department of Surgery History Interview
Gordon Hammes, Ph.D.
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This interview presents Dr. Gordon Hammes, Vice Chancellor for Academic Affairs of the Medical Center. The subject of this interview is the development of Dr. Hammes career in biochemistry and the understanding that he has developed of surgery at Duke in connection with his work as Vice Chancellor. This interview takes place in Dr. Hammes' office on the first floor of Duke Hospital South. Your interviewer is Dr. James Gifford.

Dr. Hammes, perhaps we could begin by having you say something about your personal background, and particularly, about those factors which led you to choose your career direction.

Well, there is no simple answer to that question, because when I was growing up in a small town in the midwest, my primary interests were many different things, especially music, where I had studied piano seriously and had actually contemplated a possible career in music and science. And probably it was my instruction in mathematics, and in chemistry in particular, that led to my interest in science. When I went to Princeton University I basically, after a year there, made the decision that clearly music was not going to be my profession, but I became very interested in science through my introductory course in chemistry. I then, went on from Princeton where I did undergraduate research with Clark Bricker who is a special person who inspired many undergraduates to go into the field. I went on to Wisconsin after that and obtained my degree in physical chemistry with Bob Elberty who was certainly a strong influence. He was a wonderful mentor and let his students work very independently. After my PhD, I went on to Germany where I worked with Manfred Eigen at the Moxplock institute in Gertingan. Eigen later obtained a Nobel Prize in Chemistry, and he was an interesting person to work with, undoubtedly, one of the most brilliant people I have every met, but he was developing new experimental techniques, not very much in biology at that time, but I decided that this would be a great tool applied to

biological systems, even though I was trained as a physical chemist with a little training in the biological areas. I then assumed a position at MIT. Those were the days when you did not have to go through those lengthy interviews to get a job. I was actually hired through an interview held in Gertingan where I joined the physical chemistry faculty at MIT and there I proceeded to build and develop new physical methods of primarily in model biological systems, but becoming more and more interested in biochemical systems. After five years at MIT where I certainly was very happy and was served well, I went to Cornell University as a full professor in the Chemistry Department, and there were a number of reasons for that choice. I think, for one thing, I really liked Cornell and the people there were very interested in bridging between chemistry and biochemistry. The other thing is that I liked living in the countryside rather than living in the city. I ended up staying at Cornell for 23 years, and there my research program became very biochemical in nature, and switched from the initial approach toward developing physical methods, to more of a study of important biochemical problems. I served various administrative roles at Cornell. I was Chair from 1970-1975. I then went back and continued developing a rather large research program. Toward the end of my stay with Cornell the faculty and administration decided we were going to develop a Biotechnology program and it was one of the first in the country, and I was the first Director of the program. We had a wonderful five years where we bridged a number of different Colleges including Agriculture, School of Veterinary Medicine, Engineering, Arts and Sciences in a Biotechnology program. After doing this for five years, I then made a key career decision, namely that I decided I would like to spend the rest of my career in academia doing administrative work, trying to further the careers of young scientists, and develop new programs. And this led to moving to the University of California at Santa Barber for three years where I was Vice Chancellor for Academic Affairs, which in most places is called a Provost for the Campus. This was a very interesting time. The University of California, unfortunately was getting into serious financial difficulty, but we managed to build some new programs there, including a new School of Environmental Sciences. I really was not planning on moving at that point, but Ralph Snyderman had just become Chancellor at Duke, and he convinced me that I should think about moving. At that point, my son was at Duke as an MD,PhD, and so I thought I should at least look at it. The worse possible situation would be a nice visit with my son. So, I came again,

and eventually Ralph convinced me he had a new concept of how medical schools should be run and he wanted me to come and occupy really a position that was just being created that would deal with all of the academic affairs of the medical center. So, that is, in brief, my background.

Were there persons along the way that were either your mentors or your models, and if so, can you say what you got from them?

Well, I guess I would mention a number of people, starting especially from high school. My high school chemistry teacher was a very vigorous, dramatic sort of person, named Zeigler, interested in me because he made chemistry interesting and made it a logical type of science that I enjoyed. Then, when I went to Princeton, certainly I have to mention Clark Bricker, who as I said earlier, inspired many students because of his enthusiasm and his real interest in developing young people, and in the few classes around me, there were many people who went on to significant academic careers and several of us within that little group, all became members of the National Academy of Sciences, which I think is an interesting footnote as to how good those years were at Princeton. I also did my research with someone named Dave Garvin. Again, he was a person who was genuinely interested in students who had very high standards and was a true mentor, and I still maintain this interest in students, I still teach quite a bit, and I think the most enjoyable part of being a professor is the teaching part. My PhD supervisor, Bob Elberty, was a wonderful person, and he taught me a lot about how to run a research group and what was important in science, namely, you should go wherever your natural interests lie, and if you found an interesting problem, you should work on it. He also managed to maintain a loose organization in his research group that allowed people to develop a research program he was interested in, but also allow them a lot of freedom. I always felt that was a very important lesson. Manfred Eigen was very special, an absolutely brilliant person, who, just listening to him to was wonderful. He was a man who could construct a complete logical explanation for everything regardless of whether it was a correct explanation or not, was immaterial. It was always a very logical argument that tied all the ends together, and I think that's important. Later in my career, there were really two people I would like to point to. One was a very special colleague at MIT, Isador Amder, who

I wrote a kinetics textbook with, but I spent many hours discussing science with him and teaching. He was a very special person. He died prematurely, unfortunately, from something entirely preventable after routine surgery. He had a special idea of how science should be done and his standards were very high, and he had wonderful integrity. The special colleague I had at Cornell clearly was Harold Sheraga, a very famous biophysical scientist. We worked closely together for 23 years. He is still going very strong in his research programs, and he also, was an inspiration of how things should be done and how things could be done, and how a lot could be done in terms of efficiency while still maintaining high standards.

During the time that you were at Cornell, you worked as an editor.

That started after I left Cornell, I was Editor of Biochemistry. I didn't become Editor until I got to Duke. I accepted the job before then, but decided not to start it until I got to Duke.

What was Dr. Snyderman's new way of running a medical school?

Well, to me it was very important because the traditional model of medical schools while looking at it from the outside, and I think now being on the inside, it was a correct picture of how things work, with very sharp department lines, departments operating as entities by themselves without a great deal of interaction between faculty and students. And, I always felt that was not the correct way for institutions to be, certainly not for productive research to be. And, I think one of Ralph's stated goals was to develop into disciplinary research programs and bridge the departments and for the departments to work together in a synergistic fashion, and to basically try to create a medical center that was seamless in terms of departmental boundaries. And I think a lot of that has occurred in the four years I have been here.

Is this motivated by idealism, or cost control?

I think independent cost control is the way academic institutions should be run. We did not have much cost control when I first came here because the

medicine was still, in fact, very profitable, and the medical center really had an abundance of resources. It is only in the last two years that cost control issues have come to exist. But I think, intellectually, for students, for faculty, broad interdisciplinary themes that give the Departments the opportunities for students and faculty to work across departments, is just the way an academic institution should be run. And that's pretty much the way things worked at Cornell I have to say for 23 years. They were not that way at MIT. MIT is a wonderful place, but they had very structured departments, and it was not the place built on major interdisciplinary programs.

What about the relationship between the Medical Center and the University?

Again, my feeling is that there should be strong working interaction. I think a lot of that has occurred since I have come here. For example, for the first time in the history of the institution, all of the biological sciences, including the University are running their graduate recruitment programs together. The graduate programs are united, and that students can move across departmental boundaries. The medical school is teaching a number of undergraduate courses and we have tried to regularize the interactions. We have a program between chemistry and biochemistry, first joint appointments between those two departments to my knowledge in the history of Duke University. So, we have gone a long ways toward that end and I would like to see us go further.

Your position at Duke is new, and did not exist prior to your coming here. Can you describe it specifically?

Well, that is not easy, when I first came here, I think the description was to cover everything that nobody else wanted to do. And, I had a number of those jobs pushed on me. But, I think it is becoming clearer now. The first really significant role was in organizing the basic sciences and the PhD programs. I think very quickly thereafter came the role of organizing interdisciplinary research programs within the medical center, in particular, the shared resource programs, but more recently, the interactions between the basic sciences and clinical sciences. Again, a

lot of progress has been made in allowing this to happen. The joint appointments have become much more common, and there are a number of research programs that include both clinical and basic science faculty members. So, I look to that continuing. Right now, all of the appointment processes in the basic sciences fall directly under me, a lot of the clinical things do, and I expect more of them eventually to come under my office, so that we really have a unified way and criteria for appointing faculty.

After you came to Duke, you assumed the Editorship of the Journal of Biochemistry. Can you talk about the importance of the editing overview function for the development of science.

Well, again it is my own particular view of the world, but I think every scientist has an obligation to participate in these activities that is crucial for science at large. And, certainly, the editing of a journal is one of those. High quality journals are the backbone of science, and we rely on being able to read journals and have a reasonable certainty that the results reported there are correct and that in reading certain journals we know we are getting the best information in that field. Biochemistry, I think I can immodestly say, is one of the two best biochemical journals in the world, and I really was not one of the people who was in at the beginning, so I can't take a lot of credit for that, but certainly biochemistry and journal biological chemistry are pretty much recognized to be the two top biochemical journals in the world and I felt it was really an honor to be able to have the opportunity to continue this tradition, and I also felt it was my obligation to do this for science. I think it is an important unifying role and a quality certainty role, that it is my obligation to do, and it is also related to our role in professional societies. I think everyone has an obligation to participate in these and to really help the profession that has helped me personally throughout my career.

One of the projects that you have overseen as part of your ongoing responsibilities has been the construction of the Medical Sciences Research Building. Can you talk about the overview of that project?

One of those jobs that no one else wanted when I first came here was to have the responsibility for research space allocations. and the facts were when I came here, there were two buildings in the planning process, the Levine Science Research Center, and the Medical Sciences Research Building. LSRC and MSRB. Having this happen gave the medical center the opportunity to do two things, to reorganize the space allocations within the medical center so that people with similar research interests could be grouped together in order to permit good interdisciplinary interactions or good department interactions, in some cases. The second thing it allowed us to do was really to hire some major new faculty members within the medical center. MSRB is a building that contains a lot of the research elements of the clinical departments, not all of them, but it allowed us to develop a number of major themes, and I'll just mention a couple of them. Transplantation certainly, cancer for certain and human genetics. This building plays a major role. One of the wonderful things about Duke, however, is that all of the research buildings are basically next to each other. So you can get from one end of the research campus to the other in five minutes of walking, which is a really great feature of any campus, and I think very important for the way that Duke should be operating.

As a part of your review of space for MSRB, you became acquainted with the operations of the Department of Surgery. Can you talk about your impressions of that Department?

Well, I was very fortunate early on to interact closely with David Sabiston. I think that anyone who has never heard Dr. Sabiston present what he is interested in, is missing a treat. I heard him give an incredibly impressive discussions of what his department was about in the Budget Review Process where he basically, in a very short time, not only told us about the budget of the Department of Surgery, but told us everything that was going on in the Department of Surgery, and I was very impressed with this, and he and I got along very well, personally, and I am happy to say I was involved in the recruitment of some of his more recent faculty, to have turned out to be absolutely outstanding faculty. So, we worked together fairly closely, and it doesn't take a very long exposure to the Department of Surgery or to David Sabiston to learn that we have to be working with one of the best

departments in the country, in terms of both the medical part and the research part, and that is rather unique.

Can you talk about what the strengths are?

As I said, this is a department where I would be hard to point out any weaknesses. Dave has impeccable taste when it comes to picking people. The two most recent recruitments, I think are Jeff Platt and Eli Gilboa. Jeff Platt was hired really to lead the research part of the transplantation program. And, he has done a superlative job of that, and this has gone hand-and-hand with the clinical part of the surgical transplantation program. Eli Gilboa was brought in really to lead the cancer effort in genetic therapy efforts, and again, this has worked out very well. He does the research part, but of course, we have an incredibly good Surgical Oncology Unit. But this is a department that is strong across the board. It would be hard to point out any weaknesses. They have managed to maintain outstanding medical people, while at the same time, maintaining outstanding research. And I can just go down each faculty member and we would be talking about how good they are. It would be hard to pick one out and say 'here is a weak spot'. It is just an incredibly strong department and I think it is recognized across the country, and I would say in terms of residents, they always get their top residents and their top choices, so that means the reputation goes very far if you talk to anybody which are the top department of surgery, you are going to see this department listed. If you look at the NIH rankings we talked about earlier, you are going to see surgery at or near the top of the funding ranks. It is just a department that does both the research and teaching aspects extremely well.

Do you have any sense of how that has been accomplished over the years?

Well, I think certainly the only Chair I am familiar is David Sabiston's, and in looking back, I think Dave has impeccably good judgment with regard to people, and this is a rare quality. And he has used a system whereby he has picked extremely good people to lead his divisions and his research programs, and these people have served him well in developing outstanding programs. I think that once

he has picked his people he allows them to develop the programs as they wish. And, he has been remarkably successful at this, I would say uniquely successful at this.

You mentioned NIH.

Numbers have to be interpreted. If you look at the rankings, you have to realize that some departments of surgery are not the entire surgical operation for the institution, whereas our department is the Department of Surgery, all of surgery is basically contained within that department. Then you have to look at the side effects and so on. I think by any criteria, the research support the department gets is fantastic, and they are doing extremely well. I am always a little leary of these quantitative rankings of Departments, because the truth is there are many good departments, but there is no question that our department is among the very elite.

Dr. Hammes, I usually end these interview by asking what question in your mind I should have asked that I did not ask, that would give any additional insight into the topic. Is there is anything you feel comes to mind that ought to be recorded for these purposes that I have not covered?

I think you have gotten the important things. I am really pleased that you are undertaking to do this. I think the David Sabiston era is a very special era, that he will go down in history as a uniquely remarkable man in the Annals of Duke, and I think in the Annals of Surgery throughout the country. So, it is important that everything be well documented.

Thank you Dr. Hammes.