

## **Edward Nagy Interview December 16, 2005**

- Edward Nagy: My name is Ed Nagy, I'm the Executive Director of the Academy of Radiology Research, and I have been in that position since the academy was started back in 1995.
- Claudia Wassman: Edward, I was told you were involved in the history of the creation of the National Institute of Biomedical Imaging and Bioengineering at the NIH. Maybe you can go back in your memory and tell me a little bit about pre-history that went into the creation of this institute at NIH.
- EN: Sure, and feel free to stop me with questions, because it's kind of a long story. The background is -- and the background really stretches back into the 1970s when a group of academic radiologists, I think, started to become concerned that there wasn't a real home at the NIH for Radiology research and imaging science. That because of the way the NIH was organized in institutes that were organized along disease or organ system lines and imaging cuts across those lines, there really wasn't a single place that had the mission of advancing Imaging science. And this group, which became known as the Conjoint Committee on Diagnostic Radiology worked with the NIH for several years and tried to find the best way of locating Imaging research at the NIH to kind of optimize it

and make sure that important research received support.

CW: So you say that started in the 1970s, so you remember who were the people who were involved in that?

EN: There were a number of leaders. I think probably most people would say that Russell Morgan, who was Chairman of Radiology at Johns Hopkins and Herb Abrams, who was at Harvard. The people who actually took charge on a day to day basis, I think the first one was Jim Youker -- that's Y-O-U-K-E-R, who actually is still Radiology Chair at the Medical College of Wisconsin. And Charles Putnam, who was at Duke then and then later became the first President of The Academy of Radiology Research. Our organization is the successor of that Conjoint Committee. In any event -- and this really predates me, so I'm telling you what I understand, and this is pretty anecdotal. That in those years, most of the extramural funding for Imaging research was through the National Institute for General Medical Sciences. My understanding is that they developed a consensus that that was really not the optimum arrangement. In 1982, apparently in discussions between the Conjoint Committee and the NIH, it was agreed that most extramural funding for imaging would move to the National Cancer Institute, with the understanding that the NCI would support imaging research

beyond just cancer imaging research. And so that was the case after 1982. By the early 1990's, I think the academic community had reached a consensus that that arrangement wasn't working as well as they had hoped -- through no fault of anyone's. The NCI has a mission that focuses on cancer, and imaging is much broader than that. And so they eventually came to the conclusion that the structure itself at the NIH just doesn't accommodate imaging science and that there was a lot of anecdotal evidence that investigators were tailoring their proposals to particular diseases or organ systems, because that was the only way to get it funded even though their goals were broader than those diseases or organ systems. The community eventually came to the conclusion that the only real solution was a structural one at the NIH, an organizational solution, and that was to establish a new institute that would have, as it's mission, the advancement of Imaging science.

In 1994 and 1995, about 20 of the professional societies and scientific societies in Radiology and Imaging science came together and established the Academy of Radiology Research with the general purpose of promoting greater support for imaging research, but with the very specific purpose of working toward the establishment of a new institute at the NIH. So we really got going in 1995 and decided fairly early on that there would need to be a

legislative solution to this problem. We did have some conversations with leaders at the NIH including Dr. Varmus; it was clear that the NIH was not supportive of establishing a new institute.

CW: Why would that be so?

EN: You would have to ask them.

EN: If you want, I'll speculate. I think that they - I don't want to speak for the NIH, but I do think that they felt like that Imaging was being well served by the -- by what was then the organizational structure. My sense is that the NIH rarely supports proposals for new institutes. So in any event and Dr. Varmus was very clear with us that he did not support this. So in 1996, a bill was introduced in the House of Representatives by Congressman Richard Burr from North Carolina to establish the new institute. It was introduced at the very end of the legislative session that year, and we knew that it had no choice of being acted upon in that short period before the congress adjourned, but we did want to get the issue out there for public dialogue. So the bill was reintroduced by Congressman Burr in 1997, and then later that year, a companion bill was introduced in the Senate by Senator Faircloth, also from North Carolina. During that Congress, which lasted from 1997 to 1998, we spent most of our time trying to build support for the proposal. The Congress adjourned in

1998 without having acted on it. I think we did get about 70 sponsors in the House, so we were building some support for it.

In 1999, Congressman Burr introduced the legislation for the third time to establish a new institute. In the Senate this time, Senator Faircloth had lost his re-election bid, so the Senate bill was introduced by Senator Trent Lott from Mississippi, who was then the Majority Leader of the Senate. In the meantime, we had created an alliance with the Bioengineering community as well. It had come to our attention fairly early on that the Bioengineering community faced many of the same obstacles at the NIH that Imaging did, in the sense that it was a discipline that crossed all of the institute lines, didn't have a central focus at the NIH, and in fact there was kind of scientific connection between Bioengineering and Imaging that made for an alliance that kind of made sense scientifically as well as politically. So working mainly through an organization called the American Institute for Medical and Biological Engineering, AIMBE, A-I-M-B-E, the engineers supported the proposal for a new institute that would be dedicated to both imaging and Bioengineering research.

We again spent the better part of two years trying to increase our support in the Congress. And I think we ended up with about 170 sponsors in the House and about

11 in the Senate. Near the very end of that session in the year 2000, before the 2000 elections, the House Health Subcommittee in the energy -- the Commerce Committee I guess advised us that they wanted to hold a hearing in early September, I don't remember the day, I can look it up if you want -- on our proposal. And so we provided three witnesses from academic Radiology to come and testify about the proposal and why it was important. And so there was a hearing and very quickly after that, the Commerce Committee approved the legislation. And a couple of weeks later, it went before the full House, which also approved it unanimously -- there were no votes against it.

The Congress was kind of running out of time there. They recessed until after the election, I believe. And when they came back, the bill, at this point had passed the House. It had been sent over to the Senate. Senator Lott made an effort at first to attach it to an appropriations bill. That was unsuccessful, but he was able to, on the last day that the Congress was in session, was able to call it up as a freestanding bill in the Senate, and it passed under unanimous consent right before the senate adjourned. And it was then, it came up to the President, and it was the last bill that President Clinton signed as President of the United States. And I believe he signed it pretty close to the last minute that he could have.

CW: It was a good success for you.

EN: Well, we think it was a success for the NIH, too, and for science.

CW: So who were the three radiologists?

EN: Who testified? Reed Dunick, who is the Chairman of Radiology at Michigan right now, and he is now, coincidentally the President of the Academy of Radiology Research. Bruce Hillman from the University of Virginia, and Nick Bryan, who is the Chairman of Radiology at the University of Pennsylvania and is also Vice President of the Academy of Radiology Research.

CW: And what do you think made it possible?

EN: Well, I think probably a number of factors came together. One is that we had worked for over four years to build support for this proposal, and we had considerable support, and I'm sure that the House leadership saw that and saw they had a bill that had 170 sponsors. It was a very bipartisan group of sponsors; this was not a partisan bill in any way, and frankly we think that we had a very compelling case to make -- that imaging had, in fact, revolutionized the way we diagnose and treat disease. And there was no home at the NIH to advance that science even further. CT and MRI certainly had changed, maybe more than anything

else, the way patients were diagnosed and treated. But it was hard to see where the next MRI was going to come from, because the research landscape had changed. I mean I think that those technologies were developed with very little US federal government support. And in fact, I think it's true to say that both of them, the idea probably originated in the US but was finally developed in Europe, in part, because there was no place to look to for federal support. And I think that the support for basic research in Imaging science that had been more readily available through the corporate community had decreased over time, I think, for a number of reasons. As the way the whole healthcare system had changed, and I think my sense was that companies were more likely now to devote their resources to projects that were further along, where they thought there was a more immediate prospect of developing a product, rather than to kind of waste the research that probably had received -- I don't in total dollars, but certainly in percentage terms had probably received more support in the past.

So I think we had a compelling case to make that imaging could further revolutionize medicine, and, in fact, was critical to progress in other areas of Biomedical research, but not only patient care, but in terms of advancing our knowledge of biology, and how understanding biological



processes, imaging was just critical and so there was a compelling case that new imaging technologies were important for both clinical medicine and for advanced research. And I think that many people in congress accepted that argument.

CW: So would you say it kind of goes back to the 1970s, the first techniques you were mainly concerned with was PET more than tomography.

EN: I don't know. Because I would have been involved in it then. So yeah, I really was.

CW: And now, as you say, it's non-specific for one image, it's really Imaging.

EN: And see our conception, and we hope the way this will continue to work was that not that the other institutes shouldn't do research that involves Imaging, we fully support that. What we wanted was a place to kind of develop new technologies, new techniques, that would have broad applications that would then kind of be adopted by other institutes to use to solve their particular biological problems. So we saw this as a very -- as perhaps, by it's nature, the most collaborative of the institutes as a institute that would naturally collaborate with almost all of the other institutes, because there is a real gray area there, I think, between what's basic research to develop a new technology and what's kind of applied research to use

that technology? I mean I think there's a continuum there, and it's not always clear where one ends and the other begins. And that's fine. I mean we saw this as being a collaborative effort right from the start.

CW: So imposing such an institute a little bit from the outside upon the NIH, how was that?

EN: How was -- I'm sorry, what?

CW: How was that seen?

EN: Well, you know my sense that it was -- the new institute was not universally embraced by everyone at the NIH. I think that as with any new venture like that, there is a certain period of time that has to go by until the new institute proves itself. And I hope that's what's happening right now. And it was also, I think that problem probably was made a little more difficult because of our timing, and not that we could have done anything about the timing, but this institute was created and got up and running just about the time that the Congressional effort to double the NIH budget ended. So, they were just kind of finishing. They had maybe one more year of a time of greatly expanding budgets, and this institute gets established and all of a sudden -- and with a real need to grow, because it naturally would start off as a small institute at a time when the overall NIH budget has been pretty flat.

There has been very little growth in there. And so as resources become scarcer, I'm sure it might be a little more difficult for people in other institutes to accept a new institute. So that was not unexpected, I think. But I will say the NIH leadership, once this bill was passed, worked very hard to establish the new institute I think.

CW: So did I understand this correctly, were you hired at a moment by the NIH in order to bring together the Community or...?

EN: Oh, no, no. No, we don't have any formal connection to the NIH at all. The academy is strictly an alliance of scientific and professional societies in imaging and radiology. Our goal is to support the increase -- to gain increased support for imaging research. We have a very strong interest in working with the NIH as well as with the Congress and the Administration to do this.

CW: Throughout that process, was there someone at the NIH who was supportive of your endeavors, or not really?

EN: Well, I'm sure there were individuals who were supportive and thought this was a good idea. But at the same time, the official petition, at least to the extent to Dr. Varmus's testimony in the Congress constitutes an official position, was that this was not needed. So we would not have

wanted to try to put individual staff people there on the spot -- do you support it or don't you support it -- because clearly the NIH was not supportive. And that's why we needed to -- we felt like we needed to do this through the legislative process, which is not an unusual way for new institutes to get established at the NIH.

CW: And how did it develop? Did it have something to do with tomography, some of that research gets through?

EN: I don't know, are you asking what was the relationship between the NIH and the DOE or ours? Oh, ours? We were very supportive of the DOE program in Nuclear Medicine and in Imaging research in general, but that program is -- that was not funded this year. I think it still legally resides at the DOE, and that's something that we're going to be working on next year in the next appropriations process to find -- to help find the best home for that research. I mean it's important research that has had a real, I think, benefit for the American public, and at the same time, I think there are people in the administration who felt like it was medical research and perhaps didn't necessarily belong at the DOE. And I'm not aware of anybody who thought, who thinks that it's -- hasn't been an effective program or that it's not important research, the question, again, like it was with Imaging at the NIH was to find the proper home for it.

And that's one of the issues we'll be working on in the next year.

CW: Thank you very much.

EN: Oh, you're welcome.

*End of transcript*