# The American Association of Immunologists
# Oral History Project

## Transcript

Robert R. Rich, M.D.
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Interview conducted by
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**Williams:** This is an interview with Dr. Robert R. Rich for the American Association of Immunologists Oral History Project. Dr. Rich is Associate Vice President and Associate Provost for Interprofessional Education at the University of Alabama at Birmingham. He's also professor of medical education and professor of medicine and microbiology at the University of Alabama at Birmingham School of Medicine. Dr. Rich served as editor-in-chief of *The Journal of Immunology* from 2003 to 2008. He was awarded the AAI Lifetime Achievement Award in 2008. We are at IMMUNOLOGY 2015™ in New Orleans, Louisiana. Today is Monday, May 11th [2015], and I'm Brien Williams.

Thank you, Dr. Rich, for consenting to do this today, and I'd like to start by asking you a little bit about your family background.

**Rich:** Sure. I grew up in rural Kansas, the son of a large family of four younger siblings. My father was a classical country doctor. He spent most of his career practicing medicine in very small towns, three hundred, eight hundred people, seeing whatever brought them in. Eventually, he specialized in Ob-Gyn. It was a Mennonite community and that imbued me with many of the values that I've held throughout my life, a Mennonite community that very highly valued education. My maternal grandfather was a professor in a college, and so education was always at the center of what my family wanted their children to achieve, and medicine was right on the list for me because my father is my role model.

**Williams:** Did you do rounds with him as a kid?

**Rich:** Not really. I mean, at that time it was mostly the doctor with the medical bag, and in those days doctors made house calls, and occasionally we would have patients come to the house, so I would be aware of patients coming and going. But the idea of shadowing a physician like prospective medical students do now was not the kind of thing that you did in those days because you were actually, as a physician, they would either just come into your office or you would go to their homes if they were really sick.

**Williams:** When did the Rich family get to Kansas?

**Rich:** The family actually came there in the late nineteenth century, on both sides, both my mother's family and my father's family, and they came primarily because of an emigration from the Ukraine, although they were of Germanic origin. My mother's first language was German, but they had moved from German to the Ukraine because of issues of pacifism, and then they moved to Kansas at the invitation of the Santa Fe Railroad, basically, when things changed politically in Russia and they wanted to get out of Russia, and the Santa Fe Railroad brought them in and gave them farmland, and they actually brought the wheat from the Ukraine to Kansas and made Kansas the breadbasket of the nation.

**Williams:** Wow. A famous family.


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**Rich:** Well, it's a famous—it was not my family alone. I mean, it was a large community of people that came to central Kansas, or south central Kansas at that time, and basically became farmers and a few became doctors.

**Williams:** Right, right. What's the biggest city in that region?

**Rich:** Wichita. So I grew up in several different small communities and one larger community called Newton, which is a large community of 15,000. That's a big city in Kansas, and it was a railroad city. Santa Fe Railroad is still very big in Kansas, but Wichita was the only real city.

**Williams:** And what was your schooling like in Newton?

**Rich:** Well, I only went to high school in Newton. By the time my family moved to Newton, I was already a junior in high school, so I spent two years at Newton High School. My previous schools, I started off in my first six grades were in a two-room schoolhouse, one through four and five through eight. So these were really small communities. But I thought I had a good education, and I spent my first year in college, actually, at the Mennonite college in North Newton, Bethel College, a very fine school, and then I transferred to Oberlin College, which is where I graduated.

**Williams:** Why did you choose Oberlin?

**Rich:** It was because I had some terrific professors at Bethel College, and they kept saying, "If we just keep pushing the way we're going, we'll eventually be like Oberlin College." And I had the insight to know that could be true, but that won't happen in my lifetime as a college student, so maybe I should just go to Oberlin College. So that's what I did.

**Williams:** And what did you major in?

**Rich:** I majored in chemistry and zoology.

**Williams:** So you already were moving in that direction.

**Rich:** I was pretty sure I wanted to be a physician when I was six years old. My father had an enormous influence. He was the major influence. In fact, despite the fact that he was a country doctor, he was the major influence on my decision to do research and go into academia, because he was a very, very curious man, and his one regret professionally was that he'd not gone into research and had not become a professor. So I had that sense that that was the only thing I needed to do that he hadn't done that would fulfill me, and it turned out to be pretty good advice.

**Williams:** How long was he able to witness your career as it progressed?


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**Rich:** He lived until I was a full professor at Baylor College of Medicine, so he didn't see the administrative evolution of my career into being dean of a medical school and things like that, but he saw through most of my most active research career.

**Williams:** He was probably very proud.

**Rich:** I think he was.

**Williams:** So after Oberlin, where did you go?

**Rich:** I went back to Kansas and went to medical school in Kansas, and then after graduating from medical school, I went to the University of Washington for a residency in internal medicine, and following that, I went to the NIH [National Institutes of Health]. I could have gone to Vietnam, but I decided the NIH was probably more to my liking for that period of service, and then after three years at the NIH, I went to Harvard Medical School for a couple more years, and finally got a job at Baylor College of Medicine.

**Williams:** And while you were at Harvard, were you getting some special degree or was that just—

**Rich:** No, I was not in a degree program. Both at NIH and at Harvard I was basically finishing up my certification in internal medicine and then doing certification in allergy and immunology as a clinical activity, but the vast majority of my time was in the laboratory. So I was in the laboratory. In fact, I started in the laboratory at NIH in the same lab on the same day as Tony [Anthony S.] Fauci, who is the longtime director of the National Institute of Allergy and Infectious Diseases. He was directed by Dr. Sheldon Wolff, but the person whom I was working with was Charles Kirkpatrick, whom I had originally started working with when he was at the University of Kansas when I was a medical student, and then he became an investigator at NIH. And then I followed Baruj Benacerraf when he went from NIH to Harvard. I went up there as a postdoctoral fellow, but working more closely with Dr. Carl Pierce.

**Williams:** Someone just this week talked about Dr. Baru—

**Rich:** Baruj Benacerraf, yes.

**Williams:** Yeah, yeah, yeah. No, no, Dr. Burr—I can't even remember his name. I just interviewed him. Burkaroff.

**Rich:** Burakoff?

**Williams:** Uh-huh.


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**Rich:** Dr. [Steven J.] Burakoff followed me in Dr. Benacerraf's laboratory, immediately after. In fact, there's a slightly interesting story, because as an internist, I also did some moonlighting when I was in Boston, and so I worked in an emergency room at a small hospital south of Boston, the Goddard Hospital. And when Dr. Burakoff came, I was leaving, and he picked up the gig at the Goddard Hospital, so he followed me as an emergency room moonlighter. So that's the personal connection I've had with Steve Burakoff for many years.

**Williams:** Right. Well, he talked about the Benacerraf lab as being a really special place at that time.

**Rich:** It was, it was, and many of the people who were there obviously, not only Dr. Benacerraf, who won a Nobel Prize, but many of the junior people went on to very distinguished careers.

**Williams:** Right, right, right, right. So what lured you to the University of Washington?

**Rich:** It's how the match works, the match for internships, which is a national match. I mean, it was one of the ones high on my list, but you go where the computer puts you, and that's the case to this very day. At the end of medical school, you fill out a computer form, and all the various institutions that have internships available fill out their lists, and then you're guaranteed by the computer to get into the highest-ranked hospital on your list that also has offered you a position. So I had several really good places on my list, and University of Washington was the one that matched.

**Williams:** And that was already computer programmed?

**Rich:** That was already computerized, and this was in 1966. I'm not sure; it was probably not a computer program you'd recognize today.

**Williams:** [laughs] So when you completed the work at Harvard and you went to Baylor, was there any thought of going back to Kansas?

**Rich:** Not really. I hadn't applied to Kansas. I came very close to taking a job that had been offered to me at the University of Chicago, and, in fact, my wife and I had looked at housing in Chicago and were all ready to go, and I got a call from the person who was the head of the immunology program at Baylor. This was in late February, and having lived in Boston for a couple of years, the snow was still coming horizontally in my face when I walked from the parking lot to the laboratory, and knowing what the North Shore of Chicago looks like, I knew what February in Chicago was like. And the man who called me, Dr. Bill [William T.] Butler, said, "Don't sign anything until you've visited Houston." So I went to Houston, and the azaleas were all in bloom and they seduced me. [laughter] I went to Baylor College of Medicine.


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**Williams:** And your wife happily went along with you?

**Rich:** She did. She did. She's an immunologist, too, so we set up—we each had our own laboratories, but we collaborated a lot. In the early part of our career, we collaborated extensively.

**Williams:** Where did you two meet?

**Rich:** We met at Harvard.

**Williams:** Was it love at first sight?

**Rich:** No, no, but it didn't take too long.

**Williams:** So you married in Boston.

**Rich:** We married actually in Houston.

**Williams:** Ah, I see, I see. Okay. So what kind of a program did you set up at Baylor?

**Rich:** Well, my primary appointment was in the Department of Microbiology, actually, although I had a secondary appointment in the Department of Medicine because I was a physician. So the laboratory was very much a basic science laboratory. The main object of study was the mouse. And after a few years, I think within about seven years, I was a full professor there, and about that time I was invited to become an investigator with the Howard Hughes Medical Institute, and I spent the next fourteen years or so as an investigator with the Howard Hughes Medical Institute, as well as having my own NIH grants and things and having my own independent laboratory. Howard Hughes was, as it still is, a very good place to be able to do research.

**Williams:** Did you have any clinical responsibilities at Baylor?

**Rich:** Yeah, yeah, I did. I saw patients on the general internal medicine services one or two months a year, and so I never had a—and this was by intent—I didn't have a large stable of my own patients, so I always did my clinical work either at the VA Hospital or at the county hospital, so I never had to charge for my medical work, and I could do it because I enjoyed it, and I very much enjoyed the teaching, but it meant that I could have my primary focus in the laboratory.

**Williams:** And what about the students that you were able to draw on at Baylor?

**Rich:** Well, I had wonderful students at Baylor, probably the most gratifying aspect of my professional career, and I still take pleasure almost every day when I look at the twenty-five dissertations that line one of my bookcases, because those all were very special people to me, the twenty-five students who did their thesis research


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in my laboratory, about half of whom were M.D.-Ph.D. students, so we had a lot in common, and many have gone on to very distinguished independent careers, obviously.

**Williams:** What was Baylor like in the scientific realm as a community?

**Rich:** Well, first of all, it's imbedded in the Texas Medical Center, the biggest medical center in the world, so there's a richness, and Baylor was the big dog scientifically in the Medical Center at the time that I was first there. There are a number of other big dogs now, but at that time Baylor was certainly the preeminent one, I think. So it was a very rich scientific community. It had good immunology in the Department of Microbiology, some in the Department of Medicine and some other departments, but it was a rich community and it continues to be. I mean, it's still a distinguished academic institution.

**Williams:** And you said you and your wife have pursued different lines of investigation.

**Rich:** Well, we were both interested in T-lymphocytes and we both were interested in regulation of the immune response, but after a couple of years, we went in different directions because we had our own trainees and own laboratories and things, so eventually, although we could still talk at dinner and understand one another, we were less formally collaborative after a few years.

**Williams:** So at some point you began to take on more administrative responsibilities at Baylor?

**Rich:** Yes, yes. That happened by accident. The Howard Hughes Medical Institute wanted to start a program in structural biology, and so we had to have a search process to, first of all, decide just what we would propose as the structural biology program there and then who we might be able to get to head it. I was asked to head that committee because I didn't know anything about structural biology, I think, so they wanted somebody who didn't have a personal axe to grind. [laughs] So I did that, and because I was a member, since I was already an investigator there, I did that, and they liked the report.

And after that, the person who hired me, the immunologist who hired me, by this time was president of Baylor College of Medicine, and so he asked me to do a strategic planning process for the College of Medicine for research for strategic planning, because he'd been happy with my plan about structural biology. So I did that for about a year and handed him a strategic plan for the College of Medicine, and one of the recommendations was to hire a dean for research. And about six months after I turned it in, he called me down to his office and said, "We've decided to take your recommendation. Now we'd like for you to take the job." [laughs] And I did. So that got me started administratively.

**Williams:** And what impact did that have on your scientific work?


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**Rich:** It had some impact. Because my laboratory was running well at that time, I formally divided my day so that I would always be at least half a day in the laboratory, and so I had two offices, and both offices knew better than to try to call me out unless there was really something that needed urgent attention. That worked pretty well, and I continued that until I went to the Emory School of Medicine, where my job was really pretty much full-time administrative. Then I was recruited after that to University of Alabama at Birmingham [(UAB)] as the dean of the School of Medicine, and that was definitely an administrative job.

**Williams:** [laughs] Describe the transition from Baylor to Emory.

**Rich:** Well, Emory wanted a full-time research dean, and I'd been at Baylor for twenty-five years at that point, and I thought it was a good time to explore something different. I very much liked the person who was the dean, who was recruiting me, Dr. Tom [Thomas J.] Lawley, a very prominent dermatoimmunologist, but he had been chair of the Department of Dermatology there, and he made a very good case. He offered my wife a very good position too. She became the director of the Office of Postdoctoral Education at Emory. So we had two excellent jobs, and we decided to make the move. We spent six years there and were very happy there. We liked Emory a great deal.

**Williams:** So your wife also was trending a bit into administration.

**Rich:** Basically, we had made the decision together to move in that direction, that's right, and so at UAB she's now dean of the Graduate School for the Life Sciences.

**Williams:** Were there times when you regretted having left the bench?

**Rich:** Not really. I mean, I had the feeling that, first of all, I wanted to leave the bench when I was at the top of my game, so I left it with active grants. I had three NIH grants when I decided to—but I thought that the most creative times in a science life are at a relatively young age, and I think it's mostly—not for everybody. I mean, there are some very important exceptions, but I think it's mostly a young person's game. And by this time I was in my late fifties, and I thought, "I know some things about how to get jobs done." So it was a very thoughtful, I think, rational decision that I'm at a time in my life when I can contribute more by taking administrative roles and leaving the science to people who are fifteen, twenty years younger.

**Williams:** So did Max Cooper have any role to play in luring you to Birmingham?

**Rich:** He was involved somewhat. He was obviously the most important or most eminent immunologist at UAB when I went there, and certainly I had known Max for many years. He had been an investigator at the Howard Hughes Medical


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Institute at the same time I was, so we knew each other through that context. I would say he was not one of the most active recruiters, but when I was looking at Birmingham, I certainly spent some time talking to Max.

**Williams:** Going back to Emory—well, both Baylor and Emory for a moment, reading about your success as an administrator, the thought came to me, you were "Mr. Fix-it."

**Rich:** I've not been called that before, but that's a nice way to think. I mean, I think I understand complicated institutional problems and I find them challenging, and I do find that there are some things that I've sort of learned along the way that can fix things.

**Williams:** Well, among your achievements was in increasing the funding in these places, right?

**Rich:** That's right. I mean, I guess that's thought to be important. It is important. But I think my biggest accomplishments as a dean, when you really have some authority over how the departments are structured and organized, were twofold: one was improving opportunities for faculty and the other was the opportunity to hire chairs. Obviously, the biggest impact that a dean has in terms of the science and the teaching that gets done is the quality of the chairs that they hire, because the chairpersons of the departments have enormous authority over the hiring of the faculty. The dean may have an ancillary role in that, but the dean's real responsibility is hiring the chairs.

**Williams:** Interesting, interesting. So describe what Birmingham was like as an environment.

**Rich:** Birmingham's a nice town. It's very different from either Houston or Atlanta, needless to say. The weather's much better than Atlanta's weather, or I should say than Houston's weather. It's a beautiful town because it's in the foothills of the mountains, and so it is semi mountainous. And there are lots of good restaurants there now. It's now Zagat's number-one city in America in terms of up-and-coming foodie cities. So it's a fun place to be. We've enjoyed our time there.

**Williams:** And one of the positions that you've held, or do now, I guess, is as provost of Interprofessional Education.

**Rich:** That's what I'm doing at the present time, yes.

**Williams:** And what does that mean?

**Rich:** It's become increasingly apparent that good medical care delivery, or healthcare delivery, is built around teams of individuals working together. It's not just the so-called imperial physician anymore. It now requires people who understand the


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role of nurses and physician assistants and various therapists and social workers. So much of medicine involves the context of how you live, and it makes the physician far more efficient and effective, I think, in doing the things that he or she does best. So, increasingly, accrediting bodies are demanding that students get training in an interprofessional environment of some sort. They have to be able to demonstrate that they have to have had experiences with students from other healthcare professions.

I'm the person who was for the first time charged with that responsibility, so that was another sort of new job that was created for me because I think nobody else wanted it, because it's a very political kind of—and it's very complicated because every school is very different and has very different curricula and very different flow of moneys into the school, and all of a sudden you have to try to cut your way through those thickets to get the money, the various deans of the various schools, collaborating to put money into something that is interprofessional and bringing the curricula into some sort of convergence, at least for short periods of time, to allow this.

So it's something that I've only been doing for less than a year now, but I'm finding it very challenging, harder than being a dean in terms of the complexity. I understood what being a dean was like. It's not as demanding in terms of the endless hours, but it is very, very complicated and it is challenging.

**Williams:** In this position, who has your back?

**Rich:** The provost of the university and I would say particularly the deans of the School of Medicine, my successor, and the School of Nursing, who have been the primary supporters, as well as the CEO of the health system. Those are the people that really have to be able to see that one way or another the money comes together and enables the possibility of making this happen.

**Williams:** And where does basic research come into the mix?

**Rich:** Basic research is, I would say, tangential to the elements of interprofessional education, but not irrelevant, and by that I say the people who understand how to ask questions about how you evaluate effectiveness in things generally have had a good research background.

One of the biggest challenges is—we try to say—are all the efforts that we're doing to make this happen actually changing anything, and evaluation actually is about setting up research protocols and things, and so thinking like a scientist is very helpful to me personally in terms of how do we ask questions about is what we're doing actually going to make a difference or is it making a difference. And I think the collaborators that I've had, the ones that are working with me to think through these questions, that's been personally gratifying to see us wrestle with a


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different kind of question, but they're still pretty fundamental kinds of basically research questions.

**Williams:** During your career, when did you first publish the *Clinical Immunology*[: *Principles and Practice*] textbook?

**Rich:** That must have been about 1992 [Ed. 1996].

**Williams:** When you were at—

**Rich:** When I was at Baylor. So I just was engaged a couple of weeks ago for the fifth edition.

**Williams:** That's what John [Emrich] told me, yeah.

**Rich:** So I will be doing that. I'm getting my editors, who come from literally all over this country, and I have a team of five associate editors, and we'll all be getting together in Atlanta, actually in June, to plan out the fifth edition of the book.

**Williams:** Did someone suggest that you do that or was that your own initiative?

**Rich:** No. I was approached by, at that time, the Mosby company, and then there were a series, so they asked me if I would do it. And I thought about it and I was somehow persuaded to do it, and I think having now—I was astonished. Eventually everything was acquired by Elsevier, so Elsevier is now the publisher. I had thought that big books didn't really have much of a market anymore, or that nobody wanted them, but the book has established itself as arguably the world's leading comprehensive textbook on clinical immunology, and the publisher is very interested in another edition.

**Williams:** Now, I'm not familiar with the work, I have to say, but are you the primary author or the editor?

**Rich:** I'm the editor-in-chief. We have a couple hundred authors who contribute. It's a book that's several inches thick. It's a reference textbook.

**Williams:** Right, right. Let's turn to your science portion of your career. What are you going to be remembered for in terms of science?

**Rich:** Well, I think the things that I tried to focus on were mostly the mechanisms of how the immune system recognizes danger, how it recognizes non-self—it started off as a cellular question, became a molecular question during my personal evolution—and also how the microbial environment, particularly, in my case, streptococci and staphylococci have very cleverly found ways to subvert the immune system, and understanding how that happens. And, I guess, finally, understanding this complex of molecules that together are called the major


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histocompatibility complex, and they're called that because they are the molecules that govern the rejection of tissue grafts between two people. But they're also absolutely central to this whole process of recognizing self, rejecting non-self.

There are a number of molecules within that complex whose function has been very well understood for decades, and then there are a number of molecules that structurally look the same but didn't seem to have any kind of a role, and, in fact, were regarded, generally speaking, as just more so-called junk DNA. And we figured out what some of them can do that have very specialized role in host defenses, and since that initial discovery, I think the field has expanded so nobody's just talking about these things being junk DNA. They're actually specialized niches of defenses, and that was fun figuring that out.

**Williams:** Where is the field in that particular exploration? There's a long way to go or not?

**Rich:** I'd say there's obviously still important questions to be asked, but I wouldn't say there's a long way to go. I think the important thing to understand is the regulation of expression of some of these molecules and why they pop up and where they pop up. So there are a lot of questions that are still open, but I think the biggest questions about the role of the major histocompatibility complex generally are pretty well understood now.

**Williams:** Are there translational implications to your work?

**Rich:** Yeah, I think so, I mean particularly in terms of understanding now the molecular interactions between the major histocompatibility complex and the receptors on lymphocytes, on T-lymphocytes for that foreignness. There's a huge interest, a huge translational interest in that, and also for treatment of autoimmunity in things because now the focus is really on what you can do either to promote or subvert those recognitions, obviously subverting it in the case of autoimmunity and promoting it in the case of immune deficiencies.

**Williams:** In layman's terms, how would you describe all of this?

**Rich:** I think, first of all, that the immune system is everywhere. Every organ system and every major disease class has an element of inflammation and immunity involved in it, and it's gotten bigger and bigger, and that's why the textbook that I edit is so big. But at the heart of it, a great deal of it has to do with this process of molecular recognition, and if you were born with some problem where you can't do it right, that's a big problem; you live in a bubble. In fact, one of my co-editors, Dr. William Shearer, on my textbook, was the doctor for the "bubble boy," the famous "bubble boy" in Houston. He's one of the world's authority on immunodeficiencies. Another of my co-editors, Dr. Connie [Cornelia M.] Weyand at Stanford, is an authority in autoimmune diseases. And we all come


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together in this question of how you recognize something's wrong in the recognition of foreignness and what do you do about it.

**Williams:** Right, right. Good explanation. Let's talk about the AAI for a bit here.

**Rich:** Sure.

**Williams:** When did you become a member, do you recall?

**Rich:** I think 1974. That's pretty close to it, if that's not exactly correct. I think it's '74.

**Williams:** And over the years, in general, what has the organization meant to you?

**Rich:** Oh, it's been the heart of my professional life. It really has been. I've been associated with many, many, and I've had major administrative responsibilities for a good number of professional organizations, but the constant thing has been the AAI, and I've tried to serve it in a good number of different ways, on committees and with the advanced course in immunology. In fact, I had a wonderful time last evening visiting with Dr. Jon Sprent, who was the recipient of the Lifetime Achievement Award this year, because he and I were remembering the days at Colorado College when we worked together in the advanced course in immunology that the AAI was sponsoring, as the so-called gurus, and it was a fun task because the course ran for about a week, but the individual lecturers would fly in, give their lecture, and fly out, you know, and there would be several lectures a day. The AAI had had the insight to recognize that it would actually be useful to try to persuade a couple of guys who would stay around for the whole week and then be able to help the students in the course answer, in the evenings and late afternoons and things, questions that had come up and that were puzzling about how did this lecture relate to that lecture and things like that. So they were called the gurus, and Jon and I did that together for a couple of years, and it was a nice time.

**Williams:** Who were the students in the advanced course?

**Rich:** Well, there were a couple of kinds of students. They were either graduate students or postdocs, but there was also always a contingent, especially from the pharmaceutical industry, of people who were professionals but were getting into an area where they needed to know more immunology. So there was always a contingent of people who had had their doctoral degrees for a good number of years, but were now professionally being drawn to issues in immunology. As I say, most of them were from the pharmaceutical or biotech industry.

**Williams:** That might have been a rich interplay of interests and so forth.

**Rich:** It was, it was, and I think it was a good combination of beginners and people who were coming to immunology late but were experienced scientists.


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**Williams:** Right. And among the committees you served on in the AAI was Public Affairs for a while.

**Rich:** Yes, yes.

**Williams:** What was that like? What are your recollections of that?

**Rich:** Oh, I have lots of recollections about that. I started off as a member of that committee because I was interested in the political arena, and I think a year later I became chairman of that committee, and I served as chair for—I don't know how long. It was not term-limited at that time, so it was for a long time.

And I had the great good fortune of having a mentor who was at that time the AAI's public relations officer, Mr. Pat White. Pat had been previously a staff member on Capitol Hill and then had been in the office at OSTP [Office of Science and Technology Policy] at the White House, and so he knew the ropes in Washington politically, and he taught me. So I was the scientist, he was the politically connected guy, and we spent many, many hours walking Capitol Hill and also in OSTP in the Executive Office Building and things.

I testified before both the House and Senate Committees and things on a number of occasions, but I owe a great deal to Pat, who then went on to become basically the chief legislative person for the NIH under Francis Collins, and recently left the NIH to head a new private foundation called ACT for NIH, and so Pat and I have been—he's had a wonderfully successful career with a number of organizations, but he started that advocacy career at AAI.

**Williams:** You were chairman during the Clinton years, I guess. Is that right?

**Rich:** Yes, it was during the nineties mostly.

**Williams:** Yeah, yeah. And what was the tenor of the times like then?

**Rich:** Well, we were very much involved in the enthusiasm for the doubling of NIH, and so it was a fun time to be engaged on Capitol Hill because Congress—first of all, it worked—and there were legitimate strong heroes on the Hill that we could go and talk to, and so it was a giddy time, almost, in terms of—and I also learned how to talk to people who said, "Where do you think all this money comes from?" You know, people who were doubters but who had important positions. So there were lots of different people from different mindsets. But it was a time when—NIH's still very well thought of. It's never had a real falling-out with Congress, but somehow nobody has seen the enthusiasm for it, and partly because the champions have been less vocal than they were at the time when I was heading the committee.


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**Williams:** And the doubling occurred during that period of time, is that correct?

**Rich:** The doubling, actually during most of the time that I was chair, we were working on getting the doubling to occur, and then it was shortly thereafter that it actually did occur.

**Williams:** Which was in the George W. Bush administration.

**Rich:** Yes.

**Williams:** Right, right, right. Now, you also had a long association with *The Journal of Immunology* [(*The JI*]).

**Rich:** Yes.

**Williams:** Talk about that.

**Rich:** Well, *The JI* and I go back almost to the beginning of my research career, in the sense that I got started, obviously, as an ad hoc reviewer for papers. And after I'd done that for a while, I became an associate editor and then eventually deputy editor under Frank Fitch. And when Frank's term was finished, they asked me if I would take the job, and I said yes. At that time, I didn't realize that I would be both editor-in-chief of *The JI* and simultaneously dean of the School of Medicine, but it worked out well.

**Williams:** And you were quite an innovator, I believe, in bringing things to *The JI*.

**Rich:** Well, there were several things that I brought to *The JI* that at least have stood the test of some time that I think have made it—I tried to think about what could happen to *The JI* to make it more broadly interesting so people would not only look at their own particular small niche in *The JI*, but might be interested in broadly educating themselves about things in immunology. So I did three things I started, and they were all fun. They were the most fun parts of being the editor of *The JI*. I started something called "In This Issue," and for "In This Issue" what happened was that I asked that every review that had been ranked by someone in the top 10 percent of papers that they had reviewed for *The JI* be sent to me, and then from their abstracts I would pick out a small number, and it would be seven or eight per issue, that would be featured as "In This Issue," with an editorial paragraph about why we thought this was important. That was fun.

I also started something called "Brief Reviews," and I would choose the topics on that and invite the authors. So that was fun.

But probably the most fun thing was something called "Pillars of Immunology," and this was thinking that graduate students in particular today in immunology, or at least at that time, didn't know anything about the history of immunology that


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was more than about two years old. So what I decided to do was take papers that were at least fifteen years old and that had in one way or another changed the direction of the field, and then republish them, and they weren't necessarily papers that had been published initially in *The JI*. I mean, some were from *Nature*, some were from *Science*, some were from *Journal of Experimental Medicine*. It could come from anyplace. We would write to the original publisher, and they, in most cases, were flattered to grant permission for us to republish them—or reprint them, I should say, because we reprinted them in exactly the same format that they had been originally printed. The especially gratifying thing was that I became aware then, subsequently, that several graduate schools around the country have actually set up graduate courses for which the text material is the "Pillars In Immunology" series, where graduate students have as part of their coursework picking out some of these papers and going back and saying, "So why was this paper important?"

**Williams:** And that feature still continues?

**Rich:** All three of these continue today, and I think they've made the journal [*The Journal of Immunology*] a more interesting journal.

**Williams:** What about the covers?

**Rich:** The covers, I think I was the first person to change the cover with every issue, and I would say that I thought it was a good idea, but the covers—I would usually get three or four candidates that had been chosen by Kaylene Kenyon and her staff, and then they would give me three or four nominees for each issue. They had gone through and picked out color illustrations that would be on papers that would be published in that issue, in a particular issue, and so the cover illustration was always relevant to one of the papers that were published in the issue that was particularly attractive.

I should say, by the way, that the heart and soul of *The JI* remains Kaylene Kenyon. She was in her editorial role in *The JI* office when I started, and she's still there today. Everyone who's been an editor-in-chief working under her, I should say, has been well served.

**Williams:** How often does *The JI* appear?

**Rich:** Twice a month.

**Williams:** So that is a huge workload for—

**Rich:** It's a huge—it's one of the things where learning what you can delegate and what you can't is really, really essential. So what I could delegate to people who were more qualified than I, and especially delegating to deputy editors, the deputy editor role with *The JI* is a critically important role, because these are people who


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are chosen because they're recognized as world authorities in their own area of immunology, and if you have six to nine or nine or ten of them, you can pretty much cover the field. So they're the ones that are the primary decision-makers, and that takes the load of the major content of *The JI* off the shoulders of the editor-in-chief. But there are some things you can't delegate, and you have to be willing to do those. Some of them are fun, like the ones I just talked about, the innovative things that are looking for the very best stuff, and some of them are not so fun. You can't delegate research misconduct, you know. The editor-in-chief sort of has to deal with that.

**Williams:** Did you have instances of real problems during the time that you were—

**Rich:** Sure. And I think one of the things that also was accomplished during my editorship was, together with Michele Hogan—and Michele was critically important in this job—was developing a formalized process for how we deal with allegations of misconduct so that when the allegations came in, we weren't just sort of trying things that hadn't been well thought out. We had appropriate legal counsel, we had a committee structure, and I think we knew what we were doing.

**Williams:** And was your emphasis on pre-publication or post-publication?

**Rich:** At that time, it was mostly post-publication, which is obviously much more difficult because then you're talking about retractions. I'd say, in talking to my successors, as the process of forensic analysis of figures has become really feasible on a case-by-case basis, it's become increasingly pre-publication, but we didn't have that capability when I was editor-in-chief, and so usually the things that came to our attention were post-publication.

**Williams:** Oh, wow. I read one article from the newsletter about the transition from Frank Fitch to yourself, and you together were talking about the journal and I was struck by how much data you were collecting in terms of readership and so forth. It was quite impressive that you were—

**Rich:** I would say that it's mostly the office's collecting. That's where Kaylene and her crew have been so good is to let us know who is reading it, who the subscribers really were, and particularly lots of data on times to publication, how long it sits there, how long it sits here, and huge amounts of data.

We very much formalized during my term about the process of becoming an associate editor, because people who are on the rise in their careers in immunology would really love to be an associate editor of *The Journal of Immunology*. It's obviously one of those stars on your CV that comes to the attention of your chairman and says this person's a comer. But it had been a semi—I don't want to say good ol' boys, but not too far from that club, and a little bit squeaky wheel. And we put in some criteria, particularly relating to the frequency with which you had been invited as an ad hoc reviewer and the


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timeliness with which you completed the job and the absence of any bad reviews. Those were our three criteria. The latter didn't happen too often; happened occasionally. The former two were very helpful, because if we had not been using you just because we knew you and we liked you, but you hadn't been recommended as an ad hoc reviewer, you're probably not going to get asked to be an associate editor. And the killer for you was when as an ad hoc reviewer you were late. So I advised people when I was editor-in-chief, "These are the things you need to pay attention to if you have desires to become an associate editor," and it worked.

**Williams:** During your time, too, wasn't there the change to digital submission of—

**Rich:** Yes, yes. And, in fact, not only was there digital submission, but it was during my editorship that we digitized—I shouldn't say "we"; again, it was "they" at the office. And particularly Michele, both Michele and Kaylene had a huge role in this, digitized the entire history of the journal back to the first issue.

**Williams:** And at what point was it also available online?

**Rich:** Pretty much from the start of—I mean, because that happened before the whole history was digitized, before this, so it became—I've forgotten exactly when it was, but it was—

**Williams:** Before your time.

**Rich:** It was during my time.

**Williams:** Somewhere I picked up that you had sort of two focuses. One was the quality of the content, and then the other was this publication process which you've just been describing. Those were sort of the two prongs.

**Rich:** Yeah. I think you have to—I mean, more and more, and we were able to substantially bring down the time to publication, and that's something that authors care a great deal about. I mean, what they don't want is to have a paper submitted and then not hear anything for three months, and it used to be that way. It speeded up a whole lot when all the communications between editors became digital too. So when email took over the world, we didn't have to rely on FedEx submissions and FedEx between everything. That was relatively fast, but you can take substantial time off by doing everything electronically.

**Williams:** Right, right, right. In '99, you got the Distinguished Service Award from the AAI.

**Rich:** A huge honor. I was stunned and extremely grateful.

**Williams:** And that preceded your editorship of *The JI*.


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**Rich:** No, that was after it.

**Williams:** Oh, I'm sorry.

**Rich:** No, it was not '99. I'm sorry. It was, I think, 2008 or something.

**Williams:** That was the Lifetime Achievement Award.

**Rich:** Oh, I'm sorry, okay. So what was '99?

**Williams:** It was the Service Award, Distinguished Service.

**Rich:** Yes, that was because of my service—I'm sorry. That was due to my service as chair of the Public Affairs Committee.

**Williams:** Oh, really? Uh-huh. So you did exceptional work in that Public Affairs Committee I—

**Rich:** I would say Pat and I did exceptional work.

**Williams:** Because increasingly that became an important element.

**Rich:** Well, we could take credit for doubling the NIH, maybe. [laughs] I mean, I'm being facetious, but it happened on our watch; I mean the decisions were made.

**Williams:** Right, right. And today, in today's world, it's ever more critical.

**Rich:** And people are talking about doubling again. They're beginning, at least, to talk about it. I don't see any life in it at the moment, but there are some members of Congress who think it's time for it to happen again, so obviously it's time for the AAI Public Affairs Committee to be talking to those folks.

**Williams:** Right, right. So tell me about your reception of the Lifetime Achievement Award.

**Rich:** Well, that was the one that was when I said I was humbled and stunned, because that says something about accomplishments in many different domains. When I got the call, it was nothing that you've been formally nominated about. It comes out of the blue, literally, by the council. So I got a call from Michele one day saying, "I have something I want to tell you." I almost fell out of my chair, and then I was so happy. It was so nice.

**Williams:** What was it like at the time you actually received it?

**Rich:** I came here and it was a ceremony. I didn't have something funny like Jon Sprent had for his reception of the award, but my colleagues at UAB gave me a very nice


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reception during the meeting, and they invited lots of people from the AAI and things, so it was a nice affair.

**Williams:** Right. You have served on a tremendous number of editorial boards.

**Rich:** Quite a number, yes.

**Williams:** Can you generalize about the realm of scientific publication these days?

**Rich:** Well, first of all, the number of journals continues to explode, and people now think that it all ought to be free, which, of course, it can't be. Somebody has to pay the cost. But there has been this whole tension between free online versus who's going to pay for it, and that's still a tension. But more and more things are online and at basically no cost, or no cost at least after some period of embargo has gone by, which is the way *The JI* has been functioning. So the whole process of publication in science has changed dramatically in the past decade, and I think that certainly the digitization of the scientific literature is a huge plus. People don't go to libraries anymore to look up scientific articles. I mean, you do that at your desk, you can do it at home, you can do it at work, but you don't need to go to the library for it. So the scientific literature has undergone a total revolution.

**Williams:** What about the proliferation of journals?

**Rich:** Well, the problem is some of them are very good and some of them are simply gimmicks and not peer-reviewed, and, unfortunately, they all have a life online. So just because it's published doesn't mean it's any good, and that's a real problem, I think. People that are in the field understand the difference. I mean, we know what the good journals are. We know what the good peer-review processes are. But the whole point of all of this was to make the science more accessible to the public, and, unfortunately, the public doesn't have this discrimination of knowing which of the articles, which of the journals in immunology are the ones that have rigorous peer review and have gone through a real process and which of them are just there to make money for somebody.

**Williams:** Right. You also served as FASEB's [Federation of American Societies for Experimental Biology] president.

**Rich:** I was president of FASEB, yes.

**Williams:** Describe the connection, relationship between FASEB and the AAI.

**Rich:** Well, AAI is one of the six original members of FASEB. It was thought in the early twentieth century that there would be benefit in the various disciplines of the biological sciences to come together as a voice for purposes of collaboration, scientific collaboration, and increasingly FASEB has become especially important in the area of public affairs and communication of science to the public and to


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Congress, and working on ethics in science, working on all the kinds of things that bring us together as scientists. FASEB has grown and grown and grown, so now it has—I don't know the actual number of societies in FASEB now, but it's in the twenties. So it's a big organization. Some 130,000 people are members of societies that are members of FASEB.

**Williams:** Right. What thoughts do you have on the status of immunology today and where it's headed?

**Rich:** Well, I was once told by one of my first mentors, Charles Kirkpatrick, he said at the time I first went to work for him as a medical student—I had been interested in the process of differentiation of cells, how cells understood what they were supposed to do, and I had come to the independent notion that there was no organ system in the body better to study for that question than the immune system, because the immune system was so accessible by simply drawing blood, and you could understand how cells differentiated in a test tube. You couldn't do that with liver cells, at least at that time, or heart cells or kidney cells, but you could actually study it. So I went and talked to Dr. Kirkpatrick, and I said, "I'm interested in differentiation, and I wonder if the immune system—." He was a junior immunologist at that time at University of Kansas. I said, "I'm wondering whether immunology isn't the study in the area for me to be working on."

And he said, "Well, I don't really know about the future of immunology, but I'll tell you for sure it certainly has a present." And that phrase has stuck with me, except now I have become more and more convinced over my lifetime, my career in science, that the future has become increasingly brighter than the present. I mean, it's one of those fields where the most important questions are still out there to be answered, and it gets brighter and brighter every day as we realize how the immune system pervades practically everything about how people are healthy and how they get sick. So I don't think there's a better field, and I'm more convinced than my previous mentor was about the future. I think the future is glowing, provided that the resources are there for young people to enter it and spend their time working on their science rather than just writing grant applications.

**Williams:** But the issue of resources is huge.

**Rich:** The issue of resources is really big, and I think the tragedy right now is, first for all, it's very hard to get purely academic jobs, but, second of all, too quickly people end up running laboratories where their main job is raising money. They rely on their graduate students and their postdocs for doing science, but their job is writing grant applications. And that's a different kind of doing science from the time when I got started, at least, where doing science was more of the job and writing grants was a piece of the job but not the dominant piece.


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**Williams:** Are there any courses in the curricula at medical schools today on how to grant-write?

**Rich:** Not in medical schools, but there are in graduate schools. Medical students, by and large, are not mostly going into doing research, but graduate students, of course, are. So graduate students and postdocs now have a lot more formal education in terms—not necessarily not always in courses, but there is a lot of attention to trying to give students and postdocs help. And one of the things that I tried to do as a mentor when I had trainees in the laboratory was get them involved in that process. It certainly helped me, because they brought their ideas into the process, but I was able to rationalize that helping me by helping them, because they were learning the process of how you write a grant or how you review a paper, because I had them help me review papers and things, too, and that was learning the ropes of being a professional scientist as opposed to just being a graduate student.

**Williams:** Talk a little bit about your family and how being part of a family interconnects with being a scientist.

**Rich:** Well, none of our children are scientists, and I think the hard part is—there are three children, they all are very accomplished, we're extremely proud of all three of them, two daughters and a son. The eldest is an attorney, but she has three children now, so she's basically a mom, but her husband's an air force general, so the family's doing very well. My son is a musician, owns a music studio in Brooklyn. I talked with him yesterday. He has a group over from Japan that they're working on a CD for a couple of weeks on. So he's got a successful music studio. My daughter is in Chapel Hill, the youngest daughter, and she is the global director of contracting for a big multinational corporation. So they're in three very different areas, all have been accomplished, and none of them having anything to do with science.

**Williams:** Was music a big part of your family?

**Rich:** It was, it was. One of the most memorable times of my personal career was when I was a trainee, when I was a postdoc in Boston, and I was a member of the Tanglewood Festival Chorus of the Boston Symphony Orchestra. You go out to Tanglewood and sing in the summertime and sing with the Boston Symphony during the fall and winter season. So, for me, it was mostly vocal music, although I played the trombone too.

My son was also a student at Oberlin College, but I think he was partly attracted there, as was I, because of the Oberlin Conservatory of Music. He was a major of philosophy in the college, but he took courses in the conservatory, and he was playing the tuba at the time, then became a electric bass player when he started doing gigs in Manhattan, a very good bassist, and eventually decided the way to


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survive in a very, very difficult industry was to develop your own studio, so that's what he did.

**Williams:** You mentioned you had three or four siblings?

**Rich:** Four siblings.

**Williams:** What career paths did your brothers and sisters follow?

**Rich:** So my brother is a professor of constitutional law at Washburn University in Topeka. They mostly have lived in Kansas. My youngest sister has been a musician all her life, a very fine cellist, and she has been a high school music teacher. Another of my sisters was also a high school teacher. She's now retired. And my eldest sister followed a very Mennonite tradition in peace, in being involved in conflict resolution outside the area of—bringing defendants and the aggrieved victims of some sort of interaction together to try to resolve situations peacefully rather than going through with the judicial system, and it was with the blessing of the courts. I mean, the courts were very much involved and they would sometimes refer cases to her where they thought this is not really a judicial issue, it's a situation where conflict resolution is called for, sometimes, oftentimes in domestic issues. And she's retired now too.

**Williams:** Do you feel like the heart of Kansas ever left you?

**Rich:** No, no. Part of it never left me, and I will be going back to Kansas for a visit with my siblings next month. We get together at least annually. This will be the second time this year that we've all been together. We had a beloved uncle who had terminal cancer in January, but all of us came back for our uncle to spend some time with him. We came back separately, but we were all there. We all overlapped enough that we were able to get together. So it's a part of a very large, very loving family. I've been very lucky that way.

**Williams:** You've partially answered this question already, but I've been asking everyone. What do you do besides science? What kind of recreational activities do you have?

**Rich:** Oh, I do lots of things. My lifelong thing actually started from the days when I was a Boy Scout back in Kansas, and I spent my summers as a member of the staff of a regional Boy Scout camp, and I ended up being the director of the so-called waterfront, the swimming, canoeing, and rowing, all that kind of stuff. But along the way, I got involved as an Indian dancer because we entertained the Boy Scouts by dancing for them. The final campfire was we'd come and dance.

So I have had a lifelong passion for the art and culture of Native Americans. I have no Native American heritage personally, but I have a pretty good collection of Indian baskets and rugs and pottery and things like that, and we go with our


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whole family, all our grandchildren and everything, go to Santa Fe almost on an annual basis, and we go there at a time where we can indulge one of the other passions of my wife and me personally, which is the opera. We go to opera a lot, and Santa Fe opera is one of our favorites. But we also like to go for the annual Indian market when Indians come from all over particularly the Southwest, and there are hundreds of thousands of people in this small town of Santa Fe, New Mexico. We go, and I give each of the grandchildren a small grant of money, and they can go and deal with the—and it's all selling Indian stuff. But some of it, you see multi-thousand-dollar checks just crossing the card table for some of the things. Not from me, but from people who are serious collectors. It's sort of a zoo, but it's great fun.

I guess my other thing that I spend serious time at is food and wine. I have a substantial wine cellar and I like to cook. So that's pure recreation.

**Williams:** Have you kept up the Indian dancing?

**Rich:** Just on rare occasion for my grandchildren, and when I'm purely out socializing with my wife and we're dancing, she says I'm still Indian dancing. [laughs]

**Williams:** Do you have a full Indian regalia when you—

**Rich:** I did, and I still have a good bit of it. One of the things I treasure every day are my beaded moccasins, which I have out in a place that they're displayed, and then I have various things displayed around, so that my moccasins are my favorite.

**Williams:** Good. Anything else you want to say in terms of this historical record?

**Rich:** Well, you know, I saw that question, and I sort of thought I'd just share as a sort of conclusion, a couple of the things that I have thought have been the guideposts of my own career sort of in developing leadership, a few key words that I use, and I guess the first one was simply integrity, that people know that when you say something, they can trust you. And the second one was about promises. Be careful when you make them, and then when you make them, keep them. And another was diligence in the sense that when you're asked to do something and you accept the task, be sure you deliver and deliver on time. Always get it in on time.

And then I guess one of the most important is resilience, because there are going to be serious disappointments along the way for anybody who has a career both—it doesn't matter whether it's simply in research or whether it's in any other kind of professional thing, there are going to be some real setbacks. And if the setbacks really set you back, it's a real disadvantage. If the setbacks set you back for a day or two and then you're up and going again, that counts a lot.


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And I guess the last one is always remember the Golden Rule. It trumps everything. Do unto others as you would have them do unto you. And that was the guidepost of my family when we were growing up and it's my guidepost today.

**Williams:** Thank you, Dr. Rich.

**Rich:** Thank you.

[End of interview]


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