The American Association of Immunologists Oral History Project

Transcript

Frank W. Fitch, M.D., Ph.D.
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Williams: This is an interview with Dr. Frank W. Fitch for The American Association of Immunologists Centennial Oral History Project. Dr. Fitch is a professor emeritus of the Department of Pathology and former director of the

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Stroger Hospital it is now. It was a snowy, stormy day in Chicago, and that part of the city didn't seem so attractive. When I arrived at the University of Chicago campus, here was these gothic structures, and I was impressed by the place. A week or so later, I got an acceptance, so I came to the University of Chicago.

I didn't know what I wanted to do as far as medical school was concerned, what medical practice. I'd already gotten interested in science. My old professor at Monmouth participated in a course in biological sciences in marine biology at Woods Hole at the Marine Biological Institute there, so he participated in teaching of the course and would take two students along to sort of do—if we wanted research, we could attend some of the classes. It seemed like a good way to spend six weeks in the summer.

So I got involved in doing research there. He had been interested in tapeworms in mice for some reason—*Hymenolepis nana*. It has an interesting life history. Eggs have to be eaten by beetles, the larvae developed, then the mice eat the larvae, and the larvae mature into worms. But how the eggs got hatched in the beetles was unknown, so we spent five of those six weeks trying to figure that out and trying enzymes, trying this, trying that, trying the other.

Then finally it dawned on me, these eggs are pretty big and the beetles are pretty small, maybe they chew them. So I was able to take a pin and crack the egg and, lo and behold, the larvae swam out. I think we concluded that that was the way that the lifecycle of the *Hymenolepis nana* developed. So that success sort of helped me out.

Now, in those days, the first two years of medical school were three quarters. You had the summer quarter off. The first courses were biochemistry and physiology and I've forgotten what all else, but they were mainly factual courses. You had to sort of just learn things. Then we got into pathology, which was disease. Well, this meant more to me than merely remembering the Krebs cycle or any of that sort of stuff.

There was a unique person, Paul Cannon, who was chairman of the Department of Pathology. I think he met with the class two times, and other faculty then were responsible for teaching. The first thing he said when he went into the class was, "The invention of the printing press made the lecture obsolete. You can learn all the facts from the books. The really interesting thing is how the facts are arrived at, what are the limitations of those facts, and how do all these facts mix together to end up either health, disease."

So the course was organized in three discussion sections. The class was split up into three units, and a faculty member met with each unit and we had discussions. We were thrown out questions, and depending upon our responses, each of the sessions ended up far different. The smarter ones in the class recognized that, so we would get together and pool notes from each of the classes, and we came to

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understand much more realistically, I think, what medicine, what science, what discovery is all about.

The labs were run the same way. We had a little set of microscope slides, and accompanying it was a book containing histories of the patients from whom that tissue, that slide came. We were supposed to figure out how what we saw caused symptoms, why the symptoms developed. It was really quite exciting.

Also there was a museum which contained gross specimens, many of which were pretty gross in themselves, and we were encouraged, whenever there was an autopsy going on, to go see exactly how things were done. The professor I ended up with, working as a student with, a classmate of mine and I saw the green light on over the museum door, and that meant there was an autopsy going on in the room below. So we quickly went down. It turns out that the diener, that is, the hired help that was supposed to come in and assist during the autopsy, he somehow disappeared that day. So here was the professor alone with—we introduced ourselves. He knew us already, and he said, "Do you want to participate?"

This was as a second-year medical student. I said, "Sure." So we gowned up, and he gave me things to do. I had never done them before, but it was pretty obvious what should be done. That just began really a friendship and an approach that I just ended up following.

Do you want to ask me some questions at this point?

Williams: Yes. Yes, I think this would be a good point.

Fitch: Okay. Yes, so that's how I got started.

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spring, fall, and so I chose to take my autumn quarters off. I ended up assisting as a student assistant in the pathology course that I'd taken as a medical student. So I had a chance to sort of develop the hard facts and how do understandings of medicine work out, practicing with the students.

But that was only part-time, so I asked Dr. Wissler if he had any research that I could participate in. So, yes, he did, and so I engaged in my study of what was the effect of x-radiation, total body x-radiation, on the immune system. This was shortly after the World War II ended. The Manhattan Project was just down the street two blocks away, is where [Enrico] Fermi had the first controlled chain reaction, and there was a plaque there to show that. So there was a lot of interest in the effects of total body radiation on how the body responded in various ways, so we studied the effect on immune response.

There was a hematologist who ultimately became dean, Leon Jacobson, who had shown that if you lead-shield the spleen—he constructed a little lead container that you could take the spleen from the animal and put the spleen in this lead—while the animal was being radiated, the immune response did not suffer if that was the case. The question was how long would that protection last. So we would radiate with spleen shielding and then twenty-four hours later take the spleen out, and we thought that the immune response would be impaired, but it wasn't. So spleen shielding sort of helped.

I did some histological studies and we wrote a paper. Well, I wrote a paper. I told you earlier that a colleague and I at one stage in our careers, our graduate students would write a single-authored paper. Well, I think that Dr. Wissler was wanting me to get some practice writing, so I took the paper that I finished to Dr. Cannon, who was chairman of the department. Dr. Wissler said, "Why don't you see what he thinks about it over the weekend."

So I went to see Dr. Cannon and expected to be patted on the head and be told what a good paper it was. He tossed the paper at me and said, "What were you trying to say?" So I said in twenty-five words or less what the conclusions were, and he said, "Then why didn't you say that? If you keep things simple, you'll be much better off."

Well, I was sort of feeling better after that statement, still feeling pretty down. He said, "By the way, have you thought about what you want to do as a career?"

I said, "Well, gee, I'm more thinking about I would like to go into pathology. I would like to do pathology part-time, I'd like to teach, and I'd like to do research."

He said, "Oh, I think you'll find that intellectually quite rewarding. I think you'll enjoy it. On the other hand, I'm not sure you'll ever become wealthy, but you can probably count on a life of shabby gentility." So that's what we've had, not too

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shabby and oftentimes not too genteel, but still it's been a pretty good life. That, I think, convinced me that I should try to do science.

Williams: What led you to do both the M.D. and the Ph.D.?

Fitch: At that time, there was a real advantage to having both degrees in terms of academic opportunities. How I got there, let me deviate again. At that time in Illinois, to practice medicine, and pathologists had to have a medicine license, you had to take a rotating internship. Now rotating internships are virtually nonexistent, and there were few academic hospitals that had rotating internships. These were when straight medicine, straight surgery, straight OB/GYN, straight pedatrics, those were the begi0Tw 3.83 0gesoe3.83 0 Td (ihe)-6(be)4(g)10(i)-2(0Tw 3.8

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I think it was thirty-five students received Ph.D. degrees on the basis of work that was done if not exclusively in large part, in my laboratory, and I had only seven, I think, postdoctoral fellows during that time. Now, I suspect this may be as good a point as any to say why that was done. I'd not had much experience with postdocs until I went on the sabbatical, and there it became clear what should be the goal of a postdoctoral student. In my opinion, at least, as a graduate student you identify a field that you're interested in, you accomplish something, and you establish an area within that field that you're interested in. Postdoctoral training is a given now, and what should that postdoctoral training be? Well, it should be to branch out, to learn. Hopefully, you've sort of reached the end of something with the techniques that you had learned as a graduate student, and you should seek to branch out and learn something new and go to a lab where that expertise is expertise.

Now it's become customary for there to be more than one postdoctoral experience. Now, within that lab you're supposed to now narrow down your area, and the postdoc next to you is another area and another, and there's more of a competition, as I perceive it, between the postdocs. Each is trying to establish true independence in narrow an area, so I don't find that always a healthy environment.

On the other hand, if you have a couple of senior graduate students that are working on different areas and a new student comes in, there are certain unanswered questions that each of those previous graduate students have, or they need to get things finished up. But the new graduate student coming in needs to learn some of those basic techniques and see enough science going on to know where he or she wants to be. But the senior graduate student should be willing to teach the new student, because he's going to have two hands that are going to become increasingly skilled, and if he's as smart as I am, they both win. They both win.

So I would have probably as many as five or six graduate students working at various levels, but it was a very collegial environment. Also, these graduate students who in courses or in social interactions knew other graduate students in the institution, knew what new was going on, and graduate students are more interested, I think, in helping somebody else exploit this field or technique, and there is more communication among labs at the graduate student level than at the postdoc level. So that was sort of the general philosophy.

We first studied just antibody formation, and then we got involved in what controls the immune response. I mentioned Don Mosier

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Williams: I notice, Dr. Fitch, that in ’76 you become associate dean in the medical and graduate s

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Williams: And you enjoyed going into these areas?

Fitch: Yes, yes. Actually, my second sabbatical I took to convince myself or to provide evidence to me that either I wanted to go into administrative aspects of academia or I wanted to try to still be a scientist. I at that time had looked at chairmanship pathology positions elsewhere. I'd received at least one offer, which I turned down because I liked the students here better. But I wanted to know whether I was a scientist or an administrator.

That second sabbatical, I ended up with four publications for work that I had done in the lab myself. I had learned a number of new techniques, and it changed my scientific approach and it changed my intellectual approach. I was willing to be an administrator, but not have the major administrative responsibility as long as I could still have fun in the lab.

Williams: So directing the Ben May allows you to do that

Fitch: Yes. Dr. Charles Huggins, Nobel laureate, started the lab, and it was to support his research, but over the years he added faculty to it, with permission from the dean, primarily because he brought money with it. When he retired, he didn't totally retire. But this was sort of an anomaly. The group that had supported the lab had been made a charitable trust and undergone financial problems for several years, and when I was asked to become director, they indicated that they were willing to provide financial support again if they were convinced that it was appropriate.

So at that time there was sort of a perception that the laboratory should not be a laboratory. I had the name changed to Institute so that there would be independent scientists, and got permission from the dean to add some faculty members. But since it wasn't a department, this created some problems with existing departments, so I undertook to get agreement from the other departments that any faculty member that was elected to join the faculty of the Ben May Institute would have to have a joint appointment in another department, in one of the existing departments. So Ben May was like a department but not quite a department.

Now, two directors later it has become a department, but I think that this was an evolution that was sort of natural, based on the change that I instituted going from an independent laboratory to a laboratory where faculty members would have joint appointments and interact with other departments.

Williams: Would it be true to say that the main reason why there was the Ben May was because of the funding that was provided to that entity?

Fitch: Yes.

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Williams: So did that create any friction with other departments or not?

Fitch: No, because by this time the funding expectations had changed. There was support from the Ben May Charitable Trust, which probably supported all of Huggins' research, because research was not nearly as expensive in those days as it was inflation-adjusted now. I mean, it's much more expensive to do research on normalized dollars than it was in those days.

The faculty members were expected to get research grants, and I had some guarantees from the Dean's office, but the expectations that I had of incoming faculty were that I would give them support for one or two years, but then they would be on their own. I'm proud to say my first two faculty recruits, subsequently one was the director before he left for California, and the other one is still director. So I think we were able to choose very good people, and the approach that I took was probably wise.

Williams: You were director for nine years, I believe, and were still able to be an active scientist?

Fitch: Yes. I made sure of that.

Williams: You came to the university fifty-five years ago.

Fitch: Yes.

Williams: What words come to mind to describe what it's been like to be part of the university community?

Fitch: Fantastic. It's really been great. As a matter of fact, there is no medical school except in name. The organizational unit of the medical school is the Division of the Biological Sciences and the Pritzker School of Medicine. All of the faculty members are faculty members of the division, and the political unit is the division. There are four divisions in the university: Biological Sciences, Physical Sciences, Social Sciences, Humanities. And there are a lot of institutes. I'm not sure, and I don't want to go look, how many of those institutes have independent faculty appointments or how many of them have appointments jointly with the other unit, which I think makes for a much easier mix of things.

Williams: How has the university changed over those years?

Fitch: It's grown. It's become more complicated as life in general has become more complicated. Medical care is being done differently now than it was. I think that the university has appropriately adapted to the change, and it's, I think, doing quite well.

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Williams: Describe the change.

Fitch: Well, when I was a medical student, th

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I developed for administrative effectiveness, and it could be done either here or there.

My wife doesn't like Chicago winters, and so when it came my sixtieth birthday, she said I could either join her in Phoenix or I could stay in Chicago and enjoy the winters here. So we went to Arizona for the winters. First we only spent three months a couple of years. We liked it, bought a house. My wife says we spend six months and one day in Chicago and five months and twenty nine days in Phoenix, so we're Chicago residents, but we didn't keep very accurate count.

Five years as editor of the journal was, as I said before, in other words, either make a success of it or you can't do too much harm in five years, and hopefully the journal improves each time.

Williams: Since we're on that topic now, let's talk a little bit more about it. Were there certain changes you made in the journal, or what was it like?

Fitch: Well, I'm a firm believer in involving other people. Democracy, I think, is a marvelous idea. The problem is to make it work. I think the journal as it operates and as I hope it continues to operate, although I can understand why it will not, there's a so-called three-chair revie FiiiTd [(a)-0.0ssch(ee)]TJ 0 Tc 0 Tw 4.64 0 T64

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She said, “I very much doubt it.”

I tried to maintain an openness and reported responsibly to the annual meeting and the council.

Williams: So prior to your coming in, was there still the system with deputies and reviewers and so forth?

Fitch: Yes.

Williams: But you expanded the number or changed the players or what? What happened?

Fitch: Changed players mostly. Changed players to some extent, but tried to get geographic diversity, gender diversity, scientific diversity, and although you’ll have to ask others for a valid opinion, I was comfortable with what happened.

Williams: You left in ’03.

Fitch: Yes.

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the school kids are required to have some education in the Native culture. So each week there would be probably morning and noon school kids come to the museum for fieldtrips and then to do a little bit of craftwork. I got involved with that and enjoyed it tremendously.

Williams: As a docent?

Fitch: Yes. I don't like that word, because it's so damned pretentious. The nametag I had was "interpreter", and I was "Mr. F" to the kids. It was really fun to take them around.

A couple of structures have been reconstructed. There's an ancient what a pit house looked like, and then more of the cutaway type structure. It was fun to get the kids involved. "What do you think this is?"

Williams: In 1961 you became a member of AAI.

Fitch: Yes.

Williams: Then, of course, in '92-93 you were president of the organization. What thoughts do you have about your fifty-one years of association with the organization, changes over time, and whatnot?

Fitch: I think it's changed all for the better. The journal originally was—I can't remember when it was founded. The editor-in-chief at that time was located in New York. The journal then went to La Jolla, California, and that editor was there for about fourteen years, I think. Then it was decided to move it back to the main office to Bethesda [Maryland], because that editor was getting on in years. There was no editor visible there, or no replacement editor. The decision was made to go to the five-year cycle, have the office at the office of the AAI. So that required some doing.

I was actually associated with the journal for a long, long time as I first a reviewer and then one of the so-called section editors. Then because the first editor-in-chief was appointed when it moved to Bethesda, was located at NIH, and he had deputy editors to help with decisions, for convenience, chose all of them from NIH, except that led to conflict of interest. So he asked me to be deputy editor, responsible for all manuscripts that came from federal labs. So I gained experience as a deputy editor then. Then there was the deputy editor or editor-in-chief, and I was then following along.

The course of things was quite different. Computers were virtually nonexistent back in those days. Computer system was really, I think, probably first put in place in Bethesda when it was moved there. One of my biggest disappointments as editor-in-chief was I could not get online submission developed. It was because of the three-

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I was also a member of the Pathology Society, and my first attempt to get the members of the council of the Pathology Society elected met with failure because the old boys were not willing to get up their prerogative, except two years later it happened.

Williams: Then there was the issue of whether the organization, AAI, had a constitution or was going to be run by bylaws. I don't think that was resolved during your period, but—

Fitch: I don't either. I don't think it makes a big difference, but I think it ought to be workable, and I think that, as with many things, it's worthwhile to periodically review whatever the rulings are and adapt to the times.

Williams: Then I noticed in '93–'95, you were the AAI representative to the International Union of Immunologists.

Fitch: And I didn't do much there.

Williams: What about your contacts with international scientists? Have you had many?

Fitch: Oh, yes. That was probably the main thing that I gained from the two sabbatical years that I spent. I specifically chose Switzerland for several reasons. Number one, good science. Number two, good climate. Number three, central location so I could go visit other countries easily and meet with investigators.

My first sabbatical, I presented papers at—I guess it was three meetings, international meetings, one in Strasbourg, one in Stockholm, and one in Holland. I'd give a ten-minute presentation. I spent a great deal of time identifying meetings that would meet our travel plans.

Williams: Let's do some summary questions here, sort of.

Fitch: Yes.

Williams: Looking back over your career and your life, do you feel you made the right choices at critical times?

Fitch: Yes, yes, for reasons that I've already talked about. I mean, I've had a marvelous professional career. I've done what I wanted to do, teach, research, did a little bit of pathology.

Williams: Were there wrong turns or dead ends that you encountered?

Fitch: Fortunately, not. Not major enough to me to ponder over. I think the Boy Scout motto of being prepared has sort of helped avoid some.

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Williams: Which leads to my next question, which has been what do some scientists do for fun? What are their side pursuits? Now, you've talked about your being the interpreter in Arizona. Are there other things that have kept your interest?

Fitch: I have a variety of hobbies. Photography is one. Now I'm putting together year by year volumes of what we have done with the pictures that I can find. At least it keeps my wife happy. I've done woodworking in the past. There are many things around here I could show you that I have been involved with. We don't have enough room in this house to have the tools that I'd like to have to do that.

Williams: You mentioned a story about Chicago in the snow and said we'd come back to that.

Fitch: I think it was probably the year we got married. Wait a minute. I'm not sure what was that.

Williams: I've sort of forgotten now what it—but you said we'd come back to that. Okay. Anything left unsaid today?

Fitch: No, I don't think so. The only other thing that I—we haven't talked much about FASEB.

Williams: No, that's true.

Fitch: Do you have time?

Williams: Yes.

Fitch: My first involvement with FASEB was with the Public Affairs Committee, and I think that was when Gar Kaganowich had just been hired as public affairs director for the FASEB. My first meeting was one of the dire times. I mean, again we're at the point where the funding approval rating is single digits, low double digits. It was at that time the same, and it was mostly the committee mostly lamented what was going on.

So my question was, well, what the hell do we do about it? So the committee came up with more effective ways to interact with Congress. That was the biggest contribution I think I made to FASEB over the years, was to push for the greater involvement in education of the legislators, education of the public. That was part of my presidential address that I remember.

One of my activities that we haven't talked about, probably shouldn't, is the fact that I taught a course in the college for undergraduate students and they were mostly non-majors because it was sort of a general course. The first session I passed out a list of longevity in 1907 and 1977, I think it was. At the turn of the century, longevity was forty-seven years, average, females maybe forty-five,

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going up to seventies, eighties at the time. The incidence of heart disease, diabetes, and cancer had not changed. The incidences of the infectious diseases had changed, and that came about through an understanding really of immunology.

So one of the things I tried to get these non-biological major students to understand was biology is important, and I succeeded. My greatest success was one student who came to me in June. He was going to be a firewatcher out in California at one of the fire towers and wanted recommendations for six books to take along to read, based on what I thought that was I'd been access.

Williams: Good. Thank you very much. You've provided a lot of information. Good.

Fitch: Thank you.

[End of interview]

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