

AN INTERVIEW WITH DR. J. FRANKLIN YEAGER

BY STEPHEN P. STRICKLAND, PH.D.

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Introduction and Biographical Sketch

This interview with Dr. J. Franklin Yeager is one in a series of "oral histories" focusing primarily on the origins and development of the extramural programs -- most especially the grants programs -- of the National Institutes of Health, beginning with the establishment of the Division of Research Grants in 1946. Like Dr. Yeager, most of those interviewed had critical roles in the development of the extramural programs.

The grants program constituting the largest component of the NIH, the interviews also reflect judgments and perspectives about the impact of the grants programs on health and science.

Dr. Yeager came to the NIH in 1948 from the Department of Agriculture Research Station in Beltsville, Maryland where he had worked as a research entomologist. His first position at NIH was in the Division of Research Grants, where he served for over a year before going to the National Heart Institute to help develop its grants and training branch. He was Chief of that branch from 1951 until 1961, after which he returned to the "parent" NIH as Associate Director for extramural programs. Continuing after his retirement as a special consultant to NIH and other biomedical science research organizations, Dr. Yeager's perspective of the development of grant and training programs at NIH spans the agency's period of crucial development of the extramural program.

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WASHINGTON, D.C.

Interview by Stephen P. Strickland with Dr. J. Franklin Yeager

SS: Dr. Yeager, I'd like to start our interview by hearing how you came to the NIH and the Public Health Service. Then we can cover the grants program, and your overview of how the whole system works.

FY: As far as my own background goes, I was born in 1899; I'm 87 years old. I grew up in North and South Carolina. In 1924 I finished my bachelor's degree at Yale College. I then got a job teaching biology, physiology mainly, at New York University in New York City, in the Bronx. During this period, 1924 to 1929, I also carried on graduate studies and received an M.A. in physiology from Columbia University and a Ph.D. in zoology and physiology from New York University. In 1930 I left New York and went to Iowa State College in Ames, Iowa where I continued to teach physiology, while at the same time I was also doing research in physiology. I was at Ames until the beginning of 1936, at which time I came to the Beltsville Research Center in Maryland and continued to do research in insect physiology there for twelve years.

SS: Is Ames Iowa's state university?

FY: No, it was a small college at that time. I think it became a university some years later.

While I was at Beltsville doing research for the Department of Agriculture, I taught a lecture course in insect physiology at the University of Maryland at College Park for ten years. I stopped doing that when my vision started getting pretty bad. It got so bad that I couldn't even see what I was doing, microscopically, in my own research. NIH was about three years old at that time. Two men that I had known at Beltsville had gone to NIH and they knew my situation, and knew that NIH was looking for new people who had experience in research and teaching. I was invited over to NIH for an interview, and they decided to take me. That was 1948. I went into the NIH as an Executive Secretary in the Division of Research Grants to the Hematology and Physiology Study Sections. Toward the end of that year, the Heart Institute was established and I moved over into that. I was there until I retired in December of 1965. After that, I continued to do consultative jobs, some for NIH and some for universities in different parts of the country. Those lasted about seven more years, after which I decided to retire completely.

My wife has been in a nursing home for the past ten years. I go every day to read to her, and then come home. This may seem really monotonous, but it's really not, to me. I find every phase of life interesting, each in its own way.

SS: When you were at Yale, did you have any idea that you wanted to make research your career?

FY: No. Before I went to Yale, I was very much interested in English literature, so I was going to major in that. But my mind was influenced by a doctor. I used to spend a lot of time in the YMCA doing gymnastics and in the gym. One day the YMCA had a talk for the boys given by a doctor, and what he said was

very interesting to me. The next day I happened to see the doctor on the street. I stopped him and told him I'd heard his talk and that I was especially interested in the fact that he said he had a small laboratory next to his office, where he was studying amoeba. I said, "I've never looked through a microscope, and I've never seen an amoeba. Would you show me an amoeba through your microscope?" He put his arm around my shoulder and took me back to his office, and spent almost an hour showing me different species of amoeba and telling me about them. When I looked through the doctor's microscope, I saw what looked to me like a little bit of spit! Yet here was a creature just as much alive as I was, performing the same kind of biological functions a human animal performs, except maybe thinking. I wasn't sure whether an amoeba did any thinking or not at the time! So that experience had a great influence on me. I was very excited to know more about living creatures. So when I went to Yale, I didn't major in English literature after all. I majored in biology.

SS: This episode happened when you were still in South Carolina?

FY: Yes, Greenville, South Carolina. I was born in Plymouth, North Carolina, which is, or at least was then, a stinky little town over on the shore -- I say stinky because there were a couple of paper mills there which smelled awful! From there my parents moved to Gastonia, North Carolina where we lived until I was about nine years old. Then we moved to Greenville, S.C. and that's where I met the doctor.

SS: Was it unusual for you to go up to Yale for college? Didn't most southerners in those days stay in their home states?

FY: Yes, it was unusual. The YMCA secretary in Greenville was like a second father to me -- in many ways more of a father figure than my own father was. He took me out to lunch one day close to the time when I was to finish high school, which ended at the tenth grade at that time. I had been planning to go to a small college for one year in Greenville called Furman University. He asked me, "What are you going to do after that?" I said, "I want to go to a big college." He said, "That's fine." He had gone to John Hopkins. So I wrote for catalogues from about a dozen big colleges, and the only one that said I didn't have to take Latin as a freshman was Yale! I hated Latin and was no good at languages, so I decided to go to Yale on that basis!

SS: What a great compliment to Yale!

FY: It was a great school, and I've always been grateful for the help I got from the people there.

SS: Let's talk about the National Institutes of Health and the grants program. You got there in 1948, and by that time the Division of Research Grants was established, and you had study sections?

FY: How far back do you know that story?

SS: I know about the transfer of the wartime contracts to the NIH, and the creation of the Division of Research Grants with Dr. Van Slyke and Dr. Allen helping.

FY: Surgeon General Dyer played a most important role in that.

SS: I know that is a fact, but I don't know to what extent.

FY: When these grants were transferred from the Office of Scientific Research and Development to the Public Health Service, Surgeon General Dyer was the one who decided to take them. He was the one who asked Van Slyke to put in half time administering these several grants. I got to know Van Slyke very well in later years, and know that he was one who never let grass grow under his feet! He not only administered those grants, but he and Dyer got money from Congress for an enlarged grants program. That's how it began to grow and build. Because it did, Ernest Allen also came to assist Van Slyke. That's how it got going.

SS: I am still unclear about Dr. Dyer's attitude about things. He must have had something of an entrepreneur in him, or else he wouldn't have taken the wartime contracts. Was he a real go-getter?

FY: I knew Dyer, but I didn't know him well personally. My impression of him wasn't particularly that of a "go-getter", but on the other hand he wasn't a "stand-backer" either. He was an intelligent man, and he saw the opportunity to take on a worthwhile program and did it.

SS: And what about Dr. Van Slyke?

FY: Van Slyke was chiefly responsible for the progress. He and Ernest Allen, with the backing of Dyer, were the ones who really created the organizational and philosophical basis for the extramural program as it has continued with some modifications up to the present time. They developed not only the organizational beginning of it, but they also developed the philosophy and attitude that have characterized it since then. Van Slyke and Ernest Allen together made that program. Dyer backed them, but he wasn't the one who did it.

SS: He sort of created the conditions under which they could make it all happen?

FY: Yes. He created the conditions, picked Van Slyke and Allen to do it, and supported them.

SS: Who else in the Public Health Service played a major part in building the extramural program?

FY: When I took over as Executive Secretary to the Hematology and Physiology Study Sections, the sections had been handled by members of the Public Health Service. Dr. Ken Endicott had been the Executive Secretary to Hematology and Dr. Henry Sebrell to the Physiology Study Section. When I took over these two sections, I was either the fifth or sixth Executive Secretary to come into the NIH. Dr. Irving Fuhr and I came in at the same time. I replaced Ken Endicott in Hematology and in Physiology I replaced Dr. Sebrell. I thought it was a matter of courtesy to ask them for any advice they could give me, and Ken Endicott received me very warmly and was most helpful for years. Dr. Sebrell wasn't very interested in giving advice from his experience. He wasn't interested in that study section in the first place -- he said that his assignment to the study section was something he had to do. So I left him alone. Later we became better acquainted and we ultimately quite friendly.

SS: I don't have a clear impression about him either.

FY: Dr. Sebrell's personality was utterly different from that of Ken Endicott. Sebrell was not easy to get to know, in my experience. Later when he had gone

to Europe and was running a program there, our relationship did become friendly. He was Director at NIH before he went to Europe. He did fine work, although I would say the program would have gone on with or without him, but I shouldn't speak because I don't know the details well enough of just what he did and did not do. I suspect that he contributed more than I think he did.

Another person who played a very important role in the development of the NIH programs was Dr. James Shannon.

SS: Wasn't he even a chairman of a study section in the early days?

FY: When I first knew Jim Shannon he had come into the Heart Institute as the director of its intramural program, in whose creation he played a major role. From there I'm not sure whether he served as an executive secretary to a study section or not. But not too long after that he went into the office of the Director of NIH as (I think) Associate Director. Later, of course, he became Director. Jim was a very forceful person, and he was influential to a great extent in the further development of the NIH.

SS: Would you talk a little bit about how the study sections operated? How did you, as an executive secretary, make sure that new work in the field -- i.e. hematology -- was taken into consideration when you had your review of proposals?

FY: When I started, Van Slyke was in charge of the extramural program as it existed at that time. Dr. Fuhr and I were the fifth and sixth Executive Secretaries of study sections. Ralph Meader had been in the Cancer Institute, and I think he was handling the Cancer Study Section. I became Executive Secretary to two, and Dr. Fuhr to more than one, so there were more than six sections. I did not know anything about the operations of the study sections when I got there. The six executive secretaries would periodically meet together, and much of their conversation consisted of belly-aching about three women who ran their lives for them -- one was Mrs. Mary Ellis Beecher, one was Miss Janet Roy, and the other was Miss Katherine Parent. Van Slyke had brought in these three women to help in the administration of the grants program and they sort of bossed the executive secretaries around! Janet Roy, for example, would come to me with a letter I'd written and say, "You can't send this letter like this. You've got to do it differently." And she would tell me how it should be done. This kind of supervision burned these fellows up; but I didn't mind it, because I needed that type of instruction. I was glad to have someone tell me how to do those things. Most of the others resented it.

As Executive Secretaries, we used to visit people in the universities occasionally and talk with them, which would result in grant applications coming in. When the applications came in to a study section at that time there were no councils that they had to go to, not in the way that later became the system. The executive secretary of the study section took care of the whole thing. At that time the Division of Research Grants awarded those grants that were approved by the study section. So the executive secretary and the study section were completely responsible for reviewing grants and approving them for funding. The DRG made awards based on what the study sections had determined. Later the councils were created and all study section approvals then had to go to the council which more or less got the final say on which applications would be awarded. Before the councils, the study sections and executive secretaries had been pretty aggressive in their approach of getting applications in and getting them reviewed properly, and awarding the grants. When the system changed and

the councils got the final say-so, it really "took the wind out of the sails" of the study sections, and they changed. Instead of being constructive in their approach and building the grants program further, they became very critical in their review of applications. They considered then that their job now was to see that what went to the council was really all right. They became especially critical in their review of the applications.

SS: I take it by that time the number of applications coming in had actually built up quite a lot.

FY: Yes, that's right.

SS: So you didn't need to be as aggressive in encouraging applications as years before when the program was newer.

FY: Later the encouragement of applications was even greater on the part of the Institute staffs. When the National Heart Institute was established, about a year after I went to NIH, Van Slyke was made the first director. Ernest Allen remained behind as the director of the Division of Research Grants. Van Slyke was always active. Although there was a legal basis for the establishment of the council, and money available to pay the members, nobody had been appointed. Van Slyke didn't wait for the council to be created. He went to the Cardiovascular Study Section and said, "Will you act as the council for the time being on this?"

When the Heart Institute was created, as was the case with other Institutes, those applications that were in other areas that had enough of a cardiovascular aspect to them were removed and put in the Heart Institute. That turned out to be helpful because when Van Slyke went to the Cardiovascular Study Section with these applications, the study section found itself overwhelmed with applications, so that instead of having its usual one-day meeting, it had to have a three-day meeting. Thus Van Slyke got the Institute program going.

SS: What about the creation of new study sections? How did that happen? Did you have some influence in that as an executive secretary?

FY: No, that was done by the director of the NIH, as new sections were needed. And if the need for any dropped, they were done away with. For example, when I went there, I became the exec. sec. to Hematology and Physiology, but also, for a short time, to Cardiovascular and Mental Health. Cardiovascular got its own executive secretary, Dr. Eleanor Darby, after I had only been part of it for two or three meetings, and the Mental Health Study Section was abolished soon after that.

SS: How would you characterize the growth of applications, and how did you handle the subsequent work load on the study sections?

FY: When I was working with the study sections they were not as loaded down with applications as much as they later became. I went into the Heart Institute and one of the first jobs that Van Slyke had me do there was to spread knowledge of the NIH programs around the United States, visit the universities and medical schools and talk up the grants program. I was assigned to the West Coast, so I spent several weeks visiting the various universities and medical schools all up and down the West Coast, and applications came in as a result.

SS: When you went to the Heart Institute, what positions did you hold there?

FY: When the Heart Institute was created and Van Slyke became Director, there was an intramural and extramural program, as there is now. Van Slyke brought Dr. Murray Brown to direct the extramural part, and I came to assist him. Murray was there for two years before he resigned. Murray was a very interesting person. Often he was very difficult to deal with. Once I was in an elevator after he retired and somebody asked me where he was. I said, "He's retired." The man asked me, "Did you know him?" and I said, "Oh, yes. Very well; I worked under him." He said, "Well what did you think of him?" and I said, "I'm very much indebted to Murray." When he asked me why, I told him, "Murray gave me two years in which to exercise self control, and I've found this very valuable." He thought I was kidding, but I wasn't! Murray and I became good friends, but I had to learn how to react to him and deal with him, and I did learn a lot from him.

When he left I took his position and served there until I retired at the end of 1965.

SS: So you were an associate director in charge of Extramural Programs at the Heart Institute for a long time?

FY: Yes, from 1950 until '65.

SS: At some point in the '50s and '60s, there seemed to be regular pressure from Congress and medical research lobbyists to do more. How did the extramural program people react to that?

FY: They didn't like it. I had someone from Congress, who was visiting at NIH, come and talk with me, asking me what I thought and finding out what I did. When we got around to the subject I said, "I think this program would be a lot better off if Congress didn't meddle in it directly like this." He listened to me and didn't seem resentful. The general attitude was that Congress was starting to mess things up.

SS: Most people will say that pressure didn't really change the quality.

FY: It didn't change the quality, it just made the operation more complicated.

SS: What about pressure for contract research?

FY: I didn't have much to do with contracts. When the contract program began to get big, someone was put in charge of it. By that time the grants program had gotten a little bit complicated; we were making various kinds of grants: regular research grants; special research grants; training grants; center grants supporting whole research centers, etc. Some of these grants being made, for example, to support research centers, were big grants, and we had considerable pressure about these being called grants instead of contracts. The people who were receiving them of course preferred to have them as grants. We tried to handle those particular grants on a "semi-contract" basis; we kept them as grants, but we kept a continuous and firm association with the way they were being used, as you would in the case of a contract. Nevertheless, they had the freedom of a grant.

SS: Did you feel, as Director of the Extramural Program, reviewing grants from all over the country, talking with people on study sections and councils, that you had almost a better perspective on where research was going than scientists working in their labs?

FY: In some respects, yes; I had a better overall perspective.

SS: Did you therefore suggest new areas or new programs and emphases?

FY: Yes. I spent a good bit of time visiting universities and medical labs talking with the researchers and encouraging them to apply for grants in certain areas.

When Dr. Murray Goldstein, and later Dr. Jerome Green, came into the NIH, they first served in the Heart Institute as my assistants in handling the grants program. At that time, the Heart Institute made undergraduate training grants, one to each medical school to help the training of predoctoral medical students in cardiovascular matters, and thereby encourage them to come into the field of heart research. I used to visit the various schools and talk with the directors. After several of them had said to me, "When is the Heart Institute going to get us together for a meeting?", I decided that maybe I'd better do something. So I wrote a letter to the last director who'd asked me about it, and sent copies to all of the other program directors, raising the question that he had raised about getting together for a meeting. I got replies from every one of them except four. All of them wanted to get together, except these four. So I called the four and talked with them, and found that the reason they didn't agree was because they were afraid that if the Heart Institute got them together, it would boss them around and try to tell them what to do. I assured them this was not the case, so they changed their minds and we wound up with full agreement. Dr. George Birch was on a study section and on the council, so we had become friends, and I knew him well enough that I felt I could ask him to be chairman of a planning committee to get the meetings organized.

SS: And what was the subject area?

FY: It was cardiovascular but it was tied to undergraduate training grants. Each medical school had a grant, and there was a man assigned to handle that program in that school; he was the Undergraduate Training Grant Program Director. George Birch was one of them. He agreed to chair the initial planning committee and I then invited about six other program directors from the committee. They met in New Orleans and established the basis for continuing meetings of program directors, and for a continuing planning committee to arrange these meetings. In that way, the annual meetings of all the program directors in the medical schools began, with their own planning committee. Each member would serve for two or three years and then drop off and another would fill his place, so it was a changing committee which represented the medical school group pretty well.

When I went down to see George to meet with this group, I talked to Murray Goldstein who had recently come into the Heart Institute and I said, "Murray, they don't know what they want to do. It's up to us. We've got to go down there and present them with a plan. They can take it or leave it, but at least there will be a plan to start with." So we did just that, and sure enough, nobody had anything else in particular in mind, so they accepted our plan with a few modifications, and that was the basis on which it got going. These program directors would meet every year. Murray and Jerry Green and I met with them, and Eleanor Darby did too for awhile. The program directors met in different parts of the country and through their planning committees would set their own agendas. They would discuss the kinds of problems that they were dealing with in the medical schools, and they told us that this was very helpful; we always had 96 or 97%

attendance. This went on for fifteen years, I believe, until Congress stopped appropriating money for training grants. I had already retired when this happened, and the group was going to have its last meeting in Pasadena. I was asked if I would go there and give them a talk on the history of the program. So I went out and gave a talk on the history of the program, and that was the end of it.

SS: It sounds like you not only helped bring it into being, but in fact gave focus to it. This is a wonderful illustration of your sitting in a place where you could see the overall needs, and therefore having to be a leader.

FY: That's right; somebody had to do it. I found these meetings very stimulating, and so did they, or they wouldn't have come.

When Murray Goldstein came in he was not an M.D., but an osteopathic physician. He's a very bright man, and he stood at the top of the examination list and NIH was told they had to place him. The executive officer at the Heart Institute called me on a Sunday at home and asked if I'd be interested in taking this osteopathic physician who scored at the top. I said yes, so Murray came to see me and I said, "Dr. Goldstein, from what you say, you want to be in something that involves clinical activity. Why don't you shop around and see what's in the intramural program and see if you find something you like there. If you don't, come back and we'll take you on here." In about a week he came back and said he wanted to join us. Murray contributed greatly to the program in the Heart Institute, and he is now Director of the Neurology Institute.

SS: That's great.

FY: Dr. Jerry Green also contributed to the Heart Institute's extramural program to an important degree. What I retired Jerry took my place as Associate Director in charge of the extramural programs. More recently he has been made Director of the Division of Research Grants, a critically important position.

SS: Yes, it is, and I do intend to interview Dr. Green.

FY: I should mention also that Mrs. Mary Lasker was a most important factor in getting Congress to appropriate money for the National Heart Institute. She was on the Heart Council for many years, and still may be. In Texas she was responsible for the establishment of a research center there, and she's been very active in this field.

SS: She has been one of the great "outside" lobbyists for medical research, and sometimes my impression is that Dr. Shannon thought she was more of a nuisance than a help.

FY: She may have appeared that way to him. Shannon is a very forceful man himself, and although Mary Lasker doesn't come across like a hurricane, she isn't easily pushed around. At the Heart Institute we considered her a great help.

SS: Did she ever have any particular ideas for which she urged you to try to find people to work?

FY: I don't remember her doing that, no. She didn't throw her weight around in that sense.

SS: In the Heart Institute, who were the major figures in the 15 or so years you were there?

FY: Of the utmost importance, I think, was Dr. C.J. Van Slyke, seconded at the beginning by Dr. Ernest Allen. Of course, Dr. Shannon, who came into the Heart Institute and then went on, was a most forceful and effective administrator. From the study section standpoint, I would say Ken Endicott; he had considerable influence, but in a different way. Surgeon General Dyer was a big influence at the beginning. Without him that kind of progress might not have happened.

SS: Dr. Yeager, how do you think of the whole enterprise of NIH now? With the initiatives coming from within sometimes and from outside sometimes, is this a system that's good for all time?

FY: I think it's a good system from several standpoints. The people administering the system have, and still do, interact with people in the country and people in the universities and medical schools have their impact upon the system; that is an interaction that I think is healthy. I spent a lot of my time traveling around to the universities and medical schools talking with people and I think it was very useful to everyone involved.

SS: Are there any aspects of it that you think might be changed or modified?

FY: Since I retired in 1965, the way the NIH runs now is very different. When I retired changes were beginning to occur to make NIH operate somewhat differently from what it had been doing when I was there. I am not in touch with NIH in that respect. Nevertheless, I think it's the same pie; it's just sliced differently.

Within the Heart Institute, the different areas of research are represented now by different parts of the staff of the Institute in a way that did not happen when I was there. I, for example, had to deal with all the various phases of cardiovascular research extramurally. When I retired, one part of the extramural staff was being assigned to one particular cardiovascular teaching and research area, another part was assigned to another area, etc., and there was someone heading each of those groups. That's different from the way it was when I was there, and I believe that's the way it's run now, with these parts almost independent of each other. Murray Goldstein and Jerry Green would be in good positions to tell you more.

SS: This has been very helpful, Dr. Yeager. Thank you for your time.

CURRICULUM VITAE

Name: J(ames) Franklin Yeager

Date and Place of Birth: April 9, 1899; Plymouth, North Carolina

Marital status: Married 1920, one child

Education:

- 1924 - Ph.B., Yale University
- 1926 - A.M., Columbia University
- 1929 - Ph.D., Zoology, New York University

Brief Chronology of Employment

- 1924 - 1929: Instructor in Physiology, New York University
- 1929 - 1930: Assistant Professor of Physiology, New York University
- 1930 - 1931: Assistant Professor of Physiology, Iowa State College
- 1931 - 1935: Associate Professor of Zoology and Entomology, Iowa State College, Ames, Iowa
- 1935 - 1948: Entomologist, Department of Agriculture, Beltsville, Md.
- 1948 - 1949: Research Analyst, Division of Research Grants, NIH
- 1949 - 1950: Public Health Analyst, Grants and Training Branch, National Heart Institute, NIH, Bethesda, Md.
- 1951 - 1961: Chief, Grants and Training Branch, NHI, NIH
- 1961 - 1965: Associate Director for Extramural Programs, NHI, NIH
- 1966 For several years special consultant to NIH and several other organizations.

Societies and Memberships:

- American Society for the Advancement of Science
- American Heart Association
- Washington Academy of Sciences

Research Interests:

Insect, general and comparative physiology, science administration.