

Dr. Anthony S. Fauci, Director of the National Institute of Allergy and Infectious Disease  
National Institutes of Health, Bethesda, Maryland

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The subject of this interview is Dr. Fauci's reflections on the Clinical Associates Program

Interviewer: Melissa Klein

Klein: Dr. Fauci, I will be recording this interview. Are you comfortable with this?

Fauci: Yes.

Klein: I had a chance to read over your interview with Dr. Harden for the AIDS history project and in it you describe the circumstances which brought you to the NIH. Here is a copy of it. Could you please discuss this in further detail?

Fauci: I was at Cornell University Medical College and at the time, it was the beginnings of the acceleration of the Vietnam War. The doctor draft was still on at this time even though I do not believe the regular conscription was still going on. As I remember, a recruiter came to Cornell and told us something we all ready knew. There were only two or three females in my class, and the recruiter addressed all the males and said in a very non-confrontative way, 'After you finish Medical School, every one of you except the two women will either be in the Air Force, the Army, the Navy or the Public Health Service. So what we would like you to do is to put your priority.' I knew that the NIH was at that time, and still is, a very desirable place to be from the standpoint of people wanting to go into academic medicine. If you look historically over the years the vast majority of leaders in biomedical research had some training, either a few years or many years, at the NIH. That was appealing to a lot of us so I put down as my first choice the United States Public Health Service, NIH. My second choice was the Navy. When the applications came out I would have probably gone into the Navy had I not been accepted to the NIH. I filled out my application for the Public Health Service and I came down to

the NIH for an interview. I remember in the springtime of my fourth year of medical school, I received a call from Dr. Sheldon Wolf, who became my mentor and my very good friend, offering me a position in the National Institute of Allergy and Infectious Diseases. I accepted the offer over the phone in the lobby of the New York Hospital, Cornell Medical Center. He asked me if I wanted the job, my beeper was going off, and I accepted the job over the phone. He asked me if I needed any time to think about it. I told him 'no' and that was it. I finished my medical school training. I did my internship and my residency and then I headed to the NIH. There is usually a two year advanced application.

Klein: If they were to have offered you a spot somewhere else would you have taken it?

Fauci: I probably would have taken it. Well, I cannot say for sure. The NIH really was my top choice. I probably would have taken the CDC. I think some of the other forms of alternative service, the Indian Health Service and so on, I would have probably opted to go into the Navy rather than do that.

Klein: I would think that now, with your focus with AIDS, that you would have considered the CDC more seriously and not just as a second choice to the NIH.

Fauci: I wanted to get basic bench experience. I wanted to use this opportunity for bench experience since I was fundamentally a clinician. That is where I wanted to go. In fact, I really did not want to make biomedical research my career. I wanted to be an academic physician. I wanted to go and get training at the NIH. I wanted to see if I had the aptitude or the liking for bench research so that I could ultimately come back to New York City, which is where I really wanted to go, and be at the Cornell Hospital Medical Center as full time staff physician doing part time research, part time clinical work. So I really was not thinking in terms of epidemiology or research. I either wanted to get a chance to see if I liked research so that I could ultimately come back and be a part time researcher. It never entered my mind for a moment that I would come down here and feel so

strongly and be so successful in research that I would actually wind up staying. Actually, I did not stay all the way through. I went here for three years in Dr. Wolf's program in a fellowship in Infectious Disease and Immunology. It was a joint program so that I got my boards both in Infectious Diseases and in Allergy and Immunology. The critical time came in the third year in my fellowship. The New York Hospital asked me to come back and to be Chief Resident in Medicine. After the Chief Residency, they wanted to offer me a faculty position. They wanted me to be a full time faculty member at the Cornell Medical Center. So I told Dr. Wolf what they offered me. He said that he would like to bring me back to the NIH as a full time Senior Investigator. I remember a conversation I had with him. I said, 'I really want to round off my clinical training. Although I like bench research, and I have obviously been very successful as a fellow, I want to crown off my clinical training. So if I do come back here, I would at least know that I was fully trained as a clinician.' So he said, 'Fine. Why don't you go up there, do your Chief Residency for a year and there will be a laboratory, a technician, space and resources waiting for you when you get back.' So that is exactly what I did. I was here from 68-71, I went to New York from 71-72, then in the summer of 72, I came down to the NIH as a Senior Investigator in the Laboratory of Clinical Investigation in NIAID, and I have been here ever since. So of the past thirty years, twenty-nine years I have spent here.

Klein: Are you still a Commissioned Officer?

Fauci: I just recently retired. It will be two years this summer. I loved the Service and liked being in it. However, I had been in it for 27 years and that is limit of accruing retirement benefits. So, once you hit 27 years you have maxed out on your retirement benefits. So I was advised by the personnel people that it would be to my advantage since I was planning to stay at the NIH for indefinite amount of time that I start a new retirement annuity. Namely, you can retire from the Public Health Service and you will always get that retirement pay when you retire but you can build up a

second retirement by going into SES. So in the summer of 1996, I retired from the Public Health Service having completed my 27 years and entered the Senior Executive Service.

Klein: In terms of the NIH, you applied to the NIAID.

Fauci: Right.

Klein: If they would have offered you a slot in the Heart Institute or any other Institute would you have taken it just to be at the NIH?

Fauci: The other possibility that I would have taken would have been in the Arthritis Institute. I was interested in learning immunology. That was one of the reasons I wanted to come down. I wanted to learn immunology either in the context of connective tissue diseases or in the context of infectious diseases. When I came down here, I was immediately struck and enamored of not only the institute at the clinical material, but particularly Dr. Sheldon Wolf. As I mentioned, he became my closest friend and he was the best man at my wedding. We took to each other immediately. If I had not been accepted at NIAID, and was accepted to the Arthritis Institute I probably would have done that to get the immunology training. That would have been a disappointment for me because once I interviewed down here, it was very clear that I wanted to work in the NIAID.

Klein: Now, why not Vietnam?

Fauci: I had no problem with going to Vietnam. I know it is easy to say once you have not been there but that is actually one of the reasons why I have a little bit of resentment for the term "yellow beret". I wanted to learn as much as could about research. If it turned out that I could not get into the NIH or into the CDC, I would have had no problem with going to Vietnam at all.

Klein: You mentioned that there were only two or three women in you medical school class. What about female Clinical Associates? My research indicates that there were very few. Is this because there was an unspoken

rule that these slots were to be saved for the men because women could not be drafted?

Fauci: That is not the case at all. Absolutely not, I know that because a couple of years after I came I was very much involved in the choosing of the Clinical Associates. There was never any 'saving it for the men' at all. The problem was at the time there were so few women in medical schools and even more importantly, there were so few women who were in medical schools who wanted to go into research. Most of the women who went into medical school felt that they were finally able to break the barrier of getting in and they wanted to go out and practice medicine. We had almost no women applicants. In fact, in the first couple years that I was here we had zero female applicants. So it was not a question of saving it for anybody, there were just no women who applied.

Klein: Dr. Frederickson mentioned that in the Heart Institute they had meetings for the CAs called Forums where all the CAs would come to his house and share their work and it was a social outlet for the Associates. Was there anything comparable to this during your time here as a CA?

Fauci: We did not have a formal social outlet but we had a very clear series of seminars where we would discuss every week a different clinical associate's work. Since there were 7 per year, we used to rotate and sometimes bring in outside speakers. We always had the opportunity to know what the others were doing. There was a pretty good social interaction among the Clinical Associates that just fell in naturally. We were a very collegial group and we got along very well together. There was a lot of opportunity to share the science. Each institute did it differently. We used to have these seminars.

Klein: The term 'yellow beret', you said you harbor a bit of resentment for the term. Could you expand on that?

Fauci: I do not think that anybody was "afraid" of going to Vietnam. Maybe some people were, but I don't think that physicians were afraid of going to Vietnam any more than anybody else. Nobody likes war and nobody likes

to put themselves in the danger of getting killed. It was somewhat of a derogatory term. Yes, it was part joke, but very much derogatory. I always felt that if indeed it came to that that I would go. I was not philosophically in favor from the political standpoint of the real rationale of why were there. As long as American soldiers were going there and getting killed and getting maimed, as a physician I felt if I had to go I would gladly do my part to try to help them. I did not have a problem going to Vietnam even though I had a problem with the war itself.

Klein: Dr. Kimball had mentioned that as part of his Clinical Associate time he had to do rounds over at the Naval Hospital. We discussed whether or not the other military personnel and the naval doctors resented the NIH physician who fulfilled their military service obligation through the Associates Program. What do you think?

Fauci: Yes and No. The Infectious Disease Associates were favorably looked upon. Harry might have forgotten that. Back in the early 70s, when things were really getting bad in Vietnam, I was a Senior Clinical Associate. At the time, Shelly Wolf, Harry Kimball, John Sheagren, Dick Root and I formed the first Infectious Diseases Consultation Service because the National Naval Medical Center did not have an Infectious Disease Department at the time. They were getting a lot of troops who were evacuated from Vietnam and sent to the Navy Hospital with things like legs that had osteomyelitis and bacterial endocarditis and things that were serious problems. However, they had a difficult time handling it because they did not have an Infectious Disease service. So Shelly Wolf volunteered the five of us so that we would rotate through and be the Infectious Disease Attendings for the residents there. So, although there was in fact a general feeling of some slight resentment about physicians who did not go into the service but who were here at the “cushy” job at the NIH, the fact that we volunteered our time to help with the workload of troops who were flown in with serious infectious complications of wounds

sort of put us in a soft spot in their heart. The infectious disease crew was well thought of by the Navy as opposed to some of the others.

Klein: Did you have a uniform?

Fauci: We went over there in our regular clothes. I had a uniform but I never wore it.

Klein: Do you believe that the participants in the Associates Program served their country in a way that was equally as important as those who fought in Southeast Asia?

Fauci: Well it depends, that is a philosophical question. Serving your country goes well beyond fighting for your country. The Public Health Service historically, has a major role in research advances, which have benefited the country, hence serving the country. If you look at the global concept of serving your country, I think the Public Health Service serves the country as well as any organization including the Department of Defense.

Obviously, when you are at war, the most immediate, tangible, benefit to the country is seen in the form of people who actually risk and sacrifice their lives. So I would not couch it in the word doing more or not. The uniformed service, as in the Department of Defense, was a much more dramatic and potentially catastrophic situation that they put themselves in because core men and others actually got killed over there. However, if you look historically over any number of years of peace and war, the Public Health Service makes clearly as much contributions. Take the AIDS epidemic, the virus was discovered, the blood supply was protected, that emanated out of the Public Health Service.

Klein: You mentioned that you would have gone to Vietnam but that you did not agree with the war. Would you expand on your own feelings about the war and the feeling on the NIH campus in regards to Johnson's Vietnam policy?

Fauci: The NIH campus was mixed. I was not sure whether or not this was the right thing to do from a humanitarian and political stand point, namely to be at war in a country where it was unclear whether we were on the right

side or not. The one thing I was fiercely adamant about was supporting our troops. The thing that used to drive me crazy with anger was to see when troops would come back and see that they would be treated poorly by the demonstrating hippies. I really did not like that because although I could politically question the United States' motives, I was 100% behind the Armed Services. These were young men were risking their lives and I thought it was horrible that the anger of the country was directed against young people who were risking their lives because they felt it was their duty or because they got drafted. It was not their fault. They were there because they were trying to serve their country the way we were trying to serve our country in the Public Health Service. There was mixed feeling. In general, the spirit on campus was much more a liberal leaning than a conservative leaning because that is generally the case with scientists. Most people were against the war. Some were against the war and the troops. I was ambivalent about the war and very much in favor of the troops.

Klein: I heard that Dr. Spock and Jane Fonda spoke on campus. Could you comment on that briefly?

Fauci: It was an interesting and colorful period in Washington, DC at that time. Protesters were marching on Washington and the White House. These types of things you just don't see anymore. Nixon was parking buses on Pennsylvania Avenue, to surround the White House so that people could not get through. There were a lot of demonstrations and disruptions. Dr. Spock and Jane Fonda came to the NIH. I remember hearing them speak. There were a lot of crowds on campus, I think just sort of out of curiosity. I did not have a real problem with Dr. Spock. However, I have a real problem with Jane Fonda. She was in many respects a demoralizing factor for the troops, particularly by going to North Vietnam and having her picture taken with the Viet Cong who were actually American youngsters. I could not take that. She may be a great actress but she really pissed me off.

Klein: In 1967, *Science* magazine reported “The NIH is different... it really isn’t like a government research establishment”. However, in 1969 *Science* said that “for better or worse, federal policy making on health matters and therefore on biomedical research is being politicized. And this, as well as the Vietnam War budget squeeze, has abruptly brought to an end the decade of remarkable growth in biomedical research which is already being remembered with nostalgia as the good old days at NIH.” What do you think caused this shift in opinion? Do you believe that this view was the general consensus among NIH researchers at the time?

Fauci: No. There is a little confusion as to what you mean by politicizing. The NIH was not politicized by the environment of the Vietnam war in the sense that we were given more money if we were in favor of something and less money if we were not. That is absolutely not the case. There were vicissitudes in the amounts of available discretionary funding. If you have money going for a war action, there is less money for other things. I never felt any politicization and I have been here a long time. Never once did I feel that we were politically pressured into doing anything. There was a lot of ‘disease of the month club,’ where Congress would like the NIH to spend more money on this disease as opposed to that disease. They would pressure you by lobbying the Congress to give you money for this disease versus that disease. But that is not politics in the sense of pure politics. Politics means that you might say or do something that is not the way you feel, purely for political reasons. Science was always the driving force at NIH. I have no idea what that article is referring to. I have been here for thirty years and I have never been in a situation where I had to do something I did not want to do or I was not allowed to do something I wanted to do.

Klein: Dr. Rall mentioned that he felt that the NIH was more like a university than a government institution. Do you agree?

Fauci: Yes. Science is by its nature discovery and with discovery there is a lot of freedom of thought and flexibility. Certain elements of government by

their very nature have to be somewhat rigid and regimented in the way they do things for a variety of bureaucratic and other reasons. Since pure discovery science for the sake of science, as opposed to science to develop and atom bomb or science to develop a missile, has to it a certain amount of flexibility and free floating direction. There are many who feel that is antithetical to government since government is full of rules and regulations. So the NIH is a bit of an anomaly among government institutions. People did what they wanted to do, so it gave the impression that this is more like a university campus with freedom of expression of thought, than it is of a typical government agency.

Klein: Dr. Kimball stated that in the 1960's if you really wanted to get ahead in academic medicine, having the Clinical Associates program on your CV was extremely helpful. You also mentioned in an interview that, "everyone who had a role in Academic medicine spent some time at NIH." Why was this that case? What made this program so unique?

Fauci: It was the only place in the country where you could do clinical research and have essentially no other responsibilities but to conduct research. It was a most unique situation to be in. If you go to a university medical center, you have numerous other responsibilities. By the time you look at the amount of time that you actually have to do research, it was very little. Whereas at the NIH, you had a three-year completely protected time to nothing but either basic or clinical research. That was the only thing you had to do. It was the most golden years of anybody's career. We used to tell the new associates, 'You will never again have a situation like this, ever.' So not only was the time protected completely, but also the resources were completely available. Whatever you needed to do the job you got to the job. It was a highly desirable situation to be in. That is why the competition was so extraordinary. It was not easy to get an Associate-ship appointment at the NIH. It was highly competitive at the time. Whereas now, it is much, much less competitive.

Klein: That leads me to my next question. It seems that the number of applications for the Associates program has dropped dramatically and I wondered why that is the case since former Associates hold prominent positions at the NIH as well throughout the country.

Fauci: That is a reflection of how academic medicine has changed so dramatically over the past 20 years. The medical centers, Harvard, Yale, Cornell, etc., used to be the bastions of intellectual freedom and thought. People had the opportunity within the setting of a medical center to be a true academician. To be the Chairmen of the Department of Medicine was one of the most desired professions in medicine. The Kings and Queens of Medicine were thought to hold these positions. The route to get there was to get some academic training and determine your research. Actually, we used to call them the triple threads: teaching, clinical medicine and research. Those were the three things that people used to like to do. Now the medical centers are overwhelmed with the managed care. It becomes a business; hardly anybody really wants to be a Chairman of Medicine in a major department. It turns out that you are essentially a slave to the managed care process. People who are interested in what was once a clear career path, now that career path is not around anymore. Now people either go into very fundamental basic research, which is more of the Ph.D. approach, or they go out into family practice or clinical medicine. There has been a real weakening of the academic clinician. There is no market for them anymore. The training ground then becomes less competitive for it. Before, people would come here, be a clinical associate, stay on for four or five years, build up their CV, make themselves a name in medicine and then go off and to become a Chairman. That is what the NIH trained people to do. Now, however, the jobs that you would ultimately go to are not particularly desirable jobs anymore. It is a trickle-down effect.

Klein: How did participating in the Associates program help your career?

Fauci: It did not help it, it made it. It was the first step towards what I did. I followed a pathway that was a combination of hard work, some talent and

being in the right place at the right time. I started off as Clinical Associate, became a Senior Investigator, then a Section head, then a Lab Chief and then I became the Director of the Institute. None of that would have happened had I not come down here as a Clinical Associate. I would not have been plugged into the NIH system. For example, had I not come down here, had I not made it and gone to Vietnam for a few years in the Navy, I would have probably returned to New York Hospital. I would probably be practicing medicine right now on 69<sup>th</sup> Street and First Avenue. The Clinical Associate program put me on a career track that I am still on.

Klein: How did the training in the program help you with discoveries that you made here?

Fauci: That is a very good question. I fundamentally do basic science but I am also fundamentally a clinician. I still see patients twice a week, every week, all year round. What the Clinical Associate Program does is it gives you a very interesting perspective on the relationship between disease and the basic science that you have to study to be able to approach disease. I was able to see how clinical research was done, not only done but also correctly done at a very early stage in my career. Also the link, as we used to say, between 'the bed and the bench,' you see something at the bedside, you bring it back and ask the question at the bench or you make a discovery at the bench and you go back and apply it to the bedside, that bedside to bench phenomena was really what the Clinical Associates program was all about. That was the program it was not only about treating patients. When I was Chief Resident, patients used to come into the ER like hot-dogs. They would come in, and the only thing you wanted to do was save the patient's life and get him out of the hospital. There was very little time to think about why patients developed certain diseases or infections. It was always treat them, get them ready and get them out. Whereas at the NIH, you see the patient and then you say, 'You know, I think I want to do a project to ask that question.' In fact, the very first

research that I did was trying to figure out how you could interrupt [word missed] inflammatory response for, which was a disease that Dr. Wolf and I studied in 1968, and as it turned out we ultimately developed a cure for it. That was by being at the bench and at the bedside at the same time.

Klein: It is sad to me that program is not as popular as it once was especially now that technology may allow us to make even more phenomenal medical advancements.

Fauci: It is sad. But as you were saying that I kept thinking about George Harrison's song that he wrote after the Beatles broke up, "All Things Must Pass." The way things were back then were absolutely suited to what the state of academic medicine was. Now, medicine out there is different so the program it has to adapt. I think there is going to be a resurgence of the need for a program like this. It is still alive and well. I would not want you to get the impression that it is on a slippery slope and disappearing. There is now, since there are very few opportunities to do clinical research on the outside, a lot of attention about building this up as the bastion of clinical research in the country with the new clinical center. There is a new era of excitement about the intramural research program but with a different flavor than it was years ago. Before, there was an excitement about training and then going out and seeding the universities. Now, it is about training and the different routes that you take after you train. It is not going downhill, it is just changing.

Klein: In my interview with Dr. Rosen, I asked him why the applications for the program were falling and he mentioned among other things that it was due in part to disrespect on the part of basic scientists for clinical research. Do you agree?

Fauci: Again, I have to disagree. You will always find someone who will say that. There was, and it is correcting now because the NIH is aware that there was a lot of misinterpretation and misunderstanding. Harold Varmus is helping combat it, which is interesting, because he is a basic scientist. He has been very helpful in trying to bring in a new understanding of what

clinical research is. It is not disrespect. You cannot judge clinical research, its results and the skills it takes to conduct clinical research, by the same standards and criteria as basic research. In many respects, it is much more difficult to clinical research. It may not seem as sophisticated. You cannot take 150 transgenic mice and specifically and definitively answer the question is this gene important for this aspect of the neurological system in this mouse. The results are definitive however; they are definitive for a mouse not for patients. Research that actually involves patients is much more difficult and in some respects has to be less sophisticated in the sense that all the molecular probes that you could do in an animal. There has been a misunderstanding as to what type of research is better. Is it better to answer the precise question? Yes, that is very important. But, there is still a very important role for research with the patient. I disagree that there was a lack of respect on the part of basic researchers for clinical research. Rather, I believe that there was a lack of true understanding. Right now, under Dr. Varmus's leadership, we are seeing that clinical researchers are starting to appreciate the contributions of basic researchers. Basic researchers are also starting to realize that sooner or later they are going to have to get their discoveries into a clinical research setting otherwise they will have a lot of publications but they will not mean anything. Hopefully what we start to see is more of a marriage between basic and clinical research.

Klein: I was wondering if you could cite a few examples of medical advances of physicians and scientists who came to the NIH through the Associates Program.

Fauci: If I give you examples, I am going to offend a lot of people because there are so many. Gene Braunwald, Shelly Wolf, Bob Gallo, Sam Broder, your father [Harvey G. Klein] and Harvey Alter. I could go on and on. If you look at every major person around here, they have contributed something. Bob Chanock, Brian Murphy, Bob Purcell, the number of brilliant minds fills volumes.

Klein: Could you evaluate the Clinical Associates Program, then and now.

Fauci: Back when I came, it was truly a roster of superstars. That is not to say that I do not support the program now and I do not want to demean it. But back then the participants came from the very best universities in the country and they were the best students in their class. We had the best of the best there was no question about it. The electricity among the Clinical Associates used to dominate the atmosphere of the place. Virtually everybody who was a Lab Chief or a Director, all came through the program. Now the NIH is more top heavy. We have a lot of stars who went through the program and are still here. Even though the Clinical Associates Program is good, you would not consider them superstars. With all due respect to who is here, if you look the program back then you could without being embarrassed say these are the superstars of American medicine. If you look at them now, they are good, but they are not superstars.

Klein: That is interesting because yesterday I read an article in the post by Daniel Greenberg, which commented how the NIH is too old and not as cutting edge.

Fauci: I have known Dan for years, he is a good man and I like him but we disagree on a lot of things. Again, you cannot say that we are aging. We are as cutting edge as we have ever been. Just look at what the NIH is doing. The difference is the level of young people who are coming in through the training program. He has got it wrong. If you look at the Lab Chiefs and the Section Heads, they are as cutting edge as they have ever been. If you look at the trainees that is where the difference is. There is no longer a competition of 700 people trying to get 5 slots. Now it is 8 people trying to get 5 slots. That is the difference. Do not confuse that with the NIH not being on the cutting edge. The NIH intramural program is very much on the cutting edge.