

History

of the

U. S. Food and Drug Administration

Interviewee: Frank E. Young, M.D.

Interviewer: Ronald T. Ottens
and
Robert A. Tucker

Date: December 8, 2000

Place: Bethesda, MD

INTRODUCTION

This is a transcript of a taped oral history interview, one of a series conducted by the Food and Drug Administration's History Office. The transcript is prepared following the *Chicago Manual of Style* (references to names and terms are capitalized, or not, accordingly.)

The interviews are with persons, whose recollections may serve to augment the written record. It is hoped that these narratives of things past will serve as one source, along with written and pictorial source materials, for present and future researchers. The tapes and transcripts are a part of the collection of the National Library of Medicine.



Food and Drug Administration
Rockville MD 20857

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INTERVIEWEE:

INTERVIEWER(S):

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FDA SERVICE DATES: FROM: July 15, 1984 TO: December 31, 1989

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(Last FDA Position)

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RO: This is another in a series of FDA oral history recordings. Today Dr. Frank E. Young, former commissioner of the Food and Drug Administration, is being interviewed in his office in the Fourth Presbyterian Church in Bethesda, Maryland. Today is December 8, 2000.

Interviewing Dr. Young is Robert Tucker and Ronald Ottes. The transcription of this interview, together with the tapes, will be placed in the National Library of Medicine and become a part of FDA's oral history collection.

Dr. Young, to start this interview, would you give a brief biographical sketch of where you were born, raised, educated, and any relevant work experience prior to coming to FDA.

FY: I was born in Mineola, New York, which is on Long Island, on September 1, 1931. I was born to Frank Edward Young and Erma Holmes Young, and had one brother, one aunt and uncle, and one cousin, and on my father's side, another aunt, so that I was from a very small family and a family that was very close. My father at that time was very active in the church, and we had a warm and interesting home life.

The first tragedy that struck was at his age of forty-five, when he died of his first and only coronary. I was twenty at that time, and that motivated me to pursue a career in medicine, which I did, and after three years of college at Union College in Schenectady, New York, I was, fortunately, after his untimely death, able to get into medical school and went to the Upstate Medical Center in New York, where I did my undergraduate medical training, and then went to Case Western Reserve for my pathology internship and residency.

After residency, I was very interested in research and went to study with Dr. John Spizizen in the field of molecular genetics in the Department of Microbiology, and obtained my Ph.D. in microbiology and an interest in infectious disease.

I served in a number of institutions prior to coming to the FDA, but the most important fact was that my field of research, genetics, was just about to explode into the whole genetic engineering technology, and I was fortunate to have been at the first meeting, the Asilomar meeting on recombinant DNA, and was recruited by Secretary Margaret Heckler to bring on line the technology that was just emerging.

At that time I was at the University of Rochester, serving as dean and vice president, and my laboratory was a large one, in which we were doing cloning in both bacteria and animal and mammalian and human cells. And thus she said, "How would you like to be the Food and Drug Commissioner that brought on line the technology that you were working on in the lab?"

That was an exciting offer and I entertained it. However, there was an excellent acting commissioner, Mark Novitch, and I requested that she see whether he could be appointed commissioner as well, because I felt he was more qualified than I would be, with his long history in the agency. She went back once, and I asked her to go back again, and I said, "Well, if you can't make it on the third try, I'll come down as commissioner." So that I did.

At that time, fortunately, the commissioner was still not a highly politicized post. It was a secretarial appointment rather than a Senate-confirmed appointment, and Dr. [Jim] Weingarten was chairman of the search committee that brought me to FDA. That was important in the sense that there was an ownership across the [U.S.] Public Health Service through this search process of the commissionership, and Jim Weingarten and I became fast friends, and that, I think, served well in the course of the agency.

I came down in the middle of July in 1984 and served till the end of December of 1989. I would say that the period of time in FDA was among the most enjoyable academic experiences that I've ever had. I found the FDA employees to be outstanding, highly motivated, and very dedicated, and it was a privilege to serve with them.

Paul Hile told me something that I have never forgotten. Paul at that time was the

associate commissioner for regulatory affairs, and he said that it was important to bring commissioners in from the outside and to blend them with the agency to produce hybrid vigor and thus strengthen the agency and engraft a commissioner into its body. And thus, though I really knew nothing about FDA to speak of, in a large and detailed sense, I was intrigued by and fell in love with the agency and was honored to be there for almost six years.

RO: What were some of the first things that faced you coming in as commissioner, both from a regulatory and an organizational standpoint?

FY: Let me speak to the organizational standpoint first. At that time, there had been seven commissioners or acting commissioners in seven years, and, as I was casually told, commissioners were coming and going in the night like Greyhound buses. Another person said, "Commissioners come, commissioners go. This turkey will pass. Business as usual." And so I had to figure out a way to follow through on Paul Hile's concept of hybrid vigor, so we came up with the idea of an action plan.

I discussed that with Margaret Heckler, and she thought that it was an excellent idea to unite the agency in a single purpose. Therefore, we set up a program whereby we asked each of the centers to identify their brightest young people and some of the real leading lights of the agency, and we set out with study teams to develop what the priorities of the agency should be.

I had already committed in my own mind that I would stay in the agency as long as the government would want me to stay, so that I was not looking to run away. I'm not sure the agency felt that then. I was asked at one point to describe in an open meeting what my style of leadership was. I said, "It's very simple. It's World War I." I always thought of and looked at myself in military analogies. I was Navy for the first part of my career in ready reserve, and the uniform meant a great deal to me; thus I went into the Commissioned Corp. I said, "It was very

simple. It's World War I. If I were to look out there and see a machine gun post out on a hill, I'd say I'm going to go blow the whistle, put the grenades around my neck, pick up my rifle and blow up that machine gun post. I'd like you to come with me, but I want you to know, if you don't come, I'm going to blow that sucker up anyway."

I tried to lead the agency by being out front. I was not a commissioner that would hang back and ask the agency to do something that I wouldn't do first. And I think that began to come through in the action plan process, and we built, I think, one of the finer integrated plans of agency development that we could come up with. When Jake Barkdoll, who was in charge of crafting the action plan, looked at where the initiatives came, over 70 percent of them came from the agency folks themselves. So that action plan viewed within the agency, that was Pathway A.

We then went to outside groups and invited other people to come in and look at the action plan, to testify and give us recommendations, which set in motion the general concept of involving consumer, industry, academic groups in the activities of the agency in its planning and subsequent actions. We then reviewed it outside, put it into a plan, presented it to the secretary. She was so enthusiastic about it that she then went and presented it all the way up to the President. Now, I know that because she asked for special copies to give to the president. And at that time, Gerry [Meyer] had them bound, and he kept an extra bound set for me, and I have those, which listed the names of the presenters. So it was presented to the President, the Vice President, and the Chief of Staff at a Cabinet meeting. So the agency's plan went all the way up through the administration, and, I felt, garnered a substantial amount of support.

It was at that time also that, as you will recall, the agency was going on hard times. There was a great cutdown in the numbers of people in the agency. The secretary asked whether I would be willing to continue that, and I said no, that the agency needed to grow, and that, in fact, if they wanted the number-one objective, which was drug product approval reform, that we needed an extra two hundred reviewers. Now, I must admit candidly that was a back-of-the-

envelope calculation, but we talked about it so frequently that in about a year and a half people would come up and say, "Commissioner, how's it going on getting the extra two hundred people for the agency?"

It was then that I felt that the agency was a value-added for the nation and could not be looked at as a governmental bureaucracy that had to be managed. I made the point to the secretary, and she carried up through the President's counsel and through OMB [Office of Management and Budget] the fact that we needed to look at user fees. And as you will both recall, that was a difficult time to bring this up in the agency, but I felt it was something the public was paying for by delay and that we didn't have in an overworked agency, where people were being reduced, not added to the agency, compromising the ability to meet the deadlines.

Therefore, we took up the issue, and argued it very vigorously. It took the first three years to get OMB off the point that the money should not come to the Treasury, and it was in the end of my term when Senator [Orrin] Hatch introduced the User Fees bill and others began to support it, and fortunately, in the next administration Commissioner [David] Kessler was able to culminate that, which set in motion what I think has been a very strong growth in the agency's ability to do that work. We also had hoped to bring it into the device industry and later into the food industry, so the industry that benefits from a timely FDA action in an honest way, in which it could not be used to manipulate the agency, would be well served if we had user fees.

So those were the organizational things, and they were started very early. I must emphasize, within the first few months we had set the direction for the agency, and I believe the agency was united behind that direction.

There is one other organizational point I felt was very important and was not continued, which I feel to the detriment of the agency. At the time that I was appointed, there were many more career people in leadership roles than there are today, when the secretarial appointment was changed to a presidential appointment, senatorially confirmed. I felt very strongly then, and feel

very strongly now, that the leadership of the centers, with the commissioner and the deputy commissioner and the chief of staff and general counsel, should form a Coordinating Council, and that council would lead the governance of the agency.

Every two weeks, we met for about an hour and a half to conduct the agency business, and those center directors were to put on the hat of a professional, not their own center. And one of the more interesting things to me is, when we moved FTEs [full-time equivalents] around, that there was unanimity, although some pain, to the fact that this would need to be done for the good of the agency.

RT: Is that the organization that became known as the Policy Board?

FY: The Policy Board was formed by Commissioner [Alexander] Schmidt, which I kept in place, but I strengthened it by then having the Coordinating Council meet after the Policy Board meetings, so that everyone in all of the centers and associate commissioners would have their oar in. Then having heard this, the center directors, the general counsel, the commissioner's office would go and say, "All right, now how are we going to bring these decisions to conclusion?" So I felt that I was clearly first among equals in that I wanted the professional leadership of the agency to come to the fore.

RO: The Coordinating Council then was smaller than what was considered the Policy Board.

FY: It was smaller than the Policy Board. It did not have the associate commissioners there. The Policy Board was about twenty-six people, and I felt that it was the center director that really had to exert leadership, and in the larger Policy Board, that leadership was not necessarily put on the spot. Here there was a need to have the center directors and to directly ask them, "If we're

going to do this and we're going to ask for more FTEs, and drugs is our highest priority, that may mean, foods, that you don't get very many this year. Let's go and adjudicate this. Let's be sure that everybody signs on this." So they were not commissioner unilateral decisions.

RO: So that was the commissioner, the deputy commissioner, the general counsel, and the center directors?

FY: That's correct. And I think that was very important.

The other thing that I did differently was that I worked very closely with, first, Gerry Meyers, then Sharon [Holston], and particularly Frank Claunts, and worked to understand the budget. I remember when Frank came in the first time, he said, "Well, Commissioner, we've described this budget for you, and we've saved 7 million out of 800 million for your initiatives."

I said, "Well, thank you very much, Frank. I want you to know, you're going to work with me and I'm going to understand all 800 million, and then we're going to govern it through the Coordinating Council," as I just described, and that's what we did. And so we really tried to make it a team effort.

I felt very strongly that the professional people within FDA had to own FDA. This did not mean that we were not responsive to the administration, but that we would take those as policy guidance, but the FDA had to be quite independent of any political manipulation, and that it had to serve the people. And therefore, the career people in FDA were very, very important, and their voice had to be heard, and that was the mechanism of doing that.

RO: Of course, one of the perennial program problems that came to every commissioner was faster drug approval.

FY: That's correct. And the reason that the user fees were critical was that we did two studies that were very helpful in determining how to move. They may not be remembered, so let me describe them here.

The first one was a time-motion study of the reviewers, and we found that with all the reviewers had to do with congressional testimony, with answering correspondence, with looking at other drug evaluation, they had only 25 percent of their time for new drug evaluation.

As you know, I walked constantly through the agency. I liked to do that. I'd always hear this charge that, "Those FDA bureaucrats are sitting on my drug application." Well, one time when I was going through the Center for Drug Evaluation and Research, the quarters were so meager that the poor reviewer was sitting on the drug application. There wasn't even room for a chair. So if we were going to rebuild the facilities of the agency, to rebuild the staff, we just had to have more people. We just couldn't keep throwing on new initiatives.

As you remember, we calculated the number of new initiatives. I'd keep going to Congress and telling them how much FTEs it would cost, and they would pile on new things with no new FTEs. And so, as you remember, in my time we turned around the budget, we turned around the numbers of people, and we began to move towards a well-financed agency. Then you can do the work. You can't expect people to work without the tools, without the capabilities, and without the people. So that study of the reviewer time was important.

The other one that Jake Barkdoll was very helpful in was the analysis of new drug applications. We decided to take the new molecular entities that were important medicines, and Jake found about 110 of these in a period of time, and we would do a retrospective analysis. Say, if we started 110, normalized to 100 percent, what were the percent that filed an NDA, and we would call successful filing of an NDA a 100 percent win. We didn't look whether it was approved, but if it was filed, because those were the things that were done in the industry.

We found that a total of 20 percent of those that applied for were eventually approved,

but the biggest dropout came after phase two, that almost everything--33 percent of the drugs were now left at the beginning of phase three, so only 13 percent went out after that time. We began to look at what they dropped out for and what was an analysis of the causation of those problems.

Then under Gerry's leadership, we looked at eight hundred-and-some-odd NDAs and we looked at them to determine how good the experiments were, and we found by both of these studies that about two-thirds of the experiments were wasted. They were of no value to the drug evaluation team. And in the drug evaluation of new molecular entities, a lot of decisions could be made at the end of phase two. That brought into play the whole treatment IND, the review of that, the accelerated drugs, and we cut, in my tenure, about a third off the time doing an accelerated review by the end of phase two and then combining it with phase four.

But the critical point, that I don't believe Dr. Kessler kept, was that the commissioner signed off on the treatment IND. Let me explain why that's important. As you know, only one person ever got an award for not doing something at FDA, and that was Dr. Frances Kelsey--for not approving thalidomide. I was told that story early, and I watched, as I went and defended the agency at over seventy-five hearings, that the reviewers would be hauled up and beat around the head and shoulders.

Well, now, if you're going to do an accelerated review, and you expect a professional to do that and take the risk, that really isn't fair. If someone should be beat up for that, it should be the commissioner. So that on the breakthrough drugs, the ones that were for the desperately ill, I, in the regulation that Joe Levitt and I wrote, and which was approved for the treatment IND, the right was reserved to approve the drugs that were going to be given to people, prior to their approval at company expense. We were able to get AZT out very expeditiously that way, a number of cancer drugs, a number of cardiovascular drugs, and some of the drugs for biotechnology. The commissioner then had the opportunity of not only reviewing the treatment

IND, but then to follow those drugs along legally without it being delegated down to the center, and thus not seeing the drug evaluation process. So I was very intimately involved in the new drug application process.

RO: You mentioned Gerry before. Did you mean Gerry Halperin or Gerry Meyer?

FY: Gerry Meyer. He was a great help to me, as was Sharon Holston, and Jake Barkdoll, as well as the center directors. Paul Hile was particularly a valuable long-term servant of the public.

RT: In essence, would it be fair to say about six months of the new drug process was trimmed off?

FY: At least that. It was probably, if you were to say that the drug process took at that time about eight years, we cut off about two years of the process. It was a very dramatic change, and the AIDS epidemic also added an urgency to FDA, which was very vital.

RT: In that connection, Commissioner, you faced some rather hostile hearings or meetings with AIDS-interest persons, didn't you?

FY: Yes. One of the most interesting ones, that probably would reveal both my personality and the dynamic, was the invitation to attend the Second Annual Congress of Gays and Lesbians in Boston. I brought with me at that time Dr. Stuart Nightingale and, I believe, counsel, and probably from regulatory affairs, John Taylor. I'm not sure of exactly all the people that were with me.

In the pre-meeting, I was introduced to a person who was a former Secret Service man in

the Ford administration. He said, "Well, I'll protect you." When we went in and I was introduced, there were quite a few demonstrations, and at that time there was a die-in used in the country, where people would flop to the floor and hold up their watch to signify that they were dying and I was the culprit. There were signs all around, in front and behind me. As we went through that, the die-in would occur, and I would say, "When you're done dying, I'd be happy to talk again," and I would sit down. And when the die-in was over, people would get up, and I'd start to talk again. There were about four or five die-ins while I was talking. A fellow leaned over to me who said, "I can't really protect you."

I said, "Well, thank you very much."

A little bit down the line, another person shouted out, "I hear you have police accompaniment with you."

I said, "Yes, I do. She's right over there. Would you stand up?"

She was sitting in the audience on my left-hand side, in plain clothes, and she was about five foot, just a very diminutive woman. I said, "Yes, that's true, and let me tell you why I accepted that. You need to know that my oldest daughter is retarded and my youngest son, Jonathan, just broke his neck at C5, 6, 7, and I'm the sole person that works in the family, so I thought it was appropriate to take this police protection."

And then I said, "Well now, let me tell you why I'm here. I'm different than you are and my sexual orientation is different, but I'm the commissioner for all of the people. And what brought me here, in fact, what compelled me to come here, was this story that took place about two thousand years ago, when a student of the Jewish law came to Jesus and asked him what you should do to inherit eternal life. And he said to him, 'Well, how do you read?' And he said, 'To love the larger God with all your heart, with all your mind, with all your soul, with all your strength, and your neighbor as yourself.' And he said, 'You've answered rightly. This do, and you'll have the eternal life.'"

But then, seeking to be justified, he asked, "Well, who is my neighbor?" And I said this led into the parable of the good Samaritan. Now, the Samaritans were despised by the Jews, but it was the priest that passed the man by and the Levite that passed the man by, but the Samaritan helped the wounded man in this story. I said, "You and I are different. You probably don't like my sexual orientation, and I'm not as comfortable with yours. But that story compelled me to be with you."

Well, my goodness, the whole scene changed. From die-ins, it went to standing ovations, and I'd give a couple of sentences and everyone--

[Begin Tape 1, Side 2]

FY: I said, "I need your help."

They said, "Well, how can we help?"

"You know, there's parts of the agency that don't quite believe as I do about accelerating the drug approval process and the treatment IND."

They said, "Well, what should we do?"

I said, "I'd like you to demonstrate at the agency, but I want you to let me know when you're going to demonstrate, because I'll be out of town."

Well, sure enough, they told us the date, and, sure enough, I went out of town, and as you gentlemen know, they climbed up over the door, they broke the windows and turned over wastebaskets, and I came back and said, "See, there's public pressure. We've got to get the job done." And they were among my greatest allies in getting the treatment IND through.

On one April 1--I do not remember the year--Mr. Weiss had a hearing, because he didn't like the treatment IND. And he had the general counsels, the previous general counsels come in, and all them trashed the treatment IND. And we had even one reviewer who threatened to resign,

and she really did make a lot of remarks to the trade press. But we went ahead with the treatment IND.

The next year, to the very day, Mr. Weiss had another hearing, and now he said, "Why aren't you going faster on the treatment IND's?" And that carried the day, it all disappeared, and that was the beginning of the acceleration of the drug evaluation process.

RO: That encompassed compassionate IND's?

FY: It was more formal than the compassionate. What they would do was bring the data together of phase one and phase two, and then they would submit it, and the company would have to pledge that if we approved the treatment IND, they would give it free to the public until they got the drug fully approved. Then we would accelerate, on our part, the work and stop essentially the clinical trials at that point and go with the information through the NDA.

RO: What about orphan drugs? Were they different?

FY: Yes, different. That was a difficult process. Marion Finkel resigned pretty close to the time that I came in, and we reorganized that office and Marlene Hafner was appointed to head it. We tried to enhance the orphan drug interaction and work closely with NORD [National Organization for Rare Disorders]. I believe that was successful, but I would have to admit to then being more focused on the new drug approval process, particularly with AIDS and cancer and cardiovascular disease, so I left it pretty much up to Marlene to build the office. She did a very nice job with that.

The three parts on the public health side I focused on were the new drug evaluation, the whole regulations in biotech, because when I came in there were just four or five things approved.

When I left, there were over 10,000. So we wrote the regulations for the biotech industry, both nationally and internationally.

The third thing that I really worked on extensively was to deal with the safety of the blood supply. That was a real problem at the time. In '84, we just didn't know what was producing AIDS, how it was there, and if the blood supply was still a problem. I had the head of FDA's blood program in my home, and we found that 50 percent of the Red Cross blood banks were having problems. We threatened to close them down then, and just recently this same thing has emerged. The blood banks took an incredible amount of our time.

So I focused on that, and then spent a lot of time with devices. John Villforth and Jim Benson were excellent leaders, and we spent a lot of time on the PMA [premarket approval] regulations, the device regulations. The IND regulations were put out on my watch, the NDA regulations. So we did a lot of regulatory activities around new drugs, the treatment IND, biotech, and devices. That's where I put most of my effort. On the enforcement side, I tried to enhance the enforcement capabilities of the agency, and we did add more inspectors.

RO: Explain a little bit more about the biotechnology, especially as far as drugs and vaccines are concerned.

FY: The whole issue of biotechnology was new for the agency and the nation. I do believe that it was helpful to have a commissioner that actually worked in that field. I had published, before I went to the agency, over 170 papers in fields of genetics and biotechnology and had cloned some of these, and if you could imagine, how would we know that these drugs were safe and effective and how would we review these? So, some decisions had to be made early.

One of the decisions was to put the biological process under the Center for Biologics Evaluation and Research. We made that split into the two centers and strengthened the concept

of the reviewer investigator. Kathy Zoon, who is now director of the center, was a prototype of that. She spent about five to seven years at NIH [National Institutes of Health] studying interferon. Well, by that time, interferon was up for evaluation as a new biological biotechnology drug, and Kathy was given the job. Well, she knew that molecule and was able to in six months expeditiously evaluate that and bring it to market. The light went off in the minds of the agency and we said, "We really have to have reviewers that are scientists as well as regulators."

In that sense, I give great credit to the leadership of Hank Meyer, where we focused on building that concept, and we started recruiting those kinds of people. Some of the early space additions were for that organization, and the first building that I got approved was on the NIH campus. I think I sort of hoodwinked Jim Weingarten out of that. He really didn't want to give us that space, but at a public meeting with the agency heads and secretary present, I said, "You know, Jim, we've got to strengthen biologics, and they're an integral part of NIH. How about giving us that land?" And then we were able to get the space, got it financed and we argued for the concept of the professional research reviewer. That was a key decision.

Then, as we were building the treatment IND and the drug evaluation, we made a commitment to try and get all biotech drugs reviewed in six months. We pretty much kept to that schedule, as well as for the AIDS drugs and breakthrough cancer drugs. That was the beginning, as I said, of the accelerated drug evaluation. We built across NIH. We tried to include, as much as we could, people from NIH in our advice, and recruit people and hire them to be reviewers. Now, unfortunately, that concept fell on hollow ground, and the Congress has been really criticizing biologics.

RT: Mr. [John D.] Dingell had a hearing in 1984 regarding risk assessment and scientific issues involved with the biotech area. Did that hearing or other hearings assist the agency or more an oversight appraisal of what was being accomplished?

FY: I think most of that was a genuine misunderstanding of biotechnology. It was an immense advantage to have been at the Asilomar meeting and have been a member of the first Recombinant DNA Advisory Committee. That was the group reviewing the NIH guidelines. So I not only participated in the Asilomar guidelines, the NIH guidelines, but I was a charter member of the Recombinant DNA Advisory Committee.

This provided a tremendous amount of insight and capability in dealing with that, and they became allies, because I could argue very, I think, effectively for the need for resources and the need for the biological component and the enforcement aspect to be strengthened. So that those were healthy hearings. Congressman Thornton also had hearings in that vein, as well as Congressman Brown and Congressman Waxman. Senator Orrin Hatch was particularly responsive in that way.

RO: While we're talking about congressional hearings, what do you feel was your relationship with Congress?

FY: I felt I had a good relationship with Congress. I felt that I was a professional commissioner, that though the Republican Party was the party that I was appointed under, I was never active in politics. I was a dean of a medical school, so you can't be political there at all, and I never sought political office. So I said, "All right, I'm commissioner of the Food and Drug Administration. I'm going to work with both sides of the aisle." So that I did, and I felt that I had good relationships with both Democrats and Republicans during that time.

I would go the hearings myself. Unlike some before me and some after me, I did not sit on the white horse back on the Hill. My motto was the motto of World War I, as I said, and if the agency was going to go up there, they would know that I would be there at the table to take the

first shot. I thought it was very important.

RT: As far as the press is concerned, was it favorable to the agency or were they a part of the critiquer side?

FY: The largest critique, I felt, on the negative side came from Sidney Wolfe. Sidney and I had a good love-hate relationship. He would call me the worst commissioner ever, and I would call him the high priest of demography that was self-appointed. Unlike David Kessler, who took vacations with Sidney Wolfe and whose wife went shopping with Sidney Wolfe's wife, I was not of that ilk. I kept myself separate from all sides. I felt I had to be neutral.

Probably the best Sidney Wolfe story that I could mention--because he was the largest critic of the agency then and has become a larger critic again--was that we were going to do a CNN interview. I believe it was Larry King. In any event, it was CNN, which it was in a difficult section of town, and it was late in the evening. Sidney did his portion, and I watched him, and I did mine, and then I said, "Sidney, would you like a ride home? Because, you know, it's difficult at this time."

And so he climbed into my little Honda. I had my wife with me and my sister-in-law. He climbed into the Honda, and as we were going I said, "Well, now, Sidney, do you want to know why I'm giving you this ride home?"

He said, "Yeah."

I said, "Well, you know, it's Ben Franklin in *Poor Richard's Almanac*. Ben Franklin said that you've got to have at least one virulent enemy, somebody who, at the drop of a hat, will say the worst words about you, leave no stone unturned to be negative. He said, 'Find that enemy and protect him. Keep him strong, because that person will keep you on your toes and is, in reality, your best ally.' Sidney, that's why I'm taking you home." [Laughter]

RO: We've talked a lot about drugs, but what about the food side? Do you remember some of the labeling?

FY: Oh, yes, we spent a lot of time on foods. Sandy Miller was head of foods, a fine man, and [Dick] Ronk was his deputy. John Taylor then was chief of enforcement, and Bob Lake, all excellent professionals.

The issues that we spent time on that fit into risk assessment were on the colors, and that was a very extensive and controversial portion. This did not endear the agency to Sidney Wolfe when we approved some of the colors on the rule of de minimis. We felt scientifically, from a scientific risk assessment, that one in a million upward bound risk of a cancer was a de minimis risk, and we made that ruling.

That ruling was an important one for the agency. It was not without controversy, but it was an important one for the agency. Ron Hart was an expert in risk assessment, and Ron did a lot of the calculation work and, in fact, led the committee on colors. We documented that well. We documented de minimis and then set the ground rule for that going up to the Supreme Court. We had people who were supportive of it and people who were against it. I believe now as the agency is acting in sciences it is showing that upward bound risk of about one in a million is essentially de minimis.

Foods and food additives were key. Aspartame, I had to review that again. That was based on risk assessment. And we also, under my watch, brought for the first time a more formal epidemiological analysis of adverse reactions in foods. The sulfites were another portion of that action, and we had a great deal of food additive material that was not present now.

We also laid the groundwork for biotech foods, and I led the committee overseas at the OECD [Office of Economic and Cultural Development] that focused on the concept of substantial

equivalence, which the agency still uses on biotech foods. So we looked at biotechnology and tried to strengthen it.

The area I strengthened most in foods was in the area of microbiology and in risk assessment.

RO: Do you remember the constituent policy?

FY: I do, but not as much as I do the sulfites and the colors.

RO: As I recall, the constituent policy, as far as colors was concerned, is you never have really a pure color. You always have some of the unreacted chemical entities remaining.

FY: The lakes.

RO: I thought the agency ruled that if the risk came from a constituent, then--

FY: That's right. It was a different situation. That followed the lead acetate decision on Grecian Formula No. 8

Probably the larger and more controversial issue in foods was the Chilean grapes. This was where we received information that customs had posted warnings on the wall, and then talking with the embassy in Santiago, Chile, we found out that the threat was made over the phone that, "We're sick and tired of blowing up policemen and cars. We're going to poison the fruit."

Well, we ran the traps, did a risk assessment, and people at FBI and other places said that this is likely to be a hoax. We published it, that it was a hoax. That afternoon or that day they

called in again and said, "It's no hoax."

We got the people from epidemiology and drugs and the people in foods together and decided to design a testing system to validate at least whether there was or was not cyanide present. Well, in the first 1,250 cases, we found a bunch of grapes that was contaminated, and that was a real problem, because it was in the beginning of the administration. And after much agony, we decided that we would sit down and plan to bring the fruit to a halt, but also plan on how to bring it back onto the market. And so that was a very detailed analysis.

One of the wisest things I did was appoint Bill Griggs and a woman whose name escapes me to be with me at every meeting. Bill was to do the public affairs, and this woman was to record every meeting, who was there, and every decision made by the commissioner. Well, to my great pleasure, when we had the GAO audit, the agency was mightily appraised. It was the most positive GAO audit in my time. And they said we had to do exactly what we did, that the commissioner would have gone to jail if he didn't pull the fruit. They were impressed with the documentation this team had put together and the thoroughness of the laboratory work.

RO: Do you remember the labeling of Kellogg's Bran Flakes?

FY: Oh, my goodness. Psyllium, yes.

RO: The fact that the NCI [National Cancer Institute] had more or less already blessed it.

FY: There was psyllium and there was the bran. DeVito at NCI had gone on the television and was eating bran, supporting the label claim for health benefits, without any supporting evidence at all. We came head to head against the NCI and prevailed.

Another one that was interesting was Bob--let me see, what's Bob's last name, the head of

the Nutra-Sweet Company who came up on "Good Morning America" and ate a food additive he said was so straightforward that it did need no FDA action whatsoever and that they were fully prepared to go ahead with this.

Well, I caught up with him somewhere along the way and said, "I want you know I was very interested in seeing what you had on television, and I hear that you think that it's generally recognized as safe. But we have no evidence of that, and I want you to know I want you in my office (I gave him the time the next day) with your folks. Otherwise, I'm going to immediately put our inspectors on this, and we'll look and see if it's generally recognized. But this is your corporate decision. I don't want to put any pressure on you whatsoever. I just want to let you know what we're going to do."

Well, he came in the next day with his regulatory folks and admitted that there was no information that the additive was generally recognized as safe, and it was pulled off completely. This was harder to do than against DeVito, because he was another part of the Public Health Service, which threatened the alliance I had in the good working relationship with Dr. Weingarten.

RT: There was a lot of anxiety over the labeling of foods for health. Some felt the agency just gave away the store as far as allowing a lot of the label claims whether they were on breakfast cereals, bread or whatever.

FY: I remember that, the Kellogg's--

RT: Yes.

FY: The ad with the sun and the rooster and the man and the woman. I took a different

position from the agency on that one. I felt very strongly as a physician, if there was something that could be put into foods that would have a health benefit, this is the best way to get it to the public, and I think that decision eventually prevailed, and were thinking, if not already in place, putting folic acid into cereal.

RO: Yes.

FY: That was something that I advocated very strongly.

RT: Actually, you also held a number of public hearings around the country on the issue of food labeling.

FY: Yes.

RT: Was that tied into the same considerations?

FY: It was tied into two considerations. Mr. Waxman and I, on the labeling, were very much interested in the labeling and getting better labeling of foods, as was Sandy Miller. His approach that he wanted was a legislative approach. I felt that it was better to do it from a regulatory approach. So I said, "We'll go down both courses, and you hold your hearings and I'll hold my hearings." So we went around the country and we devised pretty much what we would do in the food labeling.

But he felt so strongly about putting in a law, that he eventually prevailed, but it was quite similar in some respects to what we found. I was able, when going around the country with the hearings, to gather a large amount of data which was presented at the congressional hearings.

RO: I think that act came in after you left.

FY: It came in after I left. We were still in the negotiating stage between Mr. Waxman and myself. But the health claims in foods was something the public citizen objected to very strongly, and I did support, because I felt that the consumer needed to know if something could help them, if reducing fat could help in their diet or if a supplement like folic acid could help, then that should be part of the labeling action. But that evidence had to be there, and the bran was clearly out in front of that. Psyllium was the same issue.

RT: About that time, or somewhere during your tenure, there was interest in the radiation of food.

FY: Oh, yes.

RT: And you had some role in at least a hearing on that subject.

FY: That was an interesting point, and the agency went and did something that I don't think it will ever do again. They had a very important hearing. We had a lot of concern about contamination, and whether radiation scientifically was appropriate. The agency postulated URPS, if you remember, U-R-P-S, undetected radiation products, and they said, "Well, we have to figure out how to detect URPS." By definition, URPS were undetected radiation products.

Then the agency got into this terrible twist of, if you could radiate something you had to do risk assessment, as we did with colors, where you went to the maximum tolerated dose and then saw what the effect was. In fact, with colors you had to give the mice or rats the equivalent

of 3,000 tubes of lipstick a day and they turned pink. Well now, how are you going to do that with a radiated chicken? The maximum that you can get from the diet is about 10 to 20 percent. You're not going to go up, and still look for URPS.

So we finally, after much angst, came forward with the regulation, which resulted in more comments than almost any other regulation. I think over 5,000 comments came in, many more than on biotech or the treatment IND, which were very important regulations. We then put that regulation forward, which was deeply contested. It was a hot issue within the agency.

RO: While you were commissioner, you had more than your share of tampering incidents.

FY: Yes. I would say that was a very difficult problem. At around three-thirty in the afternoon, we got the call about Diane Ellsworth's death, and the pathologist's report indicated the first person who did the autopsy didn't detect cyanide. That's not uncommon, because pathologists, like myself, have our nose fixed in formalin and we don't smell too well. But it was picked up subsequently, and the possibility of cyanide poisoning was there and the alleged problem was Tylenol.

Well, from three-thirty to about almost four o'clock, about four-fifteen, I asked every scientific question that I could think of about cyanide. Fortunately, being a pathologist and also being a coroner, it was not uncomfortable. And by four-thirty, I had concluded that the agency was correct and that the facts were correct. At four forty-five, I notified the Office of the Secretary. The FBI was talking with people in OMB, and by ten of five, approval was given to go ahead with a national recall. At five o'clock I was rolling live, giving interviews across the land.

Again I figured the commissioner has to be out front on this. If somebody's going to take the hit, it's got to be the commissioner, not the professional staff. Otherwise, that's not fair. So about halfway through, about five-thirty, I said to myself, "I surely do hope this is cyanide or

we're going to be back at--""

[Begin Tape 2, Side 1]

RO: You were talking about the commissioner having to be out front, and one of the things that I remember, you always said, "I'm the top cop in FDA."

FY: Yes. I believed that. I carried the number-one badge that Paul Hile gave me, and I felt very, very close to the field staff and spent a lot of time in the field visiting them with Paul Hile and believed in being that top cop. Unlike David Kessler, I didn't want to be armed or have the agency armed, but I felt enforcement was a very important arm of the agency.

It was at that time that that enforcement came to the fore, because Paul Hile, with others in the regulatory affairs office, designed a method whereby we could determine rapidly whether the cases were contaminated. We did that by X-ray and rapidly restored the confidence of the American people in Tylenol, with Jim Burke's leadership.

We then went through the whole tampering regulations and the tamper-proof wraps and shrink-wraps and labeling, and it was a very intense period. I really began to know the field a lot better and through that argued for the support for the field laboratories. We did get some help in Atlanta, including a new building, and we tried to take care of the Brooklyn Building, which was terrible. There was wire on the outside of the Brooklyn Building to prevent the debris from falling off and hitting people. They were just horrible conditions.

But that tampering led to copycats. We didn't catch the person that poisoned Diane Ellsworth, but we got all of the others successfully. It was a rash of copycats, and we had to then get a law passed on tampering.

Some of the incidents were funny. One of them, I think, the product was a food product.

We got this call that a food product had been poisoned. By that time, we had a very good relationship with Judge Webster at FBI, and we arranged for a trace on calls. The FBI was helping us, and we traced the call to a particular city. Well, the third time the person called, we traced it to the county jail, and found the inmate who had made the three calls. We asked him, "What did you do that for?"

"It was a dull day at the jail, so I thought I'd make these threats."

Well, he ended up with five more years, because by that time we had the anti-tampering law in place. That law helped us immensely. In fact, when I was in the Office of the Assistant Secretary, leading the approach on bioterrorism, we modeled an anti-terrorism law dealing with biological agents threats after the anti-tampering law.

When these things would occur, I would go right down to Dick Swanson's office. Paul Hile would come down, and [Ron] Chesemore and myself and Swanson would go over the data and paste along the walls the events that were going on.

Why I'm saying this is, I tried to learn the agency, every part of it that I could.

RT: One of the things while you were commissioner was the--and I'm almost reluctant to bring this up, the generic scandal.

FY: That was a good issue, and I'm glad you asked it, because it's an important one. I'd like to put it in perspective. I want to give about four strands of this.

The first strand is that the agency was put under incredible pressure with that law. We were not given the adequate resources to manage that, and yet the profits were obscenely high for the generic drugs that were coming on. So I think this was something that would happen because of the great impact on being the first one there.

The second part that's important to look at with generic drugs was there was a lot of

hostility at that time towards this law on the part of the inventor of the drugs, and so we set up the office under Marvin Seife and tried to give Marvin as much resources as we could. But in that office, the third threat, unlike the new drug approval and unlike the regulatory activities, the commissioner was not directly involved in the decision process. The delegation was from the commissioner to the center director, from the center director to the office director, from the office director to Marv Seife, and then down the line. And so in that one, I was completely blindsided, never saw it coming.

The tragedy with that, though it was called a scandal, is that all we had were four people involved. I'm not trying to defend that action, and that four people were terrible, but I think the agency was beat around the head and shoulders for political gain that was not due to the agency, and it was a very dark day for the agency. Now, Gerry Meyer was very helpful. He held the internal review. We were able to very expeditiously identify where the problems were, and the agency swung into great action. With Bolar, we were able to use our enforcement people. We found that with other drugs, the generic company sanded off the Sandoz triangle and "S" on the tablets, and then submitted the inventor's drug as their own sample. We saw other ones where the vial equivalence was not done properly, and we uncovered a rat's nest.

I think FDA was really cleaning the act up very nicely, but at that point there was a hostile environment development between Mr. Dingell's committee and the FDA for the first time. I thought we had a good relationship otherwise. And Mr. David Nelson, who led the charge, did a good job in uncovering a lot of fraud. I just reviewed, for a different reason, the generic drug hearings, and it was a sad situation that was totally predictable that problems could occur since the agency did not have sufficient resources to both police and evaluate the provisions of the Act. We were able to strengthen the enforcement activity as well as the generic drug problem and hearings.

Now, how did I look at my own role on that point? I've not said this widely, but you can

check with Jim Benson and others who were close to me. I felt that to help the agency, I had to engineer a controlled hit on myself, that I was going to take the responsibility for the agency's action. It was not fair to brutalize the agency. So as you know, I was at all of the hearings, and the last hearing was the most interesting to me. I went to see the chairman, Mr. Dingell at that time, we were close, I would say, in our professional respect for each other. As I walked up, he moved his hand vigorously and waved me away. I said, "What's up, Mr. Chairman?"

He said, "You come over here to the side." And Mr. Dingell, on his cane, limped over to the side and came down on the floor so that I could speak with him.

He said, "Do you know why I did what I just did?"

I said, "Mr. Chairman, I have no idea why you just did what you did."

He said, "My respect for you is such that you were not to look up to me. I was to come down to the floor and speak with you."

And Mr. Sikorski, who, as you know, was always an agency critic, said in his opening remarks, and this is all in the congressional testimony, "In most instances, I have been an advocate of the captain going down with the ship. But in my opinion, we should sink the ship and save the captain."

Mr. Dingell excoriated the Office of the Secretary for having me no longer there as commissioner. I had resigned since I felt it was the right thing to do. It was not a forced resignation. I felt that I had to lead the agency through the hearings, take the hits, and then leave to go into the department so that someone else could be at the helm and the problem would dissipate. I felt that was the right thing to do. But Mr. Dingell criticized the department and promised them that they would have many more trips up the Hill.

RO: You started under Secretary Heckler.

FY: Heckler. And then I served under Secretary [Otis R.] Bowen and then under Secretary [Louis W.] Sullivan. I served in three administrations, [Ronald] Reagan one, Reagan two, and [George H.] Bush.

RO: What was your relationship with the department?

FY: I had very good access across the department. One thing I wanted to conclude was the generic drug problem. The many awards that I received in government, the most precious to me was by the inspector general, who at the end of my tenure gave me his highest award for outstanding integrity for the way that I conducted the response to the generic drug problem.

RO: That's interesting, because at one time I thought he wanted to come and take over the agency.

FY: No. Kusserow was very helpful in helping us deal with a problem within the agency. I mean, there's no question on that, because we did not have the controls in place to monitor the reviewers. The agency was stretched so thin that it couldn't exercise the oversight needed, and there was an absolute advantage taken of the agency. I would not call it a scandal in the extent that it was made to be. The fallout was that the drug evaluation slowed down, the device evaluation slowed down, the agency went through a scarred period of time, and I think measures were put in that were not as helpful to the agency as they could have been.

I'm sorry, I just wanted to finish that. You had another question.

RO: Just your relationship with the department.

FY: The secretaries, yes. I felt that I had a very good relationship with the department, and also with OMB. I was able to go to any one of the secretaries at any time, and though I went through the assistant secretary and testified on the importance of the assistant secretary, I worked very closely with the Office of the Secretary and would be able to bring, particularly with all of the crises that we had in tampering and enforcement, that was very critical.

I mentioned to each one of the secretaries that we lost one assistant secretary over flu, the vaccine, with the head of CDC [Centers for Disease Control]. We lost a secretary over the cranberry caper on Thanksgiving. I would tell, on the initial meeting of every secretary, "Your greatest vulnerability of anything you will do will come from your Food and Drug Administration, and I will faithfully keep you informed and faithfully bring issues to you, but I need access," and I had very good access and access to OMB.

RO: Getting back to biotechnology, because I know that's an interest of yours, would you comment on the recent problems we've had with corn.

FY: Yes.

RO: What do you think about these biotech foods, and what would you do in order to determine whether there is any adverse reactions from them?

FY: It's a very good question. One has to look at the history of regulation of foods. Foods are regulated as generally recognized as safe because people have eaten them over eons of time. Food safety is a canary in the cage. Do people drop dead because of what they have eaten?

And so in OECD [Office of Economic Cooperation and Development] we brought forth a concept of substantial equivalence. If the product is substantially equivalent to one known to be

safe, then it could be approved, and we gave some examples, and it's written up in a little green pamphlet on OECD that was the old Marshall Plan, Western European nations.

The U.S. pulled back from that in subsequent years, after I left. It was, in fact, during the [William Jefferson] Clinton administration that it received a lower priority. Now, prior to that, we had agreement from the twenty-four OECD nations, and that was very helpful, because we had a weight of similarity. We did that first with the biotech pharmaceuticals, with environmental issues, etc.

The question came up, when we did the food guidance about labeling, and we determined that it would be very difficult to label. Let's imagine a technology where we had a genetically engineered turkey. You could label the turkey when it was sold, but what about the turkey meat in soup? Do you label the soup? Do you label it at FDA's cutoff, if it has less than 4 percent meat, then it's an FDA product, however, if more than 4 percent, it's an agricultural product? Do we label it by percent of turkey in the soup? Then you make gelatin out of the turkey bones. Well, do you now label the gelatin because it's turkey bones? And as you go further and further down on the turkey parts in the food supply, you've got this never-ending labeling.

Now, in this case, taco shells were done inappropriately. There should have been better manufacturing control to know that it was not approved for that purpose. But to determine whether something is going to be an allergen is very, very difficult. We hardly know what allergens are now. I am deathly allergic to crab. I have to watch for crab. Well, if it's something at a reception where I can't see what that goopy thing is on a piece of toast, I'm not going to have that goopy thing. In the restaurant, I ask whether it's crab.

Well, for the person who has a genetically altered item in another product, it could be of concern. But if it is the same product, if you put a gene in corn and you give it where corn is given, that person has no substantial risk if it is substantially equivalent. Well, if you come up with an antibiotic, Kanamycin, which might be in the Flavor-Savor tomato, is that going to have

allergies to that particular gene? Well, the problem is, you can't trace it far enough and fast enough. So I think the substantially equivalent is the right thing. Here they did something that was wrong. It should be pulled off the market. But there should be better labeling.

Just yesterday there was an interesting advance by the same group that cloned Dolly that they were going to be able to produce in eggs, probably cloned through the lacalbumin gene, medicines, so that when you have your egg, you take your particular medicine. It's a very economical form of growing products. In the Third World, it's tremendous. I mean, you could get your anti-hypertensive agent through the egg. Now, you'd have to know the dose. All of these things are done, and the food modifications are there.

Now, remember, we've been doing this for foods for years. Nectarine is an ingrafted product. The tangerine. Beets were cultivated from Swiss chard. But you've got to go back to, I think, the substantial equivalent argument. I have great confidence in Joe Levitt as an outstanding lawyer-administrator, and he will, with Mary Waleski and others in the center, will carry this work forward. The agency should be left alone to do its good job, and given the resources to do it.

RO: Talk about labeling, even with the radiation of foods.

FY: Oh, yes.

RO: People wanted that labeled because they didn't know what radiation was.

FY: And they didn't make the food radioactive. It just killed the bacteria.

RT: I think there was a problem with Alar in apples.

FY: Oh, yes.

RT: That you dealt with, as well.

FY: Yes. I remember that keenly at the hearing, because, unbeknownst, Mr. Hatch threw me an apple, which I fortunately caught, and he said, "This has the pesticide Alar in it. What are you going to do?" I took a bit out of it, ate it right there in the hearing.

We have problems with pesticide residues, there is no question, and some of them are going to be within the food supply, and you want to keep that to a minimum. I don't remember all the details now over the Alar issue, but it was well overblown, and it became, I think, a problem in which people with different agendas will seize a particular event, and the agenda comes out, not particularly the pesticide in question, and I think that was there. We had Miss Street was there, Public Citizen was there, others were there, and the issue came out, pesticides in food, which I am against in general, but then how do you remove all of the pesticides?

And on the other hand, people objected to the decision that I made of labeling certified raw milk. I don't believe that certified raw milk was safe, but there are people that like to drink certified raw milk. We said, "Okay, we'll label that and say that it's not safe." But those same people that said, "You've got to take pesticide out or label it with pesticide," wouldn't say, "You can't have the right to have certified raw milk as long as it's labeled and you know that it's unsafe."

So there's a lot of agendas that come mixed in. The Alar, I don't remember the details, but I looked at it as one of those that came out with a lot of heat and not as much light.

RT: You just mentioned the dairy product bovine growth hormone.

FY: Oh, yes.

RT: That was another concern, too, wasn't it?

FY: There were two concerns, both dealing with risk assessment, that need some discussion. One of them was the breast implant. You haven't asked on that, but I'll discuss that separately.

The first was the bovine somatotropin. That was, in my opinion, and I told Bob at Nutra-Sweet, then Monsanto, that doing the first product as milk was about as stupid a decision as one could make. You look at icons. Mother's milk/cow's milk is an icon. When we got tampering of Jell-O, at that time I knew it was going to hit all over, because I could still see, at our age, we heard Jack Benny in that commercial, J-E-L-L-O. Oh, my goodness, an American icon.

Well, when you did bovine somatotropin, that raised a very great emotional problem. I think the science then and now shows that bovine somatotropin is not a problem with safety; it is a problem dealing with practice of agriculture. I remember talking to the Minister of Agriculture of France, who said, "I'm not worried as much about the safety, but this is going to destroy our family farms. This will make farming more efficient." Well, we've made farming more efficient since the turn of the century on the amount of milk produced by cow, and this is using a hormone to stimulate more milk.

From the first scientific data to when it was brought on market, it was done in a roughshod manner, and I think Monsanto paid the price for that. It is still, in my scientific opinion, a good product, but I would not have done it first. I would have done first eggs producing insulin, something that's of value. Remember, when we brought the biotech on line, very consciously we brought pharmaceutical products that were of great value to the public, where we had monoclonal antibodies, insulin, the ability to break clots, erythropoietin, these factors that were natural factors that we couldn't otherwise treat. When we did devices, we did diagnostic devices first, and this is to give the public and the regulators a confidence in it. If

you're going to do something with foods, do it once first with rennin and the cloned product there. But to jump to milk, that's a real leap, and I think Monsanto got into trouble.

Now, on the other side, why I contrasted the silicon breast implant, that was one, in my opinion--and there will be differing opinions--where they agency did not follow a careful slow risk assessment. We did that with somatropin. We knew that it was safe. But in that case, I had started a slow review. By slow, I mean a thorough review of silicon. Well, it went from a scientific review rapidly to an enforcement review, to a review that the enforcement process led to many suits and much bankruptcy.

It's important to remember that at the same time silicon implants are used in joints, in hips, and silicon was used to line syringes so that the blood wouldn't clot, and also in tubing, such as a renal dialysis tubing. There were lots of silicon products, and if you're going to regulate silicon, you had to regulate it all over.

My approach was to look very carefully at the science and determine, through risk assessment, did we have a problem. Now, something like four or five years later, the science is coming in, and there's no problem, that I've been able to detect with silicon implants. Now, there may be something that I'm not seeing in the literature, but I think that is now looked at as an overreaching of agency enforcement.

So when I coined the medallion to pass out to the agency, if you'll remember, I had the symbol of the caduceus, and then balanced with the scales of law on one side and science on the other. But to me, the agency has to be a scientific agency. I mean, excellent science in foods, excellent science in drugs, excellent science in biologics, excellent science in veterinarian medicine, excellent science in the field, and the time of those individuals, not just to be regulators, but scientists, as well, at the cutting edge. If the agency can't afford that, then we'll see the problems that we had with the silicon breast implant and the problems with BST and the problems with Alar. We avoided that in bringing on, in my watch, the biotech industry, because we had

very good science in those parts of the agency. That was left to go fallow.

RT: Was it under your watch that they merged biologics and drugs?

FY: That was before me. I separated it. I felt that they were so different in their approaches that this new biotechnology had to stand on its own and it had to be very, very scientifically run. Hank Meyer was the head of drugs, and I pulled that apart. That was difficult to pull apart, but I felt that it had to be done. Hank went with biologics, and Carl Peck came into drugs.

RT: After you left, under Dr. Kessler the agency got into the tobacco issue. I think at the time you were here, also, Dr. Young, Mr. Dingell had a hearing regarding nicotine-containing products. What was the nature of the congressional interest at that time?

FY: That new burning cigarette, Premier, I think it was called. It had at its tip nicotine. The tobacco vaporized the nicotine, at about 890 degrees. We looked at it and said, "This is a drug-delivery device."

There was a lot of pressure at that time to regulate tobacco. I looked at that with Tom Scarlett and with the advocacy groups, and we decided not to regulate tobacco, because we felt that it would be grandfathered in

[Begin Tape 2, Side 2]

RT: That's Tom Scarlett, general counsel?

FY: Yes, it is. Tom provided a lot of information at that time that would indicate that we'd

have difficulty. Now, the proponent of this was a former general counsel. Let me see his name. For a moment I'm blocked on it.

RT: Hutt?

FY: Hutt, Peter Barton Hutt. Peter came in representing the tobacco industry. To make a very long story short, I said, "Well, what we've got here is not tobacco, but it is a medical device and it's a drug-delivery device. You're welcome to put it on the market, but we're going to take it off."

I smoked one of those things. It was a terrible smoke. I don't smoke. It tasted terrible. And with the agency enforcement activity looming in the background. Premier cigarettes never saw the light of day. But we had judged that it would be a very difficult situation to take all of those years of food and drug law, with a grandfathered product, and be able to regulate it. So the attack was on getting this new device off the market, because we felt that it would be a perfect device for delivering crack, for delivering other drugs, and in that sense we were worried that it would be greatly abused. So we focused as a laser on it and looked at that product, but demurred on going after tobacco.

I think that was a wise decision at that time, because the drug-evaluation process, some of the other things in foods and biotechnology we felt were more likely to be successful. Not that we felt that tobacco was good. I've autopsied all too many people who have died of cancer of the lung. But we felt that it would be a deflection of the agency's resources at a time that we were overstrapped and overwhelmed by the work that was there, and I would defend this decision to date. I'm not sure that FDA will ever get the ability to regulate nicotine and tobacco. It hasn't gone well from what I've seen. Do you see any positive move towards its regulation?

RO: No, I don't. During these last two or three years, since Dr. Kessler's left, I think that the interest in it has waned a little bit.

RT: Well, you have so many economic interests that are playing against. In fact, it's kind of ironic that the Department of Agriculture had subsidies for growing tobacco, and Health and Human Services was--

FY: Trying to regulate it, yes. And so I think that had a difficult effect on the agency, because it also led to an attack on the Office of the Commissioner, which was under Jane Henney, had to be reduced in size. And some of the professional offices, like Dr. Nightingale's excellent office, took the brunt of that, and it was removed from the Office of the Commissioner, and I relied on Stuart immensely. So it had some negative effect there. It had some effect on the agency's resources, and I don't think made a great impact on public health. There's more awareness of it, but my approach was more the hitting of the advertisement and going in a public health approach and supporting the Surgeon General, then C. Everett Koop, the greatest surgeon general in our century, in his attack on tobacco. But I was never convinced that it could be regulated. However, that Premier cigarette we got beautifully.

RO: For years the agency took the position that it could not regulate tobacco.

FY: Yes.

RT: I think there was another area, and maybe we're jumping back, but Reye's Syndrome was also a problem, wasn't it?

FY: Yes. I came into that pretty much in mid-stream, and the question was how to label the product or what to do with that particular issue. By that time, the analysis was already down at CDC, I reviewed it, and I don't think there was any question that there was a connection between Reye's Syndrome and aspirin. The question was whether to remove all of the baby aspirin or whether to label it, and finally, as I remember, the agency went with the labeling.

There was, again, some public outcry about that, but Jake Barkdoll did an interesting situational analysis. You know, we have a consumer analysis each year. He used as a control, "Name the President of the United States," and the other one was, "Is there an association between aspirin and Reye?" There's nothing wrong with these questions. Well, Jake came in gleefully one day, and he said, "Well, you know, 12 percent of the people don't know who the President is, and about that same number don't know that aspirin is associated with Reye." [Laughter] So we took comfort from that and did the labeling. But that was controversial.

Now the irony is that baby aspirin, or its equivalent, is what the three of us are advised to do for our coronary artery disease.

RO: That's right. And I had never really understood why that was so significant as far as children were concerned, but for adults, it was a different matter.

FY: Well, for the child, there is a higher incidence, for a mechanism not known to me, at least, of an association with this terrible syndrome with taking salicylates. Tylenol is a much better anti-fibril medicine, and aspirin should not be used for children unless there's overwhelming reasons. For the adult, there is not that effect on the liver, but instead affects the platelet synthesis, which provides our anticoagulation.

But that was very early. In fact, it was interesting. I was being asked to make some of those decisions while I was hospitalized in Navy for either a prostate or kidney infection, so it was

very early within my tenure. It was a difficult issue, which we relied on NIH and CDC to try to adjudicate.

RO: Well, Commissioner, we've covered a lot of topics. Is there a special interest of yours that you'd like to discuss?

FY: Let me think of any of the other issues. Part of the concern that I have today for FDA, and one that historians should look at, is the destruction of the Public Health Service. When I was commissioner, we still had an assistant secretary of health, who coordinated the public health agencies. Now, while it's important to have the access to the secretary, which I enjoyed, more important is the collegial relationship among the heads of the Public Health Service.

Dr. Brandt convened every other week the agency heads, and that was held as a tradition. And so if I had a problem--just go back to Reye's Syndrome for the moment, I could bring that up to the assistant secretary, with the head of NIH and the director of the Centers for Disease Control sitting there, and we could talk about the problem and say, "How are we going to manage this together? How are we going to get the best science and make the best public policy?" So there was a sharing of the issue.

When we had the AIDS erupt, it was initially done among the agency heads, and there wasn't a jockeying of one agency over the other. At that time, Harry Meyer held the hearing at NIH, we were able to have the Masur Auditorium, provided by Jim Weingarten, and Tony Fauci's people from the National Institute of Allergy and Infectious Diseases. We had the people from CDC and FDA together. but we planned that activity as an interagency event, and I grew great strength from other agencies. As it is today, that interaction between the agencies is markedly diminished, and FDA is the poorer for it.

The second thing that I would opine is, during my tenure we had the Coordinating

Council, and the center directors had direct and daily access to me. Anytime there was a problem, I would be happy to be there and would go with that center director to the Hill. The center director would not be left barren and bare at that point.

Once Dr. Kessler, in my opinion, put a layer between himself and the center directors, that sends a message to the professionals that you're not running the agency in a partnership, and it strikes at the heart of Paul Hile's hybrid vigor. So that I thought those two issues were not in the best interest of the agency.

Looking forward, I think it's important for the agency to be less and less of a political football. I advocated before Congress that a commissioner should have renewable six-year terms, six years to go beyond any administration, be responsive to the administration, as the FBI director is, but be able to be separate enough that you would have public credibility. And finally, I felt that people make a lot of hay against the agency. Many of the consumer groups, I see the letters, write the annual, "We've done this to the agency. Give us more money so that next year we can do that to the agency." And the investment groups will say, "Give us more staff in this organization so we can push the agency to do that."

I think that's got to stop. The agency has to be viewed, in my prejudiced opinion, as a group of professional people that are there because they love public service. I've fought at times with Bob Temple on approvals, but I would never want anyone more than Bob Temple in a close evaluation of a drug. Bob's got a brilliant mind, and I trust Bob. And Jim Benson, I trusted very strongly in his office review. And so that these people are professional individuals, and to be shot at for these decisions just is not fair. So I believe the agency should be given more of a professional head of its own. I'm not talking about the commissioner, but left to run its own public health operations, with strong guidance from the administration, but not with oversight.

I just had a person come to me the other day talking about Ru486 and ask, "Shouldn't that be reversed? There are reasons that it should be reversed, and we should have political action on

that."

I said, "Absolutely not. I may have done something different. I don't know what was done. But the day you make FDA's approvals political instead of on safety and effectiveness, you have killed the public protection. And in fact, if you go that route, I want you to know I'd be the first one in oversight committee saying that what is being proposed is wrong, and that we have got to keep the agency professional."

So I lament what I would consider a much more politicizing of the agency.

RO: Well, don't you think that some of the things, like tobacco, for instance, if under a different administration, the agency would have gone forward with tobacco?

FY: Yes, I think that's true. It also depends on the view of the agency and the commissioner in regard to the vision of the agency. I viewed the agency as a public health agency, with a strong enforcement arm, but I viewed tobacco as the surgeon general's initiative, not as a regulatory initiative. I chose--and by the nature of the time was forced to choose--health issues. AIDS was there to deal with, as was biotechnology, tampering, food safety, and seafood safety. I mean, all of those things brought us into a public health arena. FDA is a very strong force in American society. The commissioner has to use his or her authority very carefully, and in that sense, I feel the professional aspect of the agency must be constantly elevated.

So my strongest concern is the need for professionalization of the agency and to be given the resources to keep up scientifically. It is not just luxury for a reviewer in biologics to have 50 percent of the time in a lab. It's an absolute necessity, because if you do not know the technology at the cutting edge, you can't take the risk of approval. I would say that if I was not a cloner and an expert in biotechnology, we would not have seen the industry develop as expeditiously as we

did. So it's a scientific base, a professional base that I would argue for.

Thank you.

RO: Thank you.

RT: We appreciate the interview, Doctor.

RO: Very much so.

FY: Well, I apologize for being so long. My church activities have kept me very, very busy.

I should say that in doing the work of the agency, my deputy, John Norris, was extraordinarily far-seeing and far-reaching, and Joe Levitt, who was chief of staff, and then Jim Benson, who was deputy, were very key.

RT: Mr. Norris was an associate with you in your university--

FY: Yes. John Norris was a health consultant. I never had him as an employee, but I had him as an consultant help me in some of the reform activities at the University of Rochester, when we were trying to deal with practice plans and others, and I felt that he had a good mind that would be able to help in dealing with the drug evaluation process. So he was the sole deputy at that time, and after John, Jim Benson.

I also had the privilege of training two directors of the Office of Regulatory Affairs, John Taylor and Ron Chesemore, and so I got to know that operation very substantially. So knowing the agency was very important

The other part I did, and I usually hadn't spoken about it, but John's injury, my son's

paralysis, the agency was very supportive and helpful during that time, as was my faith in trying to cope with disasters. Never did I think that here, at the end of career, when not going into the ministry at age seventeen, not feeling there was a call, that I'd be in the ministry at the age of sixty-five and above.

RT: Along with your medical and theological expertise, I'm sure you're serving very well the members of your parish.

FY: Thank you. Thank you for the privilege.

[End of interview]