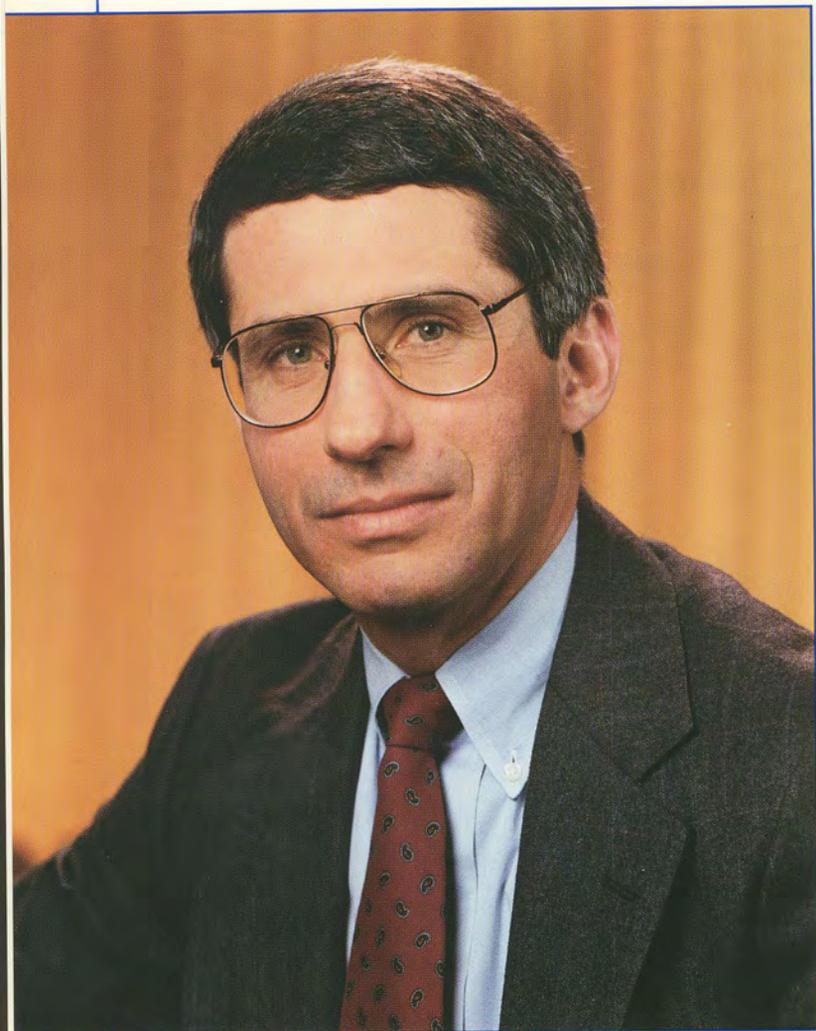


If one individual can be singled out who epitomizes the benefits of a policy of supporting basic biomedical research and its links to clinical medicine, then surely that person is Tony Fauci.

ANTHONY
S. FAUCI,
M.D.



Maxwell Finland Award Recipient
1989

As first the nation, and later the world, came to grips with the AIDS epidemic, scientists involved in unraveling the derangements the disease inflicts on the immune system frequently pointed to the fact that the speed with which so much knowledge about the disease accumulated was due to years of basic scientific knowledge accumulated long before anyone had ever heard of the Acquired Immune Deficiency Syndrome or the virus that is its cause.

Advances in science are not achieved by one person alone, but if one individual can be singled out who epitomizes the benefits of a policy of supporting basic biomedical research and its links to clinical medicine, then surely that person is Anthony S. Fauci, M.D., director of both the National Institute of Allergy and Infectious Diseases and the Office of AIDS Research at the National Institutes of Health.

From the time he was a medical student at Cornell University Medical College in the mid-1960s, Dr. Fauci has been actively interested in the immunological aspects of human disease. "When I was at Cornell between my first and second year, I worked on an immunology project with Dr. John Queenan involving Rh disease," he says. "Then, during my second year I worked with Drs. Walter Rubin, Marvin Schlesinger and Graham Jeffries on celiac disease, which is an immunologically mediated disorder. From my very first days as a medical student I was fascinated with immunology."

Dr. Queenan is now chairman of the Department of Obstetrics and Gynecol-

ogy at Georgetown University School of Medicine. Dr. Rubin is head of Gastroenterology at the Medical College of Pennsylvania. Dr. Schlesinger is at the University of California in San Francisco. Dr. Jeffries has just retired as Chairman of the Department of Medicine at the Pennsylvania State University College of Medicine in Hershey. Dr. Queenan recalls Dr. Fauci as "one of the most inquisitive and hard-working persons I have ever known. Which is not particularly surprising when you consider where he is now."

But when Dr. Fauci was at medical school, immunology was, as the NIAID Director points out, in its very early stages of development. "In those days immunology occupied only one lecture," he notes. "At the same time it was clear to me that this was a field that was going to explode, and in my fourth year at medical school when I applied to the National Institutes of Health for appointment as a clinical associate, I decided to try for the Laboratory of Clinical Investigation at the National Institute of Allergy and Infectious Diseases whose chief at the time was Dr. Sheldon Wolff."

Dr. Wolff, who is now Chairman of the Department of Medicine at Tufts University School of Medicine, recalls that this was a time when government service was a very popular way for young physicians to fulfill their national service obligations. "We had lots of applicants, far more than we had positions. I think the year Dr. Fauci applied we had 140 applications for seven positions."

Dr. Fauci was one of these seven. He joined Dr. Wolff's lab in 1968, and except for one year back at Cornell where he was Chief Resident and Instructor of Medicine, he has been at NIH ever since. "When he came to work with us, it was readily apparent that he was a most unusual person in that he was both adept in the lab and also took very good care of patients," Dr. Wolff says.

"He had then the same incredible enthusiasm and excitement about his work

as he has today. He was willing to undertake almost anything. In the nine years that we worked together, before I left to go to Tufts, I can't remember a single moment when I was disappointed in him. I am extra-ordinarily proud to have been a part of his career." Dr. Fauci describes Dr. Wolff as the one man who has been the most influential in his career.

Dr. Fauci's work into the fundamental mechanisms involving the regulation of the human immune response has been felt to constitute some of the most important advances in the management of patients with these immune-mediated disorders over the past 20 years.

Although Dr. Fauci says that he was always interested in medicine, his pre-medical school education was classical rather than scientific. Born in Brooklyn, New York, he went to Catholic schools that were strongly oriented towards classical languages and philosophy.

"At school I read the Greek and Latin classics, translating such works as the *Iliad* and *Odyssey* from Greek to English. It was a very broad liberal arts education both in high school and college," he says. One of his schools, Regis High School, is a Jesuit school in Manhattan,

and Dr. Fauci praises the Jesuitical system of education as being highly intellectual, highly logical and intensely curious.

"The Jesuits have always trained one to have precision of thought and economy of expression. Today, I tell my fellows: 'Be very precise in what you have to say and say it in a way that's very clear.' I think this training helped me in that regard, although I believe I naturally had this ability to be precise and economical. Nevertheless, I think this schooling gave me a real feel for life," he says.

Dr. Fauci's feel for life was not limited to a classical education, however. Before he went to medical school he worked for four summers as a construction laborer. One of the jobs he worked on was the building of the Samuel Wood Memorial Library at Cornell. "Later when I became a medical student and spent hundreds of hours studying in the library, I would remember that it was only a couple of years previously that I was working on the gang that had built the very stacks I was now going through.

"Of course I did it for the money. It was well paid work. But I also did it for the experience. I knew I was going into a highly intellectual academic atmosphere—medical school—so I thought I should get a feel for what a lot of people need to do to make a living."

The period when Dr. Wolff was at NIH and Dr. Fauci became a clinical associate in his lab was a unique time in immunology. "I think we were the first to study the interface of immunology and infectious disease," Dr. Wolff points out. "Until then most immunologists were interested in either the treatment of the disease or the organism that caused it. We were interested in the host.

"Tony was looking at what happened when you gave steroids. I was looking at what happened when people got fever. Others were looking into what happened to the white cells and so on. We were really one of the first, if not the first,

labs to be devoted entirely to looking at the interaction between the host and the invading organism—the immunologic response of the host to an infectious agent.”

Dr. Fauci calls himself a basic scientist, but he is particularly interested in problems that have clinical relevance. His work at NIH, before AIDS pushed him into prominence, illustrates this. He developed protocols for the use of immunosuppressive drugs, such as cyclophosphamide, in the management of patients with immune-mediated disorders. His findings are now recognized as important in delineating the precise mechanisms by which immunosuppressive agents modulate the human immune response.

“Despite the fact that AIDS is a terrible epidemic, it is one of the most extraordinary and exciting evolutions in science that I have ever heard of, much less experienced.”

“These diseases range across the whole spectrum of the vasculitides, Wegener’s granulomatosis, polyarteritis nodosa and some of the other autoimmune diseases,” he says. “At the same time we were engaged in basic work into the fundamental mechanisms involving the regulation of the human immune response.” Dr. Fauci’s work in this area has

been felt to constitute some of the most important advances in the management of patients with these disorders over the past 20 years.

In 1980 the fruits of this work won Dr. Fauci that year’s Flemming Award. The honor, named after Dr. Arthur Flemming, a former Secretary of the then Department of Health, Education and Welfare, is made every year to 10 outstanding Federal employees under the age of 40. That same year Dr. Fauci, after serving as Dr. Wolff’s deputy, was made Chief of a new laboratory at the Institute—the Laboratory of Immunoregulation. The following year the first clinical observations on a rare and unusual cancer in homosexual men were reported. The Acquired Immune Deficiency Syndrome had emerged.

Almost from the beginning Dr. Fauci recognized its importance. “I first became interested in AIDS at the end of 1981, and we started work with AIDS patients at the NIH Clinical Center,” Dr. Fauci recalls. “Even then, and this of course was well before the human immune deficiency virus was discovered, I felt this was going to become a major public health hazard throughout the world. There was no question in my mind about that. To be sure there were only a handful who felt as I did: Dr. James Curran of the Centers for Disease Control, Dr. Robert Gallo at the National Cancer Institute, Dr. William Haseltine and Dr. Max Essex in Massachusetts among others. In those days there were just a few of us.

“Despite the fact that AIDS is a terrible epidemic, it is one of the most extraordinary and exciting evolutions in science that I have ever heard of, much less experienced. In those early days, literally every week or month that went by there was some new insight into the immune system. There was an electric atmosphere; you could almost palpate it. Even now, when AIDS is a major field of research involving thousands of investigators worldwide, the excitement hasn’t

diminished. It's exhilarating, something I feel I can never get tired of."

In November 1984, Dr. Fauci was named Director of the National Institute of Allergy and Infectious Diseases. He was the youngest among the-then 12 NIH institute directors. Now, in addition to his lab and clinical studies, he has heavy administrative burdens. Despite this, Dr. Fauci still sees patients, pointing out that he is a practicing physician.

He admits to being surprised at how much he likes administration. In a recent interview with the *Cornell Medical College Alumni Quarterly* he said that he manages to organize his day so "I don't waste a minute," and finds he has the energy to work 14 hours a day, six days a week. "I have been asked: 'Don't you ever get tired? Aren't you burning out?' Well I don't think I'm anywhere near tired of it. The intellectual excitement is too great. Things are going well," he says. "Our lab is very productive, and I think we are making some major contributions to understanding the immunopathogenesis of AIDS."

It was during this period, too, after he became Institute Director, that Dr. Fauci found time to get married. His wife is Christine Grady, a nurse in the NIH Clinical Center. They have two children, Jennifer age three and Megan now eight months. His wife continues to work at NIH often with AIDS patients.

Dr. Fauci emphasizes the importance of the scientific atmosphere at NIH, especially the intramural program. He says that this is something he wishes every scientist could experience. "To be here

on the NIH campus is an incredible experience," he observes. "The intellectual atmosphere, the highly qualified scientists with whom you interact every day, and the very high standards of performance are just a natural part of the intramural program here.

"To be here on the NIH campus is an incredible experience. The intellectual atmosphere, the highly qualified scientists with whom you interact every day, and the very high standards of performance are just a natural part of the intramural program here."

"Here, it's excellence all the way, and you must strive for nothing short of that. To live as I have with that experience for 21 years has been highly gratifying. I am very fortunate to be part of the intramural program, and I look forward to remaining with it for a long time to come."