

Ferid Murad - Autobiography

My father, Jabir Murat Ejupi, was born in Albania in 1892 and was the oldest of four children. His mother died when he was 13 years old. He and his family were shepherds and he subsequently ran away from home to sell candy in the Balkan countries as a teenager for several years. Although he had less than a year of education, he learned to speak seven languages before he died at the age of 84 in 1976. He met a group of other teenagers in Austria and they immigrated to the United States. The immigration officer at Ellis Island, August, 1913, asked his name, after which the officer declared him to be John Murad and stamped his papers. It was not uncommon to have names changed and abbreviated upon immigration. After working briefly in the steel mills and factories in Cleveland and Detroit, he settled in Chicago where he had several friends. His career was quite diverse and although he never admitted it, I learned subsequently from some of his colleagues that he was quite a playboy with fancy automobiles, perhaps the reason for my love of nice cars.

My mother, Henrietta Josephine Bowman, was born in 1918 in Alton, Illinois and was the third of six surviving children of Elizabeth Lillian and Andrew Orvie Bowman. My grandmother was a kind and wonderful woman. Only six of her eleven children survived due to stillbirths and some died of diseases and other conditions of poverty. My mother went to grade school for several years before she too quit to help her mother and younger siblings while her mother and two older sisters went to work. My grandfather was a carpenter who generally worked part-time and frequently spent his modest paycheck at the local bars before going home. The childhood poverty of both my parents and their minimal education did much to influence me and my two younger brothers in our education and career choices. One brother became a dentist and the other a professor of anthropology with a PhD degree.

My mother also ran away from home at 17 in 1935 to marry my father who was 39. I was born September 14, 1936 at home in their hot and small apartment over a bakery in Whiting, Indiana. My brothers John Abderhaman and Turhon Allen were born in 1938 and 1944. We were raised in a four room apartment behind my parents' restaurant in Whiting, Indiana. This small apartment undoubtedly influenced my desire for large expensive homes.

The restaurant business had a profound effect on my future and that of my two brothers. When we were able to stand on a stool to reach the sink we washed dishes and later when we could see over the counter, we waited tables and managed the cash register. I did this throughout grade school and high school each evening and on weekends. I created a game from those chores and learned to memorize all of the customer's orders in our restaurant with a capacity of 28 customers and before they left I would tally their bills mentally and meet them at the cash register. I met a diverse and wonderful group of customers that ranged from laborers in the local refineries and steel mills to local bankers, businessmen, families and school teachers. My parents worked long hours as is typical of a family business, particularly a restaurant. My father worked 16 to 18 hours daily while my mother put in similar hours between the restaurant and raising three children. They owned the building that also included two other small apartments, another small business and 21 sleeping rooms upstairs. Many of the tenants were old and retired and my mother would often care for them and prepare their meals when they were sick. I learned

from my mother and grandmother Bowman about compassion and generosity for people and this in turn influenced my career choice in medicine. My father taught me some business skills and how to repair numerous items that were continually breaking down in this old building. He was quite good at remembering how he took anything apart in order to repair it and reassemble the pieces as I stood at his side as a youngster passing him tools.

With this background I knew that I wanted considerable education so I wouldn't have to work as hard as my parents. Also, I knew at the age of 12 that I was going to become a doctor. My parents always encouraged us to get an education and establish a profession. However, my brothers and I grew up with considerable freedom whether it was saving or spending our tips from the restaurant or our career choices. This was also applied to our religious choices as my father was Muslim, my mother Baptist and we were raised in a Catholic community. Subsequently, my brothers became Catholic when they married Catholic wives and I was baptized Episcopalian in college. My wife of more than forty years is Presbyterian, two of our daughters married Jewish men and one married a Catholic man.

In eighth grade the class was asked to write an essay of our top three career choices. My choices were 1) physician, 2) teacher and 3) pharmacist (in 1948 clinical pharmacology was not yet a discipline in medicine). Today I do just that, as I am a board certified physician and internist doing both basic and clinical research with considerable teaching in medicine, pharmacology and clinical pharmacology and with a PhD in pharmacology. While I am probably working much harder and longer hours than my parents, I certainly love my profession and have considerably more enjoyment and disposable income than they did. Until my graduation from high school only three of my cousins had finished high school and no relatives had ever gone to college. Grade school, middle school and high school were relatively easy for me and with little studying I was an honor student every semester graduating 5th in my high school class. Fortunately several high school teachers, some of whom frequented our restaurant, Jack Taylor in Spanish and history, LaDonna Thue Elson in art, Bernard Quebeck in music, Jesse Allen in math, and coach Peter Kovachic convinced me I had some potential and were wonderful counselors and advisers. I lettered in track and cross country as a distance runner in the one and two mile events and music. I also played football and basketball but spent most of my time keeping the bench warm. I played offense and defense left guard at 5'11 " and 140 pounds. After three monsters ran over the top of me I spent more of my energy with distance running in cross country. While I started to play golf in grade school, I stopped playing for many years during college and medical training and I continue to struggle with my game after I began playing again about 20 years ago.

There was one notable friend since kindergarten, Ronald Delismon, who influenced me considerably. We competed constantly with everything: grades, chess, fencing, sports, etc. Today he is an aeronautical engineer recently retired from Boeing. His projects were always top secret such as the stealth bomber and some of the star war defense projects. He would never discuss his work with me for security reasons and often joked with me by saying, "if I told you, I would then have to kill you". After 57 years we remain the best of friends and still compete, generally at golf, skiing and more pleasant encounters. His recent comment was, "one Nobel to zero".

The University of Chicago had a new program in the 1950s that accepted students after three years of high school and friends in the restaurant who were alumni from the University of Chicago encouraged me to apply. However, after considerable thought I decided not to enter college

prematurely but rather completed my senior year in high school. In retrospect, this was the correct decision for me as my senior year in high school was wonderful. I coasted through the year with excellent grades and lots of fun participating in the school's chorus and took the lead in several operettas. This was probably the only year in school where I wasn't compulsive about grades and didn't study constantly.

Since my parents couldn't afford to help me with my college costs, I looked for a school that offered the best scholarship. I considered the military programs at the Naval Academy and Westpoint, but I knew I wouldn't have received the biology training for medical school since these were primarily engineering programs with a requisite four years of military duty afterwards. I competed successfully for a Rector Scholarship at DePauw University in Greencastle, Indiana, a small and excellent liberal arts university and went there from 1954 to 1958 on a tuition scholarship. The first year my grades were okay but not great with several A's, one C and the rest B's due to the hazing and distractions of being a pledge in the fraternity. In subsequent years my grades progressively improved as I was developing more self confidence and better study habits. I lived in "annexes", or small apartments with other fraternity brothers since the fraternity couldn't accommodate all of us and I generally chose other premeds as roommates. We often studied together and competed for grades. I was the scholarship chairman of the fraternity and remained a premed major with a second major in chemistry as I enjoyed both biology and chemistry. Throughout college I waited tables, taught the anatomy and embryology labs and worked one and sometimes two jobs during the summers to cover my expenses. If I had only one summer job I would take additional classes at one of the local extensions of Indiana University for additional math or literature classes in order to take more courses in biology, chemistry, physics or Greek and Latin at DePauw. The Greek and Latin courses in high school and college were of great value subsequently in learning the root derivatives of many scientific words.

In the spring of my junior year in 1957 on spring break in Fort Lauderdale, Florida, I met Carol Ann Leopold, my wife to be. She and her family were from St. Louis. We were at DePauw together where she was an English and Spanish major planning to become a teacher. Although she dated many of my fraternity brothers, I had not met her previously. After spring break we began to date and I gave her my fraternity pin a month later. Our dates were primarily "study dates" at the library (the only thing I could afford) and after mostly A's in my senior year I was elected to Phi Beta Kappa. At Christmas we were engaged and married within several weeks of graduation from DePauw on June 21, 1958.

During my senior year of college I began to apply to medical schools and planned to go to Washington University Medical School in St. Louis. However, my faculty advisor Forst Fuller, a professor in the biology department and also my mentor during an elective research project to understand how fish managed calcium metabolism without parathyroid glands, suggested that I consider a new MD-PhD program at Western Reserve University. A fraternity brother, Bill Sutherland, also advised that I consider this new combined degree program that his father Earl Sutherland, Jr initiated in Cleveland in 1957. The program paid full tuition for both degrees and provided a modest stipend of \$2000 per year. I quickly applied and was interviewed on a Saturday morning in February of 1958 by the entire Pharmacology Department. Needless to say, I was awed by the attention they gave me and decided immediately to accept their offer. Carol, my fiancée, was somewhat concerned that I was now planning seven more years of education but she has always been understanding and supportive of my training, career path and numerous moves around the country. The game plan was to have Carol teach high school English as I

went through the combined degree program. These plans abruptly changed within three months when Carol became pregnant. After teaching for only one semester, she was asked to resign when the pregnancy "began to show". Subsequently, she was a substitute teacher, part time secretary and hospital clinic coordinator as we progressed with our family; four girls, including a set of identical twins before I finished medical school and graduate school in 1965. Number five, the first boy, was born as I finished my residency in 1967. Fortunately, we didn't stop as planned after number four was born.

As I entered the new combined degree program my mentors were Earl Sutherland, Jr. the chairman of the Pharmacology Department and Theodore Rall a new young assistant professor and collaborator of Sutherland's. The year before I arrived they had discovered cyclic AMP as a "second messenger" of epinephrine - and glucagon-mediated effects on glycogenolysis in liver preparations. My assignment was to show that the catecholamine effects on cyclic AMP formation were due to effects through the beta adrenergic receptor. Alquist had previously reported that adrenergic effects could be classified as alpha or beta depending on the relative potency of several catecholamines. The new and only beta adrenergic receptor antagonist, dichloroisoproterenol, had also been just described and was to become a useful antagonist in our work. We found that catecholamine effects on adenylyl cyclase activation in both heart and liver preparations were, indeed, due to beta adrenergic effects as shown by the relative potencies of l-isoproterenol, l-epinephrine and l-norepinephrine with inhibition by dichloroisoproterenol and failure of alpha blockers and agonists to have effects. I also found that acetylcholine and other cholinergic agents inhibited adenylyl cyclase preparations, the first description of hormones, inhibiting cyclic AMP formation. I then became interested in agents that could block the effects of cyclic AMP on phosphorylase kinase and phosphorylase activation. This required some novel assays and an acquaintance with numerous cyclic AMP analogues and other nucleotides including cyclic GMP, cyclic IMP, cyclic CMP, etc. Many of these nucleotides and their analogues were synthesized by Theo Pasternak, a professor from Geneva who was on sabbatical collaborating with Sutherland and Rall. This work subsequently influenced my desire to work with cyclic GMP as described in my Nobel lecture. Later I again played organic chemist to make some nucleotides.

I was first in my class every year in medical school and graduate school. This was a wonderful and exciting time in my life working with these mentors, watching a new area of biology develop and actively participating in the work. I loved research as Earl Sutherland was quite a visionary who was able to bring together multiple disciplines and areas to apply to his work. Ted Rall taught how to do those fool proof "Sunday experiments" as we came to call them. It was on Sundays that I could design and conduct those large and complex experiments with all of Ted's required controls such that the data were "publishable". We and others in the department were able to determine that multiple hormones including catecholamines, cholinergics, ACTH, vasopressin, etc. could increase or decrease adenylyl cyclase activity and cyclic AMP formation. Prior to this the view of Sutherland was that receptors and adenylyl cyclase were a single macromolecule or a tightly associated complex in cell membranes. My work as a student and the work of others questioned this hypothesis and suggested that different receptors for this growing list of hormones must be coupled to adenylyl cyclase in yet to be determined complex ways (see Gilman's and Rodbell's Nobel lecture of 1994 for a greater description of their subsequent work).

I also enjoyed medical school and found myself learning everything presented before me. I knew that I couldn't determine what was to be true

and important and many of our faculty acknowledged this as well. Since anything could be important, I began to learn everything taught. The new experimental integrated organ-system approach to medical education at Western Reserve permitted me to assimilate and integrate information more readily. I also thoroughly enjoyed my clinical rotations in medicine, surgery, OB-GYN, pediatrics, orthopedics, neurology, etc. There were few clinical rotations that I didn't think about as a possible discipline for my future academic career. I subsequently learned that I was at the top of the medical school and graduate school class each year and received prizes at graduation for both clinical medicine and research. I was in my element and loved it. There was no doubt in my mind about an academic career in medicine, research and teaching.

In order to supplement my stipend with so many children, I moonlighted at the Cleveland Clinic working one or two nights per week on the OB-GYN service to follow mothers with pelvic exams as they progressed through labor, assisted in deliveries and Caesarian sections and then scrubbed tables and floors after each delivery. All of this for \$20.00 per night for 12 hours of work from 7:00 p.m. to 7:00 a.m. one or two nights per week for four years. On slow evenings I was able to study, analyze lab data and write research protocols. Some nights required that I work all night and then attend a full day of classes the next day. I continued this during my clinical clerkships requiring my absence from my family as often as 4 to 5 nights per week. However, I tried to have dinner with my family as often as my schedule permitted. My wife and children were very understanding. They grew up as wonderful children and adults in spite of my absence, obviously due to a devoted wife and mother. My current fetish is my 5 grandchildren who I try to spend as much time with as possible, undoubtedly due to my guilt as an absent father. I did manage to spend several weeks each summer with my family as we took them camping all over the U.S. to various scientific meetings. There are only a few states where we have not camped together as a family and they all became proficient swimmers at a young age.

I decided to go to Massachusetts General Hospital for my internship and residency in medicine (1965-67). What a wonderful experience this was with some of the worlds' leading scientists, teachers and clinicians. Our group of 14 housestaff included exciting bright minds such as Tom Smith, Tony Gotto, Jim Willerson, Ed Scolnik and others that had considerable influence on me. My attendings and chief residents included Alex Leaf, Dan Federman, Roman DeSanctis, Frank Austen, Sam Thier, Ken Shine and others. As a resident Joe Goldstein and Mike Brown were two of our interns. I couldn't have asked for a greater introduction to medicine in spite of being on call every other night and weekend. I did, however, miss the laboratory and each spring I found myself in the library reading many of the abstracts of the Federation meeting (currently FASEB meeting) to see what I was missing in "second messengers and hormone signaling". I generated a notebook that contained numerous "obvious experiments" to be done. When I subsequently went to NIH as a clinical associate in the Heart Institute I was able to do many of the planned experiments in Martha Vaughan's laboratory. She too was an excellent mentor with a style different from either Sutherland or Rall. She gave me considerable freedom to pursue a number of areas related to cyclic AMP and hormonal regulation. Her husband, the late Jack Orloff, while superficially a gruff and tough man, was a sensitive person and talented scientist. I was indeed fortunate that they and many others at NIH influenced my thinking and career planning. I soon learned that I had numerous role models and attempted to extract the best features of each as I planned my career path and future.

I remained at NIH for more than three years (1967-70) when the University of Virginia called to recruit me to develop a new Clinical Pharmacology

Division in the Department of Medicine with an appointment as an Associate Professor in medicine and pharmacology. I couldn't resist the offer from Ed Hook, the new chairman of medicine and Joe Larner, the new chairman of pharmacology. Other faculty such as Tom Hunter, the Vice President of Medical Affairs, Ken Crispell the Dean, Bob Berne, Bob Haynes and others influenced my decision to leave NIH. I had known Larner, Berne and Haynes since they were faculty at Western Reserve when I was a student. Charlottesville was also an appealing place to raise my five children. Some colleagues around the country, particularly David Kipnis, another one of my role models, questioned me about going to Charlottesville. Just the previous year I called him to apply for a fellowship in endocrinology at Washington University. I was then 33 years old with 5 children and his advice was appropriate. He said, "Fred, time for you to get a job and support your family", and I took his advice to heart.

I joined the faculty at the University of Virginia, September 1, 1970 and nervously thought about how I could launch my own independent research career. I decided to work with cyclic GMP as it was beginning to emerge as a possible new "second messenger" to mediate hormone effects. This is detailed in my Nobel lecture. I remained at the University of Virginia from 1970 to 1981 where I was promoted as one of the youngest professors in 1975; I was also asked to become the Director of their Clinical Research Center in 1971 and the Director of Clinical Pharmacology in 1973. I built a research program with both clinical and basic studies and started to recruit many exciting students and fellows to work with me. Of the 82 fellows and students I have trained and collaborated with to date twenty are professors, chairmen, research directors and division chiefs around the world. I view them as offspring and keep in contact with most of them in my travels. There is no question that one of my greatest accomplishments is to have participated in the training of such successful scientists in my own laboratory and also influenced the careers of many talented medical students, graduate students and housestaff.

After looking at many university positions around the country as a chair of medicine or pharmacology and industrial positions, I decided to go to Stanford in July 1981 as Chief of Medicine of the Palo Alto Veterans Hospital, a Stanford affiliated hospital. I was a professor of medicine and pharmacology and the associate chairman of medicine. While it was difficult to leave many friends and colleagues at the University of Virginia where we conducted the first experiments with the biological effects of nitric oxide, I couldn't turn down this exciting opportunity at Stanford. Ken Melmon was chairman of medicine and during our first three years together we recruited about 30 new young faculty. In spite of the large administrative and clinical teaching demands, I continued to supervise a large and productive laboratory with about 15 students, fellows and staff. Trainees continued to come to our laboratory from all over the world. Some of my students and fellows subsequently went to medical school and after completing residencies have become very productive physician scientists at a number of institutions.

After a stint as Acting Chairman of Medicine at Stanford (1986-88), I left to become a Vice President at Abbott Laboratories as I was becoming concerned about managed health care on the horizon and its possible effects on patient care, research and education. After considering several industrial positions, I chose Abbott primarily because of its president Jack Schuler, a sales and marketing person with an MBA from Stanford who also had considerable vision. We worked well together as he taught me many business principles and I taught him about drug discovery and development. I enjoyed the access to all of Abbott's resources, scientific staff, instrumentation and what initially seemed like an unlimited research budget. I eventually learned that one can never have enough resources when

one looks for novel therapies of major diseases; it's an expensive undertaking. Nevertheless, in four years of directing their pharmaceutical discovery and development programs we were able to discover many novel drug targets and we brought forward about 24 new compounds for clinical trials for various diseases. I continued to have a very productive lab with two NIH grants, some outside funding for fellows and about 20 scientists working with me on nitric oxide and cyclic GMP. The administrative demands and travel were considerable since I was a corporate officer, vice president and also overseeing many industrial collaborations around the world. When I left Abbott I was supervising about 1500 scientists and staff and probably earned the equivalent of an MBA from the experience on the job plus periodic management courses required by the company. Before my arrival at Abbott the company had no postdoctoral fellows or extramural funding. When I left we had about \$3.5 mill. per year of extramural grant support and about 35 fellows in pharmaceutical research. Unfortunately, Abbott reorganized its senior management and my business roll models were asked to leave. As Abbott's senior scientist I found myself wedged between upper management, the marketing staff and the scientists and constantly was defending my decisions about the research programs. There were always considerable marketing pressures on me that in my opinion were often the wrong decisions to develop novel therapeutics for diseases without adequate therapy.

I left Abbott in 1993 to be a founder, President and CEO of a new biotech company, Molecular Geriatrics Corporation. The plan was to create another intensive research-based biotech company. Unfortunately, my investment banker never raised the amounts of money promised and he eventually lost a major personal fortune with his leveraging tactics. I found myself skipping around the world to find investors and partners to keep the company afloat and pay the bills. After a partnership with a major pharmaceutical company and some more financing as a private company, I left to rejoin academics, hopefully much wiser.

After considering a number of Vice President, Dean positions and Chairmanships, I realized that such positions would probably totally remove me from the laboratory, fellows and students, things I could not give up. In April 1997, I became the University of Texas-Houston's first chairman of a newly combined basic science department, Integrative Biology, Pharmacology and Physiology. I am also creating a new Division of Clinical Pharmacology jointly between our department and medicine. I plan to continue an active basic and clinical research program and will participate in clinical medicine and teaching again. Thus, I have come full circle. I am back in my academic element again and I love it. I also expect to continue some business adventures and exercise my entrepreneurial skills, areas that I also enjoy and view as lucrative hobbies. The freedom and intellectual environment of academic medicine and bright young students and fellows are exciting and a daily joy for me. After all, I hope to tell Ron Delismon some day "Two Nobels to zero". From Les Prix Nobel. The Nobel Prizes 1998, Editor Tore Frängsmyr, [Nobel Foundation], Stockholm, 1999

This autobiography/biography was written at the time of the award and later published in the book series Les Prix Nobel/Nobel Lectures. The information is sometimes updated with an addendum submitted by the Laureate. To cite this document, always state the source as shown above.

Addendum, September 2005

It has been seven years since receiving the Nobel Prize for Physiology or Medicine for my work with nitric oxide and cyclic GMP. Life has been extremely busy. I have continued as chairman of the Department of Integrative Biology and Pharmacology at the University of Texas - Houston.

I have expanded the department with the recruitment of six new, young, faculty, but some retirements and one death in the department kept us about the same size until some of the Dental School faculty joined us to consolidate some of the Dental School.

My laboratory has been very active with about 15 to 18 scientists which is our usual size for the past 25 years. We have found ourselves redirecting some of our research interest with nitric oxide and cyclic GMP into some new directions to maintain our lead in the field and address new challenging questions with soluble guanylyl cyclase regulation, and the role of nitric oxide and cyclic GMP in mouse and human embryonic stem cell proliferation and differentiation.

While research grant applications and support are always a nervous and time consuming process, several foundations and donors have generously supported our work and provided me with a handsomely endowed chair. These flexible and discretionary research funds have been most appreciated to pursue some of our research ideas, or accept another outstanding young scientist and trainee.

The academic world like the business world is busily involved with layers of review and compliance. With about one-half of the number of scientists in our department that I had as Chairman of Medicine at Stanford University the paper work has probably tripled. The developers of e-mail should be admonished for destroying so much paper and trees and wasting hours and hours of my time. It seems that everyone in the University feels obliged to send me all of their email copies, often after four pages of addresses, followed by a brief useless message. Perhaps all employees should be allocated some annual allotment of emails which, if exceeded, results in salary reductions.

Shortly after the Nobel Prize, I was asked to become the Director of our Institute of Molecular Medicine which I also accepted. For the past eight years I have held two senior positions in the University, as Chairman of the Department and Director of the Institute, each normally a full-time position. While at the University of Virginia, Stanford University, and Abbott Laboratories I also held two positions simultaneously. This is perhaps due to my workaholic tendencies.

Being the Director of the Institute has also provided me with a significant building and recruiting opportunity. I was able to convince the University President to engage in a major fund raising campaign of \$200 million. About half was used to build a new research building, of about 230,000 sq ft for the Institute, and the other half to recruit new faculty and scientists. The state of Texas, the Houston community, and local foundations have been most generous and we will be moving into our new research building in mid-2006. We expect to recruit 30 to 40 new faculty over the next three to five years, plus their research staff and trainees. We expect to triple our current number of scientists.

A very time consuming activity in the past seven years has been my travel and lecturing. I have visited about 35 to 40 countries during the past seven years and traveled about 100,000 to 150,000 miles per year. I am invited to all sorts of meetings and functions around the world to dedicate buildings, hospitals, participate in conferences, scientific meetings, university seminars, consult for companies and governments, etc ... Presumably, it is assumed that by having received the Nobel Prize you are automatically an expert on all topics, fields and disciplines. I have even been invited on panels of Nobel Laureates to discuss methods to promote peace and education around the world. While participating in these many travels and meetings, I have also declined many invitations because time does not permit the travel or because of conflicts in scheduling. After all, I do have a day job and must be home occasionally to pick up my paycheck. I have had many memorable experiences and meetings and fortunately my wife, Carol, accompanies me on much of my travel. I have had meetings with Palestine's Chairman Yasser Arafat, Israel's Prime Minister Netanyahu, Presidents Lee and Chen of Taiwan, Chief Executive

Tung of Hong Kong, President Medani of Albania, President Trajkovski of Macedonia, Premier Wen Jiabao of China, President Clinton, President Bush, many congressman and senators, governors and mayors.

I have also met dozens of Nobel Laureates and attended conferences and meetings with them. Carol and I have become friends of many Laureates and their spouses and many travel and lecture as much as I do. For those who are retired, it hasn't been quite so demanding or difficult.

My office and home are filled with artifacts, photographs, plaques, medals, statues, gifts and memorabilia. You receive numerous honorary degrees and certificates to wall paper your office at both work and home. We have run out of wall and surface space in my office and home and have begun to create piles to organize in the future. Since I have no plans for retirement, my children and grandchildren will probably have to organize the materials some day. One of the more humorous and memorable events was being grand marshall of the fourth of July Parade, with my wife and some of our grandchildren on the float, in my home town Whiting, Indiana. I have also given lectures to children in schools, churches and mosques. After a number of such requests, I prepared a children's educational video that can be viewed on the Nobel website that discusses the Nobel Prize and nitric oxide.

On one of my several trips to Macedonia, my father's homeland, Carol and I arranged for one of our daughters to adopt a three-month-old Albanian baby girl. The trip, at our expense, required that I give several lectures and meet with many dignitaries. I consider this one of my best honorariums. The Nobel Prize has also influenced my grandchildren who have been asked to discuss nitric oxide and the Nobel Prize in their classes after a classmate's new premature sibling required inhaled nitric oxide for pulmonary hypertension. Press conferences with the media and radio, and television interviews are frequent. The media often wants to talk about Viagra, while I attempt to lead them into more medically significant areas: such as, pulmonary hypertension in premature babies, wound healing, endothelial dysfunction with atherosclerosis, hypertension, or diabetes, where nitric oxide can be much more important medically.

While the Nobel Prize ceremonies in 1998 in Stockholm were quite a treat, the 100th anniversary Nobel Reunion in 2001 allowed me the opportunity to participate in the ceremonies and festivities, again, with less anxiety and an opportunity to absorb and savor the activities and functions. Life after the Nobel Prize is quite exciting, interesting and also demanding. I thought the attention and notoriety would subside within several months after receiving the Prize. However, there is no indication that this is the case seven years later. Wherever you go you can't escape the media and the attention. The numerous invitations to travel, lecture, attend conferences, consult for governments, universities, and companies have not subsided. It is exciting, rewarding, educational, lucrative and exhausting. You can rarely let your guard down and hide or relax. You don't dare pick your nose or scratch in some places for fear that someone will catch you on camera or video. When you travel, you often feel like you are on "Candid Camera".

Although I receive multiple faxes, phone calls and FedEx's when I travel, when I return there are stacks of correspondences and long lab meetings with my staff to review our research progress before preparing for the next trip.

The Nobel Prize in Physiology or Medicine 1998
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Presentation Speech
Illustrated Presentation
Robert F. Furchgott

Autobiography
Curriculum Vitae
Nobel Lecture
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Prize Award Photo
Banquet Speech
Other Resources
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Autobiography
Curriculum Vitae
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Interview
Nobel Diploma
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