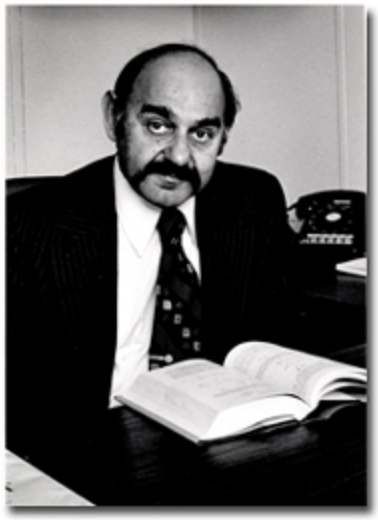

Dr. Friedman Interviewing
Dr. Seymour Lieberman in His Office
On March 22, 1999

Dr. Friedman: Dr. Lieberman, where were you born?

Dr. Lieberman: I was born in New York City, on December 1, 1916.

Dr. Friedman: Where did you grow up; in the city?

Dr. Lieberman: Yes, in the city.

Dr. Friedman: Did you have much of a family? Did you have siblings?

Dr. Lieberman: I have a sister who's eleven years younger than I am.

Dr. Friedman: What does she do?

Dr. Lieberman: By now, she's retired. She was a nurse and a School Teacher, now, she_____.

Dr. Friedman: That's great! How about your parents? Did your father have a profession?

Dr. Lieberman: No, no, no he did _____. My father and mother were born in 1887, in New York. Both of them were fully educated. No, he worked in the window

shade business and then Venetian blinds when they came into vogue in the 1930's I guess.

Dr. Friedman: He worked all his life in this business?

Dr. Lieberman: He was an employee. He didn't own the place and I think his life was spoiled by the depression, because he worried about his job although he never lost it and he lived his life working in this company.

Dr. Friedman: Where did you get your education?

Dr. Lieberman: In New York City. I'm a 1936 graduate of Brooklyn College. Then I went to the University of Illinois where I got a Master's Degree in 1937. I then came to Columbia for a couple of months at the medical school where I was first exposed to steroid hormones by Professor Oscar Wintersteiner. He is an Australian and was one of the four who discovered testosterone. He had a secure job for me at the Sharon Corporation, which was in Bloomfield, New Jersey.

Dr. Friedman: What did you do at Sharon?

Dr. Lieberman: I worked with steroids. I was involved in separating the stereoisomers of estrodye 17-alpha and 17-beta and then I was assigned to this factory, which made a kilogram of testosterone_____, which was the way testosterone in 1938 and 1939 was actually made.

Dr. Friedman: Was this before or after your got you PhD?

Dr. Lieberman: No, no, then I got my Ph. D. I applied for scholarships while I was working there and received a scholarship to Stanford University September 1939, then I left New York just after the war started.

Dr. Friedman: What did you do after you obtained your PhD? Where did you go?

Dr. Lieberman: a Harvard Professor named Louie Fieser employed me. He was one of America's most famous steroid organic chemists. He had just started corroboration with a group at Memorial Hospital in New York City and the arrangement was for me to analyze and investigate the steroid, which Memorial Hospital group isolated from the urine of patients with cancer. I spent four years at Harvard with Fieser. Although he wasn't there much, he was engaged in other activities related to the war. I came back from Harvard then to New York Memorial Hospital.

Dr. Friedman: When?

Dr. Lieberman: In April 1945 just before the war ended. The work that we did was classified as national interest, so although I was only 24-25 years of age, I was not drafted into the Army, but by midway my tenure there at Harvard, we received a contract from something called the OSRD, which was the Office of Science and Research Development. The object of the project was to isolate from urine steroids that had oxygen atoms at carbon-11, because by that time, it was known that cortisone had an oxygen at carbon-11. That to the chemist was a very big obstacle in synthesizing cortisone. There were about 10 or 11 groups around the world, mainly in England and the United States, was dedicated to various aspects of trying ultimately to make cortisone. In fact, during this time one of the people at Merck and also a man named Dick Kendall at the Mayo Clinic were capable of introducing oxygen at carbon-11, so that cortisone when it became available shortly after the war ended came from Merck, because they had a synthesis for it. Then ultimately it was made and improved upon by Upjohn Company and I think most of the cortisone that you get now comes from Upjohn. But that's the way I spent the war years at Harvard for the most part. I had a very profitable time while I was there and it stood me in good shape ultimately. But as I said, in early 1945 I came

to Memorial Hospital where I spent the next five-years until 1950. At the Memorial Hospital the object of our project was to try to relate steroid hormones to various kinds of cancer, particularly steroid hormones that were found in the urine or at least steroid metabolites that were found in the urine. And at that time, it may have sounded a little peculiar in 1999, but in 1945 it was a hot subject, it was a fashionable subject and there were many groups mainly in England and in the United States that had injected this particular one. And we were probably the longest group if I remember in 1950. The budget of our place was about $250,000, which was in those days a lot of money. We had about 20 people working for us. We had six spectrophotometer machines, when spectrophotometer machines were not commercially available. They became commercially available about that time, but it turns out that the president of the Perkins Elmer Company was a member of the board of trustees at Memorial and he made available to us this instrument which was an advancement, which was very important in identifying steroids that were isolated from urine.

Dr. Friedman: What was the time interval between the time you spent at Memorial and the time you went to Switzerland, and what precipitated your going to Switzerland?

Dr. Lieberman: Well, I went to Switzerland in June 1946 and I came back in the spring of 1947. It was while I was working at Memorial, and they actually paid my salary while I was in Switzerland, because they thought it was to their advantage that I get this experience. Now what precipitated this is a very good question and I like that question. The fact of the matter is that the famous Swiss chemists names are Reichstein and Ruzickah. Both of these men won the Nobel Prize. Ruzickah in1938 or 1940 and Reichstein in 1952. And the reasons I went there was not only due to them being geniuses, and so I could learn something from them, but it was to see how they managed

to publish so many papers in such a short time. The Swiss Journal_____,is published six times a year. And these professors would have been terribly embarrassed if any issue of this journal came out and did not have one or more papers from their own laboratory. So six times a year they would have two or three papers in each issue of the journal and I wanted to see how they could do it, because I didn't know any American chemists at the time who were as productive. It was important to know the difference between the American way, which I knew at the University of Illinois, at Stanford University and at Harvard University and how that differed from Basel. The explanation for their productivity was principally related to the fact that these guys were geniuses. It was as simple as that. It wasn't how Basel differed from our way of doing things in the U.S. I spent several months and the explanation of their productivity was principally related to the fact that these guys were geniuses. It was as simple as that. It wasn't that they didn't have any magic ways of doing it. They did have a very good system and they had very obedient students who worked perhaps a little more diligently than American students. Each of them had activities that were in progress for 10, 20 or 30 years, which they capitalized on. So it was possible for them to publish as I say two or three papers every six weeks. Phenomenal! That's what I wanted to see and I could never imitate them obviously, but at least I got an answer to my questions. What? How did they do it, right? The Americans. Fieser was one of the most famous American organic chemists at the time and was extremely productive, but he wasn't nearly as productive as they were.

Dr. Friedman: When you got back from Switzerland, what did you get involved in?

Dr. Lieberman: Well, I continued to work in the inscription, the analysis, the isolation and identification of steroids in the urine until 1950. Then I was offered a job at Columbia, which I was glad to take. So, I became an assistant professor at Columbia

University and in September 1950, I was already in what was called an associate member at Memorial Hospital, which was connected with Cornell Medical School. They promised me when I arrived at Columbia, that they would reconsider my appointment in two years, because they didn't like to put someone into a tenured position straight out. But after two years, I was reconsidered and was made tenured Associate Professor and I began to lecture there in the biochemistry department and in the department of obstetrics for the next thirty-five years.

Dr. Friedman: I assume you got involved in the endocrinology by virtue of your interest in the hormones?

Dr. Lieberman: Well, absolutely. The people at Memorial Hospital were already members of the Endocrine Society and I became a member of the Endocrine Society in the middle 1940's, so I can't remember exactly when, but sometime while I was still at Memorial. The Endocrine Society has been one of the great boons of my life and I have an absolutely great time being associated with this society. I am going to tell how I got politically involved.

Dr. Friedman: I'll be happy to hear it.

Dr. Lieberman: I don't know that date of this occasion, but the Annual Meeting of the Endocrine Society met in Atlantic City. It would be sometime in June, the year 1962 or 1963. The president at that time was George Thorne. Yeah George Thorne was president. I had heard before I got to the meeting that there was a movement on foot to create a new Endocrine Society called the International Society of Endocrinology in London. I also heard that it was their intention to restrict membership at the meetings to only people who could pass some sort of a barrier. Whatever it was whether they were members of the Society or whether they were some group that would examine their

credentials, I was against it. The consequences of my opposition was if I wrote a motion and came to the meeting of the American Chemical Society, American Endocrine Society in Atlantic City prepared to present this motion to the members assembled, there would be approximately 600. When the business of the meeting came to the last item which was called new business, I raised my hand and George Thorne who knew me, recognized me and I asked if I could come to the front, which I did. I had the yellow pad with the motion written on it, because I preferred to read. I proposed that the Endocrine Society go on record against having any limitations on people attending the meetings. I don't know if I have said it correctly, now but I think you get the idea. The motion passed with two dissenting votes. Nobody would be in favor of prejudicing somebody's attendance. My position is this, you know this point is relevant today and I will tell you in a moment why. Because there is this terrible tendency of people wanting to be special and keep people out from the groups that they belong to, clubs that they belong to. So the members at this meeting approved the meeting and George Thorne created a small committee to do the organizing session of this new society, the International Society of Endocrinology, which still exists. Because I had made the motion, he appointed me to the committee - there were four of us. The four was myself, Grant Liddle who was president in the Endocrine Society and Leo Samuels, the one we talked about just a few minutes ago that Claude Migeon decided to work with. I don't think Leo ever became president of the society, but at any rate, it wasn't Leo it was Grant and Roy Greep who didn't become members of the present society. Before it was Grant Liddle, Roy Greep, George Thorne and I. We went to this meeting where there were forty different countries represented. It was one of the most exciting times of my life sitting around in a semicircle with people from Japan and Sweden and Africa and Argentina. I'm not going

to mention their names, because they have long since died and there is no reason to revive this. The point of this story for the relevance of today is that next month in June, there will be a satellite meeting to the present American Endocrine Society at which only a few people are being invited. In other words, there is an artificial limit put on people who can come to hear the latest information, which in my judgment is antithetical to the scientific experience.

Dr. Friedman: You mean this satellite symposium is strictly on a more modern subject, that it has nothing to do with ICE?

Dr. Lieberman: Oh no, it's a present subject on modification of estrogen or something of the sort. There are always groups of people who apparently want to do better than the other people, which is a normal behavior. But the point is that the dissemination of knowledge ought not be limited to a small group of people. Now, their argument is that small meetings are better organized and actually those who attend do learn better than these massive meetings, which are now prevalent. For the balance in terms of the science in my judgment is on the side of democracy, besides being philosophically opposed to, in order to eliminate or prevent young people or anybody; women for example. I think that is going to be right cute at this meeting. From attending the meeting where the latest information is being presented to a select group as I said _____scientific process and this persistent 1999, it's not 1999 this is back in the 50's I would guess. At any rate, by making this motion before the Endocrine Society Annual Meeting, that was my entrée into politics, so now I got elected to this meeting or to this council or committee or whatever, and ultimately became president of the Endocrine Society and I am proud of this and I still think I wish somebody would stand up at this meeting and detest, because I really think the Endocrine Society ought not be parting. Not that the Endocrine Society is

parting from this meeting and there is no way that you can in fact control this, but at the same time ought to recognize this disadvantage and the objections to having such secret or because they are secret meetings.

Dr. Friedman: Once you got into the political business of the Endocrine Society, which part of the work you did for the many years for the Endocrine Society did you enjoy most?

Dr. Lieberman: Well, that's a simple answer. The part that I enjoyed most was that I was given the opportunity of meeting dozens of great people that I would never have had occasion to meet. Being trained in organic chemistry, I would not be exposed to "Endocrinologists", both those who were physicians and those who were not physicians. Some of the smartest people I ever met in my life were physicians who were endocrinologists in fact, and obviously very smart and being for the most part very decent and this enriched my life enormously. I knew every president of the Endocrine Society relatively intimately, until the very recent ones, which of course I have out grown. But I can start back with J.S.L. Brown, which goes quite far back. Of course I knew Pincus very well and then all the way up to Jameson who is going to be the next president. People in between you know were absolutely exceptional people I would never have had the opportunity to have dealt with in an intimate, friendly and productive way, so what more can you ask? I mean that's what enriches your life; at least it did mine.

Dr. Friedman: How did you enjoy the political aspect of the Endocrine Society in terms of the functions when you have to deal with public relations and things like that?

Dr. Lieberman: Well, I suppose the way to answer that question you have already detected that I enjoyed people and so being involved with people, that's really what the bottom line is, public relations as you said. Of course I enjoyed the fact that you dealt

with people that think differently from what you do and who come from different backgrounds and so that there are disagreements or frustrations or what not. I don't think that's a problem. I think that for me it was not a problem, because I had a much broader view of what it was all about and what it meant to me personally.

Dr. Friedman: How about the year in which you were president of the Endocrine Society? Could you recall things about that which interested you or upset you or pleased you?

Dr. Lieberman: The fact of the matter is that the year that I was president is very vague in my memory. I do remember that the extent of my power was to appoint four people one of them of which was Claude Migeon in fact, who became the public relations director. He was concerned with relations with newspapers and also congress. But other than that, the president in my view has very little power - not that I seek power. I could care less about power. It is an honorary title in a way and the Endocrine Society was absolutely wonderful from what I already said. Now it has changed, subsequently when it broadened its membership and by that time I was already less involved so I am not overstating it, because principally as I said, because of the people that I met. I didn't do very much to change the world of Endocrinology as one might expect, nor did I do much to change the composition of the Endocrine Society.

Dr. Friedman: Well, what would you say you didn't do much as a president? You did guide and direct the functions of the council. I mean you lead them in your sessions and sort of directed their thoughts. I didn't say you formed their thoughts, but you directed them.

Dr. Lieberman: I think that the Endocrine Society was a going institution when I became president and it was just carrying on in the mode it was in very good. It was

pointed in the right direction. And there was nothing that needed to be done to change the turn much. I was not a president who felt it necessary to change something in order to prove myself. I did start in fact the one thing pointing towards_____and that was a novelty to do the public relations if you would speak to Claude, I don't know how successful he was, because I think in retrospect those activities are not productive, because the fact is that determined the influence of the Endocrine Society budgets and public perception of endocrinology, is not determined only by the Endocrine Society, but by many other factors.

Dr. Friedman: Well, but it was important that they campaigned and they lobbies for the sake of getting money to support NIH.

Dr. Lieberman: I think my view of that is that if they hadn't done it, it wouldn't have gotten worse than if they did do it, which having done it they didn't influence it very much. The point is that the bigger factors were controlling it, for example the NIH budget was not focused on endocrinology, it was focused on much broader issues, concerning the country and on the other hand if they were, if the Endocrine Society was absent in this activity that would have been a dereliction on their part.

Dr. Friedman: I agree with you after all the documentation of the transactions of the meetings I have been studying, agree with you on that. So expand a little bit, even though you can shut this off if you like to, because I am interested in hearing.

Dr. Lieberman: That was my position, even then of course I had been at NIH for 8 months or so, but I knew how they worked and I have been at the Ford Foundation. I knew how they worked and to think that the society could by making presentations and talking to reporters, have a big influence in increasing funding in endocrinology, which is

really what their objective was. On the other hand, it was proper for them and it is proper for them to do it now, to continue lobbying.

Dr. Friedman: I agree. What have you been doing in recent years?

Dr. Lieberman: Minding my own business, maintaining myself in steroid chemistry. This Chinese man that you met, is the only chemist that I have working for me now and we are doing great things. We have published a couple of papers in the last few years and I have published several reviews that I like. These reprints that you see sitting around here are the subject of another review that I am supposed to be writing.

Dr. Friedman: Reviews on what specifically?

Dr. Lieberman: On endocrinology and biosynthesis of steroids. I never in my life wanted to be or thought to be capable of being versatile; rather, I believed that it was better to focus on one or two things. Fortunately for me, steroid hormone is sufficiently broad, but I don't have to feel closed in by a small subject. The point is that the way I ran my life and the fact is that this is interesting, I think the experiences that we are doing now today could have been done forty years ago if we had the thoughts forty years ago.

Dr. Friedman: You had the foresight.

Dr. Lieberman: No, no, but the point is, a lot of things that are being done today and by chemistry are a result of new techniques and new instruments and new ways of thinking about it. But we are doing well. If I had the thoughts then, we would have had all the techniques that we needed to do the experiments and I don't feel that I have been embarrassed to say that I am stuck in the mud with biosynthesis of steroid hormones to which I have contributed a little bit. But at any rate, we are still doing it and if my thoughts are correct, we can make them facilitate the contribution. I mean if I didn't think so, I wouldn't continue.

Dr. Friedman: Obviously, and you have a reputation for making big contributions. Is there any specific aspect of the work that you are doing that you like the most or feel you enjoy the most or feel most gratified?

Dr. Lieberman: I can answer that question. I am by training and by preference, a chemist. During my life time, biochemistry has changed so that from the time I entered it, the influence of chemistry and chemists on the subject matter of biochemistry was enormous and the influence of biologists however, you define them was conventional to a certain extent. The situation has changed in the last fifteen years or so biochemistry journals even if they pick up a biochemistry journal, it seems to me to be a predominantly biology, because a good deal of the chemistry of life has already been defined and so in order to make new advances you have to do it in a biological system; do what is already known in other systems. Whereas chemists like trained in organic chemistry particularly, are ignorant. I know a lot about endocrinology obviously, and about metabolism in humans, but I don't know much in terms of microbiology or botany or things of that sort, where the subject matter is presently growing and flourishing. Now I had an NIH Grant for 42 years entitled the Application of Chemical Methods to the Study of Steroid Hormone Biochemistry. Now this title if you recognize it, couldn't be any broader. It was not a concern in steroids or whatever, it was anything that I wanted it to be provided it was chemical and related to steroid hormone biochemistry, so I had this 42 years, which was pretty good.

Dr. Friedman: It's remarkable.

Dr. Lieberman: It is one of the longest in the NIH. Now there may be people who have longer now, but when I finally quit which is about 15 years ago maybe more, it was one of the longest in the NIH. So to answer your question specifically, what I have tried to

do, even involuntary comes naturally to me and I am pleased to do, is to apply chemical thought to endocrinology. Fortunately, steroid hormones allow a great deal of head way in that particular realm and I have to tell you I don't think I am mistaking when I'd say I know of very few present practitioners of steroid biochemistry or of steroid endocrinology who approach subjects in the same way that I do from the chemical point of view or who are capable of doing it. That includes even my students. My students are not following in my footsteps, which is quite all right. I mean that is why we groom students and children so that they don't follow in your footsteps, but the point is that there are few of us. When I started there were 20 or 30 or more around the world who were trained as I was and were interested in things I was, but little by little things have changed and so as I said before, what we are doing now is the application of chemistry to the determination of how substances like testosterone are made. Particularly I guess the hydro testosterone and that is why I address myself and I choose problems when chemical knowledge and expertise are applicable and also which distinguishes me from most of the other people in the field.

Dr. Friedman: So that you have the expertise, it's not a matter of trying; you are doing all of what you have been doing.

Dr. Lieberman: Oh, yes why absolutely and as you may note as a subject now that grew out of my students in fact called neurosteroids, that is steroids that are found in the brain. Turns out that is a subject which lends itself to chemistry and that's what we are working on and that's one of the more fashionable areas at the moment. Oh this is another thing, if I had to be objective about myself.

Dr. Friedman: You are permitted.

Dr. Lieberman: My critics would call me a contrarian. In the sense that I resent or don't easily accept other people's interpretation of the facts and I never question facts that they describe, but the interpretations are more difficult for me to be sure of and suppose you discover that A goes to B, now what's the consequences of B? That's where the interpretation comes, the fact that A went to B can easily be established, but the consequences are how relevant is that to nature? Is it relevant to the adrenals as well as the intestines or the ovaries or the brain? So I always lived my life and I have published the review fifteen years ago, which was base3d on this side of the _____. That is to say to accept all the facts as people have described them, but question their interpretation, because it is a natural tendency, which I do too, so I am not complaining about other people.

Dr. Friedman: Well, you are a true scientist.

Dr. Lieberman: To extrapolate it to as far as you can go, because in fact you owe it to the subject matter to indicate to those people who read what the possible consequences are of your experimental findings. On the other hand the interpretation that you put on your findings maybe excessive, unwarranted or improper. That's what makes somebody a contrarian – one who doesn't believe what somebody else says. They do the same thing to me, which is quite alright, I am not opposed to it, but I suppose that is part of me that is, I am not ready to be a follower and to accept what others have said. Of course if you justify that, I have to say that today is Monday, there is no way I can decide. I don't need to decide. On the other hand, if you look at our papers you would see that being a contrarian is not such a bad adjective. A simpler term scientific, absolutely, absolutely! I am not always right obviously. Nobody is. On the other hand, to be expecting that I could always be right is improper too; I mean it's so much fun. Because I have had a lot

of fun in my life, not only with the Endocrine Society, which is what I just described to you, but fun doing the chemistry and the biochemistry. I had fun with the _____where I spent a year. One of the great things about my life I have been trying to teach my grandson is that there has never been a day that I resented going to work, only because every day has been different, it has been pleasant or easy, but on the other hand, it has always been different and in the long run has been fun. The notion of fun is a very important concept, you know. Doesn't mean sitting on the beach and counting grains of sand. It's what you enjoy doing that's exactly right and you know enough about it, because it is a wonderful way to live.

Dr. Friedman: I assume your plans are just to continue.

Dr. Lieberman: "Until they carry me out". As long as you are mentally able, " 'til they carry me out. Well, I don't know about mentally able, but at the moment though, my physical state is deteriorating quickly. In the last year, I had a hip replaced, two cataracts removed, and two shoulder rotator cuffs repaired. I still can't lift my elbows high. On the contrary, my short-term memory is not as good as it was, but my long-term memory is terrific. I can tell you eleven points of the sample that I took in 1942, I am not kidding! So therefore, I think I still have a contribution to make. This is very important for us to know; the last time couple of times, we applied for grants we were turned down. On particularly these neurosteroids, in spite of the fact that I think that the contribution we make with neurosteroids in terms of biochemistry and biosynthesis is as good as anybody's. We were turned down partly because I think there is some age discrimination and I approved of that if I were on the study section, if I had to make a choice to a young person than somebody 82-years old, I am not sure that I would give it to the 82-year old guy even though he may be at the front of the field. So there is another aspect of what

people on the study section don't understand, what you are doing to monkeys, because they are not trained in the same way that I was. But so in other words, I am funded at all and this year in order to keep my chemist going who works for a small fraction of what he is worth, I have donated $25,000 to the hospital which pays his salary. Now, he is a man who is worth $100,000 salary, but he is working for $25,000, because that is all I can afford to do, but he is retired from a New York State job, so he has a pension, so I don't think he suffers too much financially. On the other hand, he likes what he is doing too. Because he is 65 or so, he doesn't look it. No, and he is absolutely terrific and we have a good time together. We published two papers already and we have published more today and this week may be the end of one of them. So that's what I hope to be able to do. I used to be the president of this institute, the institute for health sciences was a special corporation that was made by Saint Luke's Roosevelt Hospital to take on their scientific activities and I did very little in that job, except that I was the epitome of academic medicine here in the hospital. Since the course of my relationship with Columbia and my position, I was the center of academics in the hospital, which was not known for its academics before to the extent that I am bragging about it. I was dedicated to having this hospital make a contribution to medicine besides delivering health care. A couple of years ago they asked me to step down, but they allowed me to stay here and I have the lab and the offices you see and I am grateful for them to do this. I think they benefit from my presence. I'm sure they do. But a lot of people are not pleased, but anyway I think they should and so as long as they let me stay and as long as I pay for salary they have nothing at all to say, there is no burden on them, since I don't get paid.

Dr. Friedman: You never told me how high a rank you achieved at Columbia.

Dr. Lieberman: I became a full Professor in 1962 and I retired in 1987, then I became Vice Provost at the Columbia University. I don't remember the year now, but it was about six or eight years ago for 6 months the Vice Provost. I'll tell what that is about in a minute. The Vice Provost left and they did not have one and they asked me to serve in this, so I held the chair those years or the six months until they found someone. The Provost of the University is the second highest title in the university and there is one way to describe him. He is the Dean of all Deans, and of course I know him, because he was one of the people who interviewed me about 10 or 20 years ago. Of course, he was professor sociology and I was working in what was then called the office of science and technology. I was the chairman of the committee on science and science policy at Columbia University, which is the university's committee appointed by the president. I was the chairman of that for about 10 years, and I am still on the committee. We were supposed to have a meeting last week, but they called it off. I assumed the professorship was vital.

There is an important aspect of this history of course. Columbia University by 1950 was one of the few medical schools that had what was called joint appointments. Joint appointments, appointees were people who were scientists, who had an appointment in a clinical department, the point was that they believed that it was true, and I can mention very famous people who served in this duel position, that these people because they were scientist and had expertise in an area that was related to a clinical department could be an advantage to the clinical department. I was in the department of obstetrics and gynecology so I had two titles, I was professor of biochemistry, but I was also a member of the department of obstetrics and ultimately I have to tell you there is no exaggeration, I

became the most famous person in the department of obstetrics. Of course, I don't see why endocrinology is important to obstetrics, but most of the obstetricians that you know are surgeons and chemistry is quite far removed from their domain. So the notion of having a non-clinician in a clinical department, medicine have immunologist and connective tissue people and nuclear chemistry these are people who had professorships in biochemistry, but were also connected with the clinical department, in particularly medicine. We had people in orthopedic surgery who were experts in calcium metabolism. Columbia was one of the first ones to have this system, which I am a great fan of, because both the biochemistry departments and the clinical department benefited from this. The biochemistry department because they had experts whose salaries they don't pay, in fact it's usually the clinical department who pays for it and the clinical department because they have people who are addressing current problems that are relevant to their subject matter. If they choose the proper people and if they are lucky, I guess there is some luck involved also. Both departments benefit. Now there are political hazards in such a school, because the power structure in each of these departments don't allow for this kind of competition. Discontinuity is a better word and it is not only competition, no, I never had any competitions with obstetricians. They were always happy to have me in the department, because I didn't compete with them, but they were interested. I didn't compete and nor did they compete with me. But the power structure is strained by having competition, but which I think it still should, it can be managed. I had a friend at Harvard who openly succeeded in the same kind of joint appointment and I am not sure about other schools now, but I can tell you that in 1950, Columbia was one of the very few medical schools that had this system and it was terrific. We had people I don't know if you know the names of Carl Myers, and Michael Highrowberger.

Dr. Friedman: Carl Myers! Sure.

Dr. Lieberman: He was in medicine in fact and he was also professor of biochemistry. He was in medicine in fact and was also professor of biochemistry. But these are the kinds of people they could attract and did attract and it was beneficial for the whole institution.

Dr. Friedman: What interested me about your recent comments is the fact that I interviewed Roy Hertz and Roy was involved not with chemistry and obstetrics, but endocrinology and obstetrics, and it was sort of bilateral situation there also.

Dr. Lieberman: At Columbia, you will know this name one of my colleagues when I first came to Columbia in fact was instrumental in my coming was an internist who was in the department of obstetrics, you see he was an expert in the adrenals and ovary and he had a title in obstetrics.

Dr. Friedman: Who was that? Joe Jailer, of course the Joe Jailer who came from down Sinai. That's right. He worked with the adrenal person, Soffer.

Dr. Lieberman: I can't remember his name. I know him very well. Anyway, so Joe was also in a sense a joint appointee and he was one of the first interns in the department of obstetrics in the whole country. We had a very good chief whose name was Howard Taylor who was a very bright man, and an extraordinary person and he had the big broad vision, so it was not unreasonable for him to know how to do things properly, but that is absolutely true.

Dr. Friedman: One thing we didn't get into was your family. Obviously you have grandchildren you have married.

Dr. Lieberman: Well I was married in 1940 on D-day. D-day was June 6. We were married on June 5 and then the next day. I have one son who will be 50-years old this

August, who is Associate Professor of psychiatry at Brown University. He is a Harvard graduate, has two degrees from Harvard and he is at Brown. He has two children and his wife is a psychiatrist also. He was a great son. I would say the one failing in my life was that I only had one child, but it is okay. I told you one of the great benefits I received in my life has been the people that I have met throughout these various activities. Not only at the Endocrine Society, but at Columbia University, and before that, at Harvard, Stanford, and at Memorial. So that's been one of the great consequences you couldn't buy if you had money to buy, meeting all these great people and meeting them at an intimate level. The one thing hat we have not spoken yet about has to be with a procedure that we had at the medical school of Columbia, for about 30 years that I am aware of. We used to have one big cafeteria where people would come everyday for lunch and the cafeteria was sufficiently large so that you could meet just about everybody in the medical school at one time or another if you came there constantly for over a 30 year period. You would meet ultimately almost everybody that was working at the medical school at the time and obviously the Columbia Medical School had some very great people, both personally and scientifically and you could meet them over lunch. So again I was able to meet people whom I would never had the opportunity to come up against; so they include psychiatrist, and neurosurgeons, and orthopedic surgeons, urologists as well as chemists and physiologists and pharmacologists. There was a 20 year period in which I met people who were anybody at the medical school and this was a social event everyday, 5 days a week. Where could you buy such an experience? At the NIH where I was for several months, they had this enormous cafeteria where you could only meet with the people you dealt with everyday, because it's so large, noisy and busy. This was just a great pleasure and it extended over all this time and then they did away

with this cafeteria, so they don't have it any more and it seems to me they lose an enormous amount not only because information is transmitted readily through this mechanism, but in terms of developing camaraderie and the atmosphere that is conducive to having a happy place and that was one of the great activities of my life, just going to lunch everyday. Of course, we don't have it here, we don't have the number of people, but they don't do it at the medical school now either.

Dr. Friedman: Did you know Sidney Werner?

Dr. Lieberman: Oh, I knew him very well, of course. There is one other person. There was a man, Clemens who was Canadian, oh yeah, and I met him once, but I can't say that I knew him, but the next one Roy_____1926, I knew quite well, then of course in 1950, E.C. Kendall. Kendall shared the Nobel Prize for cortisol synthesis. (He and others synthesized cortisol in 1934 and in 1949, he and others reported it use in the treatment of rheumatoid arthritis). He was an enzyme chemist graduate of Columbia University and was a unique personality. I mean not a pleasant personality, but unique. Also a contrarian and always in ways that were in tradition with organic chemists. Anyway, he won the Nobel Prize, so he was right. The rest of them didn't and I knew him quite well. This is a funny story. I once went to the Mayo Clinic and when he saw me he said, "I would like you to come up to speak to the president". He said that the president doesn't have any appreciation for the Mayo Clinic and I want you to go up. Here I am 24-years old and he's about 50. He had not won the Nobel Prize yet, but he was obviously world famous, so he took me up to see the president who had an enormous office about 4 times the size of this and he asked me to make a little speech about what I thought about steroid hormone chemistry. It was really ridiculous. On the other hand, I did very well, but it was so out of place. The next one is Joe____, whom I knew quite well

Dr. Friedman: Okay, go a head.

Dr. Lieberman: Then Fred Koch, 1937, he was chairman of the department of biochemistry at the University of Chicago and in 1944, I was asked to go to the University of Chicago to help a man who I consider to be one of my mentors, Tom_____, who was not one of these; he was active in the Society though. Tome with his terrific personality had one of these contracts that I told you about that the government put out during the war. He had lost one chemist, so that they sent me out there to help. I met Koch this time. Philip Smith was the next one that I remember. He was professor of physiology at Columbia when I came there. He was an elderly man by that time and was one of America's most famous physiologists. He had invented a technique for doing hypophysectomy in rats. Edgar Allen, whom I met, was one of the discoverers of testosterone. He was a physician who worked at St. Louis and was a very nice man, properly an excellent physician and he worked with this man Victor_____that I also knew. Testosterone was isolated at approximately the same time by four different people. One in Germany, one in Argentina and one in New York and the other in _____.Philip Aubrach,_____yeah I knew him very well, before he got Parkinson's Disease. CNH Long was a professor at Yale in _____. JSL Brown was _____, the principle guy; the principle internist and was very important in the Endocrine Society, because of his position. He was a big tall man and extremely smart and a very nice person. Ed Doisy, you know that name?

Dr. Friedman: I know the name, but I never met him.

Dr. Lieberman: Doisy won the Nobel Prize for two things, I don't remember for which he won the Nobel Prize. One was _____while the other one was for vitamin K. He was

one of the first people to isolate vitamin K. He was professor at St. Louis University in St. Louis.

Dr. Friedman: When I was at Michael Reese, there was a man by the name of Henry Guterman who worked on pregnanediol

Dr. Lieberman: I knew Henry before he died. I knew him very well. We were great friends. Think he was hypertensive. He had some kidney disease. I don't know the details, but he was ill even when I knew him. I knew him for quite a number of years, but he died quite young.

Dr. Friedman: Did you know Clarence Cohn then?

Dr. Lieberman: I know the name and I can picture him. He was a chemist. Yeah, I know, but I didn't know him very well. Gregory Pincus, now I don't know what you are going to do about Pincus, there have been several biographies on Pincus. Pincus is one of the most unusual personalities that I have ever met and really deserves a chapter by himself, because for a period of about 10 or 15 years or longer, he was Czar of endocrinology in the United States. A position nobody will have again. I mean the circumstances of the science doesn't allow that these days, but when Pincus was operating there were people who would not hire somebody unless Pincus gave the okay. I mean he had power beyond what you could legislate and he was an extraordinary person. He was extremely smart. One of his great sources of power was that he was the editor of the Recent Progress in Hormone Research, of which there are some 50 odd volumes. Roy Hertz and I, I think I may have told you this. Roy Hertz, Roy Greep and I were invited to the 50th anniversary of the Laurentian Hormone Conference, which was held in Puerto Rico about 4 years ago some 5 years ago. We three were the ones who were present at the 1st Laurentian Hormone Conference in the 1950's.

Dr. Friedman: That's nice.

Dr. Lieberman: In fact that is the last time I saw both of the Roys', because I knew them quite well. Pincus, because he was the editor and the founder of the Laurentian Hormone Conference, obtained an enormous amount of self quiet power, because nobody gave it to him, he just took it and he could do it because that's the kind of personality he had and I think endocrinology benefited. I think the science of endocrinology benefited from Pincus' personality, because he was what they called a Catskills master of ceremonies. Somebody who goes around and keeps the activities going. Comedians in the Catskills used to do that.

Dr. Friedman: Now they call it social directors.

Dr. Lieberman: Yeah, right. He calls it his job, mixing things up, promoting things, being an activist. Endocrinology during his time actually benefited because he himself put himself in the position that it would have been if he had not done it. Look at all the women that benefited by the anovulatory drugs. Oh, there's no doubt about that. Some say that he influenced the lives of more women in the 20th century than any other one person, which is probably true. Even to this day, if you think about it, he promoted the drug like no one else did and did it marvelously. He used to teach the physicians, although you knew he was not a physician, he was a biologist.

Dr. Friedman: That I didn't know.

Dr. Lieberman: On yeah right. He was a biologist, he was physiologist, but I heard him give a lecture to 800 physicians telling them how to use the pill at the Rockefeller University, because he had that kind of personality. He had lots of friends you know. Paul Stein, you know better than I do, because I didn't Paul very well.

Dr. Friedman: No, I didn't know him, he was from California.

Dr. Lieberman: Yeah, I know that. I didn't know him. Earl_____was a Columbia professor so I knew him very well. Allen_____was at the University of Chicago and was a wonderful person, marvelous. He was an adrenal person. Warren Nelson was not a physician, but a biologist. He was professor in Iowa and a very nice man. I don't know where he came from. He became the President of the Population Council where he was for about 10 years. I was the chairman of their committee. They had a committee that gave money to various people who applied for it and I was chairman for about 10 years. Warren was succeeded by Charlie Segal. You know who Charlie Segal is, and Segal was just succeeded by Warren. Lawson Wilkins, I am sure you knew him. He was a great personality too. Leo Samuels we just talked about. Perry McClough, I don't know if you know him. I don't remember where he came from, but he was Canadian, I guess. He was a Scotsman. Ingraham, did you know that name?

Dr. Friedman: I knew the name, but I don't know him.

Dr. Lieberman: Ingraham was a physiologist, who worked principally at Upjohn, but he was an academic; meaning he was one of the best physiologists in the country at the time and was a very modest and extremely smart and wonderful person to know. Ted Astwood.

Dr. Friedman: He was my boss.

Dr. Lieberman: George Thorne. Harold Mason was a colleague of mine was a chemist who worked with Kendall at the Mayo Clinic. Francis Lukens.

Dr. Friedman: I knew him from Ted.

Dr. Lieberman: Yeah, right. Roy Greep. Rawson used to be at Memorial so I know him.

Dr. Friedman: I knew Rawson and met him before he left Boston. The last year I was in Boston, Rawson came down to Memorial and Greep and I met, because his backyard was back to back with Astwood's so that's how I got to meet Greep. Greep was not a physician, you know.

Dr. Lieberman: Henry Turner, I knew him not very well, because he was much older than I, but I was the vice president when he was the president and he got ill and couldn't preside or carry through. So I presided, and Val Hugh was the secretary. Turner had been secretary 15 years or something like that. Alfred____ is professor at Emory, we still have him around.

Dr. Friedman: No he died.

Dr. Lieberman: Did he die? Well, he was a terrific person. Must have died in the last year or two.

Dr. Friedman: I'm pretty sure that he died. I will have to look it up.

Dr. Lieberman: Robert Williams. Williams came from Oregon. He wrote the book. Al Albert was a good friend of mine, and was at the Mayo Clinic. He was an unbelievably smart guy. Bill Daughaday from St. Louis claimed to be the best teacher of medicine in the country. He was such a smart guy hard to believe he was interested in diabetes. He was interested in anything. He discovered what is called_____in the blood and I have forgotten what, because it has a new name now, but he has done terrific work and is extremely smart. Lou_____was a PhD and a graduate of Columbia University. He is a friend of mine and a professor at Harvard. He and I were the closest to being twins I guess in terms of our interest in chemical. Grant Liddle, did you know him?

Dr. Friedman: Yeah, from Tennessee or Kentucky. He was an adrenal man. He worked with Orth.

Dr. Lieberman: Well yeah. Orth worked with him, because he was the chief and Orth was younger.

Dr. Friedman: Yeah, right.

Dr. Lieberman: Seymour Reichlin came after me who was New England medical.

Dr. Friedman: I knew him, because he succeeded Astwood. I think there was somebody in between. He is so smart! You are interested in neuroendocrinology that is why I knew so much about him, besides he was a good doctor too. He is retired and lives on a ranch in Tucson.

Dr. Lieberman: Ernie Knobil was a physiologist who was a student of Roy Greep. Griffin Ross did you know him from NIH?

Dr. Friedman: Of course, a terrific guy. Unbelievable, terrific!

Dr. Lieberman: You know Mort Lipsett also from NIH? Well he was at Memorial too. He wrote and traveled around a while. He was also in Cleveland and then he came back to NIH. Elwood Jensen is a PhD in organic chemistry and a student of _____, got his PhD in Chicago and he was a student when I was there in 1944. That's how long I have known him. He is an interesting guy.

Dr. Friedman: He is extremely interesting. He retired a couple of years ago and following his retirement, I think. I don't know if I have the order correctly, that he spent a year in Switzerland, a year in Germany and now he is in Sweden.

Dr. Lieberman: Oh, I didn't know that.

Dr. Friedman: He is married to a German woman.

Dr. Lieberman: That I didn't know.

Dr. Friedman: I spoke to him on the phone about two weeks ago. He called me up to see if I could dig out an abstract from a proceeding of the Endocrine Society at the annual

meeting. There was an abstract over 30 years ago and fortunately I was able to find it for him.

Dr. Lieberman: Yeah, I like Elwood. Elwood won a very important prize for which he got $50,000, which was the Lasker Award. But I always thought that if anybody deserved the Nobel Prize, he did and the reason is that he was the first one to talk about estrogen receptors and while the word receptor had begun with a man named_____at the beginning of the century, there was a big hiatus between the time he talked about receptors and Elwood. Elwood found an estrogen receptor in the uterus and from then on if you look at the history of biochemistry, receptorology just skyrocketed. Just expanded into every subject, so receptors is now receptorology. But I believe that the modern era of receptorology began with Elwood's experiment, which I use to teach in biochemistry showing how the disappearance of estrogen occurs. It would be nice to have that on paper. That was such a seminal finding now. Anyway, so that is my feeling about Elwood. He is certainly an interesting personality, but besides that, he is smart. Mel_____do you know him?

Dr. Friedman: I know him when I see him.

Dr. Lieberman: He is a good friend of mine, because he was at Columbia for 10 years. I just know him when I meet him, very smart. Now Neena Schwartz, see now I am coming into modern history. Now the women are getting into it. Dorothy Krieger, Neena Schwartz, Marie New. Well, Marie I know quite well obviously. Bert O'Malley, I will just read them quickly. Lisa Fish I know very slightly. Bert O'Malley I know quite well. Sid Werner I knew quite well.

Dr. Friedman: Yeah, well I knew him from the Thyroid Society. He was a terrific personality.

Dr. Lieberman: Roger Guillemin, do you know him? Roger Guillemin is a Frenchman who had two_____titles at the same time. One in France and one in Texas and he won the Nobel Prize for his work on TRF, the release of thyroid release factors and it was a terrific discovery in fact. He didn't do it along, but at any rate, he was instrumental in the whole process. John Potts, Jerry Aurbrach, Jean Wilson, Jack Gorski, chemist. Wylie Vale, Wayne Bardin, Susan Smith, I know very slightly. Glen Lowery I know quite well. I know him from NIH and Michael Conn I know him slightly. And I see the last one was David Orth. I like him; he is a very nice man. And I just voted for Katherine Horwitz.

Dr. Friedman: So did I. She is marvelous and a terrific person and a very smart woman and I think she deserves to be the president. She is president now.

Dr. Lieberman: Oh she's president now? Oh, I don't know her.

Dr. Friedman: I don't either. One thing I forgot to ask you talking about people and deserving. What was the Dale medal that you received from the British Endocrine Society?

Dr. Lieberman: It is a medal they give every year. I don't know anything more about it. It's very prestigious in England. I will give you the lecture I wrote; I will give you a copy of it, okay?

Dr. Friedman: Fine.

Dr. Lieberman: It is an interesting lecture because at least I think so. The title of the lecture is called Pictorial Endocrinology versus Emperical Hormonology.

Dr. Friedman: I better read it.

Dr. Lieberman: The reason the title which doesn't come until the end is endocrinology even the word comes, because I am going to back up one sentence. The difference between biologist and chemists and this included physicians most of the information that

biologist got came in from their heads through their eyes, you look at a giraffe and you know it is not an armadillo, but you look at a kidney and you know there is a little bump on it so you describe it as a _____. Chemist never see the objects of their investigations they only see reflections of it. If I gave you a spoonful of sugar, you wouldn't be able to tell if it were sugar or salt, or a dozen other white chemicals that could be not dozens or hundreds. You might taste it, but even then it would not be unique. So we never know, what we deal with is all in our heads for the most part. I don't mean it's better or worse, it's just that it differs. That's the way it is. Back up now so the way endocrinology comes from the fact_____saw the same bumps that were outside that is where that word endo and that they secreted their secretions into the blood stream that is_____, but the testes and the ovaries and the adrenals and the thyroids and_____they were structures that they could see. Contrary wise endocrinology now has become chemical and so what Empirical Hormonology. Hormonology would be the study of hormones and Empirical is what you find. You do this you get that, that's Empirical and it doesn't depend on just, you can't see testosterone being secreted by testes or thyropine being secreted by the thyroid. See, you deal with it and you manipulate it and you see the results. So endocrinology in that sense is ____, but no one is going to change it. That was a small part of the lecture that I gave there.

Dr. Friedman: Thank you.