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STANLEY G. KORENMAN, MD

Interview conducted by
Adolph Friedman, MD
February 15, 2001

It is recommended that this oral history be cited as follows:

Stanley G. Korenman, MD, an oral history conducted on
February 15, 2001 by Adolph Freidman, MD,
The Endocrine Society, The Clark Sawin Library,
Chevy Chase, Maryland, 2009.

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FAMILY BACKGROUND

Dr. Friedman: Dr. Korenman, you were born January 21, 1933, in New York City. Now tell me a little about your parents. Were they educated?
Dr. Korenman: My parents were both immigrants from Russia--one from the Ukraine, and one from the Tashkent area. Neither of them was educated. My mother got her high school equivalency when she was about fifty.

Dr. Friedman: That was an accomplishment. What did your father do for a living?
Dr. Korenman: He was a dress presser in the garment district in New York. He hated it from the day he went into it.

Dr. Friedman: He remained there in it.
Dr. Korenman: He was unable to break out.

Dr. Friedman: Did you have any siblings?
Dr. Korenman: I have one brother, who is professor of physics at the University of Maryland and assistant vice chancellor.

EARLY EDUCATION

Dr. Friedman: Tell me a little bit about your lower school education. Did you go to pubic school?
Dr. Korenman: I went to PS 225, which was about four blocks from my house. In high school, I had good teachers. I had a really good time there. I was identified--separated out from the other students because I could mimeograph without getting mimeograph fluid all over my shirt. They used to call me out all the time to mimeograph things for them, and, as a result, I got to know the principal and everyone else pretty well.

Dr. Friedman: Were you outstanding in sports or drama or anything like that?

Dr. Korenman: Simply a "nerd."

Early interest in science

Dr. Friedman: You weren't interested in science at that time?
Dr. Korenman: I was interested in science from the beginning. I read every children's science book in the library by the time I was about nine or ten and actually got permission to take out adult books.

Early social research efforts

Dr. Friedman: What did you do to win the Westinghouse Talent Project?

Dr. Korenman: I did a unique project, and there's rather an interesting story that goes with that. A big issue at the time was whether reading comic books was preventing children from reading good books--whatever they were. So I did a questionnaire that we gave out to the whole public school--to seven hundred and seventy-five students. I learned that kids who read, read everything; and kids who didn't read, read nothing, which was the truth. It was the first study of this type ever done. I taught myself the statistics, coefficient of correlation, and standard deviations, and did it all with a slide rule and hand multiplication. I actually proved the hypothesis. I also learned--in that same questionnaire done in 1949--that kids were already watching television for six hours a day, which was not known either at that time. I eventually became a judge in the Westinghouse Talent Search, and they told me when my project came in that they knew it was good, but they had no category for it. It was almost rejected until finally someone said, "Listen, this is regional; it's original; it's research. So why don't we start a new category called 'Social Relations?'" So they did that; and I won.

Dr. Friedman: Good. Were there any physicians in the family or anyone who stimulated you to go into medicine psychologically?
Dr. Korenman: No.

WIFE'S CAREER AND THEIR CHILDREN

Dr. Friedman: When did you get married?
Dr. Korenman: In 1956, in my sophomore year in medical school.

Dr. Friedman: Did your wife have any particular interests, or was she professional?
Dr. Korenman: She was a graduate student in experimental psychology at Columbia.

Dr. Friedman: Tell me about your three children, what are their fields of interest?
Dr. Korenman: My oldest, Julie, is a gastroenterologist who actually works in the Washington area. She's a liver specialist.

Dr. Friedman: Never ran across her.
Dr. Korenman: Well, she worked for Kaiser for a long time, now she's in a private practice in the Shady Grove area. Her husband is an endocrinologist. He's the head of endocrinology of Kaiser in the Washington Metropolitan area, Howard Tracer.

Dr. Friedman: I've heard of him, but I've never met him. What about the other two children?
Dr. Korenman: Linda, my second, works for the Internal Revenue Service. She is a computer expert in their personnel division, managing the personnel computer systems for IRS personnel for the San Francisco area. My son--the third one is a professor of economics at City University of New York and the Baruch School of Economic Research. He does economic research on poverty, labor, and actually works in things relevant to medicine.

PRINCETON AND COLUMBIA

Dr. Friedman: Did you have any problems getting into Princeton?
Dr. Korenman: No, in fact, it was remarkable. I was never interviewed. I got a scholarship to Princeton delivered to my door, and I'd never been there, didn't even know where it was, and didn't even know how to get there. The reason I selected Princeton was that in those days you had to pick only one--Harvard, Yale, or Princeton--because they only looked at people who

picked them first. You had to identify your school choice beforehand on your applications in those days. So the Dean gathered all of us who had good grades and said, "Where do you want to go?" It was Harvard, Harvard, Harvard; so I said, "Princeton," and that was it.

Dr. Friedman: The odds were in your favor.
Dr. Korenman: We became a Princeton family on that basis.

Dr. Friedman: And from there you went to Columbia.
Dr. Korenman: Yes. I also had a state scholarship for that.

Dr. Friedman: You had a scholarship for college and a scholarship for medical school. That's great!
Dr. Korenman: And I worked through medical school. I was a laboratory technician. I was on every fourth night and every fourth weekend.

Dr. Friedman: You worked as a clinical tech.
Dr. Korenman: Clinical lab tech, yes.

Choosing endocrinology; studying biology with W. W. Swingle

Dr. Friedman: When you were up there, you didn't do anything unusual in college or medical school.
Dr. Korenman: Oh, yes, I did. I got turned on to endocrinology in college.

Dr. Friedman: Tell me about it.
Dr. Korenman: I took a course in biology with W.W. Swingle, who was one of the people who purified cortisol. He paraded out a couple of adrenally insufficient dogs that he was keeping alive with this new stuff. That really excited me. I liked all the biology I took. So even though I was a philosophy major and wrote my thesis on philosophy of science, I decided to do medicine. I went to Columbia. You sat for an exam for the Regents medical scholarship, and I was fifth in the state and received that scholarship. But that was not enough money to support me, so they

gave me a lab tech job. Then I went to the Cornell Division at Bellevue where I earned thirty dollars a week. While I was in medical school, I did research in endocrinology.

Research while in medical school

Dr. Friedman: Tell me about it.
Dr. Korenman: I asked for and received a Josiah Macy Fellowship to do research with Joseph Jailer in gyn-endocrinology. In the lab at that time were Nick Christy, Eleanor Wallace, and a number of people whose names I have now forgotten.

Dr. Friedman: That was also at Columbia.
Dr. Korenman: Yes, at Columbia. Raymond Vande Wiele was in another lab, and I was in a journal club with them--Seymour Lieberman and Stanley Glick--was reading all sorts of interesting articles, and I was totally turned on to endocrinology. I went to the Cornell Division of Bellevue and Memorial Hospitals for my further training, and the chief of medicine at Memorial at that time was another endocrinologist, Rulon Rawson.

Dr. Friedman: I knew him.
Dr. Korenman: Yes. Rulon was chief of medicine, and Marty Sonenberg was a leading endocrine researcher. During my residency--as an unheard of thing--I took research with Marty Sonenberg and did some work on redox reactions with steroid hormones. In Jailer's lab, they asked me to measure growth hormone, which is something they knew nothing about because they were steroid biochemists. So I began measuring growth hormone by tibial assay. I remember showing Joe this great standard curve, and he said, "That's a wonderful curve; lets start measuring growth hormone in blood." I said, "No, the concentrations are a thousand times what is expected to be present in blood, I don't think this assay will work." So that's what I did at Columbia and at Memorial. I was very interested in research, so Rulon got me a job at NIH in the Endocrinology Division of the NCI.

NATIONAL INSTITUTES OF HEALTH/NATIONAL CANCER INSTITUTE: ENDOCRINOLOGY DIVISION

Dr. Friedman: When you got to NIH, was there anyone who significantly influenced the course of your career other than Mort Lipsett?

Dr. Korenman: Mort Lipsett, Griff Ross, Chris Anfinsen, Gordy Tompkins--all influenced me.

Androgen work; urinary isotope dilution studies; learning how to measure steroid hormones in the blood; developing a fluorescence assay

Dr. Friedman: I observed from your first bibliography that the first ten or fifteen of your papers were on androgens. Was that because of Mort Lipsett's interest?

Dr. Korenman: Well, that's what we got started on, yes. We first did urinary isotope dilution studies. We had to learn how to measure steroid hormones in the blood, and I actually developed a fluorescence assay of testosterone in blood. That was rapidly replaced by the radioimmunoassay when they learned how to make antibodies for steroid hormones.

Dr. Friedman: From time to time, I'm going to ask you who was this one and who was that one because some of them I don't know. Who were H. Wilson and M. A. Kirschner?

Dr. Korenman: Hildegard Wilson was a biochemist who had worked on adrenal steroids in the Arthritis Institute before Mort came back. When Mort came back from a sabbatical with Egon Diczfalusy and became assistant branch chief, he brought Hildegard with him; we worked together. She did gas chromatography and was a really good steroid chemist. She taught me a lot. Marvin Kirschner was a clinical associate in the same year with me. He is now in New Jersey. He used to be the chief of medicine of one of the New Jersey College of Medicine's main affiliates. Now, he's chief of endocrinology on the campus. We've kept in touch for years.

LEAVING NIH FOR HARBOR-UCLA MEDICAL CENTER

Work with Bert O'Malley
Developing the chick oviduct system

Dr. Friedman: In 1966, you left NIH and went to UCLA.

Dr. Korenman: Yes, to Harbor General Hospital.

Dr. Friedman: At the time, you coauthored several papers with Bert O'Malley.
Dr. Korenman: No, that's before I left NIH. Bert O'Malley was my first clinical associate when I was at the NIH, and the work done at the NIH was published later, but he was my first trainee.

Dr. Friedman: He was your trainee.
Dr. Korenman: He was my trainee.

Dr. Friedman: Your work with Bert went up to 1969.
Dr. Korenman: Because some of the papers took a lot of time. I had developed the chick oviduct system. When Bert came in as a clinical associate, we really worked it, and he ran with the system. Some of the papers took a lot of time. I think the only 1969 paper was the Laurentian Hormone Conference.

Dr. Friedman: Incidentally, who was Rao? Was he an Indian?
Dr. Korenman: B. Ramanath Rao

Dr. Friedman: There was an M. D. Rao in Washington..
Dr. Korenman: Rom Rao is in Amsterdam.

UNIVERSITY OF IOWA: DEPARTMENTS OF MEDICINE AND BIOLOGICAL CHEMISTRY

Fellows at the University of Iowa

Dr. Friedman: Now, again, I want to ask you about some more names. Who was [Ramesh] Bhalla, Barbara Sanborn, and [Dan] Tulchinsky?

Dr. Korenman: When I went to Iowa, I was both in the Department of Medicine and the Department of Biological Chemistry, and I had graduate students and postdocs. Both Bhalla and Sanborn were postdocs

Dr. Friedman: So they were fellows.

Dr. Korenman: They were basic science fellows because they're both PhDs. Barbara went on to the University of Texas in Houston as a distinguished biological chemist. Ramesh Bhalla is an anatomist. He was at the University of Iowa as a full professor, but I don't know where he is now. He is no longer doing endocrinology.

Developing a serum assay for estrogen with Tulchinsky

Dr. Friedman: How about Tulchinsky?

Dr. Korenman: Dan Tulchinsky was an obstetrician gynecologist who was at Harbor when I was there. He spent a year or so in my lab doing clinical research with estrogens after we had developed a serum estrogen assay. He did things in pregnancy, and so on.

Dr. Friedman: But these were mostly at Iowa.

Dr. Korenman: No, Tulshinsky was at Harbor General, and Bhalla and Sanborn were in Iowa.

Dr. Friedman: Did you know Barry Sherman from NIH, or were you there before he was?

Dr. Korenman: I was there before he was, but I knew him, and I knew Jesse Roth with whom he had worked. Barry was from Iowa, and he had an interest in coming to Iowa, and I just grabbed him up because he was great.

Dr. Friedman: And you brought him back to Iowa.

Dr. Korenman: Yes. I also brought Darryl Granner back to Iowa. Actually, Darryl was an Iowan. He has had a very distinguished research career before he came back to Iowa, and we gave him a very nice lab. He's fantastic, and he's now the head of physiology at Vanderbilt and a really leading person in molecular biology of intermediary metabolism dealing with malic enzyme and liver metabolism of carbohydrates. He gave up being a clinician. He never liked it much. Barry, on the other hand, developed as a clinical researcher and did all those papers with me on female reproductive endocrinology as a clinical investigator. He became the director of

the Iowa Clinical Research Center, then went on to Genentech as director of clinical research, then went on in industry.

PAT WALSH AND DAVID FELDMAN AT HARBOR

You left out two people I trained at Harbor. One was Pat Walsh and one was David Feldman. Pat Walsh was a urologist interested in male reproductive endocrinology. He wanted to be the best scientifically trained urologist in the country. He was really smart. He trained at the urology department at UCLA. He spent a year with me and a year with Jean Wilson--and became a pretty good male endocrinologist. He went on to become the chairman of the Department of Urology at Johns Hopkins where he remains.

Dr. Friedman: Feldman?
Dr. Korenman: David Feldman came as a fellow. He became chief of endocrinology at Stanford. He does interesting molecular biology.

Dr. Friedman: Walsh is clinically famous--and I think he's retiring now--but clinically famous because his manner of doing the prostactectomy resulted in the least amount of side effects.
Dr. Korenman: Well, the least amount of impotence.

Dr. Friedman: About the time you went to Iowa, your interest changed. You became more interested in female endocrinology for a while, did you not?

OTHER RESEARCH AT HARBOR GENERAL HOSPITAL

Developing an estrogen-receptor assay for breast cancer; measuring estrogens in the blood; studying the menstrual cycle; Nichols takes up Korenman's estrogen-receptor assay

Dr. Korenman: While I was in Harbor, something else happened, which you didn't pick up on. I began to use the estrogen receptor assay for breast cancer and to measure estrogens in the blood. That was the first viable way of measuring estrogens in non-pregnancy blood. We use it in pregnancy blood, also. We began to study the elements of the menstrual cycle using estrogen determinations. So when I got to Iowa, we got an NIH grant to begin studying it more fully--and

were able to write a number of papers on that. This estrogen-receptor assay that I developed was efficient, so I did the first paper on estrogen receptor assay and breast cancer. I was the one who invented the assay that is currently used. Nichols took up the assay, which was a very important part of their development as a laboratory. I knew Al Nichols and had worked with the Harbor people for many years.

RETURN TO UCLA TO DEVELOP THE DEPARTMENT OF MEDICINE IN THE SAN FERNANDO VALLEY

Sepulveda VA Medical Center

Dr. Friedman: I take it--from all that I've read--you went back to UCLA because you were given the chairmanship of the Department of Medicine.

Dr. Korenman: I was given the opportunity to develop the Department of Medicine in the San Fernando Valley.

Dr. Friedman: What was the connection between this and the VA?

Dr. Korenman: The San Fernando Valley Program had two hospitals: the Olive View Medical Center and the Sepulveda VA. They complemented each other and made a very good training program, and we had significant amount of research space. So the faculty went from nineteen to about fifty at its peak at the two institutions, and we were going along reasonably well. Then all sorts of cutbacks began to affect both institutions.

COLLABORATORS, ASSOCIATES, AND TECHNICIANS

Dr. Friedman: Between 1976 and 1988, you coauthored many papers with J. F. Krall. Didn't he work also in gyn-endocrinology with Del Fisher?

Dr. Korenman: No. That's a different Krall. Fred Krall came right out of O'Malley's lab. He had a PhD with O'Malley. I recruited him to be my main PhD, so he ran the basic science lab with me, and we turned out lots of papers. He's not doing research anymore.

Dr. Friedman: There was a Krall who worked with Del Fisher in gyne-endocrinology.

Dr. Korenman: Del Fisher is a pediatric endocrinologist--the gynecologist that worked with him--not the same guy.

Dr. Friedman: Okay. Now there are a lot of other names I want to ask you about: M.F. Froelich
Dr. Korenman: Marianne Froelich is a technician.

Dr. Friedman: How about Viosca?
Dr. Korenman: Sherrie Viosca worked with me for over twenty years. She was a technician who really became a great clinical studies coordinator even before there were clinical studies coordinators. So she actually ran all the clinical studies that I did. Everything related to erectile dysfunction, we did together. Then she came over here when I came up to UCLA, and she continued to be a clinical studies coordinator.

Developing the first good geriatrics program at Sepulvida with Mooradian

Dr. Friedman: Who is [Arshag] Mooradian?
Dr. Korenman: He was a geriatric fellow who came to Sepulvida. We developed in Sepulvida the first good geriatrics program in the VA system. That's one of the things I'm really proud of. John Morley became the chief of geriatrics. The first chief of geriatrics was Itamar Abrass, who was an endocrinologist who moved on to non-endocrine geriatrics and became the head of geriatrics medicine at the University of Washington. John Morley came as the next head of geriatrics in my department, and he was a reproductive endocrinologist, so we worked together. Arshag Mooradian was a fellow of his, and we collaborated on a number of papers. John Morley went to St. Louis University to be head of geriatrics, and Arshag--about two or three years later--went there to be chief of endocrinology, and they are both still there now.

Dr. Friedman: The last one in this group was F. E. Kaiser.
Dr. Korenman: Fran Kaiser was a fellow in geriatrics who did her fellowship largely at Sepulvida, and she is now working for Merck, mostly on alendronate.

ETHICS

NIH Medical Scientist Training Program grant: teaching research ethics
The Association of American Medical Colleges, commissioned by the NIH, recruits Korenman to write a teachers' book on research ethics

Dr. Friedman: In the last five to eight years, you've become involved in ethics, evaluation of appropriate behavior in research, and other similar problems. Was this because you were made associate dean for ethics, or did your interest in the field come first and the appointment followed?

Dr. Korenman: The interest came first. What happened was I've been director of the UCLA Medical Scientist Training Program (MSTP). I wrote the first grant as chief of medicine at Sepulvida. The MSTP is now fifteen years old. As director of the MSTP, which is an NIH training grant, we were required to teach research ethics to trainees. Most people weren't too interested in it, so they did a minimal job. Since I was a philosophy of science major in college, I thought this was the time to really turn to this. I really became good at it and started teaching MSTP student research ethics at their annual retreat. I became sort of well known for this. And when the Association of American Medical Colleges was commissioned by the NIH to write a teacher's book for research ethics because other people were struggling to do this, they asked me to do it. The book is published, and all its contents are publicly available.

Dr. Friedman: That's interesting. Do you know who Shimon Glick is?

Dr. Korenman: Shimon Glick, yes--he was in Coney Island.

Dr. Friedman: Well, now he's in Israel.

Dr. Korenman: He also got involved in this ethics business in his career. He got involved in it because of the comments from patients that the staff and doctors weren't courteous enough, and he went on to campaign and developed a program in Israel for the senior students on how to deal with patients and the ethics associated with it.

Dr. Friedman: Well, that's a different thing.

Dr. Korenman: That's clinical. Neil Wenger, who is one of my coauthors on all the professional papers, runs the clinical ethics.

MORE ON FELLOWS AND TRAINEES

Dr. Friedman: Among your fellows and trainees, which of them do you feel became best renowned, did the best job, and open up their own departments, and became heads of their own departments?

Dr. Korenman: Bert O'Malley, obviously--Pat Walsh--David Feldman did a great job at Stanford. Barbara Sanborn was the first biochemist in the OBGYN Department. She's now moved to biochemistry at the University of Texas in Houston and has produced a lot of good research. People like Barry, who were young investigators when I brought them along, were also great in clinical investigations.

Dr. Friedman: Anyone else?

Dr. Korenman: I hate to leave anyone out, but I can't remember. Arshag Mooradian, who was really a geriatrics fellow, worked with me. He has been very productive and successful, also.

ENDOCRINE SOCIETY

Dr. Friedman: If you think of any others when you get this to review, you can just pencil them in. I'd like to change the nature of my questions. I'd like to devote some time to your association with the Endocrine Society. I know you were especially active in societies of fertility, reproduction, and andrology, but I want to know about the Endocrine Society. I know that you were on the editorial board at *JCEM* twice, but lets go on, and you tell me what you've enjoyed doing.

Changes in the Society's administration that accompanied its growth

Dr. Korenman: I was on Council a long time ago, but I really enjoyed being on the Council. The Society was a lot smaller then, and it was pretty intimate. We didn't have all these meetings. At that time, the journals were run by Lippincott, and we just provided the intellectual content. And I think the programs were done by outside program organization groups, and we provided essentially the contact to them. But we had only one administrator, Nettie Karpin, and she handled it pretty well.

On making his first presentation at a Society meeting

One of the singular moments in my life was when I was a resident and the Endocrine Society held its meeting in New York, and they let me go for a couple of days. It was the most eye-opening experience. My first presentation was in 1962 or 1963. I was so excited that my throat closed up, and I stood there for a full minute or two unable to speak until I finally relaxed enough so I could speak. I'm sure the audience wondered, What the hell was going on with him. I've gone to every single meeting. Endocrine Society meetings have always engaged me.

Endocrine Society concerns over abstract presentations; changing lunch times; instigating "meet the professor" sessions

I was involved when I was in the Council, and I'm trying to think of what the issues were at that time. That was the time when there was concern that not enough of the abstracts were being shown because the Society was growing and there were more and more abstracts. So I proposed poster sessions and proposed noon sessions. They always had a free period for lunch. I said, "That's a bad thing, not a good thing." Why? Because everyone goes to lunch together and that means that every place where you go to lunch was overwhelmed. And in addition you don't get done in time, so you miss the beginning of the next session. If you had sessions through lunch, then people would have lunch at different times, and they wouldn't be so overwhelming, and [people] could make the session. So that's what they did. I was an instigator of "meet the professor" sessions. So we began to change the meetings at that time when I was there on the Council.

Lobbying the Society for an ethics committee; putting together a code of ethics

Dr. Friedman: It was an accomplishment.

Dr. Korenman: Yes, but I think the most important thing that I've done in relation to the Society is chairman of the Ethics Advisory Committee--the new ethics that we just formed three years ago. I was lobbying the Society for an ethics committee for several years before that, and finally it came to fruition, and I think it's been very successful. We've put together a nice code of ethics and have written a few position papers and have responded to inquiries. We've asked the

Council, and the Council acted to make disclosure a standard part of the way the Endocrine Society works. Those are worthwhile contributions.

Dr. Friedman: You also worked with the Public Affairs Committee and the Postgraduate Committee.
Dr. Korenman: Yes, but I don't think there was that much going on. And, in fact, I didn't do that much in the Public Affairs Committee; but the Postgraduate Committee, yes. In those days, they weren't that exciting, but I was on them. I was also on the International Committee.

Dr. Friedman: But you feel that, of all of these, the ones in which you did the most was the Ethics Committee.
Dr. Korenman: Yes.

Presenting impotence as a field in internal medicine *v*. the surgical mindset of urologists

Dr. Friedman: I have a joke here. In your individual presentations in the CV, you look as though you did more talk about impotence than Bob Dole.
Dr. Korenman: [laughs] Well, I essentially created that field as a field in internal medicine and general medicine. It was a urologist's field. I wrote the first abstract and made the first presentation on impotence to the Endocrine Society, and I've been doing a "meet the professor session" since. I'm doing a symposium because I felt that this is an internal medicine, not a urology, problem. The etiologies are things like vascular, urological, psychological, and endocrine diseases. Endocrinologists, generalists, cardiologist and others see patients with ED (erectile dysfunction). We have to get them out of the hands of urologists who never talk to them or their wives because they have a surgical mindset. And I succeeded, but it wasn't me who made it successful; it was Viagra.

On the Society being more attentive to the needs of the clinical endocrinologist

Dr. Friedman: Are there any other things that you feel I should know about your life and your career?
Dr. Korenman: There is one thing that I wanted you to know about my Endocrine Society role.

Dr. Friedman: Please, go on.

Dr. Korenman: I was one of the people lobbying the Endocrine Society years ago to have more interest in the problems of clinical endocrinologists. I wrote a number of letters pointing out that endocrinologists are having parts of their domain wrested from them by various groups, and that there were people who were claiming there's no special skill to being an endocrinologist. They claimed also that general internists could do it all except for fine needle biopsies, which was simple enough. The issues surrounding endocrinology were things like getting paid, getting categories for your services. These things were not being addressed by the Endocrine Society, and there was no other society that addressed the endocrinologists' problems. They should have paid more attention. The response was sluggish, and I gave a talk to the program directors of the Endocrine Society. I said that "If you don't feel that the Society is doing enough for the practitioners; then form your own Society." So they promptly formed AACE (American Association of Clinical Endocrinologists), so I'm sure some people dislike me for that.

Dr. Friedman: Well, no because now they're wising up and realizing it, but now it's too late.

Dr. Korenman: Yes. So a group of people in that room, including Helena Rodbard and a few others, actually sat down and organized another society.

Dr. Friedman: I think the Baskins were the ones grouped down in Florida and were the ones that did the most to start it out.

Dr. Korenman: Yes, that's correct.

Dr. Friedman: We've been trying this for years. I knew Mort Lipsett on a first name basis, and I remember when Mort was the president of the Endocrine Society at the annual business meeting. At the end of the meeting he said, "Is there any new business?" and I raised my hand. He said, "Adolph, what do you want?" And it so happened that I got a kick out of it when I was reviewing Mort Lipsett's presidential papers that this came out in the transcription. Here I'm reading about myself. I told him that the clinicians felt that by throwing his manna at the end of the week on Friday afternoon at 5:00 PM, or Saturday at noon, they were giving us a chance to

present a paper when everyone else was ready to go home. Therefore, they should correct it. Then I did the same thing with Monte Greer when he was chairman of the program committee. I told Sy Reichlin when I interviewed him that when he became president--after the meeting in San Francisco, we went out to Lake Tahoe, and the fellow I was with and I bumped into Reichlin in the lobby of the hotel. We figured that we would invite him out to dinner and gang up on him, so we invited Reichlin and his wife to dinner; and at dinner, we ganged up on him. We told him that he had to correct this.

Dr. Korenman: I had a long dinner with John Potts where I badgered him over this. I talked to a lot of people about it. I felt that I had done the right thing, and I talked to Jean Wilson about it.

Dr. Friedman: He's very much opposed to it, even now. He's opposed to the Endocrine Society changing.

Dr. Korenman: I told him that it wasn't fair to the people who were in practice because they have no other society.

MORE ON COLLEAGUES AND ASSOCIATES

Dr. Friedman: Is there anything else you think we should talk about?

Dr. Korenman: Yes, I think we should talk about the people I knew, because I have very fond memories of people that are alive or not alive.

On Joseph Jailer taking him on as a medical student to do research; Seymour Lieberman; Nick Christy

Dr. Friedman: Please do so.

Dr. Korenman: Joe Jailer was the Professor of OBGYN at Columbia, and he took me on completely. In those days, it was unheard of to take on a medical student to do research; however, when I told him that was what I wanted to do, he said, "Okay." I told him I'd have to find some money because I would stop working as a clinical lab tech and devote all my time to research, so he found me some money. And, during the course of my time with him, I got married, and that was really nice. The group that he was associated with was that of Seymour Lieberman. Lieberman was a "giant," a wonderful guy, and he knew more about steroids than

anyone. He was trained in the classic biochemical tradition. He really knew everything that there was to know.
Nick Christy was a young clinical faculty member in the department of medicine at that time. He was not very much of a scientist, but he was a very good endocrinologist, and it was fun being with him.

Dr. Friedman: Have you had any contact with him, lately?
Dr. Korenman: No.

Dr. Friedman: I tried to find him--to see if he still has his marbles--because I missed the boat. For a while he was living in Rhode Island in the summer and in Florida in the winter. Then last year he moved to Florida, and I couldn't catch up with him. So I'm going to have to make a trip down there to talk to him.
Dr. Korenman: Yes, because he had a lot to do with the Society. He was the secretary treasurer for years.

On Rulon Rawson's support and guidance

Rulon Rawson as chief of medicine really took me under his wing and identified me right away. Maybe someone told him that I was interested in research. He persuaded me to go to the NIH and talked to Delbert Bergenstal because Roy Hertz, who was the head of our branch, was on sabbatical. Del gave me a job three years later.

Bench research with Marty Sonenberg

Dr. Friedman: Was it Mort?
Dr. Korenman: It was not Mort. Mort was away, too, and Griff had not been hired yet. Griff came in the same year I did, but he came in as a full-time faculty rather than as a trainee. So, anyhow, that was arranged when I was an intern. In my residency, I went into Marty Sonenberg's lab. Marty was such a great guy. It was such a great pleasure to work with [him], delightful. So I did bench research with him. They started me off with grinding ammonium sulfate. The postdoc, or the young person in the lab, was a guy by the name of Sam Koide. Sam

was a very interesting guy. He was a survivor of Manzanar. This was the place where Americans of Japanese origin were put during the beginning of World War II. To get out of there, you had to go into the military. So he went into the military and served with great distinction, then proceeded to become a scientist. He became a very good basic scientist. We had a very nice relationship. He was a good guy, and that lab was really a nice lab. That was really a pleasure. Rulon was a great chief of medicine. Everyone was kept on their toes, yet he was supportive. He gave parties every year for everyone. And in those days, you actually tried to support your house staff.

Clinical labs at Memorial Hospital and Bioscience, Los Angeles: "the only labs in the country that you could rely on"

This was the time when Oscar Bodansky was the head of the clinical labs at Memorial. They were the only labs in the country that you could rely on because he had this dramatic way of making sure that everything was done with precision, and they were the standards for all over, and that was wonderful. It was hard to do many of the assays that we did then. Those were the days when the PBI (protein bound iodine) done at Bioscience in Los Angeles was the only source of a good measure of thyroid function.

Dr. Friedman: We used to send it from Washington to California.
Dr. Korenman: Yes, I know. Everyone did, which was pretty remarkable when you think about it. When I went to the NIH, Roy Hertz was the director of the division. He was doing small animal physiology, and he actually was a pretty senior guy. He's still alive.

Dr. Friedman: He turned ninety years old, a year ago in June.
Dr. Korenman: Yes, he's really a tough hombre. Mort had just come back from Egon Diczfalusy's lab in Sweden. Griff had just been hired on because Del Bergenstal had died. He had a carcinoma and died, and they needed someone to take his place. Bill Odell showed up. He was from Seattle, and he was Robert Williams's protégé. Jack Wilber showed up a year after I did. Wayne Bardin showed up a year after I did, also. In my year there was Marv Kirschner and Dick Rivlin, who became a well-known nutritionist.

Jack Wilber and Bill Paul develop assays for thyroid stimulating hormone and luteinizing hormone and study the female reproductive cycle

Dr. Friedman: Jack Roberts?

Dr. Korenman: The people that developed the TSH assay were Jack Wilber and Bill Paul, the immunologist. So they developed the TSH assay and LH assay. The FSH assay was developed elsewhere. With those assays, they were able actually to begin the process of finding out what went on in the female reproductive cycle.

CHOOSING HARBOR GENERAL HOSPITAL

Demonstrating that estradiol level goes up the day before ovulation

That was why I was interested in estrogen measurements when I went to Harbor, because I wanted to be able to finish it off, and we were actually the ones who demonstrated that the estradiol level goes up the day before the ovulation. That really clarified what went on in the menstrual cycle.

ENDOCRINOLOGY BRANCH AT NCI

Using methotrexate and changing the approach to cancer treatment at the NIH
Measuring urinary gonadotropins to determine tumor status
Pioneering combination chemotherapy: methotrexate and actinomycin D

The Endocrinology Branch of the National Cancer Institute--which this was--had two main cancers: choriocarcinoma--and that's why the gonadotropin assays were so important and were well funded; and adrenal cortical carcinoma, which Mort was involved in. So we had plenty of patients with those conditions, and some of our clinical experiences were pretty striking. Women came with a hemoglobin of 5 grams, bleeding profusely. We put them on methotrexate, and the next morning they would be sitting up reading the newspaper. It was absolutely amazing. That got the whole NIH thinking that Yes, you can find ways of treating cancer. We were the ones that started using more than one drug. So we used methotrexate plus actinomycin D and were able show even more beneficial affects. We had the tumor marked. We were able to tell the status of the tumor without having to do anything. We just measured urinary

gonadotropins. We wanted to do blood gonadotropins, but we couldn't do it right away. The leukemia people at the NIH began to look at what we were doing, trying to find markers they could use, and also developing multiple drug therapies. So that was the beginning of simultaneous multiple drug therapy for cancer. I never published in that field. I always worked with Mort and published on the steroid part, but the others--Bill and Griff had gotten an interest in the hormone producing cancers. Bill Odell still has an interest in hCG (human chorionic gonadotropin) and hormone cancers. He's retired. He's someone you ought to talk to, also. Griff, of course, expanded to more physiological studies--from that branch moved to the Child Health Institute and no longer had a cancer mandate, which was pretty interesting. I was no longer there. But it would be interesting to know the politics of that. It would be a good resource material for a lot of endocrinologists.

Dr. Friedman: Well, I'm trying to get my hands on it. Ernie Knobil's wife--her name is Hotchkiss--she's a member, also. She's been helping me a great deal to get material together, but in the meantime Griff Ross's widow is in the same town that she's in.
Dr. Korenman: Pinky is her name.

Dr. Friedman: Well, she's trying to get Pinky to give me Ross's memorabilia [that] she has left, and Pinky hasn't been very willing to part with it.
Dr. Korenman: Is she angry at the Endocrine Society?

Dr. Friedman: I have no idea.
Dr. Korenman: Well, I can call her. We're old friends from years and years ago.

Dr. Friedman: Well if you don't mind, you can call and coincidentally say, "We had met."
Dr. Korenman: I haven't talked to Pinky in person for a long time.

Dr. Friedman: It may be difficult.

Dr. Korenman: Well, it's not hard for me. I don't have any nerves, anymore.

DYNAMICS OF THE NIH

Anyhow, that was very interesting at the NIH. The dynamics there were pretty interesting because Roy Hertz was the branch chief, but the people who were really accomplishing a lot were Griff and Mort and the retirees. Mort was a remarkable guy.

On his relationship with Mortimer Lipsett

Dr. Friedman: He, unfortunately, went too fast.
Dr. Korenman: Yes. Both of them died young. Mort and I had a very close relationship for a clinical associate and a fulltime scientist. He wanted to reestablish his tennis, so he invited me to play tennis with him. We used to play tennis at 6:00 AM, go to his house--which was on the way to the NIH from Pooks Hill--sit down, have a shower, breakfast, then go on to work. During that whole time, we would talk about everything, including science; and some of our best ideas came from our kitchen conversations. I've been lucky to have an intimacy with the people who were my bosses, leaders, professors, and that was really very nice. They were always very open for me. Even at college and in high school, I was able to have a good relationship with them. So the relationship with Mort was very enriching in many ways. He taught me how to play better bridge. I would go over there and watch him play with these very good players. I couldn't play with them, but I learned a lot by watching them.

Dr. Friedman: You learned by watching.
Dr. Korenman: Yes. I began to play bridge tournaments, but I don't do it any more. I played at the lowest level, and I would like to take that up again if I ever retire.

Dr. Friedman: Mort's second wife was a lovely lady.
Dr. Korenman: I knew them both.

Dr. Friedman: I never knew his first wife, but I haven't seen Lois for a long time.
Dr. Korenman: I guess she's up there in age by now; maybe she's retired. But I knew Marie. I knew his first wife. She was great. She was a terrific scientist, a very basic scientist at the NIH--

Marie Lipsett--but she was reserved. One of the most reserved people I have ever met: brilliant, quiet, reserved. And I think he was very impatient with her.

Dr. Friedman: Well, he had a very outgoing personality.
Dr. Korenman: It was not only that; Mort was never satisfied. He was always looking for the next thrill, the next thing to do. He was very impatient. He was always pushing, and I think they really had friction. So after they divorced, he ran around a lot--looking--meeting people--and became interested in art. He had an excellent eye for art--wines, too. He tried teaching me something about wines, but I was hopeless. I didn't drink enough--that's what it really amounted to. You have to drink wine every night in order to get any good out of it. So that was a very lovely relationship.

On his relationship with Griff Ross

My relationship with Griff was also terrific. He was a great guy. He was different.

Dr. Friedman: More conservative.
Dr. Korenman: Well, in a sense, yes; and in a sense, no. He was a general practitioner before he went to the Mayo Clinic and got an endocrine fellowship. He was not young when he did that. So, when he showed up at the NIH, he was in his forties, and he had had a career as a general practitioner. He told stories of having an X-ray machine in his Ranch Wagon and going around taking chest X-rays of people out there in the boonies. He [was] a real Texan but was as nice as anyone could be and so devoted to science in a different way than Mort. Driven and always pressing--that's why they became so important to the NIH as a whole, because Griff was the one most responsible for building the new clinical center.

Dr. Friedman: I didn't know that.
Dr. Korenman: Yes, he became the chairman of the committee--or whatever it was--and Mort was one of the leading people in the Child Health Institute. In fact, he had some higher title, eventually. I don't know what it was.

Dr. Friedman: Well, Griff became director.

Dr. Korenman: Yes, he became director of the medical center. He was not politically responsible for the building of it, but he was responsible for the actual design. There were committees, but he was the overall chief but then became director. The two of them were really important, and they both died early. Griff died of prostate cancer, which was diagnosed after he had his bypass. He had failure to heal of his venous grafts that were removed, so he was hospitalized for a long time; and during the course of that, they found that he had prostate cancer, and he eventually died in agony from prostate cancer. Mort developed encephalopathy. He first found it when playing tennis one day. I first noticed it when we were playing tennis, and he didn't have the power to get the ball. He said, "I'm just weak on that side." Then he had an MRI, which showed encephalitic pattern. As far as I know, he did not have a tumor--and that was just untreatable. He lasted a couple of years from the diagnosis. Okay, that's the NIH.

ON HARBOR GENERAL HOSPITAL

Building labs

The next place that I want to talk about is Harbor General. I went to Harbor General and came there as an assistant professor. Dave Solomon--another distinguished endocrinologist--had just come down from UCLA, went to Harbor as chief of medicine, and he was trying to build a department. He recruited Bill Odell and me, and in pediatrics he recruited Delbert Fisher. So we decided that we would all have labs in the same unit. This was an old ward called B5, a tuberculosis ward. I was shown the lab area when I was recruited. The windows were so dirty due to not having been used for several years. The dust was about three inches high. They said, "We have some money, and we'll build a laboratory there." I said, " How much do you have per square foot?" They said, "Twenty-five dollars." Today it costs five hundred to a thousand dollars. They said, "You can build it any way you want." So I became the person who built the labs, and we built a lab for Odell, a lab for Dave, a lab for me, and one for Del: four labs in this space with some joint equipment. Instead of having the standard benches because we had so little money, we got a carpenter make them and put these tabletops on them. So it was all wood. The whole place was wood. It was actually very functional. The nice thing about it is you didn't feel any compunction about--if you get some extra money--I'm knocking out a side wall and

building an office and make it all one story. And that's what happened. We built on here and there as we grew, and now it's much bigger. So I was there, and it was a very exciting time. We had all sorts of interesting people in there. Dave had Inder Chopra and a bunch of Japanese as his trainees, and I had David Feldman, Pat Walsh, Dan Tulchinsky, and Ramesh Ramaneth. Delbert had his share of trainees. In the course of the four years I was there, I wrote a CRC application--Harbor was granted a separate CRC from UCLA--and that really expanded what we could do. We got a new lab up the end of B5 of our laboratory area. Al Parlow was there at Harbor. He was running a pituitary contract. He's a very difficult guy, but we managed to get along. There were some interesting people in OBGYN, so Harbor became a powerhouse.

Albert Nichols starts Nichols Institute

Al Nichols, who was a fellow, decided he did not want to go into endocrinology. So he decided to form an assay company because we were developing assays left and right, and he dealt with everyone who had assays--and developed the Nichols Institute, now Quest Diagnostics.

Dr. Friedman: We send stuff out to him, also.
Dr. Korenman: Sure, and the Nichols Institute started out in a warehouse building in San Pedro that was owned by his father, who was a business man. It started out on very little money, and he sold out to Corning for some huge amount.

Dr. Friedman: Have you seen the new building?
Dr. Korenman: I was there when they were building all that stuff.

Dr. Friedman: Unbelievable.
Dr. Korenman: He found this territory in San Juan Capistrano that was empty and got it for practically nothing. He bought lots of space in there. I was a consultant for them for a while, and I saw them designing this thing. He was trying to design the perfect laboratory building--triangular buildings, and so on. It was sort of interesting what he was trying to do. That was quite an operation. So they were bought by Corning; then they were spewed-out as Corning went into different directions. Now, they're Quest.

Dr. Friedman: I think they're doing a tremendous job. Delbert told me that they're doing twenty-eight thousand specimens a day.
Dr. Korenman: Yes, but it's hard to make money, but I'm sure they're making some. So Delbert had become, long after I was there--you interviewed Delbert, so you know about his career.

Dr. Friedman: I'm having a very interesting week. On Monday, I interviewed Bill Daughaday; Tuesday, Delbert; today you; tomorrow Clara Szego and Dave Solomon.
Dr. Korenman: Yes. Clara, she'll be interesting. She'll be very interesting.

TENNIS TALK

Dr. Friedman: I have another interesting point. I live where you used to play tennis.
Dr. Korenman: At Pooks Hill?

Dr. Friedman: The hotel flopped.
Dr. Korenman: You mean the Pooks Hill Marriott?

Dr. Friedman: No, the Pooks Hill Marriott is down the street--but the place where you played tennis.
Dr. Korenman: No, those were public courts.

Dr. Friedman: No, it was a club.
Dr. Korenman: No, it was public courts when I was there, many years ago.

Dr. Friedman: On top of the hill?
Dr. Korenman: I don't know. It was a public court.
Dr. Friedman: Did you go past the Marriott when you went up the hill?
Dr. Korenman: No, it was below it.

Dr. Friedman: Oh. Well, past the Marriott, and off the top of the hill, there was a hotel. The hotel had a tennis club. As a hotel, it wasn't much, but it was famous for its dining room. It was excellent, and they made money on the tennis club. So the hotel finally collapsed, and an entrepreneur bought it--stripped it down to the bare concrete. It's a very well constructed building--made it into condos, and we bought an apartment.
Dr. Korenman: That's great. That's a nice place.

Dr. Friedman: They still make money on the tennis club.
Dr. Korenman: Well, at the time, there were public courts down there, and we would actually walk down through the neighborhood after playing tennis. I would park at Mort's house off campus; then we would walk up together. We didn't have to belong to any club, and we played early. Now, let me see what else I want to tell you about the endocrine environment. [cough] Well, I think I'm about done.

Dr. Friedman: I'm enjoying this because at first you impressed me on the phone as if you were reluctant because you're so busy.
Dr. Korenman: Fridays, I can't do it.

DAVE SOLOMON

Dr. Friedman: I'm fascinated that you're willing to talk so much, and this is the part that comes out to be the most interesting.
Dr. Korenman: I just had a great time. I loved all these people. Dave was no great scientist, but he was a really wonderful guy and an excellent clinician.

Dr. Friedman: He was an active physician, because I used to see him at all the thyroid sessions.
Dr. Korenman: He was a good person. We just clicked. He did research on thyroid stimulating factors that were not TSH. His whole thing was, "What stimulates the thyroid in Grave's disease?" Soon as they learned that the TSH was low, obviously something else had to stimulate it, and they didn't really have a good handle on it; now, they know. Inder worked with him, and Inder became a great thyroid physiologist. He's at UCLA.

Dr. Friedman: Well, he's young yet.
Dr. Korenman: He's almost sixty. Hell, you got a few years before you really have to interview me, but I'm glad that you're doing it because I just think that the people I've known--and I've known so many of them--have been terrific. They were very honorable; they try to do it well. They were intellectually stimulated all the time, and as a result they accomplished a great deal.

"ENDOCRINOLOGY IS THE CORE OF MEDICAL SCIENCE"

And I've always said endocrinology is the core of medical science because we deal with regulatory molecules, and regulatory molecules are essentially the essence of understanding biology. Even now that they have the human genome, they realize that interactions from the proteins, which are essentially regulatory--that's the core and the difference between what a human is and what a rat is--that we have many more interactions among our molecules, therefore, we have more complex structure and function.

ENDOCRINE SOCIETY
Information overload and problems of living in a technological society

I've always got a kick out of my relationships with people. We always had interesting conversations, always something nice going on. The meetings have generally always been exciting for me. I've enjoyed it both socially and intellectually. I think that the Society is entering into a difficult period, but everything is entering into a difficult period all the time, and there's no stopping it.

Dr. Friedman: In the interviews, I've gotten a lot of criticisms about the Society, such as it's getting too big, therefore, you don't know what they'll have time to go to. You want to hear this, you want to go to that, this one is more personally desirable, et cetera.
Dr. Korenman: The fact that there's more information available to you than you can digest--it's true of everything. You can't understand your car; you can't understand your radio; you can't understand your computer. We're in a very specialized technological society, and the fact that the Endocrine Society feels obliged to throw all this information at you is not a fault, it's just an

example of the limitations of the human being. Tough luck, buddy. I can't go to everything, but I feel that having everything available to me, and having it up on a CD so that I can find whatever I want, whenever I want it, is all that I can ask for.

Dr. Friedman: One of the current recommendations is that they try to break up the program into sections: giving the clinicians a couple of dates, giving the receptor people a couple of dates, giving the radioimmunoassay people a couple of dates. So that if people want to come to hear something, and they can't afford to spend a whole week there, they can, at least, pick their dates. That's what they're talking about. I don't know whether it will take or not.
Dr. Korenman: They had a clinical day on Saturday and part on Friday, so that the clinicians could come on Friday and Saturday. But all the symposia occur at night and morning; clinicians like to go to those. I just think it's a wrong idea.

Drug companies growing influence over the Society

Dr. Friedman: Well, I don't know whether it's going to be accomplished or not, anyhow, people are talking about it.
Dr. Korenman: Well, I'll tell you what I'm talking about. I'm talking about the interest of drug company money. I think it's having a greater and greater influence over the Society, and the Society has to ask itself whether this degree of influence is bad and if it is, what should we do about it?

On the possibility of becoming a smaller entity

Dr. Friedman: Frankly, I don't think they can survive without that money.
Dr. Korenman: Well, frankly, I don't know that it has to survive with such a large entity--in terms of all the things that run by themselves. Everything it does makes money. So the only expense that it has is staff.

Dr. Friedman: In order to keep the operation, they have fifty people.
Dr. Korenman: But remember we did it with Nettie Karpin.

Dr. Friedman: And three others.

Dr. Korenman: Right?

Dr. Friedman: Yes, but it's much bigger now.

Dr. Korenman: Because they've taken on many more things while other companies are shedding and contracting out.

Dr. Friedman: Well, they took back the publications.

Dr. Korenman: Yes, and now they're making money on them, and it's very limited. My guess is that they will make fewer dollars, certainly, from subscriptions. They're trying to get more commerce in them, and that's okay. I don't care how many ads they have in them. But they're actually making their money on large numbers of reprints. It's something to be concerned about.

Dr. Friedman: Dr. Kornenman, thank you very much for your time and patience with me. I really enjoyed it.

End of Interview

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