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**Interviews of the Margaret MacVicar Memorial AMITA Oral History Project**

**Susan Leibenhaut**– Class of 1972

(interviewed by Tatiana Mamaliga)

June 6, 2013

Dr. Susan Leibenhaut

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Introductory Summary by Susan Leibenhaut:

My name is Susan Leibenhaut. I am a member of the MIT class of 1972. I graduated in February 1972. I did not attend my graduation ceremony in June '72 because at that time graduation did not seem like such an important event. I worked in the lab of Joel Huberman in Course VII for a little while and then left with Mary Dockery, another member of the Class of 1972, for a big adventure before starting medical school. We hitchhiked across the US for about two months. In August of 1972, I matriculated at the Albert Einstein College of Medicine. I graduated in their three-year program, in 1975. I did a residency in internal medicine and then worked in primary care internal medicine, first in an HMO (Group Health Association), then in an academic institution, and finally, in the private practice setting before joining the Food and Drug Administration (FDA) in 2000. As a medical officer in the Center for Biologics Research and Review at FDA, I was responsible for the review of clinical protocols and regulation of product development for a wide range of biologic products including blood products, protein therapeutics and cell and gene therapies. After eight years at CBER, I transferred to Center for Drugs and now work in the office that is responsible for compliance with good clinical practice (GCP). It's been a

very interesting career for me because I have done many things, first in clinical practice and now working for the FDA.

When I started at MIT, there were approximately sixty women in my class. All of us lived in McCormick Hall. McCormick originally only had a single tower, but when the Class of '72 arrived, there were two towers of McCormick. Men were not allowed upstairs, and there was something called, "parietals," where, during certain hours, a resident could entertain her date in the rooms on the first floor. I lived in McCormick during my freshman and sophomore years. By the time I left to live off-campus for my junior and senior years, men could go upstairs in McCormick and even use the bathrooms on the floors. Co-educational housing was started, so some of my friends moved to other dorms. It was quite a number of changes in a small time period. The other notable fact about that time period was that a hundred and twenty women entered in 1969 as the Class of '73. That was considered a huge jump. After that I don't know what the statistics were. But as we know now, the undergraduate student body is now about 50/50 women to men. It really was quite a different time. MacGregor House and the other dorms beyond that on the west side of campus were not built, and the Infinite Corridor ended at building 56. The COOP was in the Student Center which was the center of Campus life. The temporary wooden buildings including those containing Jerry Letvin's lab were on the spot where the Stata Center is now.

MAMALIGA: Could you please tell me about your childhood a bit. Where were you born, and what was your education like leading up to MIT?

LEIBENHAUT: I was born in New Jersey and grew up on Long Island. I attended the Elmont school system. The culture was not such that women were encouraged to study science. I was the oldest child and a girl, and there was my sister, who ended up being in the first full class admitted to Yale. My parents encouraged me in all ways, and I had an aptitude for science. I was fortunate enough in this school system to be encouraged to study science and math. For example, I had an eighth grade math teacher who encouraged girls to join the math team. There were two women in the classes ahead of me who were very smart and were admitted to MIT. There were Sondra Lazarowitz, MIT Class of '70 and Dale Schain, MIT Class of '71. At Elmont Memorial High School, girls were not discriminated against in the classroom, and our high school focused on science and math. Although it was a middle class high school, half the kids actually did not go on to college. It wasn't like Bronx High School of Science or anything like that. We had a very dedicated faculty who provided some extra computer classes. There were no AP classes, but we felt that it was fairly revolutionary that we could learn to count in binary, for example.

Going to a small high school was a disadvantage, because when I got to MIT I think I was not as prepared as I could have been. I was very clever, but I wasn't a good student. I didn't know how to study hard. When I got here, I was really challenged by the classes. I would solve the physics problems essentially by intuition, by matching up the units of the variables provided in the problem. It wasn't until I asked for help in the second semester that I began to understand the underlying concepts. It was actually a pretty rough first year because I didn't know how to ask for help. There were only sixty female students in a class of fifteen hundred. In most TA sessions of thirty students, I would be the only female. As I mentioned to you, there was a way of solving the physics problems by matching up the units, and I was very embarrassed after the first midterm when the TA said to the class, "And now Ms. Leibenhaut will show us how to solve the problem from a woman's point of view." It was an embarrassing situation.

MAMALIGA: Was the TA trying to be sarcastic or was he serious?

LEIBENHAUT: I think he was trying to get the attention of the students at my expense. I had situations like that even four years later in medical

school in which teachers made a point in the classroom at the expense of female students. This was just a thing that was done to get students' attention. Also now understanding that TA's are essentially graduate students, he himself might have been nervous about teaching the class. I also remember my TA for 8.02 was Saul Rappaport, who is now a physics professor. He is an astrophysicist, and he is a wonderful teacher. My son, Jonathan Class of '13 had him also in freshman physics. I remember sitting in Dr. Rappaport's sessions, thinking how he made physics seem so straightforward, and then I would get back to the dorm and I couldn't solve the problems. I'd have to ask for help. I was not the greatest student..

MAMALIGA: Did you know right away that you wanted to major in Biology when you came to MIT?

LEIBENHAUT: Yes. When I was growing up, I knew that I wanted to go to medical school. My uncle was a doctor, and my father had wanted to be a doctor, but he became a pharmacist because he could not get into medical school. At that time there was much discrimination against Jews. I'm Jewish. There was a Jewish quota when he was applying to medical school, and unlike my uncle

who was willing to hitchhike to Arkansas and go to medical school there, my father was not so adventuresome, and he went to a pharmacy school instead. But I knew I wanted to be a physician, and my goal in going to MIT was to be pre-med. At that time, the pre-med program was not so structured. I had an advisor in course 7. My original advisor was James Buchanan, who passed away about five years ago. He was a very well-known biochemist. I also had Lisa Steiner.

MAMALIGA: I had her as my freshman advisor.

LEIBENHAUT: You did? She's still around? Very nice. She was very nice also. I remember those two advisors. Dr. Housman wrote my letter for medical school. It wasn't as structured as things are now. You didn't have to decide to be pre-med as a freshman and try and get a pre-med advisor. But I knew I wanted to go to medical school. I knew I didn't want to major in physics or math. Another interesting thing is that in addition to the social movement that was going on, there was the political movement and a lot of demonstrations. They were trying to close down the Instrumentation labs (now called the Draper lab). Sophomore year, one of the semesters was cut short. They cancelled classes

because there were so many demonstrations. There were riots nationally and on the MIT campus. The biggest riots in Boston were in Harvard Square. I remember there was a rally in the Boston Common. I was at the Boston Common, and somehow I got separated from my friend. We had no cell phones then. We knew that everyone was planning to gather at Harvard Square, and I ended up taking the subway from Boston Common to Harvard Square. I came out of the subway and I heard popping sounds. I looked down Mass Ave, and I could see a mass of people marching toward the Square. I was by myself. The first thing I thought was that the person who's leading that march was my friend Arlene, because I was looking for her. But of course, it wasn't her. The popping sounds were the windows breaking as the mob was coming up toward the Square. Then all hell broke loose. There were a lot of police and a lot of tear gas. I managed to avoid that, and then I regrouped with my friends. This must have been the end of my sophomore year. We all got back to the dorm. No one was seriously hurt. Maybe some people were suffering from hearing loss, because a can of tear gas exploded near them, but we were okay. Then classes were cancelled. Teachers were by and large supportive of the political activity. I remember Dr. Daniel Kemp was teaching chemistry, 5.41, and I had to get an extension. I was terrified to ask him, but he allowed an extension



on the tests. It was a very interesting time in politics and in women's activities. "Our Bodies, Ourselves" was written by the Boston Women's Collective at that time. I have the first edition, a little newspaper print copy of that. There was an exhibit in the Radcliffe Library about a year or two ago, because it was the 40th anniversary of that. We'd meet in collectives and discuss discrimination. Carl Oglesby was here and taught a class about tyranny of the state. There were many informal kinds of classes that you could take, almost the way IAP is now. It was very exciting, but there was a disadvantage. I think that my education was not as solid as one gets now. I skipped the classes. I obviously did well enough on the standardized tests and got good grades to get into the Albert Einstein College of Medicine, and that's where I went. MIT was very good for me because it helped me learn my limits to see that there are a lot of really bright, creative people in the world, but I wasn't as smart as I thought I was when I entered college. When I applied to MD-PhD programs, and I got into the NYU MD-PhD program, I was conflicted about spending that time doing a PhD, needing to be so disciplined and putting off patient care. I was really in a rush to get to patient care, which I think was a good match for me at the time. Once I became an internist I decided I didn't even want to specialize. I didn't even want to sub-specialize. I didn't want to become a gastroenterologist or

whatever. I wanted to become a general internist and start taking care of patients right away, begin helping people. So that's the way my career went. My sister is a psychiatrist, interestingly enough, and I felt as a psychiatrist in internist clothing. Aside from the diagnostic challenges which were always fun, I enjoyed the challenge of taking care of difficult patients if I could help them when no one else took the time or the effort. I spent time with patients, either to figure out their physical diagnoses or to help them figure out a way forward when they were having a physical illness that was either stress-related or something they could do something about. For example, I saw a woman who had terrible constipation. We figured out that she became constipated because she was a working mother with third children and did not have time to go to the bathroom! I liked helping patients through the kinds of issues which require a lot of listening and thinking. It may be surprising if I say that I was good at this because of my MIT education. This is because I got a good education in terms of problem solving.

MAMALIGA: What was your social environment like here, at MIT?

LEIBENHAUT: When I came here, I had a boyfriend from high school. We were attached for the first two years. When I lived in a dorm, I had a roommate, in one of the corner rooms of McCormick – I think they became triples, but at that time, they were doubles. Then I was in a single room. I felt like I didn't want to be beholden to my parents for my college education, so, to save money, I moved to an apartment with three other girls. The address might have been Brookline Ave. If you're going north on Mass Ave toward Harvard it would be on your left. I lived down that street. We lived in a run-down apartment building. There were the four of us in a four-floor walk-up. We would walk, take the bus, or hitchhike. We did a lot of hitchhiking to campus, which you wouldn't do now. I wouldn't encourage anybody to do it, but we did. We would go to classes and then come home and cook. There was also a room called the Cheney Room. I don't know that it still exists. We'd stay in the Cheney Room sometimes. Moving off campus is the one thing that I regret. If I had it to do over, I would have stayed on campus because I would have stayed integrated into MIT life. But because we lived in an apartment we got into our own social thing. I did not do any MIT sponsored extracurricular activities that I remember. I was interested in many things, especially politics, movies, and music of the time; I spent time with friends in Bexley Hall and in East Campus. There was a fair amount of

drugs. We didn't let it affect our studies very much. MIT did not put so much emphasis on teaching then. I think they're much better now. I think about it now because every Friday in 8.01 they used to just play us the Feynman lectures, which was great because Feynman was great, but it was very removed. I forget where the lecture hall was. Physics 8.01 was required, and the lecture hall would be filled.

MAMALIGA: Was there only a screen and no professor?

LEIBENHAUT: That's right. Or maybe the professor would introduce the video recording, and then we would have Feynman on Fridays. MIT has done a wonderful job in breaking up the different kinds of curricula, for example even with the idea of online lectures and professors – more than the graduate students, who can actually help you out. I think there's more of an emphasis on teaching now.

MAMALIGA: Yes. They've changed physics to a Technology Enabled Active Learning (TEAL) style, where they have groups of two to three students working together on solving problems.

LEIBENHAUT: Yes. 7.01 was very good because Salvador Luria taught the class. I was taking the class the year he won the Nobel Prize. I remember we all stood up and clapped – that was nice. 7.01 was very inspiring. There were also small freshman seminars. I took that seminar taught by Nevin Scrimshaw. He was a very well-known nutrition professor. His seminar was about nutrition and food science. Richard Wurtman, who is still on campus, also taught about nutrition and food science.

MAMALIGA: Was it course 20 then?

LEIBENHAUT: Yes, exactly. I did my first research project with Vernon Young in the Nutrition Department, He was British, We killed rats to measure tryptophan in the livers. I remember we had to time their killing to their high tryptophan diet and extract their livers. I was killing rats one night before I left for winter break, and I had this terrible nightmare about a rat trying to kill me after that.

MAMALIGA: Was this part of your Undergraduate Research Opportunities Program (UROP) project?

LEIBENHAUT: The UROPs didn't start until either my sophomore or my junior year. Then I was with Joel Huberman in Course 7 studying DNA replication and trying to understand the mechanisms using engineered molecules. We would measure the amount of DNA replication (incorporation of tritiated thymidine) by radionuclide emission, using a liquid scintillation counter. I did the extraction first then the DNA would end up on a filter paper. I would run it through a column and take it off at different washes. Then I'd have to put the paper into a vial of fluid that emitted photons that could be read by the counter. It involved biohazard and was time consuming. At that time, there was a vague idea of transfer RNA, messenger RNA, and ribosomes, but all that stuff was not yet worked out. It was a very interesting time.

MAMALIGA: Sounds like it was cutting edge research.

LEIBENHAUT: It was. Who knows what's in your future?

MAMALIGA: The sciences are developing pretty fast now.

LEIBENHAUT: Yes, but we didn't have much of that.

MAMALIGA: How was medical school different from MIT for you as a woman?

LEIBENHAUT: During the early 1970's there was rapid social change in some areas. Albert Einstein College of Medicine was a very progressive school. It was actually founded because of McCarthyism – I don't know if you've heard of it. There was a lot of anti-communism in the early '50s. Einstein was founded partly as a reaction to this. I think Yeshiva University would have made a medical school anyway, but they ended up hiring a lot of people who could not find employment anywhere else, because they had been blacklisted for having associations with Communists. So Einstein itself had a progressive tradition, and the women's liberation was moving forward. By the time I got to Einstein, the women made up 50% of the class. It wasn't a huge class, but there might have been 50 women in my class. The other thing actually that I want to say just to show you how naïve I was when I got to MIT is that, although my parents were willing to send me to MIT, one of their ulterior motives was that I would marry an MIT graduate.

Ironically, most of the MIT frats were across the river and the ratio of women to men in the Boston area is 3 to 1. The MIT men went out mostly with girls from BU and other schools. They did not provide me with tools for my studies such as a fancy new slide rule or typewriter- instead they bought me clothing. Also, I was not concerned that McCormick didn't have meals on the weekend. I said to my mother, "Well, that's okay because somebody is going to take me out on a date anyway, so I don't have to worry." I was thinking in a very dependent, passive role. I was not liberated in any sense of the word even though I was smart and I was going to MIT. It was not like I was a liberated woman at that point, I just accepted these discriminations. I remember in high school we would do reports on what you wanted to be when you grew up, and I wanted to be a chemist. I received information from the Chemical Society, that said, "As a woman, you're not going to make as much as a man." I never questioned that. It was a widely accepted idea. But, once we started to question the Vietnam War, we questioned all these things. It was really an exciting time that way. There was still discrimination in medical school. The fields that women would go into were Pediatrics and Psychiatry. As a woman I certainly didn't think of being a neurosurgeon or hardly any kind of surgeon. In my rotation in surgery I had a resident who would not talk to me.



He would not acknowledge my presence. My own premier hospital of the Einstein College of Medicine, the Jacobi hospital, had not had a woman as a chief resident in internal medicine. When I started my residency at the Boston City Hospital, they did not issue pants to the female interns. We had white skirts and we had to wear the skirts. Nobody questioned these things. Actually when I went to high school, you were not allowed to wear pants to school.

MAMALIGA: Were you supposed to wear a uniform?

LEIBENHAUT: No. But we wore dresses or skirts. You could not wear pants to school. It seems almost unbelievable now. This was in New York. In the winter, with stockings, you were very cold. One took it for granted. I think about it now, and I wonder were we thinking. But, in fact, we weren't thinking, we just accepted these things. It was just a very different time. I used to joke that I chose to be an internist because there were no lines for the ladies room at Internal Medicine conferences. It was not a field that women even went into. I remember, when I was a House Officer, when I was a Senior Resident in 1978, I was on duty at the VA in Washington DC. A veteran came into the ER after midnight - he said, "I'm not

going to see a woman." I said to him, "Well sir, you're going to have to wait until the morning because there's only women physicians on call." So there was still discrimination even then.

MAMALIGA: After working as a physician, how did you transition to work for the FDA?

LEIBENHAUT: From 1980 to 1995 I worked in a Health Maintenance Organization (HMO). At that time, in Washington DC there were only three HMOs, and HMOs were not common. The HMO that I worked for was called Group Health Association – it was consumer controlled, and it was only one of two in the United States. It was a very nice professional life because I could learn from the subspecialists. There was a lot of free exchange of information. There were physicians there who were my age, and we were interested in doing a good job and taking care of patients.

MAMALIGA: Could you please explain what an HMO is?

LEIBENHAUT: You might even not think of them now, because they're so common. In the old days, you bought insurance that allowed you to see a physician and pay them. Then the insurance would either pay the doctor, so you don't have to pay the doctor, or it would reimburse you for paying the doctor. You have the choice of wherever you want to go, so you can choose whatever physician or a physician that chooses your insurance. If you belong to an HMO instead of choosing a doctor from any number of doctors that have a doctor's office, you go to a certain place, kind of like MIT Medical, and you see a doctor there. That doctor manages your care. So it's called a "Health Maintenance Organization." Those were not common then when I started practice. When you're in an HMO, you make a salary or you get a salary plus some bonus, but also you relate to other physicians; it's a group. It's like a group practice I'd say, much tighter even than a network. We worked very closely. I could go down the hall and talk to the cardiologist freely. There would be much exchange of information and much discussion about patients. I had good access to subspecialists. I enjoyed it very much. Also, I saw a fairly broad range of patients from a socio-economic standpoint. Although none were indigent, they were lower and upper middle class. I took care of the people at the University of Maryland, much like MIT. So I saw custodians and cafeteria workers, and also

professors and their families, a good mix of people with a good mix of problems: old people, young people. So I liked that a lot. Then when I got into private practice and I had to think more about finances, I didn't like it. That's why I left. I started working for FDA in 2000. By then there was no sexual discrimination really. I met no discrimination for being a female.

MAMALIGA: What was the biggest challenge throughout your career that you had to overcome?

LEIBENHAUT: Early on, because I'm relatively petite and have a youthful appearance, people would look at me and think I was not old enough to be their doctor. It was actually that kind of discrimination. There was certainly discrimination at MIT, from professors and such, not the ones maybe in biology, but in other fields. I did not encounter that. I have a friend who was a chemical engineer. She ended up working for Shell Oil Company. When she went to her advisor he told her that's no field for a woman. She was disappointed. So those things happened. Looking back, I think that I was lucky because the times changed so that once I became a physician, the challenges had more to do with my own personal issues and not overt discrimination.

MAMALIGA: What do you like to do now in your free time?

LEIBENHAUT: There is not much free time. Right now, I am still working and so even when I am not at work, I keep up with medicine and the regulation of drug products. I love to read, mostly news: The New York Times and non-fiction. I like to stay active. It's mostly walking and hiking, sometimes bicycling.

MAMALIGA: Does Washington DC have any good areas for hiking?

LEIBENHAUT: There's the C&O Canal and the Shenandoah Mountains. There are places nearby, and there's lovely bike paths. We go up to the White Mountains, although we haven't been in a long time. We used to go with the kids in the White Mountains and stay in a hut. That's an advantage in earning money. I remember when I was here I did go up hiking in the White Mountains. I was interested in nature then, and we camped out. I would think, someday I wish I could stay in those huts and have a decent meal, instead of freeze-dried food. Now, we can stay in the huts. You know, we're pretty active, traveling. Everybody likes that. I work too hard. I still have issues adjusting to the work-life balance.

MAMALIGA: What would be your advice for a woman entering MIT?

LEIBENHAUT: A couple of things. One thing is know when to ask for help. Know when you need the help academically. But also don't set any limits for yourself. If you want to do something, you should definitely try it out. Don't say, "I can't do this because I am a woman." I don't think people say that anymore. They just think of their own personal limitations. So don't say you can't do something because you can't. I found that I was very focused on math and science. I was social, and I had boyfriends and friends, but I was kind of geeky. I wasn't interested in learning how to cook, learning how to relate to people, or having a soft side, but I knew I wanted to take care of people. I was good at that. For some reason I thought in order to succeed I needed to be tough. But now, I think that is not true. I think I am constantly assessing my strengths and weaknesses and trying to leverage my strengths. Most things that we say that are clichés are clichés for a reason, because they're true. If you think about your own strengths and weaknesses and then think about what you want to do, and somehow make it all come together, that's the path forward. Don't be afraid is another thing I would say.

MAMALIGA: Thank you so much!