CHEMICAL HERITAGE FOUNDATION

JUDY LIEBERMAN

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Andrea R. Maestrejuan

at

Center for Blood Research
Boston, Massachusetts

on

29 and 31 January 1997

From the Original Collection of the University of California, Los Angeles

ACKNOWLEDGEMENT

This oral history is part of a series supported by a grant from the Pew Charitable Trusts based on the Pew Scholars Program in the Biomedical Sciences. This collection is an important resource for the history of biomedicine, recording the life and careers of young, distinguished biomedical scientists and of Pew Biomedical Scholar Advisory Committee members.

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REFORMATTING:

Holly Polish, Program Intern, Oral History, Chemical Heritage Foundation. B.A. History, American University.

David J. Caruso, Program Manager, Oral History, Chemical Heritage Foundation. B.A., History of Science, Medicine, and Technology, Johns Hopkins University; PhD., Science and Technology Studies, Cornell University.

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Oral History Interview Agreement No. B980809

This Interview Agreement is made and entered into this 6th day of August, 1998 by and between THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, a California corporation, on behalf of the Oral History Program at the UCLA campus, hereinafter called "University," and JUDY LIEBERMAN having an address at The Center for Blood Research, 800 Huntington Avenue, Boston, MA 02115, hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about January 29, 1997, and tentatively entitled "Interview with Judy Lieberman". This Agreement relates to any and all materials originating from the interviews, namely the tape recordings of the interviews and a written manuscript prepared from the tapes, hereinafter collectively called "the Work."

In consideration of the mutual covenants, conditions, and terms set forth below, the parties hereto hereby agree as follows:

1. Interviewee irrevocably assigns to University all her copyright, title and interest in and to the Work. This assignment applies to University, its successors, and assigns, for and during the existence of the copyright and all renewals and extensions thereof.

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3. Interviewee acknowledges that she will receive no remuneration or compensation for her participation in the interviews or for the rights assigned hereunder.

4. Interviewee will receive from University, free of charge, one bound copy of the typewritten manuscript of the interviews.

5. To insure against substantive error or misquotation, Interviewee will have the right to review the manuscript before it is put into final form. University therefore will send Interviewee a copy of the edited transcript for review and comment. Interviewee will return transcript and comments to University within 30 days of receipt of the transcript. In the event that Interviewee does not respond within 30 days, University will assume that Interviewee has given full approval of the transcript.

6. All notices and other official correspondence concerning this Agreement will be sent to the following:

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University of California, Los Angeles
P.O. Box 951406
Los Angeles, California 90095-1406

Attention: Ms. Carli V. Rogers
Copyright Officer

If to Interviewee:

Judy Lieberman
The Center for Blood Research
800 Huntington Avenue
Boston, MA 02111

University and Interviewee have executed this Agreement on the date first written above.

INTERVIEWEE

(Signature)

Judy Lieberman
(Typed Name)

The Center for Blood Research
(Address)

800 Huntington Avenue

Boston, MA 02115

Date 2/12/97

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

(Signature)

Patricia Brennan, Director
for/Copyright Officer
UCLA-Sponsored Research
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Los Angeles, CA 90095-1406

Date 6/6/98

Pew Scholars in the Biomedical Sciences

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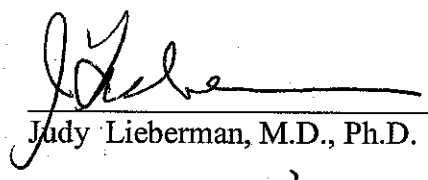

Judy Lieberman, M.D., Ph.D.

1/15/07

Date

Chemical Heritage Foundation
Oral History Program
315 Chestnut Street
Philadelphia, Pennsylvania 19106

JUDY LIEBERMAN

1947 Born in Boston, Massachusetts, in September

Education

1969 A.B., Harvard University
1974 Ph.D., Rockefeller University
1981 M.D., Harvard University-Massachusetts Institute of Technology Division of Health Sciences and Technology

Professional Experience

School of Natural Sciences, Institute for Advanced Study, Princeton, New Jersey
1974-1976 Member

Fermilab National Accelerator Laboratory, Batavia, Illinois
1976-1977 Research Associate

Center for Cancer Research, Massachusetts Institute of Technology, Cambridge, Massachusetts
1984-1986 Postdoctoral Fellow

Tufts-New England Medical Center, Boston, Massachusetts
1981-1982 Intern, Internal Medicine

Tufts University School of Medicine, Boston, Massachusetts
1982-1984 Resident
1986-1987 Clinical Fellow, Hematology-Oncology
1986-1987 Instructor, Medicine
1987-1995 Assistant Professor

Sackler School of Graduate Biomedical Sciences, Tufts University, Boston, Massachusetts
1991-1995 Member, Program in Immunology

	Strategic Program in Innovative Research for AIDS Therapy at New England Medical Center, Center for Blood Research, and Massachusetts General Hospital, Boston Massachusetts
1994-present	Program Director
	Center for Blood Research, Boston, Massachusetts
1995-present	Senior Investigator
	Harvard Medical School, Cambridge, Massachusetts
1996-present	Assistant Professor, Department of Pediatrics
1996-present	Member, Ph.D. Program in Immunology

Honors

1965-1969	National Merit Scholar
1968	Phi Beta Kappa
1969	Summa Cum Laude, Harvard University
1969-1972	National Science Foundation Predoctoral Fellow
1989-1992	Special Fellow, Leukemia Society of America
1991-1995	Pew Scholar in the Biomedical Sciences

Selected Publications

Lieberman, J. et al., 1986. A phosphorylated, disulfide-linked membrane protein in murine cytotoxic T cells. *Proceedings of the National Academy of Sciences USA* 83:7870-74.

Lieberman, J. et al., 1992. Cytotoxic T lymphocytes from HIV-1 seropositive individuals recognize immunodominant epitopes in Gp 160 and reverse transcriptase. *Journal of Immunology* 148:2738-47.

Lieberman, J. et al., 1995. *Ex vivo* expansion of HIV-1 specific cytotoxic T cells from HIV-1 seropositive subjects. *AIDS Research and Human Retroviruses* 11:257-71.

McFarland, T.A. et al., 1995. CD43 diminishes susceptibility to T lymphocyte-mediated lysis. *Journal of Immunology* 154:1097-1104.

Perales, M. et al., 1995. A vaccinia-Gp 160 based vaccine but not a Gp 160 protein vaccine elicits anti-Gp 160 cytotoxic T lymphocytes in some HIV-1 seronegative vaccinees. *JAIDS* 10:27-35.

Frankel, F.R. et al., 1995. Induction of cell-mediated immuneresponses to human immunodeficiency virus type 1 Gag proteinusing *Listeria monocytogenes* as a live vaccine vector.*Journal of Immunology* 155:4775-82.

Perales, M.A. et al., 1996. Effect of interleukin 12 on in vitro HIV type 1 replication depends on clinical stage. *AIDS Research and Human Retroviruses* 12:659-68.

Trimble, L. et al., 1996. Serum is required for the ex vivo generation of HIV-specific cytotoxic T cells. *Biotechnology and Bioengineering* 50:521-28.

Decker, L. et al., 1996. The Kaposi sarcoma-associated herpes virus (KSHV) is present as an intact latent genome in KS tissue but replicates in the peripheral blood mononuclear cells of KS patients. *Journal of Experimental Medicine*184:283-88.

Shankar, P. et al., 1996. Three regions of HIV-1 Gp 160 contain clusters of immunodominant

CTL epitopes. *Immunology Letters* 52:23-30.
Buchsbaum, R.J. et al., 1996. Adoptive transfer of EBV-specificcytotoxic T lymphocytes protects against the developmentof human B cell lymphomas in reconstituted *scid* mice.*Immunology Letters* 52:145-52.
Lieberman, J. et al., 1997. Safety of autologous, ex vivo-expanded HIV-specific cytotoxic T lymphocyte infusion in HIV-infected patients. *Blood* 90:2196-206.
Beresford, P.J. et al., 1997. Recombinant human granzyme A binds to two putative HLA-associated proteins and cleaves one of them. *Proceedings of the National Academy of Sciences USA* 94:9285-90.
Trimble, L.A. et al., 1997. Circulating CD8 T lymphocytesin HIV-infected individuals have impaired function anddown modulate CD3ζ, the signaling chain of the T cell receptorcomplex. *Blood*:in press.

ABSTRACT

Judy Lieberman, the second of three daughters, was born in Boston, Massachusetts, but grew up in a New Jersey suburb of New York City. Her father worked for Maidenform Incorporated, and her mother was an elementary school teacher. The three girls had an intensely cultural and educational childhood and family life; they were expected to excel at school and to study science or mathematics or music or art in their spare time. Judy attended summer programs in science at Columbia University and physics at Cornell University. She loved to paint – she still paints – and also attended an art camp at Cornell University one summer. The family celebrated the Jewish holy days with family but were otherwise atheists. Until about tenth grade Judy wanted to be a labor historian, but an excellent biology teacher and the Cornell physics program turned her to science.

Although she loved biology in high school, she thought perhaps physics would be more challenging and elegant, so Judy entered Harvard University intending to be a theoretical physicist. She found it an intellectually stimulating discipline, but a solitary one, and she was not sure she had made the right choice. Nevertheless, she decided to pursue a PhD in physics at Rockefeller University, where she studied with Bram Pais. During her second year as a graduate student she married Edward Greer, who had been her betrothed since her last year in college. She then spent three years at the Institute for Advanced Study at Princeton University; from there she moved to Chicago to a job at the Fermilab National Accelerator Laboratory in nearby Batavia, Illinois.

Judy was not happy as a physicist and decided to become a doctor. She obtained her MD from a special joint program in Harvard University and Massachusetts Institute of Technology, during which time she bore her first son. She did her internship at the New England School of Medicine and her residency at Tufts University School of Medicine and then accepted a postdoctoral position at Massachusetts Institute of Technology Center for Cancer Research. It was during her residency that she bore her second son. After the postdoc she moved to hematology/oncology at Tufts University School of Medicine, where she held several positions until she moved back to Harvard's Center for Blood Research. Because it is difficult to do both science research and clinical practice well Judy has decided to devote her skills to science, specifically immunology, where she believes she can make a greater difference to more people. There she continues to seek an immunotherapy for AIDS as well as for other diseases. Although she says that finding the immunotherapy for AIDS has turned out to be much more difficult than she had originally thought, she does believe that there will be good therapy, if perhaps not a cure.

In this oral history Judy discusses, in addition to her work, women in science; ethics; lab management; raising children; translational research; funding.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Andrea R. Maestrejuan, Interviewer, UCLA Oral History Program; B.A., History, University of California, Irvine, 1988; B.S., Biological Sciences, University of California, Irvine, 1988; C.Phil., History, University of California, Riverside.

TIME AND SETTING OF INTERVIEW:

Place: Lieberman' s office, Center for Blood Research, Boston.

Dates, length of sessions: January 29, 1997 (73 minutes); January 31, 1997 (187).

Total number of recorded hours: 4.35

Persons present during interview: Lieberman and Maestrejuan.

CONDUCT OF INTERVIEW:

This interview is one in a series with Pew scholars in the biomedical sciences conducted by the UCLA Oral History Program in conjunction with the Pew Charitable Trusts's Pew Scholars in the Biomedical Sciences Oral History and Archives Project. The Project has been designed to document the backgrounds, education, and research of biomedical scientists awarded four-year Pew scholarships, from 1988 through 1992.

To provide an overall framework for Project interviews, the director of the UCLA Oral History Program and three UCLA faculty project consultants developed a topic outline. In preparing for this interview, Maestrejuan held a telephone pre interview conversation with Lieberman to obtain written background information (curriculum vitae, copies of published articles, etc.) and to agree on an interviewing schedule. She also reviewed prior Pew scholars' interviews and the documentation in Lieberman' s file at the Pew Scholars Program office in San Francisco, including her proposal application, letters of recommendation, and reviews by Pew Scholars Program national advisory committee members.

For general background on the recent history of the biological sciences, Maestrejuan consulted J.D. Watson et al., *Molecular Biology of the Gene.* 4th ed. Menlo Park, CA: Benjamin/Cummings, 1987, and Bruce Alberts et al., *Molecular Biology of the Cell.* 3rd ed. New York: Garland.

The interview is organized chronologically, beginning with Lieberman's childhood and early interest in science and mathematics and continuing through her first career in theoretical physics, her medical training at the Harvard University-Massachusetts Institute of Technology Health Sciences and Technology Program, and the establishment of her lab at the Tufts-New England Medical Center. Major topics discussed include women in the sciences, the system of medical education, the competitive atmosphere in the biological sciences, and strategies for developing immunotherapy for AIDS.

ORIGINAL EDITING:

Gregory M.D. Beyrer, editorial assistant, edited the interview. He checked the verbatim transcript of the interview against the original tape recordings, edited for punctuation, paragraphing, and spelling, and verified proper names. Words and phrases inserted by the editor have been bracketed.

Lieberman reviewed the transcript. She verified proper names and made minor corrections and additions.

Jane Collings, editor, composed the table of contents.

Steven J. Novak, senior editor, compiled the index.

Beyrer assembled the biographical summary and interview history

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