CHEMICAL HERITAGE FOUNDATION

DAVID E. FISHER

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Helene L. Cohen

at

Dana-Farber Cancer Institute
Boston, Massachusetts

on

6, 7, and 8 June 2001

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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The following oral history, originally processed at the UCLA Center for Oral History Research, has been reformatted by the Chemical Heritage Foundation. The process involved reformatting the front matter, adding a new abstract, replacing the table of contents, and replacing the index. The paragraph spacing and font of the body of the transcript were altered to conform to the standards of the Oral History Program at the Chemical Heritage Foundation. The text of the oral history remains unaltered; any inadvertent spelling or factual errors in the original manuscript have not been modified. The reformatted version and digital copies of the interview recordings are housed at the Othmer Library, Chemical Heritage Foundation. The original version and research materials remain at the Darling Library, University of California, Los Angeles and at the Bancroft Library, University of California, Berkeley.

REFORMATTING:

Kim Phan, Program Intern, Oral History, Chemical Heritage Foundation. B.A. expected 2011, Anthropology, Cornell 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. _____

This Interview Agreement is made and entered into this _____ day of _____, 2001 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 DAVID E. FISHER having an address at Department of Hematology/Oncology The Children's Hospital, Dana 1620, 44 Binney Street, Boston, MA 02115 hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about June 4, 2001, and tentatively entitled "Interview with David E. Fisher". 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 his 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.

2. By virtue of this assignment, University will have the right to use the Work for any research, educational, or other purpose, including electronic reproduction, that University may deem appropriate.

3. Interviewee acknowledges that he will receive no remuneration or compensation for his 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.

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

If to University: Department of Special Collections
University of California, Los Angeles
Box 951575
Los Angeles, California 90095-1575

Attention: Victoria Steele, Ph.D.

If to Interviewee: David E. Fisher
Department of Hematology/Oncology
The Children's Hospital,
Dana 1620, 44 Binney Street
Boston, MA 02115

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

INTERVIEWEE	THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
X _____ (Signature)	_____ (Signature)
David E. Fisher (Typed Name)	Victoria Steele (Typed Name)
The Children's Hospital (Address)	Head, Department of Special Collections (Title)
Hematology/Oncology	
44 Binney Street	
Boston, MA 02115	
X Date 6/6/01	Date 6/25/01

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

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DAVID E. FISHER

1957 Born in Perth Amboy, New Jersey, on 28 August

Education

1979 B.A., Chemistry and Biology, Swarthmore College
1979 Diploma in Cello, Curtis Institute of Music
1984 Ph.D., Cell Biology and Immunology, Rockefeller University
1985 M.D., Joan and Sanford I. Weill Medical College of Cornell University

Professional Experience

Massachusetts General Hospital, Boston, Massachusetts
1985-1986 Intern in Internal Medicine
1986-1988 Resident in Internal Medicine

The Children's Hospital, Boston, Massachusetts
1989-1993 Fellow in Pediatric Hematology and Oncology
1992-present Attending Physician, Department of Hematology/Oncology

Dana-Farber Cancer Institute, Boston, Massachusetts
1989-1993 Fellow in Pediatric Hematology and Oncology
1989-1993 Fellow in Medical Oncology
1992-present Attending Physician, Department of Hematology/Oncology
1993-1998 Assistant Professor
1998-present Associate Professor, Department of Biology

Harvard Medical School, Boston, Massachusetts
1989-1993 Fellow in Pediatric Hematology and Oncology
1992-present Attending Physician, Department of Hematology/Oncology
1993-present Faculty Member of Biological and Biomedical Sciences Graduate Program
1993-1998 Assistant Professor
1998-present Associate Professor, Department of Biology

Massachusetts Institute of Technology, Cambridge, Massachusetts
1990-1993 Postdoctoral Research Fellow, Center for Cancer Research

Honors

1990-1993	Howard Hughes Medical Institute Fellowship for Physicians
1991	William Guy Forbeck Cancer Research Foundation Scholar-in-Residence Award
1993-1995	American Society of Hematology Scholar Award
1995	Pew Foundation Scholars Award
1995	McDonnell Foundation Research Scholar
1995	Charlotte Geyer Foundation Research Award
1999	Fannie E. Rippel Foundation Research Award

Selected Publications

Fisher, D.E. et al., 1977. *Comp Biochem Physiol* 56:367-70.

Fisher, D.E. et al., Small nuclear ribonucleo protein assembly in vivo: demonstration of a 6S RNA-free core precursor and posttranslational modification. *Cell* 42:75 1.

Fisher, D.E. et al., 1993. High affinity DNA binding Myc analogs: recognition by an α helix. *Cell* 72:467-76.

Hemesath, T.J. et al., 1994. Microphthalmia, a critical factor in melanocyte development, defines a discrete transcription factor family. *Genes and Development* 8:2770-80.

Lowe, S. et al., 1994. p53 status and the efficacy of cancer therapy in vivo. *Science* 266:807-10.

Parvin, J. et al., 1995. Prebending or a promoter sequence enhances affinity for the TATA binding factor. *Nature* 373:724-727, 1995.

Steingrimsson, E. et al., 1996. The semidominant Mib mutation identifies a role for the HLH domain in DNA binding separate from it srole in protein dimerization. *EMBO J.* 15:6280-89.

Hemasath, T.J. et al., 1998. *Nature* 391:298-301.

Takeda, K. et al., 2000. Perturbation of MITF phosphorylation is a potential cause of Waardenburg Syndrome type 2. *Human Mol. Genetics* 9:125-32.

Pruschy, M. et al., 2001. Key targets for the execution of radiation inudec tumor cell apoptosis: The role of p53 and caspases. *mnt. J. Radiation Oncol. Biol. & Physics* 49:561-67.

ABSTRACT

David E. Fisher grew up in Highland Park, New Jersey, the second of three children. His grandparents and their extended families had escaped Germany just in time—his grandfathers actually from camps—and settled ultimately in Chile. Some then went to Cuba and then to the United States or Israel. David's father obtained his PhD in biochemistry and nutrition from Rutgers University and then founded their department of nutrition, in which he still works. Fisher's mother became a musician and plays and teaches in the area. David and his siblings all had to learn to play piano, beginning at age five, and later a stringed instrument. David played cello, his siblings violin. His first piano and cello teachers had a strong influence on both his approach to music and his strong work ethic. Fisher was raised in the Conservative Jewish tradition, but his wife's conversion to Judaism led him to become Orthodox. Fisher attended what he calls "terrific" public schools, where he excelled. During summers he went to music camp.

Fisher decided to pursue a career in medicine, attending the Curtis Institute of Music and Swarthmore College concurrently. He spent his first college summer in his father's lab, from which he published his first paper. Through Maxine Singer he obtained a summer position in Robert Weinberg's lab at Massachusetts Institute of Technology for his third summer; here he discovered molecular biology and oncology. Although he still wanted to be a doctor, he also wanted to work in the lab, so he decided to pursue a joint M.D./Ph.D. degree at Joan and Sanford I. Weill Medical College of Cornell University and Rockefeller University. He did his residency in internal medicine at Massachusetts General Hospital. At the end of his residency he married. He then began his research in Henry Kunkel's immunology lab; in GünterBlobel's laboratory he completed thesis projects on systemic lupus erythematosis and T-cells.

Fisher then talks about his fellowships in adult and pediatric oncology at the Dana-Farber Cancer Institute and Children's Hospital Boston; his studies of TFEB transcription factor as a postdoctoral student in Phillip Sharp's laboratory at Massachusetts Institute of Technology; and the births of his children.

He then accepted a research position at Dana-Farber Cancer Institute. He talks about grant writing; funding; the impact of his grant from the Pew Scholars Program in the Biomedical Sciences; his teaching duties; and minority students and women in the graduate programs and on the faculty at Harvard University. He continues with an explanation of the makeup and management of his lab; his administrative responsibilities; publishing; traveling; clinical responsibilities; and balancing his clinical and science duties.

His current research on apoptosis and on microphthalmia transcription factor (Mitf) in melanocytes and osteoclasts fills out the interview, leading to a description of a typical day for Fisher. He hopes for clinical applications of his research projects, and explains some of his future research plans. He gives us his opinions on such matters as serendipity in science, patents, competition vs. collaboration; scientific ethics; career satisfaction; and his long-term goals. He finishes with his favorite memories and his pride in his teaching award.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Helene L. Cohen, Interviewer, UCLA Oral History Program. B.S., Nursing, UCLA; P.N.P., University of California, San Diego/UCLA; M.A., Theater, San Diego State University.

TIME AND SETTING OF INTERVIEW:

Place: Fisher's office, Dana-Farber Cancer Institute.

Dates, length of sessions: June 6, 2001 (118 minutes); June 7, 2001 (140); June 8, 2001 (138).

Total number of recorded hours: 6.6

Persons present during interview: Fisher and Cohen.

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 since 1988.

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, Cohen held a telephone preinterview conversation with Fisher to obtain written background information (curriculum vitae, copies of published articles, etc.) and agree on an interviewing schedule. She also reviewed prior Pew scholars' interviews and the documentation in Fisher's file at the Pew Scholars Program office in San Francisco, including his proposal application, letters of recommendation, and reviews by Pew Scholars Program national advisory committee members. For technical background, Cohen consulted J.D. Watson et al., *Molecular Biology of the Gene.* 4th ed. Menlo Park, California: Benjamin/Cummings, 1987; Bruce Alberts et al., *Molecular Biology of the Cell.* 3rd ed. New York: Garland, 1994; Horace F. Judson, *The Eighth Day of Creation.* New York: Simon and Schuster, 1979; and recent issues of *Science* and *Nature.*

The interview is organized chronologically, beginning with the flight of Fisher's parents from Nazi-era Germany, his childhood in Highland Park, New Jersey, his pursuit of training in both science and music, his undergraduate careers at Swarthmore College and the Curtis Institute of Music, his graduate career at Rockefeller University and the Joan and Sanford I. Weill Medical College of Cornell University, his internship and residency at Massachusetts General Hospital, his postdoctoral fellowships at the Dana-Farber Cancer Institute and the Massachusetts Institute of Technology, and his subsequent career teaching at Harvard Medical School and both practicing medicine and conducting research at the Children's Hospital Boston and the Dana-Farber Cancer Institute. Topics discussed include his marriage and family life, his

devotion to science, medicine, and music, his work in gene transcription and the regulation of proliferation and cell death in cancer, and his current interests in melanocyte development, signal responsive transcription in osteoclasts, and p53-modulated apoptosis.

ORIGINAL EDITING:

Victoria Simmons, editorial assistant, edited the interview. She 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.

Fisher reviewed the transcript. He verified proper names and made no corrections and additions.

Jane Collings, senior editor, prepared the table of contents. Victoria Simmons assembled the biographical summary and interview history. Victoria Simmons, compiled the index.

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