

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

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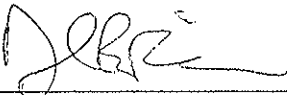
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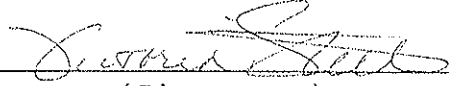
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INTERVIEWEE

THE REGENTS OF THE UNIVERSITY  
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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  $\alpha$  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 its role 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 induced tumor cell apoptosis: The role of p53 and caspases. *Int. 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 Günter Blobel's laboratory he completed thesis projects on systemic lupus erythematosus 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 TFE<sub>2</sub>B 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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