

CHEMICAL HERITAGE FOUNDATION

MARNIE E. HALPERN

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Helene L. Cohen

at

The Carnegie Institute of Washington
Baltimore, Maryland

on

4, 5, 6, and 7 December 2000

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

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

INTERVIEWEE

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

x Marnie E. Halpern
(Signature)

Dale E. Treleven
(Signature)

Marnie E. Halpern
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Date Dec. 8, 2000

Date Dec. 22, 2000

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M. E. Halpern
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MARNIE E. HALPERN

1956 Born in Hamilton, Ontario, Canada on 25 December

Education

1981 Honors B.Sc., Biology, McMaster University
1984 M.Sc., Molecular Biology, McMaster University Medical Centre
1990 Ph.D., Biology, Yale University

Professional Experience

1990-1994 University of Oregon, Eugene, Oregon
Postdoctoral Fellow

1981 McMaster University Medical Centre
Research Assistant, Cancer Research Group

1994-present Carnegie Institute of Washington
Staff Scientist, Department of Embryology

1994-present Johns Hopkins University
Adjunct Assistant Professor, Department of Biology

Honors

1990-1992 Medical Research Council of Canada Postdoctoral Fellowship
1995-1999 Pew Scholars Program in the Biomedical Sciences
1998-2001 National Institutes of Health Zebrafish Genomics Initiative Grant
1998-2001 Society of Developmental Biology Board of Directors (elected Junior Faculty Representative)
1999 Short-Term Fellowship from the Human Frontier Science Program

Selected Publications

Thisse, C. B. et al., 1994. *Gooseoid* expression in neurectoderm and mesendoderm is disrupted in zebrafish *cyclops* gastrulas. *Developmental Biology* 164:420-29.
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ABSTRACT

Marnie E. Halpern grew up in Hamilton, Ontario, Canada. Her family was Jewish and had left Europe shortly before World War II. As she says, the Holocaust was not talked about much in the family, but it was always there. Her father was a doctor; her mother, who had a master's degree in bacteriology, stayed home with the six children until they were in school. The family lived in the house where her father's practice was located, and Halpern often helped him. She was always "a bit of a brain" and did well in school, moving ahead a year or two. Several members of her family had a great influence on her.

Halpern attended McMaster University, which was in her hometown, and really did not enjoy school until her last year there. After her first year she decided to take a year to "find herself" and travelled to Europe, India, and the Middle East. She then went to Guatemala. When she returned she restarted a friendship with the man who later became her husband. They spent some time together in Europe, and then he influenced her to go back to school and to work hard. She became interested in biology in her third year, and in her fourth year she worked really hard and did very well. Becoming interested in molecular biology, she decided to do a master's degree in James Smiley's lab, still at McMaster.

She had become fascinated by *Drosophila*, and she invited Gary Struhl to give a talk at McMaster. She attended a conference on *Drosophila* at Asilomar, where she met a number of big-name scientists and felt star-struck at seeing Barbara McClintock. She decided to pursue her Ph.D. at Yale, where she joined the Spyros Artavanis-Tsakonas lab; she describes her relationship with Artvanis-Tsakonas. Halpern gained recognition in the biology department and joined the Haig Keshishian lab to characterize the neuromuscular system in larval *Drosophila*., discussing her doctoral work involving dye filling and identifying motor neurons. A class at Woods Hole helped her redefine her view of science. She then married and had her first child. She talked about her work on connectivity in the larval neuromuscular system.

After meeting Charles Kimmel at a neuroscience conference, her interest in zebrafish expanded. She visited the Kimmels, who spin their own wool and whittle, in Oregon for a postdoc interview and entered Charles's lab. Halpern's work on the *no tail* mutant led her to the Christiane Nüsslein-Volhard lab in Germany. Here she talks about her experiments in the Nüsslein-Volhard lab; living and working in Germany; and her relationship with Nüsslein-Volhard.

Next Halpern accepted a position at Carnegie Institution of Washington. Here she discusses how the Carnegie differs from other scientific institutions; Don Brown's recruitment of her; her teaching responsibilities; students she has helped to mentor; ethnic and sexual makeup of students at Johns Hopkins University; sexism in science; the impact of the Pew Scholars in the Biomedical Sciences award on Halpern's science; and the grant-writing process.

Halpern goes on to explain her relative financial security at the Carnegie; collegiality at the Carnegie; her concerns over the quality of her science; the process of publishing; her lab makeup and mentoring style; her administrative responsibilities; and her travel commitments. She talks about a typical workday and expresses her continuing interest in benchwork. This leads to the topic of balancing work life with family life in a two-professional family.

The inflexibility of the science system for women informs Halpern's explanation for the lack of female PIs. She decries perceived differences in the socialization of men and women and emphasizes the importance of having female role models in science. She returns to a

discussion of her current work on molecular asymmetry in the brains of zebrafish, which discussion segues into possible applications of Halpern's research. She tells us the genesis of her current research and gives credit to serendipity in science.

Halpern's receptivity to cultivating ties with biotechnology companies demonstrates her view of patents, which she discusses at greater length. She compares the advantages and disadvantages of competition and collaboration in science, giving an instance of plagiarism as illustrative of ethical issues. Determining who the proper overseers of science are is not a simple proposition. She considers knowing the history of science to be important. Halpern does believe in the inevitability of scientific progress. Halpern assesses her professional and personal achievements; evaluates her future plans; and extols the advantages and downplays the disadvantages of being a scientist. In conclusion, she assesses her oral history.

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: Halpern's office, The Carnegie Institute of Washington.

Dates, length of sessions: December 4, 2000 (168 minutes); December 5, 2000 (161); December 6, 2000 (113); December 7, 2000 (116).

Total number of recorded hours: 9.3

Persons present during interview: Halpern 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 PewScholars 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 Pewscholarships 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 Halpern 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 Halpern'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 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 Halpern's childhood in Hamilton, Ontario, Canada, and continuing through her undergraduate work at McMaster University, her master's degree at McMaster University Medical Centre, her doctoral degree at Yale University, her postdoc at University of Oregon at Eugene, and the establishment of her own lab at the Carnegie Institute of Washington. Major topics discussed include her growing interest in molecular biology in the James Smiley lab at McMaster University, her work in the HaigKeshishian lab to characterize the neuromuscular system in *Drosophila*, her research in the Christiane Nüsslein-Volhard lab on the *no tail* mutant, her current research on molecular

asymmetry in the brains of zebrafish, and issues of gender and sexism in science.

ORIGINAL EDITING:

Deborah Kolosova, 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.

Halpern reviewed the transcript. She verified proper names and made several corrections and additions.

William Van Benschoten, senior writer, prepared the table of contents. Deborah Kolosova assembled the biographical summary and interview history. Victoria Simmons, editorial assistant, compiled the index.

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