CHEMICAL HERITAGE FOUNDATION

MICHAEL A. CAUDY

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Andrea R. Maestrejuan

at

Cornell University Medical Center
New York, New York

on

8-10 November 1996

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.

This oral history was completed under the auspices of the Oral History Project, University of California, Los Angeles (Copyright © 1999, The Regents of the University of California) and is made possible through the generosity of

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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:

Hilary Domush, Program Assistant, Biomedical Sciences and Technologies, Chemical Heritage Foundation. B.S. Chemistry, Bates College, M.S. Chemistry, University of Wisconsin, M.A. History of Science, University of Wisconsin.

David J. Caruso, Program Manager, Biomedical Sciences and Technologies, 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 _____, 1996 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 MICHAEL A. CAUDY, having an address at Department of Cell Biology and Anatomy, Cornell University Medical College, 1300 York Avenue, Room A-406, New York, New York 10021, hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about November 8, 1996, and tentatively entitled "Interview with Michael A. Caudy". 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 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.

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

If to University:

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

Attention: Ms. Carli V. Rogers
Copyright Officer

If to Interviewee:

Michael A. Caudy
Department of Cell Biology and Anatomy
Cornell University Medical College
Room A-406
New York, New York 10021

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

INTERVIEWEE	THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
Michael Caudy	
(Signature)	(Signature)
Michael A. Caudy	Carli V. Rogers
(Typed Name)	(Typed Name)
Department of Cell Biology and and Anatomy	Copyright Officer
	(Title)
1300 York Avenue	
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New York, New York 10021	
Date 11/8/94	Date

Chemical Heritage Foundation
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MICHAEL A. CAUDY

1952 Born in Columbus, Ohio on 11 April

Education

1974 B.A., Ohio State University
1985 Ph.D., University of California, Berkeley

Professional Experience

Howard Hughes Medical Institute, University of California, San Francisco
1985-1989 Postdoctoral Fellow

Cornell University Medical College
1990-present Assistant Professor

Honors

1984 Einstein Fellowship for Developmental Neurobiology, University of California, Berkeley
1985-1987 Postdoctoral fellowship, National Institutes of Health
1990-1992 Research award, Mather Foundation
1991-1993 Alfred P. Sloan Research Fellowship in Neuroscience
1991-1994 Cornell Scholar's Award
1991-1995 Pew Scholar in the Biomedical Sciences

Selected Publications

Bentley, D. and M. Caudy, 1983. Pioneer axons lose directed growth after selective killing of guidepost cells. *Nature* 304:62-65.

Bentley, D. and M. Caudy, 1983. Navigational substrates for peripheral growth cones: Limb axis polarity cues, limb segment boundaries, and guidepost neurons. *Cold Spring Harbor Symposia on Quantitative Biology* 48:573-85.

Caudy, M. and D. Bentley, 1986. Pioneer growth cone morphologies reveal proximal increases in substrate affinity within leg segments of grasshopper embryos. *Journal of Neuroscience* 6:364-79.

Caudy, M. and D. Bentley, 1986. Pioneer growth cone steering along a series of neuronal and

non-neuronal cues of different affinities. *Journal of Neuroscience* 6:1781-95.
Caudy, M. and D. Bentley, 1986. Epithelial cell specialization at a limb segment boundary in the grasshopper embryo. *Developmental Biology* 118:399-402.
Caudy, M. and D. Bentley, 1987. Pioneer growth cone behavior at a differentiating limb segment boundary in the grasshopper embryo. *Developmental Biology* 119:454-65.
Caudy, M. et al., 1988. The maternal sex determination gene *daughterless* has zygotic activity necessary for the formation of peripheral neurons in *Drosophila. Genes and Development* 2:843-52.
Caudy, M. et al., 1988. *Daughterless:* A gene essential for both neurogenesis and sex determination in *Drosophila,* has sequence similarities to *myc* and the *achaete-scute complex. Cell* 55:1061-67.
Murre, C. et al., 1989. Interactions between heterologous helix-loop-helix proteins generate complexes that bind specifically to a common DNA sequence. *Cell* 58:537-44.
Vaessin, H.V. et al., 1990. The role of helix-loop-helix proteins in *Drosophila* neurogenesis. *Cold Spring Harbor Symposia on Quantitative Biology* 55:239-45.
Ohsako, S. et al., 1994. *Hairy* function as a DNA binding HLH repressor of *Drosophila* sensory organ formation. *Genes and Development* 8:2743-55.
Fisher, A. et al., 1996. The WRPW motif of *hairy*-related bHLH repressor protein acts as a four amino acid transcription repression and protein-protein interaction domain. *Molecular and Cellular Biology* 16:2670-77.

ABSTRACT

Michael A. Caudy was born and grew up in Columbus, Ohio. His parents divorced when he was two, and for about eight years he lived with his mother and sister; for some of that time his grandparents also lived with them. When he was about ten, his mother married a theoretical physicist. His stepfather, whom he calls a brilliant scientist, had—at least subconsciously—a major influence on Caudy's interest in becoming a scientist. The more immediate moving force was a summer job for Caudy when he was in high school: a neighbor was head of a veterinary pathology lab at Ohio State University, and he hired Caudy to work as a technician.

When he entered the Ohio State University, Caudy had been playing rock guitar for years; in college he discovered classical guitar, and then he became interested in building guitars. He also liked to read English literature, so he took longer than usual to complete his undergraduate work, attending school part time, reading, playing and studying music and dance, and doing some science, until he finally settled on an English education major. After college he spent some time teaching in different elementary and junior high schools to learn about alternative methods of teaching. During these years he maintained a serious interest in science, primarily physics and mathematics, until he entered the biophysics graduate program at Ohio State. After a year there he transferred to the University of California, Berkeley, to David Bentley's lab, to study theoretical biophysics and neurobiology, with a focus on developmental neurobiology.

After describing his experiences growing up in the early 1970s, Caudy compares and contrasts the environment at Ohio State and Berkeley. He then explains his reasons for accepting a position at Weill Cornell Medical College and describes his lab there. He discusses his research in mammalian and *Drosophila* genetics; he describes his work on the hairy gene and its binding sites, lamenting the difficulty of finding funding. He analyzes the academic and clinical organization of Weill Cornell Medical College, and the pressures on medical schools in general. He explains his lack of interest in working for private industry. He shares his future research agenda while philosophizing about the need for scientists to have time to ponder larger questions. He explains the specifics of a functional lab, including funding and size, and stresses the need for creativity and innovation within it.

Although Caudy experiences pressures in his career he claims those pressures have not detracted from his love of science. He concludes the interview by suggesting policies that might further the cause of scientific discovery.

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: Caudy's office, Weill Cornell Medical College.

Dates, length of sessions: November 8, 1996 (135 minutes); November 9, 1996 (123); November 10, 1996 (143).

Total number of recorded hours: 6.7

Persons present during interview: Caudy 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 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, Maestrejuan held a telephone preinterview conversation with Caudy 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 Caudy'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 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, 1994.

The first tape is organized chronologically, beginning with Caudy's childhood in Columbus, Ohio, and continuing through his graduate work at Ohio State University and University of California, Berkeley. The remainder of the interview is organized by topic. Major topics discussed include the funding of science in the U.S., the nature of cutting-edge science, and Caudy's research extending work on *Drosophila* into mammalian species.

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.

Caudy did not review the transcript and therefore some names have not been verified.

William Van Benschoten, editor, prepared the table of contents and biographical summary. Ödül Bozkurt, editorial assistant, compiled the index. Beyrer assembled the interview history.

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