CHEMICAL HERITAGE FOUNDATION

GEORGE C. PRENDERGAST

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Helene L. Cohen

at

DuPont Pharmaceuticals
Glenolden, Pennsylvania

on

11, 12, and 13 December 2000

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 © 2002, 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:

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. TR2200B

This Interview Agreement is made and entered into this 22nd day of December, 2000 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 GEORGE C. PRENDERGAST, having an address Dupont Pharmaceuticals, Glenolden Laboratory/ G-265, 500 So. Ridgeway Avenue, Glenolden, Pennsylvania 19036, hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about December 11, 2000, and tentatively entitled "Interview with George C. Prendergast". 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.

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

If to University: Oral History Program
University of California, Los Angeles
Box 951575
Los Angeles, California 90095-1575

Attention: Director

If to Interviewee: George C. Prendergast
Dupont Pharmaceuticals
Glenolden Laboratory/G-265
500 So. Ridgeway Avenue
Glenolden, Pennsylvania 19036

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

INTERVIEWEE

(Signature)

George C. Prendergast
(Typed Name)

Dupont Pharmaceuticals
(Address)

500 So. Ridgeway Avenue

Glenolden, Pennsylvania 19036

Date 12/11/2000

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

(Signature)

Dale E. Treleven
(Typed Name)

Director, Oral History Program
(Title)

Date Dec 22, 2000

Pew Scholars in the Biomedical Sciences

Chemical Heritage Foundation Internet Posting Release Form

I, George C. Prendergast, Ph.D., hereby request that my wishes be followed as per the checked selection below with regards to posting portions of the digital copy of the audio-taped interview of me and the related written transcript on the internet for non-commercial, educational use only.

Please check one:

a. _____ **No restrictions for Internet Posting.**
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b. X **Semi-restricted Internet Postings** (My review of the material intended to post is required.)

c. _____ **Restricted access.** (Do not post.)

This constitutes my entire and complete understanding.

George C. Prendergast, Ph.D.

2/4/08
Date

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

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GEORGE C. PRENDERGAST

1961 Born in Philadelphia, Pennsylvania, on 25 August

Education

1983 B.A., Biochemistry, University of Pennsylvania
1984 M.S., Molecular Biophysics/Biochemistry, Yale University
1989 Ph.D., Molecular Biology, Princeton University

Professional Experience

New York University Medical Center
1989-1991 Postdoctoral Fellow, Department of Biochemistry, Howard Hughes Medical Institute

Merck Research Laboratories, West Point, Pennsylvania
1991-1993 Senior Research Biochemist

Wistar Institute
1993-1997 Assistant Professor
1998-1999 Associate Professor and Assistant Chair, Tumor Biology Group
1999-present Adjunct Associate Professor

University of Pennsylvania
1994-present Adjunct Professor, Department of Genetics School of Medicine
1994-present Graduate Group in Cellular and Molecular Biology

1995-present Cancer Center and Institute for Human Gene Therapy

DuPont Pharmaceuticals Company
1999-present Senior Director, Department of Cancer Research

Honors

1984 National Science Foundation Fellowship Honorable Mention
1985 NIH Predoctoral Fellowship (Genetics Training Grant), Princeton University
1989 American Cancer Society Postdoctoral Fellowship
1995 Pew Scholar in the Biomedical Sciences Award

Selected Publications

Prendergast, G.C., and E.B. Ziff. 1991. Methylation-sensitive sequence-specific DNA binding by the c-Myc basic region. Science 250:186-89.

Prendergast, G.C. et al., 1991. Association of Myn, the murine homolog of Max, with c-Myc stimulates methylation-sensitive DNA binding and Ras cotransformation. Cell 65:395-407.

Prendergast, G.C. et al., 1994. Farnesyl transferase inhibition causes morphological reversion of Ras-transformed cells by a complex mechanism that involves regulation of the actin cytoskeleton. Molecular Cell Biology 14: 4193-202.

Lebowitz, P. et al., 1995. Evidence that farnesyl transferase inhibitors suppress Ras transformation by inhibiting Rho activity. Molecular Cell Biology 16:6613-22

Sakamuro, D. et al., 1995. Myc induces apoptosis in epithelial cells by p53-dependent and p53-independent mechanisms. Oncogene 11:2411-18.

Sakamuro, D. et al., 1996. BIN1 is a novel Myc-interacting protein with features of a tumor suppressor. Nature Genetics 14:69-77.

Lebowitz, P. et al., 1997. Farnesyltransferase inhibitors alter in vivo RhoB prenylation status and growth-stimulating function. Journal of Biological Chemistry 272: 15591-94.

Du, W., P. Lebowitz, and G.C. Prendergast, 1999. Cell growth inhibition by farnesyltransferase inhibitors is mediated by gain of geranylgeranylated RhoB. Molecular Cell Biology 19:1831-40.

Liu, A. et al., 2000. RhoB alteration is necessary for apoptotic and antineoplastic responses to farne syltransferase inhibitors. Molecular Cell Biology 20:6105-13.

Elliott, K. et al., 2000. The c-Myc interacting adaptor protein Bin1activates a caspase-independent cell death program. Oncogene 19:4669-84.

DuHadaway, J. et al., 2001. Bin1 mediates apoptosis by c-Myc in transformed primary cells. Cancer Research 61:3151-56.

Liu, A.-X. et al., 2001. RhoB is required for the apoptotic response of neoplastically transformed cells to DNAdamage. Proceedings of the National Academy of Sciences, USA 98:6192-97.

ABSTRACT

George C. Prendergast was born and raised in Philadelphia, Pennsylvania, the oldest of four siblings. His father taught accounting and economics at St. Joseph's University in Philadelphia; his mother worked for General Electric until Prendergast was born. From a young age he was interested in science and scientists, reading about both in the World Book Encyclopedia Childcraft series, and in music, playing the piano, the alto saxophone, the clarinet, and the flute. In high school he chose to participate in a Saturday-morning organic chemistry class, which lasted for three hours.

Predergast applied to and was accepted at the University of Pennsylvania (UPenn) in Philadelphia. As an undergraduate he read James Watson's *Molecular Biology of the Gene* which contributed significantly to his growing interest in molecular biology. From UPenn he went on to graduate research at Yale University, though realized after a year that his research interests diverged from the faculty at Yale, so he left with a master's degree and then continued his graduate studies at Princeton University. At Princeton Prendergast worked with Michael Cole, the discoverer of the *Myc* gene and gene translocation in certain cancers, before moving on to a postdoctoral position with Edward B. Ziff at New York University, in part because of Ziff's desire to move in the direction of neurobiology. After a few years in Ziff's lab, Prendergast interviewed at several universities but chose to begin a career in industry at Merck Research Laboratories, a company for which his wife worked. He stayed there for a short while before moving on to the Wistar Institute in Philadelphia to research farnesyltransferase inhibitors and programmed cell death. Later he also accepted a position as the senior director in the department of cancer research at DuPont Pharmaceuticals, thereby becoming the principal investigator of two laboratories.

At the end of the interview Prendergast talks about the advantages and disadvantages of working less at the bench; balancing work and family life; the work environment at Merck and DuPont; managing his two positions at Wistar and DuPont; the comparative strengths and weaknesses of academic and biotechnological science; and his current research on *Myc* protein and signal transduction by the *Ras* oncoprotein. He concludes with his thoughts on the issue of patents in science; the advantages of knowing the history of science; scientific research in academia and the commercial sector and the nature of competition in academic and commercial labs; biological hazards; and the role of the Pew Scholars Program in the Biomedical Sciences in his work.

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: Prendergast's office, DuPont Phamaceuticals, Glenolden, PA.

Dates, length of sessions: December 11, 2000 (115 minutes); December 12, 2000 (120); December 13, 2000 (112).

Total number of recorded hours: 5.75

Persons present during interview: Prendergast 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 Prendergast 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 Prendergast'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 Prendergast's childhood in Bala Cynwyd, Pennsylvannia, and continuing through his undergraduate work at University of Pennsylvannia, his graduate work at Yale and Princeton University, his postdoc at Howard Hughes Medical Institute and Department of Biochemistry, New York University Medical Center, and the establishment of his own lab at Merck Research Laboratories. Major topics include his joining the Edward B. Ziff lab at New York University, his research at Merck Research Laboratories, and his joining the Wistar Institute to work on farnesyltransferase inhibitors.

ORIGINAL EDITING:

Nirit Michael, 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.

Prendergast reviewed the transcript. He verified proper names and made a number of corrections and additions.

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

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