

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

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

ACKNOWLEDGEMENT

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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."

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

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THE REGENTS OF THE UNIVERSITY
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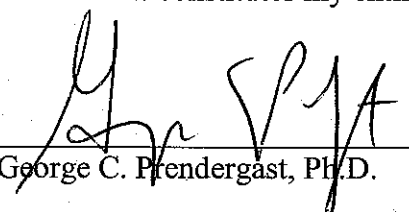
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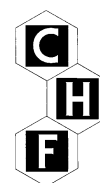
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GEORGE C. PRENDERGAST

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

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

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

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

1994-present University of Pennsylvania
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

1999-present DuPont Pharmaceuticals Company
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.
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- 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.
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- 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 farnesyltransferase inhibitors. *Molecular Cell Biology* 20:6105-13.
- Elliott, K. et al., 2000. The c-Myc interacting adaptor protein Bin1 activates a caspase-independent cell death program. *Oncogene* 19:4669-84.
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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.

Prendergast 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 Pharmaceuticals, 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, Pennsylvania, and continuing through his undergraduate work at University of Pennsylvania, 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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