CHEMICAL HERITAGE FOUNDATION

BRADLEY B. OLWIN

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Steven J. Novak

at

Purdue University
West Lafayette, Indiana

on

30 November and 1, 2 December 1994

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 the Pew Scholars Program in the Biomedical Sciences Advisory Committee members.

From the original collection at the Center for Oral History Research, UCLA Library, UCLA.

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:

Marnie Berkowitz, Consultant to the Chemical Heritage Foundation. B.A., Classical Languages and Literatures, University of Minnesota; Ford Foundation Fellowship, Classical Languages and Literatures, University of Chicago.

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. R941208

This Interview Agreement is made and entered into this 21st day of December, 1994 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 BRADLEY B. OLWIN having an address at Biochemistry Department, 1153 Biochemistry Building, Purdue University, West Lafayette, Indiana, 47907-1153, hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about November 30, 1994, and tentatively entitled "Interview with Bradley B. Olwin". 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 Intellectual Property Administration
University of California, Los Angeles
405 Hilgard Avenue
Los Angeles, California 90024-1406

Attention: Ms. Carli V. Rogers
Copyright Officer

If to Interviewee: Bradley B. Olwin
Biochemistry Department
1153 Biochemistry Building
Purdue University
West Lafayette, IN 47907-1153

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

INTERVIEWEE

Bradley B. Olwin
(Signature)

Bradley B. Olwin
(Typed Name)

Biochemistry Department

1153 Biochemistry Building

Purdue University
(Address)

West Lafayette, IN 47907-115

Date 11/30/94

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

Carli V. Rogers
(Signature)

Carli V. Rogers
(Typed Name)

Copyright Officer
(Title)

405 Hilgard Avenue
(Address)

Los Angeles, CA 90095-1406

Date December 21, 1994

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

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BRADLEY B. OLWIN

1957 Born in Saint Paul, Minnesota on 15 January

Education

1979 B.A., University of California, San Diego
1984 Ph.D., University of Washington

Research Appointments

1984-1985 Postdoctoral Fellow, University of California, San Francisco
1985-1987 Postdoctoral Fellow, University of Washington

Professional Experience

University of Wisconsin-Madison
1988-1993 Assistant Professor
1993 Associate Professor

Purdue University
1993-present Walther Associate Professor of Biochemistry

Honors

1983 Achievement Reward for College Scientists
1989-1993 Shaw Scholar
1990-1994 Pew Scholar in the Biomedical Sciences
1991 Pound Research Award, College of Agriculture and Life Sciences, University of Wisconsin-Madison

Selected Publications

Olwin, B.B. et al., 1982. Interaction of a fluorescent N-dansylaziridine derivative of troponin I with calmodulin in the absence of calcium. *Biochemistry* 21:5669-75.

Olwin, B.B. et al., 1983. Immunoaffinity purification and characterization of 5-iodo-acetyl-amino-ethyl-amino-1-naphthalene sulfonic acid-derivatized calmodulin. *Biochemistry* 22:5390-95.

Olwin, B.B. et al., 1984. Quantitation of energy coupling between Ca^{2+}, calmodulin, skeletal muscle myosin light chain kinase and kinase substrates. *Journal of Biological Chemistry* 259:10949-55.
Olwin, B.B. and D.R. Storm, 1985. Calcium binding to complexes of calmodulin and calmodulin binding proteins. *Biochemistry* 24:8081-6.
Olwin, B.B. and Z.W. Hall, 1985. Developmental accumulation of laminin in the extracellular matrix of a mouse muscle cell line. *Developmental Biology* 112:359-67.
Olwin, B.B. and S.D. Hauschka, 1986. Identification of the fibroblast growth factor receptor of Swiss 3T3 cells and mouse skeletal muscle myoblasts. *Biochemistry* 25:3487-92.
Olwin, B.B. and S.D. Hauschka, 1988. Cell surface fibroblast growth factor and epidermal growth factor receptors are permanently lost during skeletal muscle terminal differentiation in culture. *Journal of Cell Biology* 107:761-69.
Olwin, B.B. and S.D. Hauschka, 1989. Cell type and tissue distribution of the FGF receptor. *Journal of Cellular Biochemistry* 39:443-54.
Burrus, L.B. and B.B. Olwin, 1989. Isolation of a receptor for acidic and basic fibroblast growth factor from embryonic chick. *Journal of Biological Chemistry* 264:18647-53.
Olwin, B.B. and S.D. Hauschka, 1990. Fibroblast growth factor receptor levels decrease during chick embryogenesis. *Journal of Cell Biology* 110:503-9.

ABSTRACT

Bradley B. Olwin was born in St. Paul, Minnesota, but his family moved to Los Alamos, New Mexico, when Olwin was an infant. There his father was an engineer who worked on the Poseidon Missile warhead and on nuclear testing at the test sites in Nevada; his mother was a housewife. Olwin has one younger brother, who now works as an engineer for the Boeing Company in Seattle, Washington. Olwin's family was a close one, engaging in outdoor weekend activities like skiing, water skiing, hiking, camping, backpacking. He still travels to the Cascade Mountains to climb, camp, and backpack. In high school he loved science but also studied Russian literature. Olwin matriculated at University of California at San Diego because he wanted to be an oceanographer; but he soon switched his major to chemistry, which he loved. He also kept up his Russian during college. While still an undergraduate Olwin worked in Stuart Brody's lab and in Susan Taylor's lab. Olwin applied and was accepted to the University of Washington, where he entered the pharmacology department. After rotations in Joseph A. Beavo's and Daniel R. Storm's labs, he joined the Storm lab. He found a mentor in his lab postdoc, David C. LaPorte; there he used anisotropy to study calmodulin-binding interactions. In his third year of graduate school Olwin and his first wife, whom he had married before he left San Diego, were divorced. Subsequently, Olwin met and married Jennifer Martin, who was also a student in pharmacology at the University of Washington. They have two children. Olwin accepted a postdoc at University of California at San Francisco in Zach Hall's lab, but because Jennifer was not able to transfer to San Francisco Olwin left Hall's lab after just one year and went to Stephen Hauschka's lab at University of Washington, where he stayed for three years. From there he accepted an assistant professorship at the University of Wisconsin. Because his wife could not get a job there eventually Olwin decided to accept a professorship at Purdue. There Jennifer also was offered a position, and there they remain today. Olwin continues to work on the effects of fibroblast growth factor (FGF) on cell differentiation and regulation, cell de-differentiation, and signaling.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Steven J. Novak, Senior Editor, UCLA Oral History Program. B.A., History, University of Colorado; Ph.D., History, University of California, Berkeley; M.B.A., UCLA Graduate School of Management.

TIME AND SETTING OF INTERVIEW:

Place: Tapes I-IV, Olwin's office, Purdue University; Tapes V-VI, Olwin's home, West Lafayette, Indiana.

Dates, length of sessions: November 30, 1994 (107 minutes); December 1, 1994 (84); December 2, 1994 (42); December 3, 1994 (91).

Total number of recorded hours: 5.5

Persons present during interview: Olwin and Novak.

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 consultants developed a topic outline. In preparing for this interview, Novak held a preinterview telephone conversation with Olwin to obtain written background information (curriculum vitae, copies of published articles, etc.) and to agree on an interviewing schedule. He also reviewed prior Pew scholars' interviews and the documentation in Olwin'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, Novak 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.* 3d ed. New York: Garland, 1994.

The interview is organized chronologically, beginning with Olwin's childhood in Los Alamos, New Mexico, and continuing through his education at the University of California, San Diego, and the University of Washington and the establishment of his labs at the University of Wisconsin-Madison and Purdue University. Major topics discussed include his research on the effect of fibroblast growth factor on cell regulation, differentiation, and signaling; the importance of basic research; science funding; and the problems facing women and two-career couples in the sciences.

ORIGINAL EDITING:

Kristian London, editorial assitant, 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.

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

Jane Collings, editor, prepared the table of contents and interview history. London assembled the biographical summary. JinAh Lee, editorial assistant, compiled the index.

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