

CHEMICAL HERITAGE FOUNDATION

CHARLES K. BARLOWE

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Andrea R. Maestrejuan

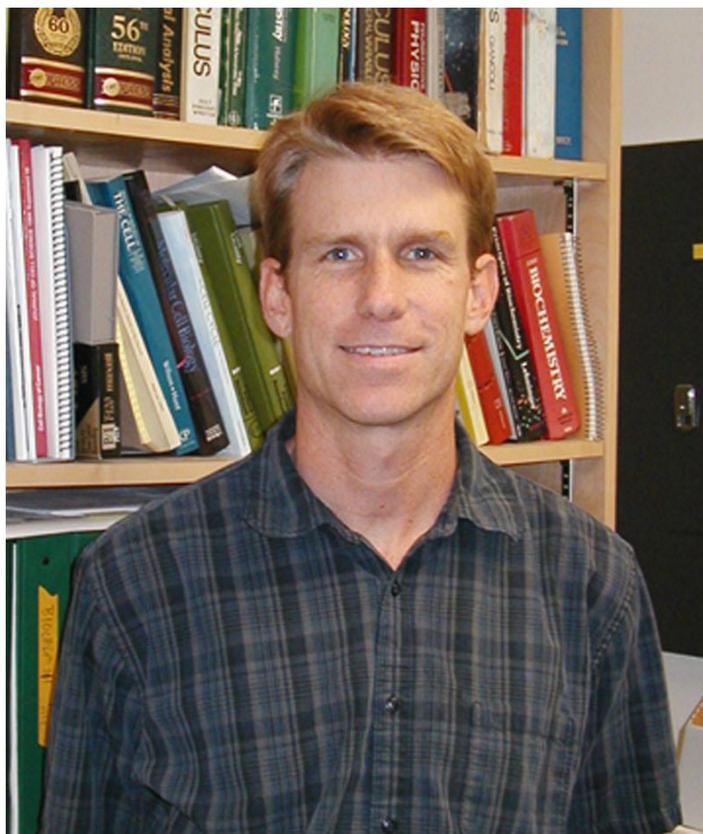
at

Dartmouth Medical College
Hanover, New Hampshire

on

7, 8 and 9 October 2002

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Charles K. Barlowe

ACKNOWLEDGEMENT

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

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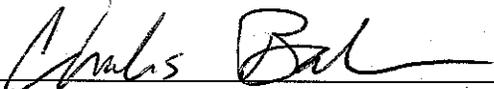
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CHARLES K. BARLOWE

1961 Born in Richmond, Virginia on 3 July

Education

1983 B.S., Chemistry, College of William and Mary

1990 Ph.D., Biochemistry, University of Texas

Professional Experience

1990-1994 University of California, Berkeley, California
Randy Schekman Laboratory, Department of Molecular and Cell Biology

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Assistant Professor, Department of Biochemistry

1999-present Associate Professor, Department of Biochemistry

Honors

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1990 Eakin Biochemistry Award, University of Texas

1990-1993 Damon Runyon-Walter Winchell Cancer Fund Fellow

1996-2000 Pew Scholars Program in the Biomedical Sciences

Selected Publications

Matherly, L.H., Barlowe, C.K. and Goldman, I.D. (1985) Interactions between 4-aminoantifolates and natural folate-polyglutamates in cells. In Proceeding of the Second Workshop on Folyl and Antifoly Polyglutamates (Goldman, I.D., editor) pp. 256-272. Praeger, New York.

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ABSTRACT

Charles K. Barlowe was raised during the time of desegregation in Saluda, Virginia near the Chesapeake Bay, the youngest of three children. His father was a World War II veteran who used the G.I. Bill to become, ultimately, a dentist; his mother received her degree in history from the College of William and Mary, and became a school librarian once her children were in school. Barlowe started in public schools, but eventually transferred to private schools due to overcrowded classrooms and better educational opportunities. His education and childhood were, according to him, quite typical.

Following in his family's footsteps, Barlowe enrolled in the College of William and Mary for his undergraduate education, where he decided to pursue his interest in chemistry. He worked with Gary C. DeFotis, a physical chemist who studied transition metals, analyzing crystal complexes by an x-ray diffraction method and then measuring their ferromagnetic properties with large magnets. Unsure of what path he wanted to follow for a career, after college Barlowe applied for and received a laboratory position with I. David Goldman in the Hematology/Oncology department of the Medical College of Virginia where he worked on antifolate polyglutamylation and competitive drug displacement at dihydrofolate reductase as important elements in leucovorin rescue. After his experiences at the Medical College of Virginia he decided to apply to, and was accepted at, the University of Texas. He studied with Dean R. Appling on folic acid metabolism in yeast for his doctoral work and then moved on to Randy Schekman's laboratory at the University of California, Berkeley for postdoctoral research on transport vesicle formation in membrane trafficking. Family and professional considerations led him to accept a faculty position at Dartmouth Medical School in Hanover, New Hampshire.

The interview ends with a discussion of setting up his laboratory at Dartmouth Medical School, the impact of the Pew Scholars Program in the Biomedical Sciences grant on his work, and his current research on mechanisms of COPII-dependent transport. In addition, he talks about scientific funding in the United States, his wife's career, balancing family life with work commitments, and the role of the scientist in society.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Andrea R. Maestrejuan, Interviewer, UCLA Oral History Program. B.S., Biological Sciences, University of California, Irvine; M.A., History, University of California, Riverside; C.Phil., History, University of California, Los Angeles.

TIME AND SETTING OF INTERVIEW:

Place: Barlowe's office, Dartmouth Medical College.

Dates, length of sessions: October 7, 2002; October 8, 2002; October 9, 2002.

Total number of recorded hours: 5.5

Persons present during interview: Barlowe 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' 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 Charles Barlowe 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 Charles Barlowe's file at the Pew Scholars Program office in San Francisco, including the proposal application, letters of recommendation, and reviews by Pew Scholars Program national advisory committee members.

ORIGINAL EDITING:

Carol L. Squires 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.

Barlowe reviewed the transcript. He verified proper names and made minor corrections and additions.

Squires prepared the table of contents. Maestrejuan assembled the interview history.

TechniType Transcriptions compiled the guide to proper names.

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