

CHEMICAL HERITAGE FOUNDATION

CAROLYN R. BERTOZZI

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Andrea R. Maestrejuan

at

The University of California, Berkeley
Berkeley, California

on

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Carolyn R. Bertozzi

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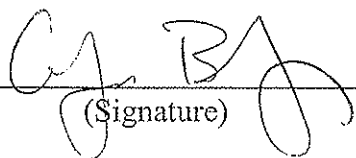
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CAROLYN R. BERTOZZI

1966 Born in Boston, Massachusetts on 10 October

Education

1988 A.B. in Chemistry, *summa cum laude*, Harvard University
1993 Ph.D. in Chemistry, University of California, Berkeley

Professional Experience

University of California, San Francisco
1993-1995 Postdoctoral Fellow, Program in Immunology and
Department of Anatomy
2000-present Professor of Molecular and Cellular Pharmacology

University of California, Berkeley
1996-1999 Assistant Professor of Chemistry
1999-2002 Associate Professor of Chemistry and Molecular
and Cell Biology
2002-present Professor of Chemistry and Molecular and Cell Biology

Lawrence Berkeley National Laboratory
1996-present Faculty Associate, Materials Sciences Division
2000-present Howard Hughes Medical Institute Investigator, Director,
Biological Nanostructures Facility of The Molecular
Foundry

Honors

1987 Radcliffe Science Research Fellowship
1987 Phi Beta Kappa
1987 Danforth Teaching Award
1988 New England American Institute of Chemists Award
1988 Thomas T. Hoopes Undergraduate Thesis Prize
1988-1991 Office of Naval Research Graduate Fellowship
1988-1993 AT&T Bell Laboratories Graduate Fellowship
1989 Outstanding Graduate Student Instructor Award
1990 Outstanding Graduate Student Instructor Award
1991-1992 American Chemical Society Medicinal Chemistry

	Graduate Fellowship
1992	Bruce Mahan Teaching Award
1993-1995	American Cancer Society Postdoctoral Fellowship
1995	Camille and Henry Dreyfus New Faculty Award
1996	Exxon Education Fund Young Investigator Award
1996-2000	Pew Scholars Award in the Biomedical Sciences
1997	Burroughs Wellcome New Investigator Award in Pharmacology
1997	Alfred P. Sloan Research Fellow
1997	Horace S. Isbell Award in Carbohydrate Chemistry (ACS)
1998	Office of Naval Research Young Investigator Award
1998	Research Corporation Research Innovation Award
1998	Glaxo Wellcome Scholar
1998	Prytanean Faculty Award
1998	Beckman Young Investigator Award
1998-2000	Joel H. Hildebrand Chair in Chemistry
1999	Arthur C. Cope Scholar Award (ACS)
1999	Camille Dreyfus Teacher-Scholar Award
1999	MacArthur Foundation Award
2000	Presidential Early Career Award in Science and Engineering (PECASE)
2000	UC Berkeley Department of Chemistry Teaching Award
2000	Merck Academic Development Program Award
2001	ACS Award in Pure Chemistry
2001	UC Berkeley Distinguished Teaching Award
2001	Donald Sterling Noyce Prize for Excellence in Undergraduate Teaching
2002	Fellow of the American Association for the Advancement of Science
2002	Irving Sigal Young Investigator Award of the Protein Society
2003	Elected member of the American Academy of Arts and Sciences
2004	Iota Sigma Pi Agnes Fay Morgan Research Award
2005	Havinga Medal, Univ. Leiden
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2005	Elected member of the National Academy of Science

Selected Publications

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 - A New Approach to Mineralization of Biocompatible Hydrogel Scaffolds, application filed 2/28/03 (Lawrence Berkeley National Laboratory)
 - Ceramic/Polymer Composition with Graded Microstructures, application filed (Lawrence Berkeley National Laboratory)
 - Compositions and Methods for Modification of Biomolecules, application filed 11/1/04 (University of California)

ABSTRACT

Carolyn Bertozzi grew up in Lexington, Massachusetts, the second of three girls. Her father was a nuclear physicist at the Massachusetts Institute of Technology, her mother a secretary in MIT's physics department. Carolyn's father's four siblings, all born in Italy, also went into some branch of science. During the Great Depression Carolyn's maternal grandparents and uncle emigrated from Nova Scotia and established a farm. Carolyn's older sister, a "math genius" now teaches at Duke University, and her younger sister became a psychologist.

It was expected that Carolyn and her sisters would do well in school, and Carolyn did, but she also played soccer in high school and was recruited to Harvard with what would be at any other school an athletic scholarship. She found soccer and later crew too time-consuming, however, and quit sports to devote herself to academics. She began as a biology major but in her second year took an organic chemistry class, which she loved, although she continued to take biology classes, she switched her major to chemistry. She was first in her class and eventually graduated *summa cum laude*, but Harvard's chemistry department was exclusively male at the time. As a result, she went to a lab in the biochemistry department, where Joseph Grabowski, her teacher for a physical organic chemistry class, asked her to work for him during the summer. He was so impressed with her work that he required her to write a graduation thesis, which he then submitted for an award of a substantial amount of money. He convinced her to go to graduate school at University of California at Berkeley.

At Berkeley, she joined Mark Bednarski's bioorganic chemistry laboratory to study carbohydrates. Bednarski was also new, and Carolyn found him enthusiastic, and she wrote a number of grant proposals in his lab. She wrote her doctoral dissertation on the synthesis of carbohydrate analogues for biological applications. Continuing her interest in carbohydrates, and contrary to the advice of other chemists, Carolyn went to work in Steven Rosen's cell biology laboratory at the University of California, San Francisco, for her postdoc. There she studied the role of carbohydrates in inflammation and leukocyte adhesion.

After her postdoctoral work, she accepted an assistant professorship at the University of California at Berkeley and set up her own laboratory. She and Rosen also founded a private company, Thios Pharmaceuticals, Inc. At Berkeley she enjoys teaching, finding her students very intelligent, hard-working, and interesting. In the laboratory she writes (and gets) grants, mentors (particularly women), and sets problems. She has published many journal articles. Her current research interests continue in glycobiology, which she sees as having potentially a wider clinical application. Now a tenured professor, she has a number of academic appointments and steady funding.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Andrea R. Maestrejuan, Interviewer, UCLA Oral History Program, B.S., Biological Sciences, University of California, Irvine, 1986, M.A., History, University of California, Riverside, 1991, C.Phil, History, University of California, Riverside.

TIME AND SETTING OF INTERVIEW:

Place: Bertozzi's office at the University of California, Berkeley.

Dates of sessions: August 17, 2003, August 18, 2003.

Total number of recorded hours: 6

Persons present during interview: Bertozzi 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 Bertozzi to obtain written background information (curriculum vitae, copies of published articles, etc.) and agree on an interviewing schedule. She also reviewed documentation in Bertozzi's file at the Pew Scholars Program office in San Francisco, including Bertozzi's proposal application, letters of recommendation, and reviews by Pew Scholars Program national advisory committee members.

ORIGINAL EDITING:

Carol 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.

Bertozzi did not review the transcript. Consequently, some names remain unverified.

Carol Squires prepared the table of contents and TechniType Transcripts compiled the guide to proper names.

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