## CHEMICAL HERITAGE FOUNDATION

# NANCY M. HOLLINGSWORTH

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview Conducted by

William Van Benschoten

at

SUNY Stony Brook Stony Brook, New York

on

11, 12, and 13 November 2002

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



# Nancy M. Hollingsworth

# ACKNOWLEDGEMENT

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#### **REFORMATTING:**

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Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about November 14, 2002, and tentatively entitled "Interview with Nancy M. Hollingsworth. 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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If to Interviewee:	Nancy M. Hollingsworth Department of Biochemistry and Cell Biology State University of New York 314 Life Sciences Stony Brook, NY 11794-5215

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

INTERVIEWEE

Many (Signature)

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× Date 11/11/02 \_\_\_\_\_

. ..... Janue L. Reeff (Signature)

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Date 9 Dec 2002

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# NANCY M. HOLLINGSWORTH

1958	Born in San Francisco, California, on 2 July	
Education		
1980 1988	B.S., Zoology, Oregon State University Ph.D., Genetics, University of Washington	
Professional Experience		
1988-1989	Fred Hutchinson Cancer Research Center, Seattle, Washington Postdoctoral Fellow	
1989-1994	University of California, San Francisco, California Postdoctoral Fellow	
1994-2000 2000-present	State University of New York at Stony Brook, New York Assistant Professor, Department of Biochemistry & Cell Biology Associate Professor, Department of Biochemistry & Cell Biology	
Honors		
1978-1980 1979 1980 1981 1988-1991	Oregon State Scholarship-Leadership Honoree C. Robert Herrick Jr. Memorial Scholarship B. S. with highest honors Jim Mountain Memorial Scholarship Damon Runyon-Walter Winchell Cancer Fund Postdoctoral Fellowship	
1991-1993 1995-1997 1995	American Cancer Society Senior Postdoctoral Fellowship March of Dimes Basil O'Connor Starter Scholar Research Award Ad hoc member of the NSF Microbial Genetics Study Section	
1996-2000 2000-2004 2002-present	Pew Scholars Program in the Biomedical Sciences Member of the NIH Microbial Genetics and Physiology II Study Section Member of the Pew Charitable Trust Sponsored Science and Society Institute	

# Selected Publications

Hollingsworth, N. M. and S. J. Brill. (2004) The Mus81 solution to resolution: Generating

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- Vershon, A. K., N. M. Hollingsworth and A. D. Johnson (1992) Meiotic induction of the yeast HOP1 gene is controlled by positive and negative regulatory elements. Mol. Cell. Biol. 12: 3706-3714.
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specific component of yeast chromosomes. Cell 61: 73-84.

- Hollingsworth, N. M. and B. Byers (1989) *HOP1:* a yeast meiotic pairing gene. Genetics 121: 445-462.
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#### ABSTRACT

**Nancy M. Hollingsworth** was born in San Francisco, California, but spent most of her youth moving around—to Oregon, Panama, New Mexico, California, and, finally, Arizona—with her parents and older brother. Her father was a psychiatrist (and the reason for the travel); her mother was a trained dietitian who chose not to work while her children were growing up. Hollingsworth enjoyed school from a young age, a precocious child who loved reading, schoolwork (she would also play "school" when at home), playing cards with her family, nature, and music. In high school she had a great interest in literature, mathematics, and history, though did think about pursuing zoology as a major in college.

Hollingsworth matriculated at Oregon State University and felt fortunate to have Peter Dawson as her advisor and mentor—Dawson was a population geneticist who worked on the flour beetle, Tribolium castaneum and Tribolium confusum, and who also taught the undergraduate genetics class. Though maintaining an interest in history and literature, Hollingsworth began working in Dawson's lab very early on in her undergraduate career, doing crosses and measuring map distances between some genes in Tribolium. She completed her degree in zoology, moving on to a master's degree at Oregon State. She participated in a summer course at the Marine Biological Laboratory in Woods Hole, Massachusetts, working under the tutelage of Lynna Hereford and Mary Anne Osley and solidifying her decision to attend the University of Washington for doctoral studies (instead of one of the three Ivy league schools that accepted her). At the University of Washington, Hollingsworth chose to work in the lab of Breck E. Byers, studying meiosis in yeast, ultimately developing a mutant screen for yeast recombination proteins and subsequently identifying the HOP1 mutant; she also had the opportunity to meet Leland H. Hartwell, with whom she also worked. From there she moved on to postdoctoral research in Gerald R. Smith's laboratory at the Fred Hutchinson Cancer Research Center, studying Schizosaccharomyces pombe recombination, at which point she also met her future husband, Aaron Neiman. She transferred to the University of California, San Francisco to work with Alexander D. Johnson on Hop1 biochemistry and HOP1 alleles. She then accepted a position at the State University of New York, Stony Brook, and began her research on the recombinant promoter gene MSH5 in yeast and on the roles of the Mms4/Mus81complex and of Mek1 in recombination.

The remainder of the interview focuses on the topics of Hollingworth's lab, her mentoring style, and her thoughts on contemporary issues in science and its practice. She talks about the impact of the Pew Scholars Program in the Biomedical Sciences on her work; her teaching duties; how she chooses her research projects; and how she balances family (she has three children) and career. The interview ends with her thoughts on collaboration and competition in research; the national scientific agenda the role of scientists in informing the public and determining public policy; gender issues; and more on the influence of Lynna Hereford and Mary Ann Osley on her career.

#### UCLA INTERVIEW HISTORY

#### **INTERVIEWER:**

William Van Benschoten, Interviewer, UCLA Oral History Program. B.A., History, University of California, Riverside; M.A., History, University of California, Riverside; C. Phil., History, UCLA

#### TIME AND SETTING OF INTERVIEW:

Place: Hollingsworth's office, State University of New York at Stony Brook.

Dates, length of sessions: November 11, 2002; November 12, 2002; and November 13, 2002

#### **Total number of recorded hours: 5.5**

Persons present during interview: Hollingsworth and Van Benschoten.

#### 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, Van Benschoten held a telephone preinterview conversation with Nancy Hollingsworth to obtain written background information (curriculum vitae, copies of published articles, etc.) and agree on an interviewing schedule. He also reviewed prior Pew scholars interviews and the documentation in Hollingsworth'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 the punctuation, paragraphing, and spelling, and verified proper names. Words and phrases inserted by the editor have been bracketed.

Nancy Hollingsworth reviewed the transcript. She verified proper names and made a number of corrections and additions.

Carol L. Squires prepared the table of contents. Victoria Simmons compiled the

interview history. TechniType Transcriptions compiled the index.

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the recombinant promoter gene *MSH5* in yeast. Current research projects on the roles of the *Mms4/Mus81* complex and of *Mek1* in recombination. Human infertility.

## Final Thoughts

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The impact of the Pew Scholars Program in the Biomedical Sciences. Writing journal articles. Balancing family and career. The tenure process at State University of New York, Stony Brook. Collaboration in research. Her views on how to improve the quality of science in the United States. More on the influence of Lynna Hereford and Mary Ann Osley. Her interest in meiosis as the subject of her research. The peer review system.

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