

CHEMICAL HERITAGE FOUNDATION

DAVID J. JULIUS

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Neil D. Hathaway

at

The University of California, San Francisco
San Francisco, California

on

20, 23, 27, and 31 July 1993

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

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Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about July 20, 1993, and tentatively entitled "Interview with David J. Julius. 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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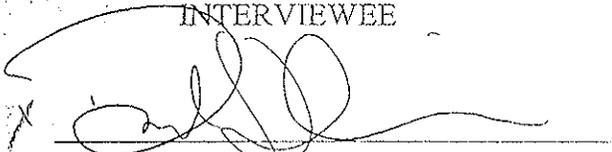
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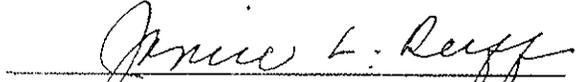
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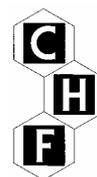
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DAVID J. JULIUS

1955 Born in Brooklyn, New York on 4 November

Education

1977 B.S., Massachusetts Institute of Technology
1984 Ph.D., University of California, Berkeley

Research Appointments

1984-1987 Postdoctoral Fellow, Institute of Cancer Research, Columbia University

Professional Experience

1987-1989 Associate, Howard Hughes Medical Institute, College of Physicians and Surgeons, Columbia University
1989-present Assistant Professor, University of California, San Francisco

Honors

1976 Eloranta Research Fellow, Massachusetts Institute of Technology
1981 University of California Graduate Studies Award
1984-1987 Fellow, Jane Coffin Childs Memorial Fund for Medical Research
1990-1994 Pew Scholar in the Biomedical Sciences

Selected Publications

- Julius, D.J. et al., 1979. Isomeric specificity of aminoacylation of wheat germ transfer ribonucleic acid and the specificity of interaction of elongation factor Tu with aminoacyl transfer ribonucleic acid. *Biochemistry*, 18:604-9.
- Julius, D.J. et al., 1983. Yeast alpha-factor is processed from a larger precursor polypeptide: The essential role of a membrane-bound dipeptidyl aminopeptidase. *Cell*, 32:839-52.
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- receptor. *Science*, 241:558-64.
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- Julius, D.J., 1991. Molecular biology of serotonin receptors. *Annual Review of Neuroscience*, 14:335-60.
- Tecott, L.H. and D. Julius, 1993. A new wave of serotonin receptors. *Current Opinion in Neurobiology*, 3:310-15.

ABSTRACT

David J. Julius was born and grew up in the Brighton Beach section of Brooklyn, New York, where he lived with his parents and two brothers, one older and one younger. His father was an engineer and his mother an elementary-school teacher. Julius attended the local grammar school, but he tested into Peter Stuyvesant High School in Manhattan. He commuted there for a year before deciding that though the social and entertainment life in Manhattan surpassed those in Brooklyn, he preferred to go to the local high school, Abraham Lincoln High School. He was interested early in the sciences, although he did not particularly enjoy school. He attended Massachusetts Institute of Technology, where he received his BS in 1977. He then obtained his PhD from University of California at Berkeley in 1984. He was a postdoctoral fellow at the Institute of Cancer Research at Columbia University; he then was an associate at the Howard Hughes Medical Institute at Columbia University. In 1989 he was appointed assistant professor at the University of California at San Francisco, where he remains. He is the winner of a number of awards, including the Pew Scholar in the Biomedical Sciences award, and has published many papers. Julius's major areas of interest include yeast genetics, the secretory pathway, *Xenopus* and *Aplysia*, neurobiology, electrophysiology, mouse genetics, and the serotonin receptor. He is married to Holly A. Ingraham.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Neil D. Hathaway, Interviewer, UCLA Oral History Program. B.A., English and History, Georgetown University; M.A. and C.Phil., History, UCLA.

TIME AND SETTING OF INTERVIEW:

Place: Julius's office, University of California, San Francisco.

Dates, length of sessions: July 20, 1993 (85 minutes); July 23, 1993 (90) ; July 27, 1993 (75) ; July 31, 1993 (109).

Total number of recorded hours: 6

Persons present during interview: Julius and Hathaway.

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.

In preparing for this interview, Hathaway, in consultation with the director of the UCLA Oral History Program and three UCLA faculty project consultants, developed a topic outline to provide an overall interview framework. Hathaway then held a telephone preinterview conversation with Julius to obtain extensive written background information (curriculum vitae, copies of published articles, etc.) and agree on a research and interviewing timetable. Hathaway further reviewed the documentation in Julius'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 general background on the recent history of the biological sciences, Hathaway consulted such works as: J.D. Watson et al., *The Molecular Biology of the Gene*. 4th ed. 2 vols. Menlo Park, CA: Benjamin/Cummings, 1987; Lubert Stryer, *Biochemistry*. 3d ed. New York City, New York: W.H. Freeman, 1988; *The Journal of the History of Biology*; H.F. Judson, *The Eighth Day of Creation: Makers of the Revolution in Biology*. New York City, New York: Simon and Schuster, 1979; and recent issues of *Science*, *Nature*, and *Cell*.

The interview is organized chronologically, beginning with Julius's childhood and education in Brooklyn and continuing through his undergraduate education at Massachusetts Institute of Technology, graduate work at University of California, Berkeley, postdoc at Columbia University, and the establishment of his own laboratory at University of California, San Francisco. Major topics discussed include yeast genetics, the secretory pathway,

Xenopus and *Aplysia*, neurobiology, electrophysiology, mouse genetics, and the serotonin receptor.

ORIGINAL EDITING:

Vimala Jayanti, editor, 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.

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

Steven J. Novak, senior editor, prepared the table of contents. Jayanti drew up the biographical summary. Kristian London, assistant editor, assembled the interview history. Gregory M. Beyrer, editorial assistant, compiled the index.

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<p>Taking a postdoc at Columbia University Institute of Cancer Research. Shifting research focus to brain signaling. Working in Richard Axel's lab. Becoming interested in cloning serotonin receptor; trying Dan R. Littman's method of cloning to get serotonin receptors. Technological constraints on experiments. Working with Thomas M. Jessell to find neurotransmitter receptors. Learning <i>Xenopus</i> technology from Douglas A. Melton. Receptors in choroids plexus of the brain. Electrophysiological measurements. Cloning a serotonin receptor. Running Julius's own lab. 5HT1c; 5HT3. Therapeutic applications of his research.</p>	
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