

CHEMICAL HERITAGE FOUNDATION

**TREVOR WILLIAMS**

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview  
Conducted by

Andrea R. Maestrejuan

at

Yale University  
New Haven, Connecticut

on

12-14 August 1998

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



**Trevor Williams**

## 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.

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**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.

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**ERRATA:**

On a subsequent review, Dr. Williams identified the following errors in the transcript:

- p. 12: “[Isamband K.] Brunel” should be “[Isambard K.] Brunel”
- p. 25: “There were two readers there. One of them had gone away . . .” should be “[Ron Reeder was] there, [but he] had gone away . . .”
- p. 62: “[glucorticoid reception]” should be “[glucocorticoid receptor]”

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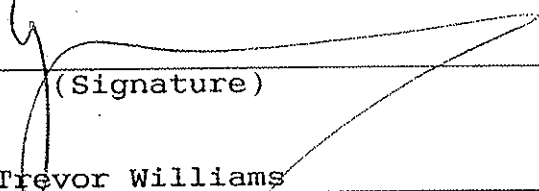
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INTERVIEWEE

THE REGENTS OF THE UNIVERSITY  
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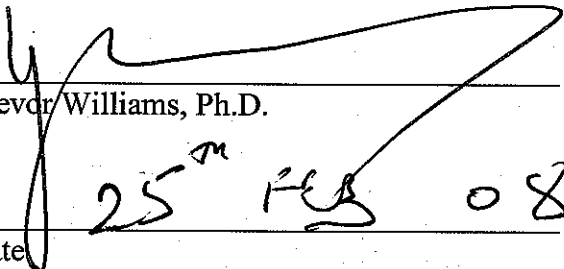
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## TREVOR WILLIAMS

1959 Born in Wolverhampton, England on 16 January

### Education

B.A., Trinity College, University of Cambridge, Cambridge, England  
Ph.D., Imperial Cancer Research Fund, London University, England

### Professional Experience

1986-1991	University of California, Berkeley Postdoctoral Fellow
1991-1997	Yale University Assistant Professor
1997-present	Associate Professor

### Honors

1981	Cold Spring Harbor Olney Fellow
1986-1988	Howard Hughes Medical Institute Postdoctoral Fellowship
1993-1997	Pew Scholar in the Biomedical Sciences
1993	Member of the Yale Comprehensive Cancer Center

### Selected Publications

- Williams, T. and M. Fried, 1986. A mouse locus at which transcription from both DNA strands produces mRNA's complementary at their 3' ends. *Nature* 322:275-79.
- Williams, T. and M. Fried, 1986. The MES-1 murine enhancer element is closely associated with the heterogeneous 5' ends of two divergent transcription units. *Molecular and Cellular Biology* 6:4558-69.
- Williams, T. et al., 1988. The mouse surfeit locus contains a very tight cluster of four "housekeeping" genes that is conserved through evolution. *Proceedings of the National Academy of Sciences USA* 85:3527-30.
- Williams, T. et al., 1988. Cloning and expression of AP-2, a cell-type specific transcription factor which activates inducible enhancer elements. *Genes and Development* 2:1557-69.
- Williams, T. and R. Tjian, 1991. A novel dimerization motif in the transcription factor AP-2 can be utilized by other DNA binding proteins. *Science* 251:1067-71.

- Williams, T. and R. Tjian, 1991. Analysis of the DNA binding and activation properties of the human transcription factor AP-2. *Genes and Development* 5:670-82.
- Bosher, J.M. et al., 1995. The developmentally regulated transcription factor AP-2 is involved in a c-erbB-2 overexpression in human mammary carcinoma. *Proceedings of the National Academy of Sciences USA* 92:744-47.
- Zhang, J. et al., 1996. Neural tube, skeletal and body wall defects in mice lacking transcription factor AP-2. *Nature* 381:238-41.
- Nottoli, T. et al., 1998. AP-2 null cells disrupt morphogenesis of the eye, face and limbs of chimeric mice. *Proceedings of the National Academy of Sciences USA* 95:13714-19
- Turner, B.C. et al., 1998. Expression of AP-2 transcription factors in human breast cancer correlates with the regulation of multiple growth factor signaling pathways. *Cancer Research* 58:5466-72.

## ABSTRACT

**Trevor Williams**, the youngest of three children, was born and grew up in Wolverhampton, England. His father worked for the railroads; he was drafted into the Royal Engineers, where he met Trevor's mother, who became a school cook. The elder of Trevor's two older sisters was not interested in school, but the next sister fought their parents to be able to attend college; this helped prepare the way for Trevor. Their neighborhood was working-class. The comprehensive school that Trevor was assigned to after elementary school was tough, and at the time did not graduate many college-bound pupils. However, he did well enough on a school exam to be accepted into the local grammar school instead. He had always liked school, especially science. As a perk of his job, Trevor's father received a number of train tickets each year, tickets that Trevor and his mother would use to visit her family in Kent; this meant transferring in London, and on those trips they would visit the natural history or science museums, further fueling Trevor's interest in science.

Trevor's grammar school encouraged him to strive for Oxbridge; he applied to Cambridge because he had been told Oxford was more snooty and because of the importance of science at Cambridge. A class with Tony Minson convinced him that virology would be his specialty. After his second year he won a research fellowship to study at the Fred Hutchinson Cancer Research Center, where he worked on herpes virus in James McDougall's lab.

The next year his interest in the molecular genetics of cancer as related to viruses led him to spend a summer fellowship in Joe Sambrook's lab at Cold Spring Harbor Laboratory. Subsequently, Trevor moved to the Imperial Cancer Research Fund in London, where he began his PhD studies with Michael Hayman, but later switched to Michael Fried's lab to study cell enhancers.

Shifting from virology to molecular biochemistry, Trevor accepted a postdoc in Robert Tjian's lab at University of California at Berkeley. There he jumped into research on AP transcription. Realizing that science in the United States provided a more comprehensive market for all kinds of research, Trevor decided not to return to Britain. He accepted an assistant professorship at Yale, where he has since become an associate professor. Still preferring basic science to applied, he continues his research into AP-2. He has been a Howard Hughes Fellow and has won a Pew Scholars in the Biomedical Sciences award; he continues to write and publish his work; he teaches undergraduate classes as well the students in his lab; he writes grant proposals; and he attempts to balance all this with having a personal life.

## UCLA INTERVIEW HISTORY

### INTERVIEWER:

Andrea R. Maestrejuan, Interviewer, UCLA Oral History Program; B.A., History, University of California, Irvine, 1988; B.S., Biological Sciences, University of California, Irvine, 1988; C.Phil., History, University of California, Riverside.

### TIME AND SETTING OF INTERVIEW:

**Place:** Williams's office, Yale University.

**Dates, length of sessions:** August 12, 1998 (102 minutes); August 13, 1998 (139); August 14, 1998 (109).

**Total number of recorded hours:** 5.85

**Persons present during interview:** Williams 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 Williams to obtain written background information (curriculum vitae, copies of published articles, etc.) and to agree on an interviewing schedule. She also reviewed prior Pew scholars' interviews and the documentation in Williams' 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, Maestrejuan 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*. 3rd ed. New York: Garland, 1994.

This interview is organized chronologically, beginning with Williams' childhood in Wolverhampton, England, and continuing through his graduate work at the Imperial Cancer Research Fund, his postdoctoral work at University of California, Berkeley, and the establishment of his own laboratory at Yale University. Major topics discussed include his postdoc work in the Robert Tjian lab, his research on AP-2 transcription factor, similarities and differences between the American and British scientific systems, and Williams' funding history.

## ORIGINAL EDITING:

Gregory M.D. Beyrer, editorial assistant, 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.

Williams reviewed the transcript. He verified proper names and made a number of corrections and additions.

William Van Benschoten, editor, prepared the table of contents.

Beyrer assembled the biographical summary and interview history. Ödül Bozkurt, editorial assistant, compiled the index.

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