

CHEMICAL HERITAGE FOUNDATION

**JONATHON HOWARD**

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview  
Conducted by

Steven J. Novak

at

University of Washington  
Seattle, Washington

on

23-25 January 1995

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

## ACKNOWLEDGEMENT

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Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about January 23, 1995, and tentatively entitled "Interview with Jonathon Howard". 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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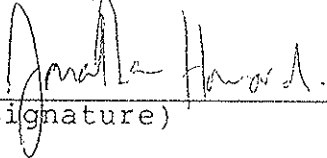
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(Signature)

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(Typed Name)

Physiology/Biophysics Department

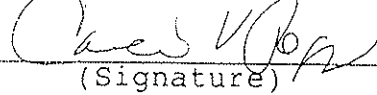
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## JONATHON HOWARD

1957 Born in Sydney, Australia on 15 August

### Education

1979 B.Sc., Australian National University  
1983 Ph.D., Australian National University

### Professional Experience

1983 Australian National University  
Postdoctoral Fellow

1984 University of Bristol, England  
Postdoctoral Fellow

1985-1987 University of California, San Francisco  
Visiting Postdoctoral Fellow  
1988-1989 Assistant Research Physiologist

1989-1994 University of Washington  
Assistant Professor  
1994-present Associate Professor

### Honors

1976-1978 Australian National Undergraduate Scholarship  
1979 Australian Commonwealth Postgraduate Research Scholarship  
1981 M. G. F. Fuortes Travelling Scholarship  
1988-1990 Fellowship, Fondation pour l'Étude du Système Nerveux Central  
et Périphérique  
1990-1992 Alfred P. Sloan Research Fellowship  
1990-1994 Pew Scholar in the Biomedical Sciences

### Selected Publications

Stange, G. and J. Howard, 1979. An ocellar dorsal light response in a dragonfly. *Journal of Experimental Biology*, 83:351-55.  
Howard, J., 1984. Calcium enables photoreceptor pigment migration in a mutant fly. *Journal*

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## ABSTRACT

**Jonathon Howard** was born in Sydney, Australia. The oldest of four children, he grew up in a suburb of Sydney. He lived near Ku-Ring-Gai National Park, where he loved to hike, camp, and fish. He also played cricket and soccer and surfed. His parents were both architects until his father became a successful landscape architect and his mother a teacher of architecture. None of his siblings finished high school, and Howard disliked school intensely—except for mathematics—playing truant for much of his time there. But along came William Eason, who had been headmaster at Ku-Ring-Gai Chase High School before Howard entered. Eason founded International School, to which Howard transferred and in which he thrived. From International School Howard went to Australian National University, obtaining his BSc in mathematics in 1979. He lost interest in mathematics and became interested in physics and neurobiology for graduate work. He obtained his PhD from Australian National University in 1983. He then took a postdoctoral fellowship at the University of Bristol in Bristol, England. Sensing a lack of common interest with co-workers there and not liking the weather, he took a postdoc at the University of California at San Francisco, where he worked in Albert James Hudspeth's lab. He found UCSF's intellectual climate stimulating and exciting. He also met his wife, Karla M. Neugebauer, there. Howard became interested in both vision and hearing, studying first photoreceptors and then hair cells. He accepted an assistant professorship at the University of Washington, which he thought would be a better place to continue his research on kinesin and myosin. He remains there today, attempting to balance his construction of his own tools, his teaching, his thinking, his research, and his life with wife and young daughter. He has won many awards, including the Pew Scholar in the Biomedical Sciences award, and he has many publications to his credit.

## UCLA INTERVIEW HISTORY

### INTERVIEWER:

Steven J. Novak, Senior Editor, UCLA Oral History Program. B.A., History, University of Colorado; Ph.D., History, University of California, Berkeley; M.B.A., UCLA Graduate School of Management.

### TIME AND SETTING OF INTERVIEW:

**Place:** Howard's office, University of Washington.

**Dates, length of sessions:** January 23, 1995 (123 minutes); January 24, 1995 (125) ;  
January 25, 1995 (130).

**Total number of recorded hours:** 6.3

**Persons present during interview:** Howard and Novak

### 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 consultants developed a topic outline. In preparing for this interview, Novak held a telephone preinterview conversation with Howard to obtain written background information (curriculum vitae, copies of published articles, etc.) and to agree on an interviewing schedule. He also reviewed prior Pew scholars' interviews and the documentation in Howard'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 technical background, Novak 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*. 3d ed. New York: Garland, 1994.

The interview is organized chronologically, beginning with Howard's childhood and education in Sydney, Australia, and continuing through his postdocs at the University of Bristol and the University of California, San Francisco, and his career at the University of Washington. Major topics discussed include the optics of compound eyes, the gating-spring model of ion channels, developing methods of recording from and studying single molecules of kinesin, scientific publishing, and the process of running a lab.

## ORIGINAL EDITING:

Kristian T. London, assistant editor, 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.

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

London prepared the table of contents, biographical summary, and interview history.

Kathleen McAlister, editorial assistant, compiled the index.

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