CHEMICAL HERITAGE FOUNDATION

PETER R. ARVAN

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Neil D. Hathaway

at

Beth Israel Hospital
Boston, Massachusetts

on

29 June and 2, 5, 6 July 1993

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

Peter R. Arvan

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 Pew Biomedical Scholar Advisory Committee members.

This oral history was completed under the auspices of the Oral History Project, University of California, Los Angeles (Copyright © 1997 The Regents of the University of California) and is made possible through the generosity of

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REFORMATTING:

Hilary Domush, Program Assistant, Biomedical Sciences and Technologies, Chemical Heritage Foundation. B.S. Chemistry, Bates College, M.S. Chemistry, University of Wisconsin, M.A. History of Science, University of Wisconsin.

David J. Caruso, Program Manager, Biomedical Sciences and Technologies, Chemical Heritage Foundation. B.A., History of Science, Medicine, and Technology, Johns Hopkins University; PhD., Science and Technology Studies, Cornell University.

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Oral History Interview Agreement No. R930709

This Interview Agreement is made and entered into This 14th day of June, 1993 by and between THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, a California corporation, on behalf of the Oral History Program at the UCLA campus, hereinafter called "University," and PETER R. ARVAN having an address at Beth Israel Hospital, Department of Medicine, Division of Endocrinology, 330 Brookline Avenue, Boston, Massachusetts, 02115, hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about June 28, 1993, and tentatively entitled "Interview with Peter R. Arvan". 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."

In consideration of the mutual covenants, conditions, and terms set forth below, the parties hereto hereby agree as follows:

1. Interviewee irrevocably assigns to University all his copyright, title and interest in and to the Work. This assignment applies to University, its successors, and assigns, for and during the existence of the copyright and all renewals and extensions thereof.

2. By virtue of this assignment, University will have the right to use the Work for any research, educational, or other purpose that University may deem appropriate.

3. Interviewee acknowledges that he will receive no remuneration or compensation for his participation in the interviews or for the rights assigned hereunder.

4. Interviewee will receive from University, free of charge, one bound copy of the typewritten manuscript of the interviews.

5. To insure against substantive error or misquotation, Interviewee will have the right to review the manuscript before it is put into final form. University therefore will send Interviewee a copy of the edited transcript for review and comment. Interviewee will return transcript and comments to University within 30 days of receipt of the transcript. In the event that Interviewee does not respond within 30 days, University will assume that Interviewee has given full approval of the transcript.

6. All notices and other official correspondence concerning this Agreement will be sent to the following:

If to University: Office of Intellectual Property Administration
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405 Hilgard Avenue
Los Angeles, California 90024-1406

Attention: Ms. Carli V. Rogers
Copyright Officer

If to Interviewee: Peter R. Arvan
Beth Israel Hospital
Department of Medicine,
Division of Endocrinology
330 Brookline Avenue
Boston, Massachusetts 02115

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

INTERVIEWEE

Peter Arvan
(Signature)

Peter R. Arvan
(Typed Name)

Beth Israel Hopsital

Department of Medicine
Division of Endocrinology

330 Brookline Avenue
(Address)

Boston, MA 02115

Date 7/2/93

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

Carli V Rogers
(Signature)

Carli V. Rogers
(Typed Name)

Copyright Officer
(Title)

Date July 19, 1993

Pew Scholars in the Biomedical Sciences

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I, Peter Arvan, M.D., Ph.D., hereby grant permission to post portions of the digital copy of the audio-taped interview of me, and the related written transcript, on the internet for non-commercial, educational use only as per the checked selection below.

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Peter Arvan, M.D., Ph.D.

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PETER R. ARVAN

1956 Born in New York City, New York on 11 September

Education

1977 B.A., Biochemistry, Cornell University
1984 M.D., Yale University School of Medicine
1984 Ph.D., Cell Biology, Yale University School of Medicine

Professional Experience

Harvard Medical School
1988-present Assistant Professor, Cell and Developmental Biology Program

Beth Israel Hospital, Boston
1988-present Associate Physician, Division of Endocrinology

Honors

1977 Phi Beta Kappa
1978 Medical Scientist Training Program, Yale University School of Medicine
1985 Research Residency Program, Yale University School of Medicine
1988-1992 Pew Scholars Program in the Biomedical Sciences.

Selected Publications

Arvan, P. and J.D. Castle, 1982. Plasma membrane of the rat parotid gland: Preparation and partial characterization of a fraction containing the secretory surface. Journal of Cell Biology, 95:8-19.

Arvan, P. et al., 1983. Secretory membranes of the rat parotid gland: Preparation and comparative characteri-zation. Methods in Enzymology, 98:75-87.

Arvan, P. et al., 1984. Osmotic properties and internal pH of isolated rat parotid secretory granules. Journal of Biological Chemistry, 259:13567-72.

Arvan, P. et al., 1985. Relative lack of ATP-driven H+ translocase activity in isolated parotid secretory granules. Journal of Biological Chemistry, 260:14945-52.

Arvan, P. and J.D. Castle, 1986. Isolated secretion granules from parotid glands of chronically-stimulated rats possess an alkaline internal pH and inward-directed H+ pump activity.

Journal of Cell Biology, 103:1257-67.
Arvan, P. and J.D. Castle, 1987. Phasic release of newly-synthesized secretory proteins in the unstimulated rat exocrine pancreas. Journal of Cell Biology, 104:243-52.
Arvan, P. and A. Chang, 1987. Constitutive protein secretion from the exocrine pancreas of fetal rats. Journal of Biological Chemistry, 262:3886-90.
Arvan, P. and J.L. Lee, 1991. Regulated and constitutive protein targeting can be distinguished by secretory polarity in thyroid epithelial cells. Journal of Cell Biology, 112:365-76.
Kim, P.S. and P. Arvan, 1991. Folding and assembly of newly-synthesized thyroglobulin occurs in a pre-Golgi compartment. Journal of Biological Chemistry, 266:12412-18.
Arvan, P. et al., 1991. Protein discharge from immature secretory granules displays both regulated and constitutive characteristics. Journal of Biological Chemistry, 266:14171-74.
Kim, P.S. and P. Arvan, 1992. Transient aggregation of nascent thyroglobulin in the endoplasmic reticulum: Relationship to the molecular chaperone, BiP. Journal of Cell Biology, 118:541-49.
Arvan, P. and J.D. Castle, 1992. Protein sorting and secretion granule formation in regulated secretory cells. Trends in Cell Biology, 2:327-31.
Kim, P.S. and P. Arvan, 1993. Hormonal regulation of thyroglobulin export from the endoplasmic reticulum of cultured thyrocytes. Journal of Biological Chemistry, 268: 4873-79.

ABSTRACT

Peter R. Arvan begins the interview discussing his childhood in Queens, New York. Arvan's family background played an important role in his development, including his mother's escape from Nazi Germany as a teenager. Although his parents were extremely interested in his education, there never existed any particular emphasis on science; his movement into a scientific career could have been altered had he found any inspiration or an inspirational figure in the humanities instead. Arvan's decision to pursue science developed from his involvement in the National Science Foundation Summer Program in Biochemistry before his senior year in high school. Arvan returned to this program as an advanced student the following summer and even as an instructor while he was an undergraduate; this program was extremely influential in his academic development. Arvan joined Efraim Racker's laboratory at Cornell University and then pursued his M.D./Ph.D. at Yale University working in the research laboratory of J. David Castle. After one year at the University of North Carolina for residency, Arvan returned to Yale under the Research Residency Program where he pursued research in Howard Rasmussen's laboratory. Throughout the interview Arvan discussed the difficulties of scientific funding, the fortuitous events which have shaped his scientific thinking, and the difficulties inherent in the M.D./Ph.D. program.

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: Arvan's office, Beth Israel Hospital, Boston.

Dates, length of sessions: June 29, 1993 (130 minutes); July 2, 1993 (85); July 5, 1993 (131); July 6, 1993 (152).

Total number of recorded hours: 8.25

Persons present during interview: Arvan 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, from 1988 through 1992.

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 Arvan to obtain extensive writtenbackground information (curriculum vitae, copies of published articles, etc.) and agree on a research and interviewing timetable. Hathaway further reviewed the documentation in Arvan'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: W.H. Freeman, 1988; The Journal of the History of Biology; and H.F. Judson, The Eighth Day of Creation: Makers of the Revolution in Biology. New York: Simon and Schuster, 1979.

The interview is organized chronologically, beginning with Arvan's family background and his childhood and early education in Queens, New York, and continuing through his undergraduate years at Cornell University, his pursuit of an M.D./Ph.D. and postdoc at Yale University, and the creation of his lab at Beth Israel Hospital in Boston. Major topics discussed include the National Science Foundation Summer Program in Biochemistry, the M.D./Ph.D. track, the field of cell biology, secretory pathways, and science funding.

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.

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

Steven J. Novak, senior editor, prepared the table of contents and interview history. Jayanti compiled the biographical summary and index.

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