CHEMICAL HERITAGE FOUNDATION

ROBERT C. DE LISLE

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Helene L. Cohen

at

The University of Kansas Medical Center
Kansas City, Kansas

on

10-12 April 2000

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

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.

From the original collection at the Center for Oral History Research, UCLA Library, UCLA.

The following oral history, originally processed at the UCLA Center for Oral History Research, has been reformatted by the Chemical Heritage Foundation. The process involved reformatting the front matter, adding a new abstract, replacing the table of contents, and replacing the index. The paragraph spacing and font of the body of the transcript were altered to conform to the standards of the Oral History Program at the Chemical Heritage Foundation. The text of the oral history remains unaltered; any inadvertent spelling or factual errors in the original manuscript have not been modified. The reformatted version and digital copies of the interview recordings are housed at the Othmer Library, Chemical Heritage Foundation. The original version and research materials remain at the Darling Library, University of California, Los Angeles and at the Bancroft Library, University of California, Berkeley.

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.

David J. Caruso, Program Manager, Oral History, 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. T0602006

This Interview Agreement is made and entered into this 2nd day of June, 2000 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 ROBERT C. DE LISLE, having an address at Department of Anatomy and Cell Biology, The University of Kansas, Medical Center, 3901 Rainbow Boulevard, Kansas City, Kansas 66160, hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about April 10, 2000, and tentatively entitled "Interview with Robert C. De Lisle". 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, including electronic reproduction, 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: Oral History Program
University of California, Los Angeles
Box 951575
Los Angeles, California 90095-1575

Attention: Director

If to Interviewee: Robert C. De Lisle
Department of Anatomy and Cell Biology
The University of Kansas
Medical Center
3901 Rainbow Boulevard
Kansas City, Kansas 66160

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

INTERVIEWEE

R. C. De Lisle
(Signature)

Robert C. De Lisle
(Typed Name)

University of Kansas
(Address)

Medical Center

Kansas City, KS 66160

Date 4-10-00

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

Dale E. Treleven
(Signature)

Dale E. Treleven
(Typed Name)

Director, Oral History Program
(Title)

Date June 2, 2000

Pew Scholars in the Biomedical Sciences

Chemical Heritage Foundation Internet Posting Release Form

I, Robert C. De Lisle, Ph.D., hereby request that my wishes be followed as per the checked selection below with regards to posting 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.

Please check one:

a. X **No restrictions for Internet Posting.**
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b. _____ **Semi-restricted Internet Postings** (My review of the material intended to post is required.)

c. _____ **Restricted access.** (Do not post.)

This constitutes my entire and complete understanding.

RC DeLisle
Robert C. De Lisle, Ph.D.

2-4-08
Date

Chemical Heritage Foundation
Oral History Program
315 Chestnut Street
Philadelphia, Pennsylvania 19106

ROBERT C. DE LISLE

1957 Born in Buffalo, New York on 5 August

Education

1979 B. A., University of Massachusetts-Boston
1984 Ph.D., Case Western Reserve University

Professional Experience

University of California, San Francisco
1984-1987 Postdoctoral Fellow

University of Michigan
1988-1990 Assistant Research Scientist

University of Kansas Medical Center, Department of Anatomy and Cell Biology
1990-1996 Assistant Professor
1996-present Associate Professor

Honors

1984 Steuer Award, Department of Developmental Genetics and Anatomy, Case Western Reserve University
1985-1987 Postdoctoral Fellow, Cystic Fibrosis Foundation
1993-1997 Pew Scholar in the Biomedical Sciences

Selected Publications

De Lisle, R.C. et al., 1984. Isolation of stable pancreatic zymogen granules. *American Journal of Physiology: Gastrointestinal Liver Physiology* 241 :G4 11-18.

De Lisle, R.C. and U. Hopfer, 1986. Electrolyte transport properties of pancreatic zymogen granules: Implications for pancreatic secretion. *American Journal of Physiology* 250:G489-96.

De Lisle, R.C. and C.D. Logsdon, 1990. Pancreatic acinar cells in culture: Expression of acinar and ductal antigens in a growth related manner. *European Journal of Cell Biology* 51:64-75.

Kitagawa, M. et al., 1990. Amylase secretion from streptolysin-O permeabilized pancreatic acini. *American Journal of Physiology. Gastrointestinal Liver Physiology* 259:G157-64.

Goke, B. et al., 1992. Low molecular mass GTP-binding proteins in subcellular fractions of the pancreas: Regulated phosphoryl G-proteins. *American Journal of Physiology: Cell Physiology* 262 :C493 -500.

De Lisle, R.C., 1994. Characterization of the major sulfated protein of mouse pancreatic acinar cells: A high molecular weight peripheral membrane glycoprotein of zymogen granules. *Journal of Cell Biochemistry* 56:385-96.

De Lisle, R.C., 1995. Increase expression of sulfated gp300 and acinar tissue Pathology in pancreas of CFTR (-/-) mice. *American Journal of Physiology. Gastrointestinal Liver Physiology* 268 :G7 17-23.

De Lisle, R.C. and R. Bansal, 1996. Brefeldin A inhibits the constitutive-like secretion of a sulfated protein in pancreatic acinar cells. *European Journal of Cell Biology* 71:62-71.

De Lisle, R.C. et al., 1996. Metallothionein is a component of exocrine pancreas secretion: Implications for zinc homeostasis. *American Journal of Physiology. Cell Physiology* 271 :C1 103-10.

De Lisle, R.C. et al., 1997. MUCLIN expression in the cystic fibrosis transmembrane conductance regulator knockout mouse. *Gastroenterology* 113:521-32.

De Lisle, R.C. et al., 1998. Developmental expression of a mucinlike glycoprotein (MUCLIN) in pancreas and small intestine of CF mice. *American Journal of Physiology. Gastrointestinal Liver Physiology* 275 :G2 19-27.

De Lisle, R.C. and D. Ziemer, 2000. Processing of pro-MUCLIN and divergent targeting of its products to zymogen granules and the apical plasma membrane of pancreatic acinar cells. *European Journal of Cell Biology* (in press).

ABSTRACT

Robert C. De Lisle was born in Buffalo, New York, the fourth of seven children. His father was an electrical engineer who holds patents on several of his inventions and who, now that he is retired, is studying cosmology for fun. De Lisle credits his father with influencing him (Robert) to think, as well as to do whatever he (Robert) was interested in. A home filled with growing children becomes crowded, and Buffalo weather is not conducive to outdoor fun, so De Lisle's father built each child a small room in the basement. There Robert built models. When Heathkits became available, De Lisle's father built a color television set and a stereo. Watching and talking with his father aroused and reinforced Robert's interest in science, in how things are put together and how they work. Robert was always interested in and did well in science and math. He considers high school mostly a waste of time, but he had an inspiring math teacher (Nello Allegrezzo) and two good biology classes that cemented his desire to be a biologist. Having won a National Merit Scholarship that paid his whole tuition to any state school, De Lisle entered the Boston campus of the University of Massachusetts. He lived at home, commuting daily. There he was able to indulge his love of learning, taking classes of all kinds, and, since his science classes were all lab classes, to learn that he loved working at the bench.

He decided that a biology major required further education, so he applied to graduate school, entering Case Western Reserve. There he worked in the Ulrich Hopfer laboratory, doing research on the pancreas. He visited the Max-Planck Institut also. After finishing his Ph.D., he accepted a postdoc at the University of California at San Francisco, working with John Williams. When Williams went to the University of Michigan, De Lisle followed. At Michigan De Lisle collaborated with Motoji Kitagawa, who was studying the molecular mechanisms in exocytosis. Eventually De Lisle accepted a position at the University of Kansas Medical Center. He set up his laboratory and married Eileen Roach, who had been a technician in Williams' lab. He continues his interest in and work on the pancreas and gastrointestinal system. He is currently working on two broad projects: what *muclin* protein does in the exocrine pancreas; and applications to cystic fibrosis, which he points out was originally called cystic fibrosis of the pancreas. In his occasional spare time he loves to build furniture.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Helene L. Cohen, Interviewer, UCLA Oral History Program. B.S., Nursing, UCLA; P.N.P., University of California, San Diego/UCLA; M.A., Theater, San Diego State University.

TIME AND SETTING OF INTERVIEW:

Place: De Lisle's office, University of Kansas Medical Center.

Dates, length of sessions: April 10, 2000 (103 minutes); April 11, 2000 (105); April 12, 2000 (105).

Total number of recorded hours: 5.2

Persons present during interview: De Lisle and Cohen.

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, Cohen held a telephone preinterview conversation with De Lisle to obtain written background information (curriculum vitae, copies of published articles, etc.) and agree on an interviewing schedule. She also reviewed prior Pew scholars' interviews and the documentation in De Lisle'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, Cohen consulted J.D. Watson et al., *Molecular Biology of the Gene.* 4th ed. Menlo Park, California: Benjamin/Cummings, 1987; Bruce Alberts et al., *Molecular Biology of the Cell.* 3rd ed. New York: Garland, 1994; Horace F. Judson, *The Eighth Day of Creation.* New York: Simon and Schuster, 1979; and recent issues of *Science* and *Nature.*

The interview is organized chronologically, beginning with De Lisle’s childhood in Buffalo, New York, and continuing through his undergraduate work at University of Massachusetts, his graduate work at Case Western Reserve University, his postdoc at University of California, San Francisco, his research fellowship at University of Michigan, and the establishment of his own laboratory at University of Kansas Medical Center. Major topics discussed include his research in the Ulrich Hopfer laboratory; his study of exocytosis at the University of Michigan and University of California, San Francisco; the impact of the Pew

Scholars in the Biomedical Sciences award; and his current research on *muclin* protein and cystic fibrosis.

ORIGINAL EDITING:

Ji Young Kwon, editorial assistant, 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.

De Lisle reviewed the transcript. He verified proper names and made minor corrections and additions.

William Van Benschoten, editor, prepared the table of contents. Kwon assembled the biographical summary and interview history. Stephen Wilson, editorial assistant, compiled the index.

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