CHEMICAL HERITAGE FOUNDATION

THOMAS L. ORTEL

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Helene L. Cohen

at

Duke University
Durham, North Carolina

on

24, 25, and 26 October 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 Pew Biomedical Scholar 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:

Kim Phan, Program Intern, Oral History, Chemical Heritage Foundation. B.A. expected 2011, Anthropology, Cornell University.

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. T1127OOE

This Interview Agreement is made and entered into this 29th day of November, 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 THOMAS L. ORTEL, having an address at Department of Medicine, Duke University, Box 3422, Medical Center, Durham, North Carolina 27710, hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about October 23, 2000, and tentatively entitled "Interview with Thomas L. Ortel". 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:

Thomas L. Ortel
Department of Medicine
Duke University
Box 3422, Medical Center
Durham, North Carolina 27710

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

INTERVIEWEE

X _____
(Signature)

Thomas L. Ortel
(Typed Name)

Duke University
(Address)

Department of Medicine
(Address)

Durham, North Carolina 27710

X Date 24 Oct 2000

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

_____
(Signature)

Dale E. Treleven
(Typed Name)

Director, Oral History Program
(Title)

Date November 29, 2000

Pew Scholars in the Biomedical Sciences

Chemical Heritage Foundation Internet Posting Release Form

I, Thomas L. Ortel, M.D., 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. _____ **No restrictions for Internet Posting.**
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This constitutes my entire and complete understanding.

Thomas L. Ortel, M.D., Ph.D.

7 Feb 2005

Date

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

THOMAS L. ORTEL

1957 Born in Greenfield, Indiana, on 27 August

Education

1979	B.S., Microbiology, Indiana University
1983	Ph.D., Biochemistry, Indiana University
1985	M.D., Indiana University

Professional Experience

Duke University Medical Center

1988-1991	Fellow, Division of Hematology/Oncology
1991-1993	Associate in Medicine, Division of Hematology/Oncology
1993-1998	Assistant Professor, Department of Hematology/Oncology
1994-present	Assistant Professor
1995-present	Medical Director, Clinical Coagulation Laboratory
1999-present	Associate Professor, Division of Hematology
1999-present	Medical Director, Platelet Immunology Laboratory

Honors

1979	Phi Beta Kappa
1981-1982	Indiana University Combined Degree Fellowship
1995	Pew Scholar in the Biomedical Sciences

Selected Publications

Moll, S. and Ortel T.L., 1997. Monitoring Warfarin Therapy in Patients with Lupus Anticoagulants. *Ann Intern Med,* 127: 177-85.

Ortel, T.L. et al., 1998. Inhibitory anti-factor V antibodies bind to the factor V C2 domain and are associated with hemorrhagic manifestations. *Blood,* 91: 4188-96.

Goel, N. et al., 1999. Familial antiphospholipid antibody syndrome: criteria for disease and evidence for autosomal dominant inheritance. *Arthritis Rheum,* 42: 3 18-27.

Macedo-Ribeiro, S. et al., 1999. Crystal structures of the C2 domain of human coagulation factor V: Implications for Ca(2+)-independent membrane binding. *Nature*, 402: 434-39.

Sands, J.J. et al., 2000. Antibodies to bovine thrombin correlate with access thrombosis. *Am. J. Kidney Dis.*, 35: 796-801.

Ortel, T.L. et al., 2000. Assessment of primary hemostasis by PFA-100® analysis in a tertiary care center. *Thromb. Haemost.,* 84: 93-97.
Kelley, M.J. et al., 2000. Mutation of non-muscle myosin heavy chain A (*MYH9)* in May-Hegglin anomaly. *Nature Genetics,* 26: 106-8.
Ortel, T.L. et al., 2001. Immunologic impact and clinical outcomes after surgical exposure to bovine thrombin. *Ann. Surg.,* 233: 88-96.
Lewis, D.A. et al., 2001. Factor VIII Arg(2304)→His binds to phosphatidylserine and is a functional cofactor in the factor X-ase complex. *Thromb. Haemost.,* 85: 260-64.
Izumi, T. et al., 2001. Fine mapping of inhibitory anti-factor V antibodies using factor V C2 domain mutants: identification of two antigenic epitopes involved in phospholipid binding. *Thromb Haemost.,* 85: 1048-54.
Hansen, K.E. et al., 2001. Risk factors associated with thrombosis in subjects with antiphospholipid antibodies. *J. Rheumatol.,* 28: 2018-24.
Schoenecker, J.G. et al., 2001. Exposure of mice to topical bovine thrombin induces systematic autoimmunity. *Am.J.Pathol.,* 159: 1957-69.

ABSTRACT

Thomas L. Ortel grew up in on a farm in Indiana, the oldest of three children. His extended family lived in the corners of the farm. He and his siblings and cousins had farm chores to do, but then they were able to range all over the farm. Ortel attended a Lutheran two-room school with four grades in each room, ten children in his class. He always liked school, and he did well, except for penmanship. Religion was important through these years, but he made the transition from a Lutheran private school to a public secondary school, ten students in his class to about 150, pretty easily.

Weekly allergy shots and chicken butchering on the farm provided scope for an early interest in science, especially biology. Ortel attended Indiana University (IU), finishing with a double major in microbiology and chemistry. Never interested in other schools, he enrolled in the M.D./Ph.D. program at IU, where he entered the Frank W. Putnam lab to study protein chemistry. He describes his first years of medical school at Bloomington, Indiana, and his clinical rotations.

Ortel chose to study hematology/oncologyat Duke University Medical Center; he liked the support and camaraderie there, as well as the fact that people seemed to connect basic science research to clinical practice (and, of course, the climate). During his three years as intern and resident he performed an eye-opening rotation in infectious disease in Dar es Salaam, Tanzania. Having become interested in coagulation, he decided to stay at Duke for a fellowship and from that point joined the Duke faculty. He discusses his lab's funding and funding in general; how he writes grants and journal articles; his teaching and administrative responsibilities; the ethnicand gender makeup of his lab and the faculty at Duke University Medical Center; and his lab management. He describes a typical workday, including some of his leisure activities.

Ortel continues with details about his current research on Factor VIII and interactions between immune systems and clotting mechanisms, and he explains the genesis of his ideas. He believes his medical practice has a very important influence on his basic research; conversely, he is mindful of searching for practical applications of his research. He answers the interview questions about current issues in science: patents; competition; ethics and the enforcement of laboratory ethics; genetic engineering; and the appropriate overseers of science. He loves the science he does and is accepting of the fact that there is always more to do, that one cannot ever catch up to his aspirations. He wishes he had more leisure time, but concedes that it is a matter of balance. If he could not be a scientist Ortel would stay in academics, in astrophysics or archaeology or anthropology. Future research and professional goals include settling his lab members in their own labs; developing more of a network of medical practitioners who recognize the importance and use of clotting; and finding a better balance in his own life. He feels that the Pew Scholars inclusion of MD/PhD scholars is an excellent acknowledgement of the importance of connecting the clinical and research aspects of medicine. Ortel concludes his interview with a graceful nod to how important and engaging the Pew Scholars oral history interview process is.

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: Ortel's office, Duke University.

Dates, length of sessions: October 24, 2000 (102 minutes); October 25, 2000 (103); October 26 (103).

Total number of recorded hours: 5.8

Persons present during interview: Ortel 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 Ortel 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 Ortel'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; and 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 Ortel's childhood in Greenfield, Indiana, and continuing through his undergraduate work at Indiana University, his graduate work and medical training at Indiana University, and the establishment of his own lab at Duke University Medical Center. Major topics discussed include his first years of medical school at Bloomington, Indiana, the origins of his interest in coagulation and hemophilia mutations, and his current research on Factor VIII, interactions between immune systems, and clotting mechanisms.

ORIGINAL EDITING:

La'Tonya Rease Miles, 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.

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

William Van Benschoten, editor, prepared the table of contents. Miles assembled the biographical summary and interview history. Romi Keerbs, editorial assistant, compiled the index.

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