CHEMICAL HERITAGE FOUNDATION

YURI A. LAZEBNIK

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Helene L. Cohen

at

Cold Spring Harbor Laboratory
Cold Spring Harbor, New York

on

18, 19, and 20 April 2001

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, CornellUniversity.

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. _____

This Interview Agreement is made and entered into this _____ day of _____, 2001 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 YURI A. LAZEBNIK, having an address at Cold Spring Harbor Laboatory, P.O. Box 100, 1 Bungtown Road, Cold Spring Harbor, New York 11724, hereinafter called "Interviewee."

Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about April 17, 2001, and tentatively entitled "Interview with Yuri A. Lazebnik". 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.

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

If to University: Department of Special Collections
University of California, Los Angeles
Box 951575
Los Angeles, California 90095-1575

Attention: Victoria Steele, Ph.D.

If to Interviewee: Yuri A. Lazebnik
Cold Spring Harbor Laboratory
P.O. Box 100
1 Bungtown Road
Cold Spring Harbor, New York 11724

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

INTERVIEWEE

(Signature)

Yuri A. Lazebnik
(Typed Name)

Cold Spring Harbor Laboratory
(Address)

1 Bungtown Road

Cold Spring Harbor, NY 11724

Date 4/18/01

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA

(Signature)

Victoria Steele
(Typed Name)

Head, Department of Special Collections
(Title)

Date 6/25/01

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

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YURI A. LAZEBNIK

1958 Born in Severomorsk, Russia, on 3 February

Education

1981 M.S., Biology/Biochemistry, St. Petersburg State University
1986 Ph.D., Biochemistry, St. Petersburg State University

Professional Experience

Centre d'Études Nucléaire, Fontenay-aux-Roses, France
1991 Fellow, UNESCO Human Genome Program

Johns Hopkins University, Baltimore, Maryland
1991-1994 Fellow

Institute of Cytology of the Academy of Sciences of the USSR, St. Petersburg, Russia
1986-1991 Research Associate

Cold Spring Harbor Laboratory, New York
1994-1998 Assistant Investigator
1998-1999 Associate Investigator
1999-present Associate Professor

Honors

1991 Fellowship, UNESCO Human Genome Program
1994 Postdoctoral First Prize, Johns Hopkins University
1995 Pew Scholarship in the Biomedical Sciences

Selected Publications

Y.A. Lazebnik et al., 1992. Drop-delay measurement using enzyme-coated particles. *Cytometry* 13:649-52.

Y.A. Lazebnik et al., 1993. A model system for analysis of the active phase of apoptosis. *Journal of Cell Biology* 123 :7-22.

Lazebnik, Y.A et al., 1994. Cleavage of poly(ADP-ribose) polymerase by a proteinase with

properties like ICE. *Nature* 371: 346–47.
D.W. Nicholson et al., 1995. Identification of the ICE/CED-3 protease responsible for inactivation of poly(ADP-ribose) polymerase during apoptosis. Nature 367:37-43.
Faleiro, L., R. et al., 1997. Multiple species of CPP32 and Mch2 are the major active caspases present in apoptotic cells. *European Molecular Biology Organization Journal* 16: 2271–81.
Fearnhead, H.O. et al., 1997. Oncogene-dependent apoptosis in extracts from drug-resistant cells. *Genes & Development* 11:1266–76.
Rodriguez, J. and Y. Lazebnik. 1999. Caspase-9 and APAF-1 form an active holoenzyme. *Genes & Development* 13:3179-84.
J. Rodriquez et al., 2000. Caspase phosphorylation, cell death, and species variability. *Science* 287:1363a.
Duelli, D. and Y. Lazebnik, 2000. Primary cells inhibit oncogene-dependent apoptosis. *Nature Cell Biology* 2:859-62.
M.S. Soengas et al., 2001. Inactivation of the apoptosis effector *Apaf-1* in malignant melanoma. *Nature* 409:207-11.

ABSTRACT

Yuri A. Lazebnik was born in Severomorsk, Russia. After his parents' divorce, his mother moved with him to Leningrad (now St. Petersburg), but after she became ill, he was raised, for a few years, in Shakti by his maternal grandmother before returning to his mother's rearing. His father was in the navy, his mother was the valedictorian of her high school and went to college in Leningrad, training as a mathematician until Lazebnik was born—later she worked whatever jobs she could find. Lazebnik and his mother shared a two-room apartment with another family in a building situated between other buildings that housed various academic departments at the local university. He and his mother did not have much during the Leonid Brezhnev and Mikhail Gorbechev eras; Lazebnik worked regularly through high school and college to support himself and his mother. He was an avid reader, enjoying the works of Jules Verne and other writers, though as a teenager Barry Commoner's *The Closing Circle: Nature, Man, and Technology* truly impacted his beliefs and made Lazebnik consider environmental science as a career.

He joined St. Petersburg State University for his undergraduate degree in biology; he quickly changed his mind from pursuing ecology as a major since he could not find any advisor in that field. He progressed through the typical undergraduate coursework and applied to continue his education as a graduate student in the laboratory of Valerei Yu. Vasiliev. In Vasiliev's lab, Lazebnik's project was to study cell cycle, but in order to study cell cycle he needed a flow cytometer, a device that cost more than most departments' yearly budgets, possibly, according to Lazebnik, even more than the entire university's budget. So since he did not have the funds to purchase such a device he used the informal system of favor-swapping in Russia to obtain the materials he needed to build his own device. Lazebnik undertook postdoctoral studies in the N.N. Nikolskylaboratory at the Institute of Cytology of the Academy of Sciences, and then a short stint as a visiting scientist at the Commissariat à l'Énergie Atomique in France. Then the August Putsch of 1991 occurred in Moscow, spurring Lazebnik's decision to take a position in the United States; he received much support from William C. Earnshaw who expedited a work visa for Lazebnik. Lazebnik entered the Earnshaw laboratory at Johns Hopkins University in Baltimore, Maryland in November of 1991 and his family followed him the following month; he began his work on apoptosis. From Hopkins he moved on to a position at Cold Spring Harbor in New York.

Throughout the interview Lazebnik reflects on life in Russia during the Brezhnev and Gorbachev years, especially as it compares to his life in the United States. At the end of the interview he talks about his community-service, editorial, and administrative responsibilities; balancing work and family life; his interest in aikido; the "corporatization" of scientific research; patents; and maintaining quality research in his lab. He concludes the interview with a discussion of moral relativism; the ethics of using animals in scientific research; the importance of learning the history of science; and the Pew Scholars Program in the Biomedical Sciences.

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: Lazebnik's office, Cold Spring Harbor Laboratory.

Dates, length of sessions: April 18, 2001 (111 minutes); April 19, 2001 (119); April 20, 2001 (119).

Total number of recorded hours: 5.82

Persons present during interview: Lazebnik 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 Lazebnik 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 Lazebnik'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.*

This interview is organized chronologically, beginning with Lazebnik's childhood in Severomorsk, Russia, and continuing through his undergraduate and graduate education at St. Petersburg State University, his postdoc at the Institute of Cytology of the Academy of Sciences, and the establishment of his own lab at Cold Spring Harbor. Major topics discussed include his work in the N.N. Nikolsky lab on cytometry and immunofluorescence, his balancing of work and family, and his current research on apoptosis.

ORIGINAL EDITING:

Victoria Simmons, 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.

Yuri Lazebnik reviewed the transcript. He reviewed proper names and made minor corrections.

William Van Benschoten, senior writer, prepared the table of contents. Victoria Simmons assembled the biographical summary and interview history. Romi Keerbs, editorial assistant, compiled the index.

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