

CHEMICAL HERITAGE FOUNDATION

MIGUEL C. SEABRA

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Helene L. Cohen

at

Imperial College School of Medicine
London, England

on

11, 12, and 13 September 2000

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

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If to Interviewee: Miquel C. Seabra
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University and Interviewee have executed this Agreement on the date first written above.

INTERVIEWEE

THE REGENTS OF THE UNIVERSITY
OF CALIFORNIA

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Date 9/14/00

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Miguel Seabra

Miguel C. Seabra, M.D., Ph.D.

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MIGUEL C. SEABRA

1962 Born in Lisbon, Portugal, on 1 June

Education

1986 M.D., New University of Lisbon Medical School
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Professional Experience

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1994-1997 Assistant Professor, Department of Molecular Genetics

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Senior Lecturer (Associate Professor), Molecular Genetics,
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1999-present Professor and Department Head

Honors

1986-1988 Young Investigator Fellowship, National Institute for Scientific Research,
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1988-1993 Fulbright Program Scholar

1995-1999 Pew Scholar in the Biomedical Sciences

Selected Publications

Reiss, Y. et al., 1990. Inhibition of purified p21^{ras} farnesyl: Protein transferase by Cys-AAX tetrapeptides. *Cell* 62:81-88.

Seabra, M.C. et al., 1992. Purification of component A of *Rab* geranylgeranyl transferase:

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ABSTRACT

Miguel C. Seabra grew up in Lisbon, Portugal, one of three sons; his father was an ophthalmologist and his mother a kindergarten teacher. Seabra liked school and did well when school was in session. Political upheaval in Lisbon caused chaos in his school in his fifth-grade year, and Seabra's uncle, who had been a minister in a previous administration, was arrested. His academic interests in high school were in science and mathematics.

Seabra's parents had expectations for their children and their careers, and his father had a great influence on his decision to enter medical school. While at medical school he worked under Fernanda Mesquita and had an internship in Turin, Italy. During his travels under the aegis of the Children's International Summer Villages he met the woman who became his wife, Isabel Fernandes Pinto. Soon after, he made the decision to seek a Ph.D. outside of Portugal and was accepted into the doctoral program at University of Texas Southwestern Medical Center in Dallas, Texas. His family was resistant to his moving to the United States; he had trouble, at first, with lectures in English; and he and his wife suffered quite a bit of culture shock and homesickness for a little while.

Seabra was directed by Scott Grundy to Joseph Goldstein's lab, where he continued his research on cell cholesterol metabolism with Michael Briggs and Yuval Reiss and helped purify the geranylgeranyltransferase enzyme, though he chose not to write his PhD thesis on geranylgeranylation; during his graduate work Seabra published a paper on *Rab* escort proteins in *Cell*. Ultimately he transitioned to a postdoc and principal investigator position at University of Texas Southwestern, working hard to overcome challenges when setting up his own lab.

After spending some time in his faculty position, Seabra decided to pursue his science abroad, moving to the Imperial College School of Medicine in London, England, for reasons that included funding growth in England, especially by the Wellcome Foundation; his wife's profession; and the language and culture. Core to his growth and development in the United States, however, was his receipt of the Pew Scholars Program in the Biomedical Sciences award, a topic that he talked about at length in the interview.

The interview concluded with Seabra's discussion of a typical workday, a workday that has made balancing family and career a challenge. He has had little time for working at the bench, much less for leisure activities. Experiencing firsthand the extreme competitiveness that exists in the global scientific community affected his beliefs and practices about science.

The interview ends with Seabra's opinions about ethics in science; the inevitability of scientific progress; and the impact of fashionable trends on the publication of scientific articles. He compares scientific collaboration in the United States and England, and explains his current research on prenylation of *Rab* proteins and possible applications of his research. He talks about the support he has received to cure choroideremia, and finishes with an elaboration of his personal and professional goals, an assessment of his achievements, and final thoughts on foregoing a possible Howard Hughes Medical Institute award.

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: Seabra's office, Imperial College School of Medicine, London, England.

Dates, length of sessions: September 11, 2000 (117 minutes); September 12, 2000 (140); September 13, 2000 (151).

Total number of recorded hours: 6.8

Persons present during interview: Seabra 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 Seabra 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 Seabra'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 Seabra's childhood in Lisbon, Portugal, and continuing through his graduate work at the New University of Lisbon Medical School and the University of Texas Southwestern Medical Center at Dallas, and the establishment of his own lab at the Southwestern Medical Center at Dallas and, later, at Imperial College School of Medicine, London. Major topics discussed include his childhood and education in Portugal, his research in the Joseph L. Goldstein lab, and his research and teaching at the Imperial College School of Medicine.

ORIGINAL EDITING:

Deborah Kolosova, 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.

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

William Van Benschoten, editor, prepared the table of contents. Deborah Kolosova assembled the biographical summary and interview history. Ann Marie Davis, editorial assistant, compiled the index.

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