

CHEMICAL HERITAGE FOUNDATION

JASON G. CYSTER

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Andrea R. Maestrejuan

at

University of California
San Francisco, California

on

24, 25 and 26 September 2002

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

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Interviewee agrees to participate in a series of University-conducted tape-recorded interviews, commencing on or about September 23, 2002, and tentatively entitled "Interview with Jason G. Cyster. 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."

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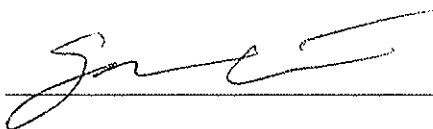
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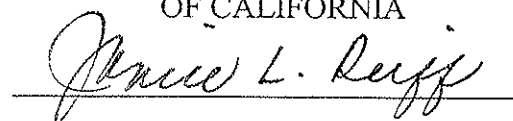
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University and Interviewee have executed this Agreement on the date first written above.

INTERVIEWEE

THE REGENTS OF THE UNIVERSITY
OF CALIFORNIA





(Signature)

(Signature)

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(Typed Name)

Janice L. Reiff

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Department of Microbiology
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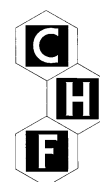
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JASON G. CYSTER

1967 Born in Narrogin, Australia, on 14 May

Education

1988 B.Sc., Biochemistry and Microbiology, University of Western Australia
1992 Ph.D., Immunology, University of Oxford

Professional Experience

1992-1995 Stanford University Medical Center
Postdoctoral Fellow, Laboratory of Dr. Goodnow
University of California, San Francisco, California
1995-2000 Assistant Professor, Department of Microbiology & Immunology
2000-present Associate Professor, Department of Microbiology and Immunology
2000-present Howard Hughes Medical Institute
Assistant Investigator

Honors

1984 The Beazley Award for secondary education in Western Australia
1988 J.A. Wood Memorial prize from the University of Western Australia.
1989-1992 Commonwealth Overseas Studentship
1992-1995 Cancer Research Institute Postdoctoral Fellowship
1996-2000 Pew Scholars Program in the Biomedical Sciences Grant
1997 Cheryl Whitlock Memorial Prize for Postdoctoral Studies
1998-2003 David and Lucille Packard Fellowship

Selected Publications

- Cyster, J., Somoza, C., Killeen, N. and Williams, A.F. 1990. Protein sequence and gene structure for mouse leukosialin (CD43), a T lymphocyte mucin without introns in the coding sequence. *Eur. J. Immunol.* 20, 875-881.
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- Cyster, J.G., Fowell, D. and Barclay, A.N. 1994 Antigenic determinants encoded by alternatively spliced exons of CD45 are determined by the polypeptide but influenced by glycosylation. *Int. Immunol.* 6, 1875-1881.
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- Cyster, J.G. and Goodnow, C.C. 1994 Protein tyrosine phosphatase 1C negatively regulates antigen receptor signaling in B lymphocytes and determines thresholds for negative selection. *Immunity* 2, 13-24.
- Cyster, J.G. and Goodnow, C.C. 1995 Pertussis toxin inhibits migration of B and T lymphocytes into splenic white pulp cords. *J. Exp. Med.* 182, 581-586.
- Cyster, J.G. and Goodnow, C.C. 1995 Antigen-induced exclusion from follicles and anergy are separate and complementary processes that influence peripheral B cell fate. *Immunity* 3, 691-701.
- Cyster, J.G., Healy, J.I., Kishihara, K., Mak, T.W., Thomas, M.L. and Goodnow, C.C. 1996 Regulation of B lymphocyte negative and positive selection by tyrosine phosphatase CD45. *Nature* 381, 325-328.
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ABSTRACT

Jason G. Cyster was born and raised in Western Australia, the younger of two brothers. Cyster lived and worked on a farm for much of his early life. His father worked as a hired laborer on others' farms before buying his own (for a time later in life he made a brief foray into software engineering—due, in part, to his elder son's interests—developing software for farmers, before returning to farm life); Cyster's mother, once the children were in school, worked first as a secretary and then as a real-estate agent. Cyster's school was a seventy-five minute bus ride from his home, so commuting to and from school, school, and work on the farm did not leave much time for activities not related to academics or farm life. He did well in his local school throughout most of his childhood; both he and his older brother went to a boarding school in nearby Perth to finish the last two years of school, principally because the local public high school was close to fifty miles away. While completing high school, Cyster obtained the highest aggregate score on Australia's Tertiary exams in his state, receiving the Beazley Award.

He matriculated at the University of Western Australia to pursue science rather than veterinary medicine (his older brother was there as well, though focusing on computer science). In part, his decision to study biology was based upon his own childhood inclinations and interests (he and his mother started a piggery, and he occasionally dissected a pig), and in part on the caliber of lecturers at the university. By his third year, he developed an interest in immunology and began working in the lab of, and being mentored by, Wayne R. Thomas with whom Cyster conducted his honors thesis. After receiving a Commonwealth Overseas Studentship, Cyster decided to undertake his graduate studies at Oxford University instead of remaining in Australia. At Oxford he worked with Alan F. Williams characterizing the CD43 molecule; he also collaborated with Paul C. Driscoll and Ian Campbell on a structural analysis of the T lymphocyte CD2 antigen. Early on in his graduate study Cyster began thinking of where to do his postdoctoral work, and though Australia was certainly a consideration, Cyster also entertained the notion of going to the United States. He decided to work with Christopher C. Goodnow at Stanford University studying immunological tolerance and the follicular exclusion process. From there, he accepted a position at the University of California, San Francisco.

Near the end of the interview, Cyster comments on the tenure system in the United States and in Europe; his mentoring style; the Tetrad and Biomedical Science programs at University of California, San Francisco; and the broader applications of his work. He concludes the interview with thoughts on the advantages and disadvantages of competition in science; the peer review system; the role of industry in research; and the impact that the Pew Scholars Program in the Biomedical Sciences had, and has, on his work.

UCLA INTERVIEW HISTORY

INTERVIEWER:

Andrea R. Maestrejuan, Interviewer, UCLA Oral History Program. B.S., Biological Sciences, University of California, Irvine; M.A., History, University of California, Riverside; C. Phil., History, UCLA

TIME AND SETTING OF INTERVIEW:

Place: Cyster's office, University of California, San Francisco.

Dates, length of sessions: September 24, 2002 ; September 25, 2002; September 26, 2002.

Total number of recorded hours: 4.5

Persons present during interview: Cyster and Maestrejuan.

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, Maestrejuan held a telephone preinterview conversation with Jason Cyster 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 Jason Cyster's file at the Pew Scholars Program office in San Francisco, including the proposal application, letters of recommendation, and reviews by Pew Scholars Program national advisory committee members.

ORIGINAL EDITING:

Carol L. Squires 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.

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

Squires prepared the table of contents. Maestrejuan assembled the interview history.

TechniType Transcriptions compiled the index.

Cyster wished to add the following statement: While every effort was made to ensure that a precise transcript of the spoken word was generated, occasional misquotations may have occurred. In some cases, this might have led to alterations in meaning.

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