CHEMICAL HERITAGE FOUNDATION

CAROL W. GREIDER

The Pew Scholars Program in the Biomedical Sciences

Transcript of an Interview
Conducted by

Neil D. Hathaway

at

The Cold Spring Harbor Laboratory
Cold Spring Harbor, NY

on

22, 24, 30 September and 5 October 1993

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Cold Spring Harbor Laboratory
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Cold Spring Harbor, New York 11724

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INTERVIEWEE

Carol W. Greider
(Typed Name)
Cold Spring Harbor Laboratory
P.O. Box 100
Address
Cold Spring Harbor, NY 11724

Date Sept 22, 1993

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CAROL W. GREIDER

1961 Born in San Diego, California on 15 April

Education

1981-1982 Georg-August-Universität
1983 B.A., Biology, University of California, Santa Barbara
1987 Ph.D., University of California, Berkeley

Research Appointments

1988-1990 Cold Spring Harbor Fellow, Cold Spring Harbor Laboratory
1990-1992 Staff Investigator, Cold Spring Harbor Laboratory

Professional Experience

1992-1994 Senior Staff Investigator, Cold Spring Harbor Laboratory
1994-present Senior Staff Scientist

Honors

1981 Auslandsamt Scholarship, Georg-August-Universität
1981 Regents Scholarship, University of California
1983 Phi Beta Kappa
1984 Graduate Opportunity Fellowship, University of California, Berkeley
1990-1994 Pew Scholar in the Biomedical Sciences
1992 Allied-Signal Corporation Outstanding Project Award

Selected Publications

ABSTRACT

Carol W. Greider was born in San Diego, California. Her father was a physicist; her mother was a biologist who died when Carol was young. Her father had a position at Yale University when Carol was a child, and they lived in New Haven for a couple of years. Then they returned to California, to the University of California at Davis, where they continued to live while Carol grew up, except for a year in Germany when Carol was about ten. She learned to speak German there and continued to study the language when she was in high school. Beatrice Sweeney, a friend of her father, inspired Greider to attend the University of California at Santa Barbara. She studied circadian rhythms there, working with a graduate student who was studying microtubules in chicken brains. She spent her junior year in Göttingen, Germany. In part because of Elizabeth Blackburn, Greider decided to attend graduate school at University of California at Berkeley. In Blackburn’s lab she cloned telomeres by functional complementation and became interested in how sequences are added into telomeres. She began searching for the telomerase enzyme; when she discovered it she determined its nucleic acid component, finding that telomerase is sensitive to RNase and has an RNA component. After completing her Ph.D. she accepted a postdoc at Cold Spring Harbor Laboratory, where she remains. Greider continued work on telomerase, relating it to human aging and cellular senescence and attempting to clone the RNA component of telomerase. She found herself in competition with Blackburn’s lab to some extent. But her collaboration with Calvin Hurley, who was recruited into Geron Corporation, led to a position as an advisor there; she has, therefore, what many scientists consider a great deal of funding. Competitors have risen in what used to be Greider’s own area, but still telomerase remains uncloned. Greider has organized and held a conference on telomerase; she is editing a textbook; and she meets with others—most recently in Sweden—who are interested also in telomeres and telomerase.
UCLA INTERVIEW HISTORY

INTERVIEWER:


TIME AND SETTING OF INTERVIEW:


Dates, length of sessions: September 22, 1993 (106 minutes); September 24, 1993 (98); September 30, 1993 (108); October 5, 1993 (103).

Total number of recorded hours: 6.9

Persons present during interview: Greider and Hathaway.

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.

In preparing for this interview, Hathaway, in consultation with the director of the UCLA Oral History Program and three UCLA faculty project consultants, developed a topic outline to provide an overall interview framework. Hathaway then held a telephone preinterview conversation with Greider to obtain extensive written background information (curriculum vitae, copies of published articles, etc.) and agree on a research and interviewing timetable. Hathaway further reviewed the documentation in Greider's file at the Pew Scholars Program office in San Francisco, including her proposal application, letters of recommendation, and reviews by Pew Scholars Program national advisory committee members. For general background on the recent history of the biological sciences, Hathaway consulted such works as: J.D. Watson et al., The Molecular Biology of the Gene, 4th ed. 2 vols. Menlo Park, CA: Benjamin/Cummings, 1987; Lubert Stryer, Biochemistry. 3d ed. New York: W.H. Freeman, 1988; The Journal of the History of Biology; H.F. Judson, The Eighth Day of Creation: Makers of the Revolution in Biology. New York: Simon and Schuster, 1979; and recent issues of Science, Nature, and Cell.

The interview is organized chronologically, beginning with Greider's youth in Davis, California, and continuing with her education at University of California, Santa Barbara, her graduate work at University of California, Berkeley, her post-Ph.D. work at Cold Spring Harbor Laboratory, and the creation of her own lab at Cold Spring Harbor. Major topics discussed include the discovery of telomerase and its role, cloning telomerase's RNA component, processivity and telomeres, the biotechnology industry, the funding and administration of research, and the place of women in science.
ORIGINAL EDITING:

Vimala Jayanti, editor, 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.

Greider reviewed the transcript. She verified proper names and made minor corrections.

TABLE OF CONTENTS

Early Years 1
Born in San Diego. Father physicist, mother biologist. Mother died when Carol very young. Spent most of childhood in Davis, California. Spent a year in Germany when in grade school. Liked and did well in science in high school.

Undergraduate Years 8
Inspired by Beatrice Sweeney to attend University of California at Santa Barbara. Studied circadian rhythms in Sweeney's lab. Worked with a graduate student, Kevin Sullivan, studying microtubules in chicken brains. Worked with David Asai. Spent junior year as exchange student in Göttingen, Germany. Travel and social life. Dyslexia’s effects on career. Applied to graduate schools.

Graduate School Years 43
Entered University of California at Berkeley. Worked with Elizabeth H. Blackburn on cloning telomeres. Worked in Steven K. Beckendorf’s lab. Telomerase enzyme; Tetrahymena; RNase.

Postgraduate Years 114
Postdoc at Cold Spring Harbor Laboratory; Bruce W. Stillman’s role there. Consulting for Biotechnology companies. Conflicts of interest. Cellular senescence. Sets up her own lab. Competes with Blackburn lab. Repeats and processivity. Funding. Private industry and conflicts of interest.

Greider’s Lab and Geron 125
Sets up and manages her own lab. Calvin Hurley, her collaborationist, goes to Geron Corporation. Greider eventually gets a position as advisor at Geron. Her lab studies telomerase in humans and mouse. Other labs become interested in telomerase. Telomerase researchers in Sweden. Greider’s conference on telomeres. Lab management.

Index 225
INDEX

3

32P, 83, 87, 88

A

agarose, 86, 87
Albert Einstein School of Medicine, 214
Alberts, Bruce, 202
Alexander von Humboldt, 30
Allied Signal Corporation Outstanding Project Award, 124, 207
Allshire, Robin C., 163
Amazon, 52
Anderson, Jathryn V., 51
Andrews, Brenda J., 183
Arndt, Kim, 24, 138, 139, 141, 144
Arndt-Jovin, Donna J., 24
Asai, David, 12, 15, 17, 18, 19, 20, 21, 41, 49
ATP, 188
Autexier, Chantal, 186
Avilion, Ariel A., 144, 145, 170, 180, 184, 208

B

Bacchetti, Silvia, 138, 184
Bal 31, 80
Baltimore, David, 222
Banbury Center, 134, 202
Bar-Sagi, Daphna, 53
Baylor College of Medicine, 135
Beach, David, 176, 186
Beckendorf, Steven K., 68, 73, 75, 80, 81, 82
Beckman Neurobiology Center, 119
Berlin, Germany, 25, 26, 31
Biessmann, Harold, 199, 200
biochemistry, 18, 32, 33, 48, 50, 59, 61, 64, 68, 69, 100, 105, 106, 121, 122, 143, 145, 152, 153, 157, 165, 169, 170, 171, 172, 183, 194, 212, 213

Blackburn, Elizabeth H., 48, 50, 52, 54, 58, 59, 67, 68, 69, 70, 72, 74, 75, 81, 83, 84, 90, 91, 92, 100, 102, 109, 110, 114, 142, 149, 150, 151, 153, 154, 157, 165, 187, 188, 189, 195, 201, 202, 208, 209
Blasco, Maria, 106, 171, 172, 180, 185, 187, 207, 208
Bliska, James D., 60, 75, 77
Borowiec, James A., 57
Botchan, Michael R., 109, 210
Burroughs Wellcome and Company, 181

C

C4A2, 147, 148, 149
Calendar, Richard, 59, 68, 82
California Institute of Technology, 41, 42, 43, 46, 47, 48, 49, 50, 51
Caltech. See California Institute of Technology
Campbell, Judy L., 51
CCA, 102
Cech, Thomas R., 83, 84, 103, 104
cell biology, 3, 10, 18
cellular senescence, 135, 137, 138, 194
centromeres, 190
cesium chloride, 79
circular, 32
Chironomus, 198, 199, 200
Chistov, 200
ciliate, 20
circadian rhythms, 9, 10
Cla-1, 81
Clark University, 36, 133
Cleveland, Don W., 15, 19
Cold Spring Harbor Press, 201
College of Creative Studies, 8, 9, 13, 17, 24, 35, 36, 37
Collins, Kathleen, 107, 150, 152, 171, 180, 183, 189, 208
Comfort, Louise K., 215
Comfort, Nathaniel C., 178, 217, 224
complementation, 74
Cornell University, 41
Council for Tobacco Research, 123, 207
Counter, Christopher M., 170, 184
Cozzarelli, Nicholas R., 63, 69, 209
Crick, Francis H.C., 50, 193
CW Group, 136

D
Dallas, Texas, 135
Davis, California, 2, 4, 7
de Lange, Titia, 202
Delbrück, Max, 154, 157
deoxynucleotides, 189
Die Zeit, 29
Dinoflagellate, 10
distributive (mechanism), 148, 149, 150, 168
DNA, 3, 18, 19, 51, 59, 61, 68, 74, 75, 79, 83, 84, 85, 86, 87, 88, 90, 91, 92, 97, 98, 100, 103, 141, 147, 150, 162, 189, 191, 198
Drosophila, 50, 80, 84, 194, 198, 199, 200
Duesberg, Peter H., 70, 71
dynein, 19

E
E. coli, 189
EAP. See University of California Education Abroad Program
Echols, Harrison, 63
Edström, Jan Erik, 198, 199, 201
enzyme, 75, 76, 79, 80, 83, 85, 86, 87, 100, 102, 103, 104, 105, 107, 108, 147, 148, 149, 150, 151, 152, 158, 169, 170, 171, 172, 179, 183, 185, 186, 187, 188, 189, 191, 192, 195
eucaryote, 190
eucaryotic, 63
Euplotes crassus, 142

F
Forney, James, 19, 20
Fox Chase Cancer Center, 214
Frankfurter Allgemeine Zeitung, 29
Franklin, Rosalind, 35, 97, 98
Futcher, A. Bruce, 56, 90, 138, 160, 162, 163, 165, 176

G
G₄T₂, 147, 188
Gall, Joseph G., 84
Genentech Corporation, 120
genetics, 8, 24, 31, 32, 37, 68, 72, 195
Georg-August-Universität, 23
Germany, 21, 22, 25, 28, 29, 31, 34, 40, 45, 53, 185, 219
Geron Corporation, 121, 124, 125, 127, 128, 129, 130, 131, 132, 134, 135, 138, 164, 173, 174, 175, 177, 178, 180, 181, 190, 193, 207, 222
Giardia, 190
Gibbons, Ian, 19
Glaxo, 181
Gordon Conference, 20
Göttingen, Germany, 22, 23
Graduate Record Examinations, 42, 43, 46
Greider, Cornelia Widney (grandmother), 1
Greider, Jean Foley (mother), 1
Greider, Kenneth R. (father), 1, 47, 95, 160
Greider, Marian Flander (stepmother), 22
Greider, Mark Francis (brother), 1
GREs, 47, See Graduate Record Examinations
Grodziker, Terri, 53
Grossbach, Ulrich, 23

H
Hamilton, Canada, 56
Harley, Calvin B., 121, 124, 127, 129, 134, 137, 138, 158, 162, 163, 165, 178, 183
Harrington, Lea A., 139, 140, 141, 143, 151, 159, 183
Harvard University, 41, 113, 127
Hastie, Nicholas D., 163
Hawking, Stephen, 97
Heidelberg, Germany, 22
HeLa, 180
Helfman, David M., 123, 144, 206
Henderson, Brittany, 114
Hernandez, Nouria, 53
Herr, Winship, 23, 24, 177, 222
Hodgkin, Dorothy C., 98
Human Genome Project, 155
Hurwitz, Jerard, 213

I
immunofluorescence, 11
in vivo, 92, 149, 150, 157, 164, 165
Ingalls, Alyssa, 7, 9
Inglis, John, 201
isoforms, 14, 19

J
Jones, Corrina (stepsister), 22
Jongens, Thomas A., 81
Jovin, Thomas M., 24

L
Larson, Drena, 111, 114
Lederberg, Joshua, 50
Lee, Margaret S., 150, 151, 152
Leptomonas, 74
Lerner, Richard, 134
Lewis, Edward B., 36, 50
Linskis, Martaan, 217
Lund, Sweden, 201

M
Mantell, Lin L., 168, 185
Maroney, John, 128, 136
Martin Marietta Corporation, 2
Massachusetts Institute of Technology, 41, 127, 156
Max-Planck-Institut für Biophysikalische Chemie, 23
Max-Planck-Institut für Kernphysik, 22
McClintock, Barbara, 194, 195
McMaster University, 56, 90, 121, 134, 138, 162
Medical Research Council Laboratory of Molecular Biology, 98
Menlo Park, California, 121
Merck and Company, 181
Meyerowitz, Elliot M., 50
microtubules, 10, 14
MIT. See Massachusetts Institute of Technology
molecular biology, 3, 8, 20, 26, 31, 40, 48, 50, 59, 60, 61, 63, 64, 69, 98, 198, 200
Moran, Elizabeth, 53
Morin, Gregg B., 168, 180, 182
MRC. See Medical Research Council
Laboratory of Molecular Biology
Mudrick, Marvin, 8, 35, 36
Muller, Hermann J., 194, 198
mutant, 80, 149, 150, 184, 186, 188

N
National Institutes of Health, 64, 65, 121, 122, 123, 133, 143, 156, 160, 170, 174, 204, 206, 207, 208, 220
New Haven, Connecticut, 2
NIH. See National Institutes of Health
Nobel Prize, 103, 193
North Shore University Hospital, 141
nuclease, 104
nucleotide, 87, 88, 89, 102, 105, 108, 148, 149, 188

O
oligonucleotide, 87, 88, 90, 91, 92, 143, 187
Olovnikov, A.M., 162
oocytes, 186
Oxford University, 97
Oxytricha nova, 84

P
P2, 80
Patterson, Scott, 120, 207
Petes, Thomas D., 76
Pew Scholars in the Biomedical Sciences, 95, 113, 123, 124, 140, 207, 216
phage P4, 80
pharmacology, 33, 34, 59
physical chemistry, 33, 34
plasmid, 67, 79, 80, 81, 83, 97, 172
polymerase, 91, 92, 104, 147, 148, 150, 188, 189, 191
Porrica, Patricia, 70
principal investigator, 9, 93, 121, 214
procaryotes, 190
processivity, 145, 148, 149, 150, 157, 158, 159, 160, 162, 165, 168, 169, 192
prokaryotic, 63
Prowse, Karen R., 161, 166, 167, 170, 185, 186, 207, 217
Purdue University, 19, 20

rDNA, 84, 90
recombination, 75, 76, 77, 78, 182, 188, 194
restriction, 79, 80, 81, 83, 86, 87, 89, 90
reverse transcriptase, 189, 190
Reynolds, Jeffrey R., 61, 62, 64, 65, 80, 210
Rhaeto-Romanic, 24
ribonucleoprotein, 198
ribonucleotides, 189
ribosomes, 10
Riecke, Monika, 25
Rine, Jasper, 109
Rine, Jasper D., 68, 69, 108
RNase, 103, 104, 108
RNasin, 104
RNP. See ribonucleoprotein
Robert, Michel, 24
Roberts, Richard, 156
Rockefeller University, 185, 202, 214
Rockefellers, 136
Roeder, Robert G., 213
rolling five, 115, 116, 117, 118, 119, 120, 140, 156, 206, 221, 222
Roos, Göran, 197, 200, 201
Rubin, Gerald M., 109

S
SAB. See scientific advisory board
Sallati, Lillian, 141, 143
San Diego, California, 1, 2, 7, 8, 19, 41
Sandoz Pharmaceuticals, 134, 222
Scharting, Mathias, 53, 185, 207
scientific advisory board, 129
Scripps Research Institute, 134, 222
Sedat, Benjamin, 112, 113, 114
Sedat, John W., 111
sequencing, 87, 88, 91, 92, 101, 103, 108, 141, 142, 147, 148, 149, 171, 179, 187, 188, 191
sgs-4, 80
Shampay, Janis, 75, 76
Shay, Jerry W., 135, 180
Shippen-Lentz, Dorothy, 142, 153, 154
Shuman, Stewart H., 214
Sigma Chemical Corporation, 104
Skalka, Anna Marie, 214
Skinner, Kenji, 28
Sloan-Kettering Memorial Cancer Center, 124, 185
Smith, Stephanie Kaplan, 143, 159, 184
Stanford University, 7, 41, 42
State University of New York at Stony Brook, 39, 185, 218, 220
Steitz, Joan, 168, 180
Stillman, Bruce W., 54, 55, 117, 119, 120, 121, 140, 141, 144, 145, 155, 156, 157, 220, 221, 222
Storz, Giesla, 160
Sullivan, Kevin, 12, 13, 15, 17, 18, 21, 33
Supercoil (Greider’s nickname), 63
Sweden, 1, 64, 65, 181, 197, 198, 201
Sweeney, Beatrice, 8, 9, 10, 11, 12, 13, 17, 21, 24, 33, 38, 48, 54
Szostak, Jack W., 67, 75, 91

T
T2AG3, 187, 188
T2G4, 103, 188
TAG, 190
telomeres, 67, 74, 75, 76, 78, 83, 84, 85, 91, 100, 101, 121, 137, 138, 149, 162, 163, 166, 167, 170, 171, 172, 179, 190, 192, 194, 196, 197, 198, 199, 200, 201, 202, 203
Tetrahymena, 75, 76, 83, 84, 85, 91, 92, 102, 105, 142, 143, 149, 151, 153, 165, 167, 170, 171, 172, 180, 183, 184, 186, 187, 188, 195
the Johns Hopkins University, 19
Tonks, Nicholas K., 176
Toronto, Canada, 55
transcription, 10, 80, 83, 86, 183, 212, 213
transgenic, 80
trypanosomes, 74
tubulin, 14, 19
Tularik, 177

U
UCSB. See University of California at Santa Barbara
UCSF. See University of California at San Francisco
Umeå, Sweden, 201
University of California at Berkeley, 7, 40, 41, 42, 43, 46, 47, 48, 49, 50, 51, 52, 56, 58, 61, 71, 78, 89, 109, 113, 156, 157, 194, 209, 215
University of California at Davis, 2, 7, 29, 40, 182
University of California at San Francisco, 37, 111, 133, 153, 218
University of California at Santa Barbara, 3, 4, 7, 8, 9, 11, 15, 17, 22, 30, 31, 40, 41, 48, 215
University of California at Santa Cruz, 7
University of California Education Abroad Program, 22, 23
University of Colorado at Boulder, 41
University of Hawaii, 19
University of Massachusetts at Worcester, 132, 133
University of Pittsburgh, 215
University of Texas Southwestern Medical Center at Dallas, Texas., 135
University of Toronto, 183, 184
University of Uppsala, 201

V
VenRock Associates, 135, 136

W
Wagner, Gerhard, 198, 201
Walmsley, Richard M., 76
Watson, James D., 50, 118, 119, 120, 121, 123, 127, 128, 129, 131, 132, 141, 154, 155, 156, 169, 174, 175, 193, 222
Wenner, Adrian M., 11
West, Michael, 66, 135
Wigler, Michael, 176
wild type, 149, 150, 188
Wilson, Leslie, 12, 18, 21, 40
Witkowski, Jan A., 134, 202
Worcester Foundation for Experimental Biology, 132
Worcester, Massachusetts, 132
Wright, Woodring E., 135, 180

Y
Yale University, 2, 41
yeast, 51, 67, 68, 74, 75, 76, 91, 92, 138, 141, 143, 168, 183, 184, 185
Yu, Go-Liang, 195

Z
Zaug, A.J., 83