Thomas E. Johnson

CURRENT POSITIONS:

Professor of Behavioral Genetics
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Buck Institute for Age Research
8001 Redwood Blvd
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University of Colorado Biofrontiers Institute
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PROFESSIONAL EXPERIENCE:

2010	Visiting Professor, Institute for Ageing and Health, New Castle University
2004 – present	Professor, Department of Integrative Physiology, University of Colorado, Boulder (UCB)
2002 – 2003	Visiting Scientist, Oakridge National Laboratory
1995 – 2004	Professor, Department of Psychology, UCB
1988 – 1995	Associate Professor, Department of Psychology
1988 – present	Fellow, Institute for Behavioral Genetics, University of Colorado, Boulder
1982 – 1988	Assistant Professor, Molecular Biology and Biochemistry, University of California, Irvine
1981 – 1982	Fellow, Institute for Behavioral Genetics, University of Colorado
1977 – 1982	Research Associate, Molecular, Cellular and Developmental Biology, University of Colorado
1975 – 1977	Research Associate, Cornell University

HONORS AND AWARDS:

2020	Nominated by the Nobel Committee at Karolinska Institute to select one or more candidates for the Nobel Prize in Physiology or Medicine 2021
2020	"Genetic suppression of cryoprotectant toxicity" won the Arthur W. Rowe Best Paper Award recognizing the most outstanding paper published annually in Cryobiology in 2019
2016	Recipient of the Outstanding Career Achievement Award, The International Dose-Response Society
2011	*Aging Cell:* Best paper in 2010: Liao, C.-Y., Rikke, B.A., Johnson, T. E., Diaz, V. and Nelson, J.F., 2010. Genetic variation in the murine lifespan response to dietary restriction: from life extension to life shortening. *Aging Cell* **9**:92-95. PMID 19878144.
2010	American *Aging* Association's Denham Harman Research Award
2010	CU Genomics Biotechnology Initiative Award (also known as the **"Butcher Grant"**).
2010	Boulder Faculty Excellence in Research, Scholarly and Creative Work, University of Colorado at Boulder
2010	Fellow of the American Association for the Advancement of Science
2009	Glenn Award for Research in Biological Mechanisms of Aging, Paul Glenn Foundation
2009	Schober Prize winner, Martin Luther University, Department of Cardio-Thoracic Surgery, Halle Germany
2008	Editor-In-Chief, *Experimental Gerontology*
2007	Appointed to Organizing Committee, Dahlem Conference on Barrier Diseases and Aging
2006	Elected President, American Aging Association
2005	Hayflick Lecture, University of Alabama, Birmingham, Center for Aging
2004	Co-Recipient, with Research Associate Brad Rikke, of Sam Goldstein Award for best paper published in the *J. Gerontology*: *Biological Sciences*, during 2003/2004
2003	Appointed to Cellular Mechanisms In Aging And Development (CMAD) Study Section, Biology of Development and Aging Integrated Review Group
2002	Recipient, Robert W. Kleemeier Award, Gerontological Society of America
2002	Co-Recipient, with former student James Cypser, of Sam Goldstein Award for best paper published in the *J. Gerontology*: *Biological Sciences*, during 2001/2002
2000	Elected to Board of Directors, American Aging Association

1998	Ellison Medical Foundation Senior Scholar
1997	Chaired, Gordon Conference on the Biology of Aging
1996	Listed in *Who's Who in the World*, 14th Edition
1995	Nathan Shock Memorial Lecture, Gerontology Research Center, National Institute on Aging
1994	Research Scientist Development Award, National Institute on Alcohol Abuse and Alcoholism
1994	Elected Chair, Gordon Conference on the Biology of Aging
1993	Recipient of 1993 Busse Research Award for Biomedical Gerontology, Awarded at International Association for Gerontology meeting, Budapest, Hungary
1992	Appointed to Biological and Clinical Aging Review Committee A, National Institute on Aging
1990	Glenn Foundation Fellowship
1990	Elected Chair, Biological Sciences Section, Gerontological Society of America
1990, 2000	Elected to Board of Directors, American Aging Association
1987 – 1992	Research Career Development Award from the USPHS
1986	Fellow of the Gerontological Society of America
1986	Fellow of the American Federation for Aging Research
1986 – 1987	Appointed to National Research Council, Committee on Chemical Toxicity and Aging
1979 – 1982	USPHS Young Investigator Award
1977 – 1979	USPHS Postdoctoral Fellowship
1970 – 1972	NIH Predoctoral Fellowship
1966 – 1970	Gates Foundation Scholarship

MEMBERSHIPS IN SCIENTIFIC SOCIETIES:

American Aging Association
American Association for the Advancement of Science
American Federation for Aging Research
Behavior Genetics Association
Gerontological Society of America
National Scientific Advisory Council (NSAC) American Federation for Aging Research (AFAR)
Organ Preservation Alliance

PREVIOUS MEMBERSHIPS IN SCIENTIFIC SOCIETIES:

American Aging Association
Genetics Society of America

PROFESSIONAL OFFICES:

Executive Committee, American Aging Association, 2008 – 2013

President Elect, President. Past President
American Ageing Association, 2005 – 2008

Board of Directors
American Aging Association, 1991– 1994, 2000 – 2004

Presidential Appointee,
Task Force on Publications,
Gerontological Society of America,

Program Committee
Research Society on Alcoholism, 1997, 1998, 2001

Chair, Publications Committee
Gerontological Society of America, 1998 – 2000

Program Committee for the Biological Sciences
Gerontological Society of America, 1997

Chair, Gordon Conference on the Biology of Aging, 1997

Member of the Permanent Faculty
Summer Training Courses in Experimental Aging Research, 1994 – 1996

Chair-Elect, Chair, and Past Chair
Biological Sciences Section
Gerontological Society of America, 1990 – 1993

National Scientific Advisory Council (NSAC) American Federation for Aging Research (AFAR), 1991 – current

Membership and Fellowship Committee
Biological Sciences Section
Gerontological Society of America, 1986 – 1989

Publications Committee
Biological Sciences Section
Gerontological Society of America, 1986 – 1989, 2003 – 2005

Chair, Ethics Subcommittee
Gerontological Society of America, 1986-1989

EDITORIAL REVIEW BOARDS:

Honorary Editor, 2018 - Present	*Experimental Gerontology*
Editor in Chief, August, 2008 – 2017	*Experimental Gerontology*
Deputy Editor for the Americas, 2005 – 2008	*Experimental Gerontology*
Associate Editor, 1998 – 2005	*Experimental Gerontology*
Section Editor, 1998 – 2005	Genetics and Model Systems *Neurobiology of Aging*

Associate Editor, 1988 – 1999, 2003 – present	*Journals of Gerontology, Series A Biological Sciences and Medical Sciences,* Gerontological Society of America
Editorial Board, 2002 – 2019	*Genes, Brain and Behavior*
Editorial Board, 1998 – present	*Rejuvenation Research, (*formerly *Journal of Anti-Aging Medicine)*
Editorial Board, 1999 – 2001	*Mechanisms of Aging and Development*
Editorial Board, 2001 – 2009	*Biogerontology*
Board of Managing Editors, 1991 – 1995	*Mutation Research DNAging*

CURRENT RESEARCH GRANTS:

09/15/2020 - 04/30/2022	C. Elegans as a Model of Cell Senescence and Alzheimer's Disease (R21 AG067147). (MPI) Thomas Johnson, James Cypser and Christopher Link. $231,00, total funding.
2012 – current	National Inst on Aging, Identification of Mammalian Genes Promoting Life Extension. (Co-PI) Wallace Chick. $1,100,000, total direct costs

PATENTS (since 2000):

CU1454B Provisional United States Patent Application, 7/2005, "Method for Predicting Human Longevity"

CU2277B Provisional United States Patent Application, 9/2009, "Generation of long-lived mouse mutants by mutagenesis in mouse embryonic stem cells"

CU3744B Provisional United States Patent Application, 11/7/2014, A method for enhanced organismic resistance to disease, Increased survival and slowed aging

SELECTION OF PAST RESEARCH GRANTS:

1979 – current	**Total grant funding >$16,748,355** NIH officials noted that my funding positioned me in the Top 0.5 % of total NIH grant funding (excludes clinical trials)
2014 – 2017	Bioscience Discovery Evaluation Grant (BDEG), State of Colorado Office of Economic Development and International Trade, Pharmacological Abrogation of Injury Associated with Cryopreservation $200,000
2011 – 2013	Glenn/AFAR Breakthroughs in Gerontology, Dissection of the Stochastic Mechanisms Underlying Differential Longevity in Isogenic Populations of *C.* elegans. $200,000, total direct costs

2010 – 2012	CU Genomics Biotechnology Initative Awards-also known as the "Butcher Grant"; (Co-PI) Wallace Chick. $100,000, total direct costs
2006 – 2012	“Ethanol Teratogenesis and Genomic Imprinting”, $1,409,825, total direct costs
1999 – 2010	National Institute on Aging: “Molecular Genetics of Aging in *C. elegans*,” $1,935,076, total direct costs
1995 – 2010	National Institute on Aging: “Oldest-Old Mortality: Demographic Models and Analyses,” $1,941,631, estimated total direct costs
2004 – 2010	National Institute on Aging: “Genes Specifying Aging and Longevity in the Mouse,” $1,251,250, estimated total direct costs.
2006 – 2008	“Generation of Oxidative Resistant Mutant Mice (with Chick Wallace at UCHSC), $75,000, from the California Pacific Medical Center Research Institute (Steven R. Cummings Program Director)
1992 – 2008	National Institute on Alcohol Abuse and Alcoholism: "Mapping of Genes Predisposing to Alcohol Sensitivity," $3,605,120, total direct costs
2000 – 2008	National Institute on Alcohol Abuse and Alcoholism: “ High Efficiency Mapping of Alcohol Sensitivity Genes,” $810,319, total direct costs
2002 – 2006	Ellison Medical Foundation, $200,000, total direct costs, (PI: Brad Rikke, Dr. Johnson is co-PI; work is ongoing in his lab.)
1999 – 2004	National Institute on Alcohol Abuse and Alcoholism: "Molecular Mapping of Quantitative Loci for Voluntary Ethanol Preference," $458,671, total direct costs; (PI: Beth Bennett; Dr. Johnson is co-PI; work is ongoing in his lab.)
1994 – 2004	National Institute on Alcohol Abuse and Alcoholism: “Identifying Genes Predisposing to Alcoholism,” Research Scientist Development Award, $940,918, estimated total direct costs
1999 – 2003	Ellison Medical Foundation Senior Scholar Award: “Identification of Gerontogenes in the Mouse,” $600,000, total direct costs
1997 – 2001	National Institute for General Medical Sciences: “QTL Mapping of Genes Specifying Anesthetic Sensitivity”, $822,525, total direct costs
1992 – 1998	Veterans Administration: "Molecular Genetics of Alcoholism and Cirrhosis," Component of VA Alcohol Research Center. $366,000, total direct costs

1991 – 1995	National Institute on Aging: "RFLP-Mapping of QTLs for Life Span and Life History," $381,378, total direct costs
1988 – 1995	National Institute on Aging: "Molecular Genetic Specification of Aging Processes," $768,384, total direct costs
1987 – 1992	National Institute on Aging: "Molecular Genetic Analysis of the Specification of Aging," Research Career Development Award, $256,988, total direct costs
1985 – 1988	National Institute on Aging: "Genetic Specification of Physiological Aging," $237,480, total direct costs
1982 – 1984	National Science Foundation: "Genetic Analysis of the Aging Process," $104,180, total direct costs
1978 – 1982	National Institute on Aging: "Genetic Analysis of the Control of Aging," $83,310, total direct costs

SINGLE-YEAR AWARDS:

1991	National Institutes of Health, Small Instrumentation Grant, $6,975, total direct costs
1990	Glenn Foundation Fellowship, $50,000, total direct costs
1990	National Institutes of Health, Small Instrumentation Grant, $9,045, total direct costs
1989	Council on Research and Creative Work Grant-in-Aid, “RFLP-Mapping of Quantitative Trait Loci,” $3000, total direct costs
1989	National Institutes of Health, Small Instrumentation Grant, $6,000, total direct costs
1989	National Institutes of Health, Biomedical Research Support Grant, $11,958, total direct costs
1987 – 1988	Allied-Signal Corporation Grant from the American Federation for Aging Research: "Molecular Cloning of a Major Gene Specifying Length of Life," $25,000, total direct costs
1986 – 1987	Charles A Dana Grant from the American Federation for Aging Research: "Molecular Cloning of a Major Gene Specifying Length of Life," $25,000, total direct costs
1983 – 1984	Cancer Research Coordinating Committee: "Control of DNA Methylation in *Caenorhabditis elegans*," $18,000 direct costs

CONFERENCE GRANTS RECEIVED:

2008	National Institute on Aging: "Role of Genes, Environment and Chance in Determining Aging," Annual meeting of the American Aging Association, $30,000.

2007	Glenn Foundation Grant, Ellison Foundation, multiple additional gifts: Annual meeting of the American Aging Association, $30,000.
2006	Ellison Foundation Grant, Annual meeting of the American Aging Association, $10,000.
1996 – 1997	National Institute on Aging, AG14048: "1997 Gordon Conference on the Biology of Aging;" $50,000
1996	Glenn Foundation Grant, to fund 1997 Gordon Conference on the Biology of Aging, $5000.
1991 – 1992	National Institute on Aging: "The Molecular Basis of Aging and Longevity," Annual meeting of the Gerontological Society of America, $27,090.
1991 – 1992	Glenn Foundation Grant, Annual meeting of the Gerontological Society of America, $2000.

MEETINGS ORGANIZED:

Organizer of Symposium for the Annual American Aging Association; May 30 – June 2, 2008, Boulder, CO.

Co-Organizer with Drs. James Curtsinger and David Harrison, Aug 2 – 8, 2000, Third International Conference on Genetic Effects on Aging, Jackson Laboratory, Bar Harbor, ME

Chair, Gordon Conference on the Biology of Aging, January 1997, Ventura, CA

Organizing Committee, "The Biology of Aging- A Molecular Viewpoint," May 1994, Geriatric Center, St. Louis, MO

Co-Organizer with Dr. Caleb Finch, March 1993 Keystone Symposium on the Molecular Biology of Aging, Keystone, CO

Chair of Organizing Committee for Biological Sciences, November 1991 Gerontological Society of America, San Francisco, CA

Co-Organizer with Dr. Caleb Finch, UCLA Symposium on the Molecular Biology of Aging, March 1989, Santa Fe, NM

Organizer, Second West Coast *C. elegans* Conference, March 1988, Lake Arrowhead, CA

MEMBERSHIP IN ADVISORY GROUPS:

2008 – 2013	Member of Scientific Advisory Board to the Methuselah Project
2005 – 2009	External Advisor, MIMAGE European Consortium, Frankfurt, Germany
2004 – 2010	External Advisor, Genetics of Healthy Aging Consortium (GEHA), Bologna, Italy
2002 – 2003	External Advisor, Neuromutagenesis Program, Tennessee Mouse Genetics Consortium

2000	International Advisor, Australian Society for Cellular and Molecular Gerontology, Centre for Molecular Biology and Medicine
1999	Author, Report to Congress on QTL Mapping, National Institute on Alcohol Abuse and Alcoholism
1997	Member, Extramural Scientific Advisory Board, Advisor on Report to Congress, National Institute on Alcohol Abuse and Alcoholism
1997 – 2004	Scientific Advisor to Portland Alcohol Research Center.
1997	Member, Extramural Scientific Advisory Board, Advisory on Genetics Portfolio, National Institute on Alcohol Abuse and Alcoholism
1995, 1996	Member, *ad hoc* Mapping of Genes for Longevity, Committee on Population, National Academy of Sciences
1994 – 1996	Member of Course Advisory Group, Summer Training Courses in Experimental Aging Research, Administered through Univ. of Michigan
1994	ACTION Review Committee, Gerontology Society of America
1992	Scientific Advisor to National Institute on Aging, Committee to Assess the Value of an Outbred Rodent Model for Selection on Longevity
1992	Scientific Advisor to National Institute on Alcohol Abuse and Alcoholism, Extramural Science Advisory Board: Applications of Animal Models to Alcohol Research

CONSULTING RELATIONSHIPS:

2019- present	Founded Cirque Cryotech, LLC
2014 – current	21st Century Medicine, A private company
2005 – 2009	External Advisor, “Role of Mitochondria in Conserved Mechanisms of Ageing” (MIMAGE), Frankfurt, Germany
2005 – 2009	External Advisor, Genes Specifying Human Aging (GEHA), Bologna, Italy
2001 – 2009	Consultant, Accera, Inc. Broomfield, CO.
2000 – 2010	Consultant, Evolutionary Genomics, Inc., Denver, CO.
2006	Consultant, Peptide Pharmaceuticals, Denver Colorado
2005	Consultant, SomaLogic, Boulder, CO
1999 – 2001	Consultant, Neurogenetics Pharmaceuticals, Inc., San Diego, CA.
1999 – 2003	Executive Committee, San Antonio Nathan Shock Aging Center

1997 – 2000	Founder and Vice President for Functional Genomics at GenoPlex, a genomics company with a major focus on aging, learning, and anesthetics
1996 – 1999	External Advisor to Program on Aging, UT Health Sciences Center at San Antonio
1995 – 1996	Scientific Advisory Board, MRX Biotechnologies
1994	External Advisor to Andrus Gerontology Center, University of Southern California
1994	Scientific Advisor, Genome Technologies
1993	Scientific Advisor and Member of Board of Peers, Biogerontronix, Inc.
1992	Outside Advisor to the National Institute on Alcohol Abuse and Alcoholism
1991	Scientific Advisor to National Institute on Aging, Committee on Mammalian Genetic Models for Longevity
1991	Scientific Advisory Council GRECC, Denver Veterans Administration
1988 – 1990	Scientific Advisory Committee, Nucleic Acids Research Institute

GRANT REVIEW COMMITTEES:

2019- present	Paper Reviewer for Aging Cell
2019- present	Paper Reviewer for Nature Metabolism Preparation
2018- present	Paper Reviewer for GSA, JG:BS
2018- present	Paper Reviewer for EXG
2018- present	Paper Reviewer for Geroscience
2019	Paper Reviewer for Nature Communications
2010	Neurotoxicology and Alcohol Study Section, *ad hoc* member
2009	Cell Biology and Developmental Fellowship Study Section, *ad hoc* member
2009	Genetics of Human Disease Study Section, *ad hoc* member
2003 – 2007	Cellular Mechanisms in Aging and Development Study Section, Founding Member and *ad hoc* member
2001	Mammalian Genetics Study Section, *ad hoc*
1995 – 2004	National Institute on Alcohol Abuse and Alcoholism, *ad hoc*
1995	National Institute on Drug Abuse, *ad hoc*
1992 – 1996	Biological and Clinical Aging Review Subcommittee A,
1992 - present	Veterans Administration, *ad hoc*

1986, 1991 – present	American Federation for Aging Research
1986 – 2002	United States Department of Agriculture
1983 – 2004	National Science Foundation
1983 – 2003	National Institute on Aging, *ad hoc* National Institute on Aging

RECENT UNIVERSITY SERVICE:

2005 – 2018 Salary Committee, Department of Integrative Physiology

2003 – 2016 Salary Committee, Institute for Behavioral Genetics

2010 – 2016 Awards Committee, Department of Integrative Physiology

2008 – present Chair Awards Committee, Institute for Behavioral Genetics

2011 Search Committee for Faculty for the Linda Crnic Institute

2011 – 2012 Search Committee for Faculty for the Department of Integrative Physiology

2011 – 2012 Search Committee for Faculty for the Institute for Behavioral Genetics

2012 – 2013 Search Committee for Faculty for the Department of Integrative Physiology

201 2– 2013 Search Committee for Faculty for the Institute for Behavioral Genetics

2013 – 2014 Search Committee for Faculty for the Department of Integrative Physiology

2013 – 2014 Search Committee for Faculty for the Institute for Behavioral Genetics

2013 – 2017, Institute Animal Care University Committee
2015 – 2017, Awards Committee, Department of Integrative Physiology
2015 – 2019, Teaching Committee the Institute for Behavioral Genetics
2015 – 2019, Space Committee the Institute for Behavioral Genetics
2015 – Present, Awards Committee the Institute for Behavioral Genetics
2018 – 2019, Library Committee the Institute for Behavioral Genetics

PUBLICATIONS:

ORCID: orcid.org/0000-0001-7147-8237

Papers in Peer- Reviewed Journals:

1. Johnson, T. E., 1975 Perithecial development and pattern formation in *Neurospora crassa*. Ph.D. Thesis, University of Washington.
2. Howe, H. B. and Johnson,T. E., 1976 Phenotypic diversity among alleles at the *per-1* locus of *Neurospora crassa*. *Genetics* **82**:595-603.
3. Johnson, T. E., 1976 Analysis of pattern formation in Neurospora perithecial development using genetic mosaics. *Dev Bio* **54**:23-36.
4. Johnson, T. E., 1977 Mosaic analysis of autonomy of spore development in Neurospora. *Exp Mycol* **1**:253-258.
5. Johnson, T. E., 1978 Isolation and characterization of perithecial development mutants in Neurospora. *Genetics* **88**:27-47.17248793
6. Johnson, T. E., 1979 A Neurospora mutation that arrests development as either male or female sterile parent. *Genetics* **92**:1107-1120.PMID: 7217303
7. Johnson, T. E. and Wood, W. B., 1982 Genetic analysis of life-span in *Caenorhabditis elegans*. *Proc Natl Acad Sci USA* **79**:6603-6607. PMCID: 36959141

8. Johnson, T. E., Mitchell, D. H., Kline, S., Kemal, R., and Foy, J., 1984 Arresting development arrests aging in the nematode *Caenorhabditis elegans*. *Mech Ageing Dev* **28**:23-40.

9. Johnson, T. E. and McCaffrey, G., 1985 Programmed aging or error catastrophe? An examination by two-dimensional polyacrylamide gel electrophoresis. *Mech Ageing Dev* **30**:285-297.

10. Johnson, T. E., 1986 Molecular and genetic analyses of a multivariate system specifying behavior and life span. *Behav Genet* **16**:221-235.PMID: 3707485

11. Simpson, V. J., Johnson, T. E., and Hammen, R. F., 1986 *Caenorhabditis elegans* does not contain 5-methylcytosine at any time during development or aging. *Nucleic Acids Res* **14**:6711-6719. PMID: 3748820

12. Johnson, T. E., 1987 Aging can be genetically dissected into component processes using long-lived lines of *Caenorhabditis elegans*. *Proc Natl Acad Sci USA.* **84**:3777-3781.PMID: 3473482

13. Friedman, D. B. and Johnson, T. E., 1988 A mutation in the *age-1* gene in *Caenorhabditis elegans* lengthens life and reduces hermaphrodite fertility. *Genetics* **118**:75-86. PMID: 1203268

14. Friedman, D. B. and Johnson, T. E., 1988 Three mutants that extend both mean and maximum life span of the nematode, *Caenorhabditis elegans*, define the *age-1* gene. *J. Gerontol* **43**:B102-B109, PMID: 3385139.

15. Johnson, T. E., Conley, W. L. and Keller, M. L., 1988 Long-lived lines of *Caenorhabditis elegans* can be used to establish predictive biomarkers of aging. *Exp Gerontol* **23**:281-295. PMID: 3197780.

16. Johnson, T. E. and Hartman, P. S., 1988 Radiation effects on life span in *Caenorhabditis elegans*. *J Gerontol.: A Biol Sci Med Sci* **43**:B137-B141, PMID: 3418030.

17. Hartman, P. S., Simpson, V. J., Johnson, T. E., and Mitchell, D., 1988 Radiation sensitivity and DNA repair in *Caenorhabditis elegans* strains with different mean life spans. *Mutat Res* **208**:77-82.

18. Uitterleinden, A. G., Slagboom, P. E., Johnson, T. E., and Vijg, J., 1989 The *Caenorhabditis elegans* genome contains monomorphic minisatellites and simple sequence. *Nucleic Acids Res* **17**:9527-9530, PMID: 2602134.

19. Nelson, J. F., Karelus, K., Felicio, L. S., and Johnson, T. E., 1990 Genetic influences on the timing of puberty in mice. *Biol Reprod* **42**:649-655, PMID: 2346773.

20. Johnson, T. E., 1990 Increased life span of *age-1* mutants in *Caenorhabditis elegans* and lower Gompertz rate of aging. *Science* **249**:908-912, PMID: 2392681.

21. Brooks, A. and Johnson, T. E., 1991 Genetic specification of life span and self-fertility in recombinant-inbred strains of *Caenorhabditis elegans*. *Heredity* **67**:19-28, PMID: 1917549.

22. Nelson, J. F., Karelus, K., Felicio, L. S., and Johnson, T. E., 1992 Genetic influences on oestrous cyclicity in mice: Evidence that cycle length and frequency are differentially regulated. *J. Reprod Fert* **94**:261-268.

23. Johnson, T. E., DeFries, J. C. and Markel, P. D., 1992 Mapping quantitative trait loci for behavioral traits in the mouse. *Behav Genet* **22:**635-653. Erratum, *Behav Genet* **23**:305.

24. Johnson, T. E and Hutchinson, E. W., 1993 Absence of strong heterosis for life span and other life history traits in *Caenorhabditis elegans*. *Genetics* **134**:463-474.

25. Johnson, T. E., Tedesco, P. M., and Lithgow, G.J., 1993 Comparing mutants, selective breeding, and transgenics in the dissection of aging processes of *Caenorhabditis elegans*. *Genetica* **91**:65-77.

26. Brooks, A., Lithgow, G. J., and Johnson, T. E., 1994 Mortality rates in a genetically heterogeneous population of *Caenorhabditis elegans*. *Science* **263**:668-671.

27. Fabian, T. J. and Johnson, T. E., 1994 Production of age-synchronous mass cultures of *Caenorhabditis elegans*. *J Gerontol.: A Biol Sci Med Sci*, **49**:B145-B156.

28. Markel, P. D. and Johnson, T. E., 1994 Initial characterization of STS markers in the LSXSS series of recombinant inbred strains. *Mam Genome* **5**:199-202.

29. Melov, S., Hertz, G. Z., Stormo, G. D., and Johnson, T. E., 1994 Detection of deletions in the mitochondrial genome of *Caenorhabditis elegans*. *Nucleic Acids Res* **22**:1075-1078.

30. Lithgow, G. J., White, T. M., Hinerfeld, D. A., and Johnson, T. E., 1994 Thermotolerance of a long-lived mutant of *Caenorhabditis elegans*. *J Gerontol.: A Biol Sci Med Sci* **49**:B270-B276.

31. Vaupel, J. W., Johnson, T. E., and Lithgow, G. J., 1994 Rates of mortality in populations of C*aenorhabditis elegans* (Technical Comment). *Science* **266**:826.

32. Johnson, T. E., 1994 Response to Letters. *Science* **266**:828.

33. Duhon, S. A. and Johnson, T. E., 1995 Movement as an index of vitality: Comparing wild type and the *age-1* mutant of *Caenorhabditis elegans. J Gerontol: A Biol Sci Med Sci* **50**:B254-B261. PMID 7671016.

34. Markel, P. D., DeFries, J. C., and Johnson, T. E., 1995 Use of repeated-measures in an analysis of ethanol-induced loss of righting reflex in inbred long-sleep and short-sleep mice. *Alcohol Clin Ex Res* **19**:299-304.

35. Fabian, T. J. and Johnson, T. E., 1995 Identification of genes that are differentially expressed during aging in *Caenorhabditis elegans. J Gerontol: A Biol Sci Med Sci* **50**:B245-B253.

36. Markel, P. D., DeFries, J. C., and Johnson, T. E., 1995 Ethanol-induced anesthesia in inbred strains of long-sleep and short-sleep mice: A genetic analysis of repeated measures using censored data. *Behav Genet* **25**:67-73.

37. Melov, S., Lithgow, G. J., Fischer, D. R., Tedesco, P. M., and Johnson, T. E., 1995 Increased frequency of deletions in the mitochondrial genome with age of *Caenorhabditis elegans. Nucleic Acids Res* **23**:1419-1425.

38. Lithgow, G. J., White, T. M., Melov, S., and Johnson, T. E., 1995 Thermotolerance and extended life-span conferred by single-gene mutations and induced by thermal stress. *Proc Natl Acad Sci USA* **92**:7540-7544. PMCID: 41375

39. Fabian, T. J. and Johnson, T. E., 1995 Total RNA, rRNA and poly(A)$^+$ RNA abundances during aging in *Caenorhabditis elegans*. *Mech Ageing Dev* **83**:155-170.

40. Shook, D., Brooks, A., and Johnson, T. E., 1996 Mapping quantitative trait loci specifying hermaphrodite survival or self fertility in the nematode *Caenorhabditis elegans*. *Genetics* **142**:801-817.

41. Duhon, S. A., Murakami, S., and Johnson, T. E., 1996 Direct isolation of longevity mutants in the nematode *Caenorhabditis elegans. Develop Genet* **18**:144-153.

42. Christensen, S. C., Johnson, T. E., Markel, P. D., Clark, V. J., Fulker, D. W., Corley, R. P., Collins, A. C., and Wehner, J. M., 1996 Quantitative trait locus analyses of sleep-times induced by sedative-hypnotics in LSXSS recombinant inbred strains of mice. *Alcohol Clin Exp Res* **20**:543-550.

43. Markel, P. D., Fulker, D. W., Bennett, B., Corley, R. P., DeFries, J. C., Erwin, V. G., and Johnson, T. E., 1996 Quantitative trait loci for ethanol sensitivity in the LSXSS recombinant inbred strains: Interval-mapping. *Behav Genet* **26**:447-458.

44. Markel, P. D., Bennett, B., Beeson, M. A., Gordon, L., Simpson, V. J., and Johnson, T. E., 1996 Strain distribution patterns for genetic markers in the LSXSS recombinant-inbred series. *Mamm Genome* **7**:408-412.

45. Murakami, S. and Johnson, T. E., 1996 A genetic pathway conferring life extension and resistance to UV stress in *Caenorhabditis elegans*. *Genetics* **143**:1207-1218.

46. Johnson, T. E., Lithgow, G. J., and Murakami, S., 1996 Hypothesis: Interventions that increase the response to stress offer the potential for effective life prolongation and increased health. *J. Gerontol: A Biol Sci Med Sci* **51**:B392-B395.PMID 8914487.

47. Erwin, V. G., Markel, P. D., Johnson, T. E., Gehle, V. M., and Jones, B. C., 1997 Common quantitative trait loci for alcohol-related behaviors and CNS neurotensin measures: hypnotic and hypothermic effects. *J Pharmacol Exp Ther* **280**:911-918.

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259. Johnson, T.E., Mendenhall, A.R., Cypser, J.R., Seewald, A.K., Tedesco, P.M., Taylor, L., Link, C., 2010 Senescence and aging: program or stochastic? Keynote address at British Society for Research on Aging: Newcastle, England.

260. Johnson, T.E., Mendenhall, A.R., Cypser, J.R., Seewald, A.K., Tedesco, P.M., Taylor, L., Link, C. 2010 Stochastic processes lead to heterogeneity in aging. Discerning Diversity in Ageing, St. Andrews, Scotland.

261. Florez-McClure, M.L., Flink, S., Downing, C., Rikke, B.A., Johnson, T.E., Kechris, K. 2011 Gene expression changes in a fetal alcohol exposure model: exploring succeptibility mediated by strain differences and maternal effects. 2011 RSA Meeting, Atlanta, GA.

262. Downing, C., Balderrama-Durbin, C. C., Kimball,' A., Biers, J., Gilliam, D.M., Johnson, T.E., 2011 Quantitative trait locus mapping and candidate gene identification for ethanol teratogenesis in BXD recombinant inbred mice. RSA Meeting, Atlanta, GA.

263. Mendenhall, A. R., Tedesco, P. M., Cypser, J. R., Taylor, L., Lowe, A., Brent, R., and Johnson, T. E., 2011 Factors affecting the mean, variance and predictive power of a lifespan biomarker, 18th International *C. elegans* Meeting: Los Angeles, CA.

264. Johnson, T. E., 2011 Genetic studies on caloric restriction in the worm and in the mouse: what does it tell us? Prevention and Intervention, from Molecular Biology to Clinical Perspectives, Sept. 2011, Halle, Germany:

265. Mendenhall' A. R., Wu, D., Park, S.-K., Cypser, J. R., Tedesco, P. M., Link, C. D., Phillips, P. C., and Johnson, T. E., 2011 Genetic Uncoupling of somatic and germline lifespan in the nematode *Caenorhabditis elegans.* NAPA Valley Meeting on Aging in the Wild.

266. Chick, W. S., Zhou, X., Williams, K., Ye, M., and Johnson, T. E., 2011 Identification of mammalian genes promoting multi-disease resistance. Annual Butcher Symposium, Univ. of Colo.

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267. Johnson, T. E., Chick, W. S., Cypser, J., Fahy, G., Kitzenberg, D.A., Ludwig, M., Newell, B., and Tedesco, P., 2014 Making connections: from stress resistance to a longer health span. Annual Meeting of the Gerontological Society of America, Washington D.C.

268. Johnson T. E., Chick W. E., and Fahy, G. M., 2015 Eliminating toxicity during long-term cryogenic storage of human organs. Meeting of the Organ Preservation Alliance, Feb. 27, 2015 Palo Alto. CA

269. Mendenhall, A., Sands**. B.,** Tedesco, P., Johnson, T. E., Brent, R 2015 Mechanisms of animal-to-animal and cell-to-cell variation in gene expression in adult hermaphrodites. 2015 worm meeting

270. Mendenhall, A., Sands**. B.,** Tedesco, P., Johnson, T. E., Brent, R., 2015 Reproducible quantification of gene expression in single cells of live adult animals 2015 worm meeting

271. Mendenhall, A., Sands, B. and Brent, R., 2015 Effects of introns on gene expression. 2015 worm meeting

272. Newell, B., Lifespan and healthspan in *C. elegans*, a long life does not always mean a good life. IBG Symposium May 15, 2015

273. Newell, B., Cypser, J. R., Tedesco, P., Ludwig, M,., Chick, W., and Johnson, T. E. 2015 Frailty and health span in *C. elegans* and mice. Fort Collins

274. Thomas E Johnson, James R. Cypser, Shane L. Rea, Alexander R. Mendenhall 2015 Molecular Dissection of Hormesis; International Dose Response Society Conference, University of Massachusetts at Amherst. April 19 and 20, 2016 "Hormesis, Aging and Enhancing Longevity",

INVITED PRESENTATIONS at NATIONAL or INTERNATIONAL SYMPOSIA:

KEYNOTE ADDRESSES:

Genetics and Genomics of Inflammatory Barrier Diseases, July 12, 2007, Kiel, Germany: "The Nematode, *Caenorhabditis elegans*: An Anti-Aging Model for Humans?"

Biomarkers in Ageing, September 18-20, 2009, Halle, Germany: "Life Span as a Biomarker of Aging: What Does It Tell Us?"

American Aging Association, 39th Annual Meeting, June 4-7, 2010, Portland, OR: "The Discovery of Longevity Mutants."

BSRA 60th Annual Conference, July 14-16, 2010, Newcastle, UK: "Senescence and Aging: Program or Stochastic?"

25th Anniversary of the India National Institute of Immunology: Aging and Age-Related Diseases, March 3-4, 2011, New Delhi, India: "Genetic and Stochastic Analysis of Aging and Age-Related Disease in Animal Models."

Prevention and Intervention, from Molecular Biology to Clinical Perspectives, September 16 - 18, 2011, Halle, Germany: "Laudation of Dr. Kaisu Pitkälä, Helsinki Finland."

Neurobiology and Neuroendocrinology of Aging, July 29 - August 3, 2012, the Kloster Mehrerau, Bregenz, Austria: Twenty-Five Years after age-1: Drugs, Interventions, and the Scientific Aristocracy.

German Association for Aging Research (DGfA), Dusseldorf, Germany, December 6, 7, 2013: Keynote address: German Society for Aging Research.

International Dose Response Society Conference, University of Massachusetts at Amherst. April 19 and 20, 2016 "Hormesis, Aging and Enhancing Longevity",

Symposia Related to QTL-Mapping of Alcoholism and Related Traits

1990 Conference on Genetics and Brain Involvement in Dyslexia, sponsored by the Academia Rodinensis Pro Remediatione; September 18-21, 1990, Boulder CO. Overview and Discussion: Toward the Molecular Genetic Basis of Dyslexia: Problems and Progress."

Gordon Conference, Perspectives on Alcoholism, February 5-9, 1990, Oxnard, CA: "Genetic Models of Alcoholism: Molecular Biological Approaches."

Annual Meeting of the Behavioral Genetics Association, June 6-8, 1991, St. Louis, MO: "Mapping Sensitivity to Ethanol Using the LSXSS RI Strains of Mice."

Research Symposium on Alcoholism, June 8-13, 1991, Fort Myers, FL: "RFLP-Mapping Using the LSXSS RI Strains of Mice."

Research Symposium on Alcoholism, June 20-23, 1993, San Antonio, TX: "Alcoholism in Flies and Worms: Genetic Insights from Invertebrate Systems."

1993 World Congress on Psychiatric Genetics, October 2-5, 1993, New Orleans, LA: "Mapping of QTL, Regulating Ethanol-Induced Anesthesia." (Talk delivered by Paul Markel, a graduate student.)

International Society for Biomedical Research on Alcoholism, June 26-July 1, 1994, Brisbane, Australia: “Mapping QTLs for Ethanol-Induced Anesthesia in LSXSS Recombinant Inbred and F2 Mice.”

Workshop on Mouse Molecular Neurogenetics, September 21-23, 1994, Bar Harbor, ME: “Identification of QTLs Influencing Ethanol-Induced Anesthesia in LS and SS Mice.”

Mouse Genome Conference, November 6-10, 1994, London, UK: “Mapping QTLs for Anesthesia Sensitivity.”

University of Colorado Health Sciences Center, August 28, 1995, Denver, CO: “Mapping QTLs for Alcohol-Related Traits in the LS and SS Selected Lines.”

NAASO-SSIB Annual Conference, National Institute on Alcohol Abuse and Alcoholism, October 12-17, 1995, Baton Rouge, LA: “From Character to Clone: Mapping the Mouse Genes Responsible for Sensitivity to Ethanol.”

1996 Gordon Research Conference on Alcohol, January 7-12, 1996, Oxnard, CA: “Identifying, Confirming, and Cloning Genes Specifying Sensitivity to Ethanol in LS and SS Mice.”

The Fifth International Conference on Molecular and Cellular Mechanisms of Anaesthesia, June 18-20, 1997, Calgary, Alberta. Presentation delivered by Dr. Victoria Simpson, a major collaborator.

Veteran’s Administration Workshop on QTLs and Alcohol Action, September 18-20, 1997, Cannon Beach, OR: “Whither QTLs, After the Mapping.”

Member, Extramural Scientific Advisory Board, Advisory on Genetics Portfolio, National Institute on Alcohol Abuse and Alcoholism, Nov. 4, 5, 1997, Washington DC: “Quantitative Trait Loci for Alcohol-Related Behaviors in Non-Human Mammals.”

National Institute on Alcohol Abuse and Alcoholism Workshop on QTL Mapping; August 20-21, 1998, Bethesda, MD: “Sedation.”

2000 Keystone Symposium on the Genetics of Alcoholism and Substance Abuse, Jan. 23-28, 2000, Tahoe City, CA.: “Uncovering genes for neurosensitivity to ethanol and general anesthetics.”

National Institute on Alcohol Abuse and Alcoholism Workshop on QTL Endgame: Strategies for Identifying Genes Influencing Alcohol-Related Behavior; Nov. 30 – Dec. 1, 2000, Rockville, MD: “QTL ID to gene ID for alcohol’s hypnotic action.”

Keystone Symposia on Natural Variation and Quantitative Genetics in Model Organisms, Jan. 8 – 13, 2004, Breckenridge, CO: ”QTLs in mice and worms; use of recombinant inbred strains.”

38th Winter Conference on Brain Research, Jan. 22 – 28, 2005, Breckenridge, CO: “Novel quantitative trait genes (QTGs) for the sedative-hypnotic drug dependence, withdrawal, and sensitivity.”

International Society for Anaesthetic Pharmacology (ISAP), Theme: Genetics and Anesthesia, Oct. 14, 2011, Chicago, IL: “The Future of Genetics and Genomics. (Talk delivered by Philip Morgan)

Symposia Related to Cryoprotection

Meeting of the Organ Preservation Alliance, Feb. 25-27, Stanford CA: “Forward genetic approaches to identify drugable pathways leading to cryo-protection”

Symposia Related to Aging

Behavior Genetics Association, July, 1982, Fort Collins, CO: "Genetic Analysis of Life Span in the Nematode, *Caenorhabditis elegans*." Participant in roundtable discussion on the future of behavioral genetic research.

Fund for Integrated Biomedical Research (FIBER) Symposium, November, 1982, Boston, MA: "*Caenorhabditis elegans*: A Genetic Model for Understanding the Aging Process."

35th Annual Scientific Meeting of The Gerontological Society of America, November, 1982, Boston, MA: "Genetic Models of Aging, Genetic Analysis of Long-lived Strains of *Caenorhabditis elegans*."

Meeting on *C. elegans,* May, 1983, Cold Spring Harbor, NY: "Genetics of Long-Lived Variants of *C. elegans.*"

37th Annual Meeting of the Gerontological Society of America, November, 1984, San Antonio, TX: "Aging in Invertebrates: *Caenorhabditis elegans.*"

Symposium on Multivariate Behavioral Genetics and Development: Change and Continuity, May, 1985, Boulder, CO: "Molecular and Developmental Genetic Analyses of Multivariate Behavioral Systems."

13th International Congress of Gerontology, July, 1985, New York, NY:
1. "Animal Models for Aging: *Caenorhabditis elegans.*"
2. "Genetics and Aging: Some New Directions for Research: Selective Breeding and Mutant Gene Approaches to the Study of Senescence."

Meeting on *C. elegans,* May, 1985, Cold Spring Harbor, NY: "Life Spans of Induced Mutants."

Workshop on Environmental Toxicity and the Aging Process, October 1-2, 1985, Columbia MD: *"Caenorhabditis elegans* as a Model Organism for Use in Assessment of Toxicity Effects on Aging."

Modern Biological Theories of Aging, June 3-6, 1986, New York, NY: "Developmentally Programmed Aging, Future Directions."

Gordon Conference on the Biology of Aging, July 21-25, 1986, Plymouth, NH: "Analysis of Genes Specifying Length of Life."

Brookhaven Symposium in Biology, Number 34, Aging Processes in Animals, October 19-23, 1986, Brookhaven National Laboratory, Upton, NY: "Mutant Genes that Extend Life Span."

West Coast Genetics Conference, January 30-February 1, 1987, Lake Arrowhead, CA: "Life Span Mutants."

Meeting of the American Geriatrics Society, May 14, 1987, New Orleans, LA: "Studies in Molecular Genetics."

Gordon Conference on the Biology of Aging, February 14-20, 1988, Ventura, CA: "Genetic Inferences from Strains of the Nematode *C. elegans* with Lengthened Life Span."

International Symposium on the Biology of Aging, March 16-18, 1988, Kyoto, Japan: "A Mutation in a Single Gene Produces a 70% Increase in the Life Span of the Round Worm *Caenorhabditis elegans*."

Biomedical Advances in Aging '88, VIIIth International Washington Spring Symposium, May 9-13, 1988, Washington DC: "A Developmental Genetic Approach to the Analysis of Aging Processes."

Annual Meeting of the Tissue Culture Association, June 15-19, 1988, Las Vegas, NV: "Genetics of Aging in *Caenorhabditis elegans*."

Second International Conference on Genetic Effects on Aging September 18-23, 1988, Bar Harbor, ME: "Genetic Variants and Mutations of *Caenorhabditis elegans* Provide Handles for Dissecting the Aging Processes."

American Aging Association, October 5-8, 1988, San Francisco, CA: "Genetic Analyses of Longevity and Senescence."

41st Annual Meeting of the Gerontological Society of America, November 19 - 22,1988, San Francisco, CA: "Complexity Determining Aging and Longevity."

41st Annual Meeting of the Gerontological Society of America, November 19 - 22 1988, San Francisco, CA: "Mutant Genes that Extend the Life Span." Sponsored by the American Federation for Aging Research.

UCLA Symposium on the Molecular Biology of Aging, March 4-10, 1989, Santa Fe, NM: "Cloning Genes for Life-extension in *C. elegans*."

Frontiers in Aging Research, March 11-12,1989, Santa Fe, NM: "Models for Aging Research: Invertebrates."

Third International Congress of Biomedical Gerontology, June 16-18,1989, Acapulco, Mexico: "Molecular Genetic Analysis of Processes Limiting Life."

International Congress of Gerontology, June 19-23, 1989, Acapulco, Mexico: "Genetics of Life Span in *Caenorhabditis elegans*."

Workshop: "Identification, Isolation, and Characterization of Aging and Longevity Genes: Strategies and Technologies," October 5,1989, Nerja, Spain.

Workshop: "Identification of Genes Specifying length of Life in the Nematode, *Caenorhabditis elegans*," EURAGE, October 6-8, 1989, Nerja, Spain.

American Aging Association, October 4-7, 1989, Washington DC: "Genetic and molecular analysis of a longevity gene in *C. elegans*." (Talk presented by Dr. T. Hutchinson, a postdoctoral associate.)

Correlations of Aging and Space: Effects on Biosystems, October 30-November 2, 1989, Washington DC: "Cellular Effects."

42nd Annual Meeting of the Gerontological Society of America, November 17-21, 1989, St. Paul, MN: "Genetic Analysis of Life Span: Whence and Where."

Workshop on New Animal Models for Aging Research, December 5-6, 1989, Bethesda, MD: "Nematodes as Models of Aging." (Talk presented by Dr. T. Hutchinson, a postdoctoral associate.)

Annual Meeting of the American Association for the Advancement of Science, February 15-20, 1990, New Orleans, LA: "Aging Genes in Worms."

International Congress for Systematic and Evolutionary Biology, July 1-7, 1990, College Park, MD: "Antagonistic Pleiotropy in the Evolution of Nematode Aging? A Genetic Analysis."

Third Serling Symposium on the Biology of Aging, September 10-14, 1990, Judea, Israel: "Cloning a gene specifying life-span extension." (Talk delivered by Dr. E. W. Hutchinson, a research associate.)

43rd Annual Meeting of the Gerontological Society of America, November 16-20, 1990, Boston, MA: "Molecular and classical genetic analysis of life span in *Caenorhabditis elegans*."

Congressional Workshop on Aging, January 24-26, 1991, Banbury Center, Cold Spring Harbor Laboratory, Cold Spring Harbor, NY: "Identification of genes affecting life span in model systems."

The Molecular Biology of Aging Processes, April 22-26, 1991, Cold Spring Harbor Laboratory, NY: "Toward identification of genes specifying life span in *Caenorhabditis elegans*."

1991 Gordon Conference on the Biology of Aging, April 28-May 3, 1991, San Miniato, Italy: "Transgenic analysis of age-related genes in *Caenorhabditis elegans*."

Gordon Research Conference, August 16-21, 1991, New Hampton, NH: "Genes that regulate senescence and programmed cell death."

Workshop on Control of Cell Proliferation in Senescent Cells, October 3-5, 1991, Montreal, Canada: "Mapping cell-senescence genes using the well-developed physical map of *Caenorhabditis elegans*"; and "*Caenorhabditis elegans* as a model system for the study of aging."

American Aging Association, October 9-11,1991, Denver, CO: "Molecular genetic approaches to the analysis of aging in *Caenorhabditis elegans*." (Talk presented by Mr. T. Fabian, a graduate student)

Fourth Asia/Oceania Regional Congress of Gerontology, October 31-November 3, 1991, Yokohama, Japan: "Identifying and cloning genes that limit life of *C. elegans*."

Molecular Biology of Aging, December 13-14, 1991, Heidelberg, Germany: "Molecular and genetic dissection of nematode aging." (Talk presented by Ms. Anne Brooks, a graduate student.)

Annual Meeting of the American Association for the Advancement of Science, February 6-11, 1992, Chicago, IL: "Identification and cloning of gerontogenes in *Caenorhabditis elegans*."

Molecular Biology of Aging Processes, April 22-26, 1992, Cold Spring Harbor Laboratory, NY: "Genetic approaches to the dissection of the aging processes of *Caenorhabditis elegans."*

Fourth Serling Symposium on the Biology of Aging, September 14-17, 1992, Jerusalem, Israel: "Genetic dissection of aging processes in *C. elegans."*

45th Annual Meeting of the Gerontological Society of America, November 18-21, 1992, Washington DC: "Comparing aging and development: What's different and what's not."

45th Annual Meeting of the Gerontological Society of America, November 18-21, 1992, Washington DC: "Transgenic analysis of life span in *Caenorhabditis elegans*."

Symposium on the Cellular and Molecular Aspects of Aging, October 22, 1993, Los Angeles, CA: "Molecular Genetics of Aging in *C. elegans."* (Talk delivered by Dr. Gordon Lithgow, a postdoctorate.)

46th Annual Meeting of the Gerontological Society of America, November 19-23, 1993, New Orleans, LA: "Adding Life to Years: Reality, Implications, Societal and Ethical Considerations."

46th Annual Meeting of the Gerontological Society of America, November 19-23, 1993, New Orleans, LA: "What is the Role of Genetics in Longevity?"

Interdisciplinary Approaches to Research on Aging, March 29-30, 1994, Chicago, IL: "Genetic Strategies for Identifying Key Processes Involved in Aging."

Symposium on the Molecular Aspects of Aging, May 2-4, 1994, St. Louis, MO: "Genes Which Influence Life Span in Nematodes."

Genetic Analysis of Life History, May 21, 1994, Eugene, OR: "Mapping QTLs Specifying Life History Traits Using the Nematode *Caenorhabditis elegans*."

The State of Theory on Aging: A Cross-Discipline Interchange, November 19, 1994, Greensboro, NC: “Testing Biological of Aging: Fact versus Theory.”

American Society for Clinical Pharmacology and Therapeutics, March 16, 1995, San Diego, CA: “Identification of Gerontogenes.”

The Genetics of Death, April 11-12, 1995, Glasgow, Scotland: “Regulation of Life Span in *C. elegans*.”

Gordon Conference on the Biology of Aging, May 7-12, 1995, Barga, Italy: “Function of Gerontogenes in *C. elegans*.”

Kyoto Course on Animal Models for Aging Research, May 12-20, 1995, Kyoto, Japan: “Genetic Influences on Aging in Mammals and Invertebrates.”

Heredity, Central Nervous System, and Behavior, June 3-4, 1995, Richmond, VA: "Mapping Quantitative Trait Loci for Life Span and Fertility in *Caenorhabditis elegans*."

The Nathan W. Shock Memorial Lecture, Gerontology Research Center, National Institute on Aging, June 15, 1995, Baltimore, MD: "Identification and Function of Gerontogenes in *C. elegans*."

Biodemography of Aging Expert Meeting, October 27-28, 1995, Irvine, CA: "Theoretical Knowledge for Demography to be Gained from Quantitative Trait Loci."

III European Congress of Gerontology, August 30-September 2, 1995, Amsterdam: "The Genetics of Longevity and the Stress-Response Genes in *Caenorhabditis elegans*." (Talk delivered by Dr. Gordon Lithgow, a former postdoctorate.)

American Federation for Aging Research at the 48th Annual Meeting of the Gerontological Society of America, November 15-19, 1995, Los Angeles, CA: "Gerontogenes Specify Resistance to Environmental Stresses in the Nematode *Caenorhabditis elegans*."

48th Annual Meeting of the Gerontological Society of America, November 15-19, 1995, Los Angeles, CA: "Back to Hormesis: A Little Stress May be Good for You."

48th Annual Meeting of the Gerontological Society of America, November 15-19, 1995, Los Angeles, CA: "Tutorial on Models for the Study of Aging."

National Academy of Sciences, Committee on Population's Workshop on the Biodemography of Aging, April 12-13, 1996, Washington, DC: "Approaches to Mapping Longevity Genes."

UNESCO Sponsored International Conference on Human Ageing, "Adding Life to Years," June 17-20, 1996, Paris, France: "Role of Stress in the Life-Extension Mutants of *C. elegans*."

French Academies of Sciences and of Moral and Political Sciences, June 21-22, 1996, Paris, France: "The Discovery of Gerontogenes."

Featured Speaker, 1996 FASEB Meeting, August 17-22, Snowmass, CO: "Clonal Senescence and Differentiation"; "Longevity Genes in the Nematode."

49th Annual Meeting of the Gerontological Society of America, November 17-21, 1996, Washington, D. C.: "Changing Funding Structure and its Effects on Biological Science Research Directions in Gerontology."

Fourth South-North Human Genome Conference, UNESCO, March 16-19, 1997, Guadalajara, Mexico: "Genetic determination of aging in *C elegans*: the role of stress."

American Association for Cancer Research 88th Annual Meeting, April 12-16, 1997, San Diego, CA: "Genetics of aging and dietary restriction: Possible convergence."

Third European Research Workshop on Longevity, May 17-21, 1997, Ancona, Italy: "Genes determining longevity in model systems: Relevance to humans."

NHMCC Bio/Technology Conferences: Molecular and Genetic Strategies for Treatment of Age-Related Diseases, July 14-15, 1997, Seattle, WA: "Identification of genes specifying signal transduction pathways leading to increased health and longevity in *Caenorhabditis elegans*."

Second Annual Symposium on the Biology of Aging, November 6-8, 1997, Lexington, KY: “Increased resistance to stress as a ‘public’ mechanism for increased longevity.”

Bat-Sheva Seminar on Cellular, Molecular and Genetic Aspects of Aging and Longevity, December 7-12, 1997, Israel: “Longevity assuring genes in nematodes.”

Gordon Conference on the Biology of Aging, May 10-15, 1998, Barga, Italy: “Stress resistance, dietary restriction and hormesis: common actions in aging.”

NHMCC Bio/Technology Conferences: Frontiers in Aging research and Age-Related Diseases, Oct. 5-7, 1998, San Diego, CA: “Life extension as resistance to stress: toward a molecular description.” (Meeting cancelled.)

Hiroshima Cancer Seminar Foundation, November 2, 1998, Hiroshima, Japan: “Genes for Aging in Nematodes: Regulating Response to Environmental Stress.”

51st Annual Meeting of the Gerontological Society of America, November 20-23, 1998, Philadelphia PA.: “Stress and gerontogenes: the intersection.”

Internet World Congress, Dec. 7-16, 1998, Cyberspace: “Genetic manipulation of longevity in *C. elegans* through increased response to stress.”

Keystone Symposium, Aging: Genetic & Environmental Influences on Life Span, February 2-7, 1999, Tamarron Hilton, Durango CO: “Genetic and environmental manipulation of longevity in *C. elegans.”*

28th Annual Meeting of the American Aging Association, June 4, 1999, Seattle WA: “Genes, longevity and stress adaptation in *C. elegans.”*

22nd Annual Meeting of the Japanese Society of Biomedical Gerontology, June 16-18, 1999, Kyoto, Japan: “Uncovering the secrets of aging using genetics in the nematode *C. elegans.”*

1999 FASEB Meeting, July 5-9, Copper Mountain, CO: "Role of stress resistance in life extension: focus on the worm.”

Third International Research Colloquium on Social and Biological Determinants of Longevity, August 2-6, 1999, Max Planck Institute for Demographic Research, Rostock, Germany: “Physiological aspects of individual life expectancy in the nematode worm.”

Course on the Molecular Biology of Aging, August 11, 1999, Marine Biology Laboratory, Woods Hole, MA: “Increased resistance to environmental stressors and diseases of aging: common-ground among all gerontogenes.”

Colloquium on the Molecular Biology of Aging, August 13, 1999, Marine Biology Laboratory, Woods Hole, MA: “Resistance to stress: Worms to mammals.”

EMBO Workshop of Molecular and Cellular Gerontology, Sept 18-22, 1999, Olivone, Switzerland: “Life extension of *C. elegans* is specified by increased stress resistance.” (lecture presented by Dr. Shin Murakami, a postdoctoral fellow.)

Buck Center for Research in Aging, Inaugural Symposium, Sept. 30, 1999, Novato CA: “Life extension as resistance to environmental stress: toward a molecular description in *C. elegans*.”

52nd Annual Meeting of the Gerontological Society of America, November 19-23, 1999, San Francisco, CA: “Gerontogenes through evolution: nematode, mouse, human.”

52nd Annual Meeting of the Gerontological Society of America, November 19-23, 1999, San Francisco, CA: “From *daf-2* to the insulin receptor: does the dauer pathway truly mimic CR in mammals?”

European Science Foundation meeting on the Biology of Ageing, May 6-10, 2000, Spa, Belgium: “Gerontogenes mediate health and longevity in nematodes through increasing resistance to environmental toxins and stressors.”

29th Annual Meeting of the Association, June 2, 2000, Boston MA: “Changes in transcript prevalence with age in a nematode worm*.”*

Third International Conference on Genetic Effects on Aging, August 7, 2000, Bar Harbor, ME: "Analysis of longevity genes in Cae*norhabditis elegans* points to increased response to stress as key for increased longevity."

Course on the Molecular Biology of Aging, August 14, 2000, Marine Biology Laboratory, Woods Hole, MA: “Increased resistance to environmental stressors and diseases of aging: common-ground among all gerontogenes.”

Australian Society of Cellular and Molecular Gerontology, March 27, 2001, Melbourne, Australia: “Increased resistance to environmental stressors and diseases of aging: common-ground among all gerontogenes.”

Gordon Conference on the Biology of Aging, July 22 – 26, 2001, Oxford, UK: “Microarray analysis of normal aging in *Caenorhabditis elegans.”*

Society for the Study of Inborn Errors of Metabolism, Sept 4-7, 2001, Prague, Czech Republic: “Longevity genes in the nematode *C. elegans* also increase resistance to stress and prevent disease.”

Comparative Biology of Aging Workshop, Feb. 6, 7, 2002, Washington DC: “The Insulin/IGF-1 pathway in C. elegans: conservation of signaling cassette; apparent divergence of signal outcome.”

Second Euresco Conference on Biological Ageing, May 18-22, 2002,Spetses, Greece: "The aging program: an organismic response to living?"

Third Longevity Consortium Meeting, July 14 – 16, 2002,Annapolis MD: “The ‘aging program’ is an organismic response to life.”

Frontiers of Aging Research, George Martin Symposium, Sept. 17-18, 2002: “Aging in *C. elegans.”* (Talk cancelled due to accident to my daughter, which prevented my attendance.)

Neuroendocrine Systems and Lifespan Determination, Buck Institute Symposium on Aging. Sept 24-27, 2002: “Genetics of Aging.” (Talk cancelled due to accident to my daughter, which prevented my attendance.)

55th Annual Meeting of the Gerontological Society of America, November 22-25, 2002, Boston, MA: “*C. elegans*, the promise and the reality.”

56th Annual Meeting of the Gerontological Society of America, at the Public Policy Committee Symposium: “The Genie’s Out of the Bottle: Moral, Ethical, and Societal Implications of the Search for the Fountain of Youth,” November 22, 2003, San Diego CA: “Advances in genetics research promote development of a drug for life extension.”

Robert W. Kleemeier Award Lecture, 56th Annual Meeting of the Gerontological Society of America, November 22, 2003, San Diego, CA: “Genes, phenes, and dreams of immortality.”

56th Annual Meeting of the Gerontological Society of America, At the Presentation of the Longevity Prize of the Foundation IPSEN to J. Vaupel, November 22, 2003, San Diego CA: “Genetics of Longevity.”

Biodemography of Survival and Longevity, Duke University, March 11-13, 2004, Raleigh NC: "Revealing hidden heterogeneity underlying mortality deceleration."

Functional Genomics Conference of Ageing, April 28 - May 1, 2004, Crete, Greece: “The *age-1* pathway specifies response to hard times.”

33rd Annual Meeting of the American Aging Association, June 4-7, 2004, Tampa FL: “Metabolism and stress resistance in age mutants of *C. elegans.”*

University of Nebraska – Lincoln’s Redox Biology Center, Oct. 1, 2004, Lincoln, NE: “Resistance to reactive oxidants in longevity mutants of *C. elegans.*”

International Meeting on *C. elegans,* June 25 – 29, 2005, Los Angeles, CA: “Stochastic Effects Make a Big Difference in How Long You Will Live (If You Are a Worm).”

Conference on Genetics of Healthy Aging (GEHA), July 6 – 9, 2005, Bologna, Italy: “Genes, Environment and Chance Determine Longevity.”

Nutrient Control of Gene Expression and Cell Signaling, August 3 - August 4, 2005, Tucson AZ: “Nutrient Specification of Longevity in *C. elegans.”*

Buck Institute 2005 Symposium, Pharmacology of Lifespan Extension, October 6-8, Novato, CA: "Genes, environment and especially chance determine longevity."

2nd Symposium on The Role of Mitochondria in Conserved Mechanisms of Aging, April 6, 2006, Frankfurt, Germany: “Genes, Environment and Chance – All Play a Role in Determining Life Span; How Much?”

11th Annual Genetics & Ethics in the 21st Century Conference, July 21 – 23, 2006, Aspen, CO: “Life Span Extension or Immortality: The Reality and the Hype.”

International Association of Gerontology, 5th European Congress of Biogerontology, September 16 - 20, 2006,Istanbul, Turkey: “Conservation of gene function?” contrasting the IGF-1 and mitochondrial longevity genes of *C. elegans*.

Austrian Biochemical Society, September 25 – 27, 2006, Salzburg, Austria: “The Roles of Genes, Environment and Chance in Determining Life Span.”

Evolutionary Demography Workshop, October 23 – 25, 2006, Durham, NC: “Environmental and stochastic determinants of longevity explain most of the variation in nematode life-span.”

3rd International Friedreich’s Ataxia Scientific Conference, November 10 – 12, 2006, Bethesda, MD: “A Nematode Model for Friedreich’s Ataxia.”

59th Annual Scientific Meeting of The Gerontological Society of America, November 16 – 20, 2006, Dallas, TX: “How Far to Immortality? Facts from Research in Invertebrates.”

European Conference on Aging, November 28 – 30, 2006, Innsbruck, Austria: “Stochastic Aspects of Programmed Aging.”

Conference on Research Frontiers of Social, Environmental and Genetic Determinants of Healthy Longevity, December 19 – 21, 2006, Beijing, China: “Genetics of Longevity in C. *elegans.*”

Molecular Basis of Aging, April 11-15, 2007, Titisee (Germany): “Epigenetic and stochastic factors in *C. elegans* longevity.”

Summit for Systems Biology, June 5-7, 2007, Richmond, VA: “Genetics of Aging in *C. elegans.*”

Ben Hall Symposium,August 22-25, 2007, University of Washington, Seattle, WA: “Genes, environment or chance – Roles in the specification of life span, a *C. elegans* story.”

MiMage Summer Course, September 18-22, 2007,Les Diablerets, Switzerland: “Genes, environment, and chance in aging and life span: How much of each?”

Gordon Research Conference, September 23-28, 2007,Les Diablerets, Switzerland: ”Worm regulation of stress resistance.”

20th Annual AFAR Grantee Conference, October 1-2, 2007, New York, NY: “A Biomarker of Longevity Involves Response to Stress.”

Summit on Cognitive Aging, October 9 – 11, 2007, Washington DC: “Genetic and Epigenetic Factors in Age Related Cognitive Function.”

GEHA Training course on Genetic Data Analysis, November 11-13, 2007, Rostock, Germany: “Biodemography in a Model System: The Nematode *C. Elegans*.”

60th Annual Scientific Meeting of the Gerontological Society of America, November 16-20, 2007, San Francisco, CA: “Predicting Life Span Using a Single-Gene Marker: Epigenetic and/or Stochastic.”

Longevity Consortium Symposium, December 2-3, 2007, Bethesda MD: “Stress-Resistant Embryonic Stem Cells and the Creation of Long-Lived Mice.”

NIEHS, February 21, 2008 Raleigh, NC: “Genes, Environment, and Chance: Their Role in Aging.”

Banbury Meeting, “The Future of Retirement,” April 27-30, 2008, Cold Spring, NY: “The Role of Stress in Specifying Longevity and Rate of Aging.”

7th Annual International Conference on Dose Response, April 29-30, 2008, Amherst MA: “Genetic Dissection of Hormesis: Ponce d'elegans.” (Talk delivered by J. Cypser.)

Annual Meeting of the Centre for Integrated Systems Biology of Ageing and Nutrition, Sept. 29 – Oct. 1, 2008 Newcastle, UK: “Genes, Environment and Chance Determine Longevity: How Much of Each?"

Longevity Consortium, Nov. 5 - 7, 2008, Washington DC: “Mapping Genes for Ad Lib and Dietary Restricted Longevity in the Mouse.”

Gordon Research Conference on Oxidative Stress and Disease, March 8 - 13, 2009, Il Ciocco, Italy: "Slowing Aging & Optimizing Stress and Increasing Vitality.”

International Association Biomedical Gerontology, May 18-20, 2009, Quebec City, Quebec: "Response to Stress: Epigenetic and Stochastic Aspects."

38th Annual Meeting of the American Aging Association, May 29 - June 1, 2009, Phoenix, AZ: “*C. elegans*- Stochastic Patterns in Aging.”

Fifth GEHA Annual Meeting, June 18 - June 20, 2009, Bologna, Italy: “Ageing Well from Worm to Man; Genes, Mitochondria and Heat Shock.”

MiMage Symposium on Ageing, Mitochondria in Ageing and Age-related Disease, Sept. 26 - 30, 2009, Les Diablerets, Switzerland: “Molecular Pathways Mediating Response to Oxidative Stress.”

6th GEHA Annual Meeting, April 11-12, 2010, Bologna, Italy. “The Role of Genetics and Stochasticity in Longevity. The lesson of the Animal Models.”

The Biology of Aging: A Meeting of the Minds to Celebrate Award Winning Science; Joint Convocation of The American Aging Association, The American Federation for Aging Research, and The Gerontological Society of America, June 4, 2010, Portland, OR: “Stochastic Processes of Aging.”

Genetic and Molecular Basis of Longevity and Aging, A Paul F. Glenn Symposium on the Biology of Aging, June 4-7, 2010, Santa Barbara, CA: Developments in Aging Research from the Johnson Lab.

British Society for Research on Aging, July 13-15, 2010, Newcastle, England: “Senescence and Aging: Program or Stochastic?” Keynote address.

Discerning Diversity in Ageing, Nov. 9-13, 2010, Edinburgh, Scotland: “Stochastic Processes Lead to Heterogeneity in Aging”.

Aging and Age-Related Diseases, March 3, 4, 2011, New Delhi, India: ”Genetic and Stochastic Analysis of Aging and Age-Related Disease in Animal Models”, Keynote Address.

Neurobiology and Neuroendocrinology of Aging, July 29 - August 3, 2012, the Kloster Mehrerau, Bregenz, Austria: “Twenty-Five Years after age-1: Genes, Interventions, and the Revolution in Aging Research,” Keynote Address.

Mitochondria, Metabolic Regulation and the Biology of Aging, February 13-16, 2013, Island of Lanzarote, Canary Islands: Novel Longevity Strains in the Mouse.

8th Annual Harvard/Paul F. Glenn Symposium on Aging, June 17, 2013, Harvard Medical School, Boston, MA.

Halle meeting on ageing: Stress and ageing: from molecular biology to clinical perspectives. September 06 – 08, 2013, Halle, Germany.

Systems Biology of Aging, (fifth in an ongoing series entitled, The Virginia Commonwealth University Summit on Systems Biology), October 17-18, 2013, Richmond, Virginia

Interventions to Slow Aging in Humans: Are We Ready? October 8-13, 2013, Erice Sicily, Italy

German Association for Aging Research (DGfA), Dusseldorf, Germany, December 6, 7, 2013: Keynote address

Halle meeting on ageing: Treatment of patients: the challenge of the future. “Frailty and health span in *C. elegans* and mice”: September 25 – 27, 2015, Halle, Germany

What is the evidence for stress resistance in lower organisms being associated with aging? Front Range Consortium on Stress Resistance and Slowed Aging, October 30, 2015, Fort Collins, CO

Molecular dissection of hormesis: mechanisms and translational research. The International Dose-Response Society, April 19-20, 2016, Amherst, MA

INVITED SEMINARS:

1981:
Kansas State University, Manhattan, KS, May.
University of California at Irvine, CA, July.
University of Colorado, Boulder, CO, July.

1982:
Colorado State University, Fort Collins, CO, March.
University of Washington, Seattle, WA, June.
University of Colorado, Boulder, CO, July.

1983:
University of California at Irvine, FRF, September.
University of California at Santa Cruz, November.

1984:
University of Iowa, Iowa City, IA, April.

1985:
University of California at Riverside, March.
University of Washington, Seattle, WA, April.

1986:
National Academy of Sciences, Committee on Chemical Toxicity and Aging, Washington DC, February 21.
Lady Davis Institute for Medical Research, Montreal, Canada, May 14, "Genetic analysis of prolongevity genes."
University of California at Irvine, Irvine, CA., May 22, "Single genes that specify life-span in the nematode, *Caenorhabditis elegans."*
University of California, California College of Medicine, Academic Geriatric Resource Center, Orange, CA, August, "Biomarkers of aging."
Sandoz Visiting Lecturer, Institute for Research on Aging and Department of Biology, University of California at San Diego, November 7, "A gene specifying life span in *C. elegans."*
University of California at Irvine, November 11, "Genetic control of the life span."
University of Illinois at Chicago, November 18, "Genetic specification of senescence."
Regents Lecture, State University of California at Sacramento, December 5, "Genetic analysis of aging using mutants of *C. elegans*."

1987:
University of California at Irvine, Microbiology and Molecular Genetics, January 22, "Genes that control life span."
University of Colorado, Department of Psychology and Institute for Behavioral Genetics, Boulder, CO, April 20, "Genes that lengthen life and slow the loss of behavioral competence."
University of California, California College of Medicine, Academic Geriatric Resource Center, Orange, CA, April 24, "Using mutants to dissect the aging process."
Bar Harbor Laboratory, Bar Harbor, ME, May 5, "Genes that lengthen the life span of the nematode *Caenorhabditis elegans*."

Research Symposium on Aging, University of California at Irvine, May 9, "Genetic modulation of the aging processes."
Institute for Human Development, The Pennsylvania State University, College Station, PA, June 8, "Genetic specification of life span in *Caenorhabditis elegans*."
Hoag Memorial Hospital, Newport Beach, CA, September 4, "Genetic Determination of Life Span."

1988:
Beckman Research Institute of the City of Hope, Duarte, CA, February 3, "Genetic analysis of aging using *C. elegans*."
Fullerton State University, Fullerton CA, April 12, "Insights into aging using genetic analysis of *C. elegans*."
Louisiana State University Medical Center, New Orleans, LA, May 4, "Normal genes that limit life span."
Virginia Polytechnic and State University, Blacksburg, VA, May 6 "Genetic dissection of aging using *C. elegans*."
Department of Genetics, Cambridge University, May 17, "Genetic dissection of aging processes using *C. elegans*."
Linus Pauling Institute, Palo Alto, CA, November 18, "Using genetics to dissect aging processes."

1989:
Regeneron, Tarrytown, NY, May 10, 1989, "Applications of *Caenorhabditis elegans* to cell death and aging research."
School of Pharmacy, Boulder, CO, October 18, "Molecular cloning of a gene specifying life span."

1990:
Texas Christian University, Fort Worth TX, February 16, "Genetic dissection of aging using long-lived mutants of *Caenorhabditis elegans*."
University of Denver, Denver, CO, February 26, "Genetic dissection of aging using long-lived mutants of *Caenorhabditis elegans*."
Northwestern University Medical School, Chicago, IL, March 22, "Cloning genes specifying life span."
University of Colorado Health Sciences Center, Denver CO, December 10, "A gene responsible for life prolongation in *C. elegans*."

1991:
University of Texas Health Sciences Center, San Antonio, TX, January 8, "Aging, adaptive or non-adaptive?"
University of Texas Health Sciences Center, San Antonio, TX, January 9, "Identification of genes involved in aging, the nematode model."
Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan, October 29, "Identification of genes determining life span."
Tokai University School of Medicine, Isehara, Japan, October 30, "Identification of genes determining life span."
Baylor College of Medicine, Houston TX, November 11, "Cloning genes specifying length of life."

1992:
St. Louis University College of Medicine, St. Louis, MO, March 11, "The nature of genes specifying life span in *Caenorhabditis elegans*."

Texas Christian University, Fort Worth, TX, March 27, "The nature of genes specifying life span in *Caenorhabditis elegans*."
University of Missouri at Kansas City College of Medicine, Kansas City, MO, April 9, "The nature of genes specifying life span in *Caenorhabditis elegans*."
University of Michigan, Ann Arbor, MI, April 14, "The nature of genes specifying life span in *Caenorhabditis elegans*."

1993:
The George Washington University, Washington DC, Feb.23, "Using genetics to dissect the aging processes."
The Gerontology Research Center, Baltimore MD, March 16, "Using genetics to dissect the aging processes."
The Colorado Gerontology Society, Denver, CO, October 15, "Role of genetics in aging."
Southern Methodist University, Dallas, TX, December 2, "Genes involved in aging processes in *Caenorhabditis elegans*."

1994:
University of Wisconsin, Madison, WI, May 3, "Identifying genes involved in aging in the nematode *Caenorhabditis elegans*."
Geron Corporation, Mill Valley, CA, June 13, "Using genetic approaches to study aging processes."
Duke University, Durham, NC, September 13, Duke Distinguished Lecture, "Identification and function of gerontogenes."
University of Manchester, Manchester, U.K., November 3, "Identification of gerontogenes specifying life span and rate of aging in the nematode *Caenorhabditis elegans*."
Pennsylvania State University, December 12, "Toward the cloning of quantitative trait loci in the mouse for sensitivity to ethanol and general anesthesia."

1995:
Eleanor Roosevelt Institute, February 8, "Alcoholic mice and their genes."
University of Arkansas for Medical Sciences, April 30, "The identification and function of genes leading to extended life span in the nematode *C. elegans*."
University of Colorado Health Sciences Center, May 30, "Methods for detecting, confirming and cloning QTLs."
University of Colorado Health Sciences Center, August 28, Denver, CO: "Mapping QTLs for alcohol-related traits in the LS and SS selected lines."
Conference on Experimental and Evolutionary Demography of Aging, November 2-4, Durham, NC: "Demographic structure of large populations of nematodes."
University of Colorado Health Sciences Center, November 28, Denver, CO: "The gene hunt:finding anesthesia-sensitivity genes."

1996:
IPSEN Foundation, April 19, Paris, France: "Identifying and cloning longevity determining genes in the nematode *C. elegans*."

1998:
University of California at Los Angeles, January 29, Los Angeles, CA: "Gerontogenes in the worm and relevance to mammalian aging."
School of Pharmacy, University of Colorado Health Sciences Center, October 22, Denver CO: "Life extension as resistance to stress: toward a molecular description in *C. elegans."*

Department of Molecular Life Science, Tokai University School of Medicine, October, 27, Isehara, Kanagawa, Japan, “Life extension as resistance to stress: toward a molecular description in *C. elegans.”*

Department of Aging Angiology, Shinshu University School of Medicine, November 4 Asahi, Matsumoto, Japan: “Life extension as resistance to stress: toward a molecular description in *C. elegans.”*

Lawrence Berkeley National Laboratory, December 8, Berkeley, CA: “Gerontogenes in the nematode and their role in the response to stress.”

1999:

Medical Genetics Program, University of Colorado Health Sciences Center, May 13, Denver, CO: “Molecular genetic approaches to slowing organismic aging and extending healthy life.”

Philadelphia, PA: “The role of stress resistance in the specification of life extension in *C. elegans*.”

Department of Biology, University of North Carolina at Chapel Hill, Oct. 22, Chapel Hill, NC: “The role of stress resistance in the specification of life extension in *C. elegans*.”

2000:

Department of Environmental, Population and Organismic Biology, University of Colorado at Boulder, Sept.15, “The role of stress resistance in the specification of life extension in the nematode *C. elegans*.”

Molecular, Cellular and Developmental Biology, University of Colorado, Sept. 28, Boulder, CO: “Mouse models of human alcoholism: genes underlying ethanol neurosensitivity.”

NIAAA QTL Mapping Workshop, Bethesda, MD, Nov. 30, "QTL ID to gene ID for alcohol's hypnotic action.”

Neurogenetics, Inc., San Diego, CA, Dec. 7, “Potential clinical relevance of *daf-16* homologs.”

2001:

Alcohol Research Center, University of Texas at Austin, TX, March 5, “Mouse models of human alcoholism: genes underlying hypnotic neurosensitivity to ethanol.”

Alcohol Research Center, Wake Forest University, Greenboro, NC, April, “Mouse models of human alcoholism: genes underlying ethanol hypnotic neurosensitivity.”

Roche Bioscience, Palo Alto, CA, April 25, “Mapping QTLs for alcohol and drug sensitivity in mice.”

University of Rochester, Rochester, NY, Shock Center on Aging, Sept 10, “Genetic analysis of aging mutants in *C. elegans* reveals an insulin/IGF-1 pathway regulating life extension and stress resistance; are there human applications?”

Fitzsimons BioTechnology Park, Aurora, CO, Sept 26, “Finding the longevity gene…in Colorado.”

Department of Psychology, University of Colorado at Boulder, Nov. 26, “Playing the gene game to understand aging.”

2002:

California Institute of Technology, January 22, “Aging mutants in *C. elegans* reveal trade-offs between life extension and reduced fitness; are there human applications?”

Oak Ridge National Laboratory, Oak Ridge, TN, February 25, ”Identification of life extension genes and relevance to humans and mice.”

Institute of Molecular Biology and Biotechnology, Foundation for Research and Technology, Heraklion, Crete, Greece, May 23, “Increased resistance to environmental stressors and diseases of aging: common-ground among all gerontogenes.”
Department of Nutrition, University of Tennessee, Knoxville, TN, Oct. 18, “Playing the gene game to understand aging.”

2003:
Annual Retreat of the Tennessee Mouse Genetics Consortium, Nashville, TN, Jan. 16, “Lessons from the worm for the mouse.”
Department of Integrative Physiology, University of Colorado at Boulder, Boulder, CO, Dec. 4, “Life extension mutants in *C. elegans.”*
Case Western Reserve, Cleveland, OH, Dec.10, “Programmed aging in the nematode *Caenorhabditis elegans*? Environmental stress targets a *daf-16* dependent pathway.”

2004:
Samuel Lunenfeld Research Institute, Toronto, Canada, March 31, “Genes for life extension: seven-fold increase; is that all there is.”
Department of Experimental Medicine and Biochemical Sciences, University of Rome, "Tor Vergata”, Rome, Italy, "Tor Vergata, May 4, “Genes, environment and chance specify the life span and aging.”
Department of Nematology, Wageningen University, Wageningen, The Netherlands, December 14, “Genetic, environmental and chance determination of the life span and aging.”

2005:
Laboratory of Experimental Gerontology, Gerontology Research Center, National Institutes on Aging, Baltimore MD., April 19, “Genetic, environmental and chance determination of the life span and aging.”
Institute for Biomedical Aging Research of the Austrian Academy of Sciences, July 10-11, Innsbruck, Austria: “Genes, environment and chance determine longevity.”
Salzburg University, Department of Genetics, July 11-12, Salzburg, Austria: “Genes, environment and chance determine longevity.”
Karl Franzens University, Department of Molecular Biology, July 13-14, Graz, Austria: “Genes, environment and chance determine longevity.”
Washington University School of Medicine, Department of Molecular Biology & Pharmacology, November 7, St. Louis, Missouri: “Genes, environment and chance determine longevity.”
University of Alabama, Birmingham Center for Aging, Dec 2, Birmingham, Alabama. 2005 Annual Hayflick Lecture, honoring contributions to the biology of aging field. “Genes, environment and chance determine longevity.”
University of Arkansas, Department of Biochemistry and Molecular Biology, Dec. 14, Little Rock, Arkansas: “Genes, environment and chance coordinately specify life span and aging.”

2006:
University of Texas, Austin, TX, March 23, “Roles of genes environment and chance in determining life span.”
Mayo Clinic, Rochester, MN, May 26, “Genes, environment, and chance all play a role in determining individual life span: how much of each?”
Mayo Clinic, Rochester, MN, October 4, “Life extension mutants in C. *elegans.*”

2007:
Barshop Institute, University of Texas Health Sciences Center San Antonio, March 7, San Antonio, TX "How genes, environment and chance work together to determine life span."
Boulder, CO, June11-13, Biodemograpy - University of Colorado Population Center Summer Short Course, "The genetics of longevity."
Max Planck Institute for Demography, Rostock, Germany, Nov.13, "Genetic demography for using the nematode."

2009:
The Jackson Lab, Bar Harbor, ME, May 21, "Genetic analysis of the aging processes."

2010:
Portland, OR, June 4-7, The Biology of Aging: A Meeting of Minds to Celebrate Award Winning Science. Keynote Address: "Dissecting stochastic variation determining physiologic states and longevity."
Newcastle University, Institute for Ageing and Health, Newcastle, England, Sept. 15, "Using genetics to dissect the processes of aging."
San Antonio,TX, December 14, Cellular and Structural Biology Seminar Series, "The role of genes, environment and chance in determining the processes of aging."

2011:
Baltimore, MD, January 11, Nathan Shock Center for Aging Research, "Dissecting aging: genetic and non-genetic approaches."
Leiden, The Netherlands, Nov. 17, Department of Epidemiology, "Genetics, environment and chance play a role in determining life expectancy: using a nematode model to parse the effects of each."

2012:
Birmingham, AL, Oct. 9, Nutrition Obesity Research Center, University of Alabama at Birmingham, "Genetic and stochastic dissection of aging."
Fort Collins, CO, Nov. 9, Department of Health and Exercise Science, "Dietary Restriction in Worms and Mice."
Lake Konstanz, Austria, Aug. 3, University Konstanz, "Aging: Exploring Genes, Environment and Chance in C. elegans."

2013:
Baltimore, MD, May 30 – June 3, 42nd Annual Meeting of the American Aging Association, "Healthspan vs Lifespan" What's Up in *Caenorhabditis elegans*."
Santa Barbara, CA, June 3-5, 26th Annual AFAR Grantee Meeting, "Stochastics and Biomarkers of Future Health."
San Antonio, TX, June 8 - 13, 21st Annual Summer Training Course in Experimental Aging Research, "(1) Use of Invertebrates to Discover Pathways in Aging": (2) Resistance to Stress as a Pathway in Longevity."
Boston, MA, June 17, Harvard Paul Glenn Symposium on Aging, "Genetic and Epigenetic Modulation of Stochastic Effects on Aging."
Cologne, Germany, December 5, University of Cologne, CECAD Cluster of Excellence: Cellular Stress Responses in Aging-Associated Disease: Using Genetics to Slow the Rate of Aging and Increase Stress Resistance in Worms and in Mice."
2015:
2016: Boulder, CO
Toronto, Ontario, Sept. 20, Northern Ontario School of Medicine, "Aging as an Emergent Property of Resistance to Stress"

Current Thesis Committees (for students not under my direction)

Cal Tech student,

Ph.D, Thesis Committee, Innsbruck Austria, Ms. Andrea Taferner: “The aging of biological communication systems”, August, 2015

Recent Undergrads (Past students estimated to be > 100: 1988 – current)

Anita Lowe (see below)

Laura Gentile, Integrative Physiology, Undergraduate Research Opportunity Program (2011 – 2012)

Lindsey Mae Beverly, Integrative Physiology (2011 – 2012)

Vinod Kantha, Integrative Physiology (2011 – 2012)

Katherine Karabus, Integrative Physiology (2011 – 2012)

Eli Finer, Integrative Physiology (2013 – 2014)

Jerome Castillion, Integrative Physiology (2012 – 2014)

Cody Jackson, Integrative Physiology (2013 – 2014)

Samantha Humann, Integrative Physiology, UROP (2014)

Leah Reagan Greenfield, UROP (2015, 2016,2017)

Alexa Mejorada, Integrative Physiology, UROP (2017)

Past Undergrads of Merit

Anita Lowe, recipient Howard Hughes Medical Institute Grant, Integrative Physiology, Summa Cum Lauda; recipient: “Best Student in the College of Arts and Sciences (2011), Currently at Stanford Medical School.

David Kitzenberg, Integrative Physiology, *Summa Cum Lauda*, recipient Howard Hughes Medical Institute Grant (2011 – 2012)

Breanne Lauren Newell, Integrative Physiology, Sum Lauda, Undergraduate Research Opportunity Program (2011 – 2012)

Former Graduate Students (all PhD except as noted)

1988-1994, Tom Fabian, Last: GenoPlex Corp. Denver CO

1989-1994, Anne Brooks, Last: Academic advisor, Integrative Physiology, CU Boulder

1990-1994, Paul Markel, Professor, Minot State University, ND

1990-1996, Stacey Duhon, Vice President for Student Affairs, Grambling State University

1993-1996, David Shook, Research Scientist, University of Virginia, Charlottesville

1996-2002, Jim Cypser, Research Associate, University of Colorado, Boulder

1998-2001, Jeremy Owens, Director of Student Services and Adjunct Psychology, Westwood College Online, Denver, CO

2001-2005, Oge Arum, Research Fellow, University of Illinois

2003-2008, Clarissa Parker, Assistant Professor, Middlebury College

2009 – 2011, Larry Taylor, MS, Graduate Student, U Cal, Berkeley

2011 – 2014, Breanne Newell, MS, Now in PhD program IPHY

2014 – 2015, Hannah Shapero, Integrative Physiology, University of Colorado at Boulder

Current Graduate Students

2012 – 2019, Breanne Newell, Integrative Physiology, University of Colorado at Boulder

2016 – 2019, Garrett Jeffrey Schumacher, Integrative Physiology, University of Colorado at Boulder

Past Post-Doctoral Fellows

Beth Bennett, Ph.D. from University of Colorado at Boulder. Current Position: University of Colorado at Denver

Chris Downing, Ph.D from State University of New York at Albany. Current Position: Assistant Professor, Idaho State University; Pocatello, ID

Vaughn Gehle, Ph.D. from UC Irvine. Current Position: South West State University, MN, Associate Professor

Edward Hutchinson, Ph.D from UC Irvine

Takamasa Ishii, Ph.D from Kyoto University. Current Position: Tokai School of Medicine

Nate Kahn, Ph.D from Denver University, Current Position unknown

Chris Link, Ph.D. from U Mass. Amherst, Associate Professor, Univ. Colo. Boulder, CO

Gordon Lithgow, Current Position: Senior Research Scientist, Buck Institute; Novato, CA

Maria McClure, Ph.D. from University of Colorado Health Sciences Center. Current Position: Martek Pharmaceuticals

Simon Melov, Current Position: Senior Research Scientist, Buck Institute; Novato, CA

Alex Mendenhall, Ph.D., University of North Texas, Position: Researcher, Hutchinson Cancer Inst.; Seattle Washington

Junji Mitsushita, Ph.D. from Shinshu University. Current Position: Physician, Shinshu University

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