

CURRICULUM VITAE

JOHN MICHAEL SEDIVY

TITLE

Herman C. Bumpus Chair in Biology

Professor of Medical Science
Department of Molecular Biology, Cell Biology and Biochemistry
Brown University

ADDRESS

Business: Department of Molecular Biology, Cell Biology and Biochemistry
Laboratories for Molecular Medicine
Brown University
70 Ship Street
Providence, RI 02903
TEL 401-863-9654 (admin); 401-863-7631 (direct); FAX 401-863-9653
e-mail JOHN_SEDIVY@BROWN.EDU

ACADEMIC DEGREES

B.Sc. 1978 with Honors, Zoology, University of Toronto
Ph.D. 1985 Microbiology and Molecular Genetics, Harvard University, Dan Fraenkel, supervisor

PROFESSIONAL APPOINTMENTS

1984–1988 Postdoctoral Fellow, Massachusetts Institute of Technology, Phillip Sharp, supervisor
1988–1993 Assistant Professor, Department of Molecular Biophysics and Biochemistry, Yale University
1993–1995 Associate Professor, Department of Molecular Biophysics and Biochemistry, Yale University
1996–1998 Associate Professor, Department of Molecular Biology, Cell Biology and Biochemistry, Brown University
1998–present Professor, Department of Molecular Biology, Cell Biology and Biochemistry, Brown University
2005–present Chair, Department of Molecular Biology, Cell Biology and Biochemistry, Brown University
2005–present Director, Center for Genomics and Proteomics, Brown University

RESEARCH INTERESTS

Replicative senescence, cellular aging, c-Myc oncogene, control of cell cycle progression, targeted homologous recombination

PROFESSIONAL HONORS AND AWARDS

1974 Ontario Scholar
1977 New College (University of Toronto) In-course Scholarship
1981 Ryan Foundation (Cincinnati) Fellowship
1984 Medical Research Council (Canada) Postdoctoral Fellowship
1989 March of Dimes Basil O'Connor Starter Scholar
1990 NSF Presidential Young Investigator
1991 Andrew Mellon Award

PROFESSIONAL SOCIETY MEMBERSHIPS

American Association for Cancer Research
American Association for the Advancement of Science
American Society for Microbiology
Genetics Society of America
American Society for Biochemistry and Molecular Biology

SERVICE TO PROFESSION

Study Sections and Grant Reviews

1994–1997 US Army Breast Cancer Initiative
Member, Scientific Advisory Committee
Molecular Biology Study Section

1995 National Science Foundation
Ad hoc external grant reviewer

1996 American Cancer Society
Ad hoc member, Peer Review Committee
Developmental Biology Study Section

1996–2001 American Cancer Society
Member, Peer Review Committee
Development, Differentiation, and Cancer Study Section

1997 National Institutes of Health
Ad hoc member, Scientific Review Group
Human Embryology and Development-2 Study Section (HED-2)

1998 National Institutes of Health
Member, Scientific Review Group
Longevity Assurance Genes RFA Study Section (NIA-LAG)

- 1998 National Institutes of Health
Member, Scientific Review Group
Small Business and Innovation Study Section (SBIR-CBY-2)
- 1999 National Institutes of Health
Ad hoc member, Scientific Review Group
Molecular Cytology Study Section (CTY)
- 1999 National Institutes of Health
Ad hoc member, Scientific Review Group
Cell Development and Function Study Section (CDF-2, formerly CTY)
- 1999 National Institutes of Health
Member, Program Project (P01) Site Visit Review
NCI, Jefferson Cancer Center, R. Baserga P.I.
- 1999 US Army Breast Cancer Initiative
Member, Scientific Advisory Committee
Molecular Biology Study Section
- 2000 National Institutes of Health
Scientific Review Group
NIA Nathan Shock Centers of Excellence
- 2000 US Army Breast Cancer Initiative
Member, Scientific Advisory Committee
Molecular Genetics Study Section
- 2001 US Army Breast Cancer Initiative
Member, Scientific Advisory Committee
Molecular Genetics Study Section
- 2000–2003 National Institutes of Health
Member, Scientific Review Group
Cell Development and Function Study Section (CDF-2)
- 2003–2006 National Institutes of Health
Charter Member, Scientific Review Group
Cellular Mechanisms of Aging and Development Study Section (CMAD)
- 2005 American Federation for Aging Research
Member, Scientific Review Group
AFAR Research Committee

- 2005 American Federation for Aging Research
Member, Scientific Review Group
Glenn/AFAR Breakthroughs in Gerontology Initiative
- 2005 National Institutes of Health
Chair
Special Emphasis Panel Cellular Mechanisms of Aging and Development
(ZRG1-CMAD)
- 2005 National Institutes of Health
Member, Scientific Review Group
NIGMS P20 Exploratory Center Grants for hES Cell Research
- 2006 National Institutes of Health
Ad hoc member, Scientific Review Group
Molecular Genetics C Study Section (MGC)
- 2007 National Institutes of Health
Ad hoc member, Scientific Review Group
Cellular Mechanisms of Aging and Development Study Section (CMAD)

Meetings Organized or Chaired

- 1998–present Co-organizer (with Marc Tatar, Brown), Annual Colloquium “Biology of Human Aging”, Brown University
- 1999 Chairman, Session on “Mechanisms of Immortality”
1999 American Society for Biochemistry and Molecular Biology International Meeting, San Francisco, CA
- 1999 Chairman, Session on “Apoptosis”
Fifteenth Annual Meeting on Oncogenes and Tumor Suppressors, Frederick, MD
- 2001 Chairman, Session on “Apoptosis”
Seventeenth Annual Meeting on Oncogenes and Tumor Suppressors, Frederick, MD
- 2002 Co-organizer (with Gordon Peters, ICRF London, UK), Banbury Conference on Cellular Immortalization, Cold Spring Harbor Laboratory, NY
- 2007 Discussion Leader, Session on Stem Cells
Gordon Research Conference on Oxidative Stress and Disease, Ventura, CA

Editorial Work

- 2001–2004 *Journal of Molecular Medicine*, Editorial Board Member
2002–2006 *The Aging Cell*, Section Editor

2003–present *Experimental Cell Research* Editorial Board Member
2006–present *The Aging Cell*, Co-Editor-in-Chief

Manuscript Reviews

1988–1998 *Biochemistry, Biochimica et Biophysica Acta, Cell Growth and Differentiation, EMBO Journal, Experimental Cell Research, FASEB Journal, Genetic Analysis, Journal of Biological Chemistry, Molecular and Cellular Biology, Nucleic Acids Research, Oncogene*; count of manuscripts reviewed was not maintained

1998 4 manuscripts reviewed: *Molecular and Cellular Biology* (2); *Nature Genetics* (2)

1999 20 manuscripts reviewed: *American Journal of Physiology* (1); *Blood* (1); *Cell Growth and Differentiation* (1); *Experimental Cell Research* (1); *Journal of Cell Biology* (1); *Molecular and Cellular Biology* (10); *Nature* (1); *Nature Genetics* (1); *Oncogene* (3)

2000 19 manuscripts reviewed: *Molecular and Cellular Biology* (3); *Nature* (4); *Oncogene* (5); *Proc. Natl. Acad. Sci. USA* (5); *EMBO Journal*. (2)

2001 13 manuscripts reviewed: *Cancer Research* (1); *Cell Growth and Differentiation* (2); *Journal of Virology* (1); *Molecular Biology of the Cell* (1); *Molecular and Cellular Biology* (7); *Nature Medicine* (1)

2002 14 manuscripts reviewed: *Experimental Cell Research* (1); *Immunity* (1); *Journal of Leukocyte Biology* (1); *Molecular and Cellular Biology* (2); *Nature Cell Biology* (1); *Nature Medicine* (1); *Oncogene* (3); *Proc. Natl. Acad. Sci. USA* (1); *Science* (1); *EMBO Reports* (1); *Trends in Cell Biology* (1)

2003 15 manuscripts reviewed: *Cancer Cell* (1); *EMBO Journal* (2); *EMBO Reports* (3); *Experimental Cell Research* (2); *Molecular and Cellular Biology* (4); *Molecular Biology of the Cell* (1); *Proc. Natl. Acad. Sci. USA* (2)

2004 18 manuscripts reviewed: *Cell* (1); *Molecular Cell* (2); *Experimental Cell Research* (5); *Molecular and Cellular Biology* (4); *Proc. Natl. Acad. Sci. USA* (1); *Nature* (1); *Nature Genetics* (1); *Nature Cell Biology* (2); *Nature Reviews Cancer* (1); *Nucleic Acids Research* (1)

2005 5 manuscripts reviewed: *Aging Cell* (1); *Cell* (2); *Journal of Cell Science* (1); *Nature Cell Biology* (1)

2006 11 manuscripts reviewed: *Aging Cell* (1); *Cell* (3); *EMBO Journal* (1); *Journal of Biological Chemistry* (1); *Journal of Cell Biology* (1); *Molecular and Cellular Biology* (2); *Molecular Cell* (1); *Nature* (1)

Consulting Agreements

1986-1988 Biogen Inc., Cambridge, MA

1992-1994 Creative Biomolecules, Hopkinton, MA
2000-2002 Millenium Pharmaceuticals, Cambridge, MA

Scientific Advisory Boards

2001-present Advanced Cell Technology, Inc., Worcester, MA
2001-present Biolog, Inc., Hayward, CA
2002-2003 Harvard Medical School, Boston, MA; Cell Cycle Regulators of Oral Cancer Program Project, External Advisory Committee
2003-2006 Lifespan Academic Medical Center, Providence, RI; Center of Biomedical Research Excellence (COBRE) External Advisory Committee
2005-present Yale School of Medicine, New Haven, CT; Molecular Basis of Viral and Cellular Transformation Program Project, External Advisory Committee

Expert Witness

2001 Kaye Scholler, LLP, New York, NY; Lexicon Genetics, Inc., vs. Deltagen, Inc.

SERVICE TO INSTITUTION

Yale

Junior Faculty Scholar Review Committee, School of Medicine
MSTP Admissions Committee, School of Medicine
Swebelius Fund Postdoctoral Review Committee, Yale Comprehensive Cancer Center
Biohazard Committee, Department MB&B
Executive Committee, Department MB&B
Junior Faculty Search Committee, Department MB&B
Long Range Planning Committee, Department MB&B
Undergraduate Curriculum Advisory Committee, Department MB&B

Brown Institutional Committees

1996 Graduate Admissions Committee, MCB Department
Co-chair with Prof. Jorg Martin

1996-present Graduate Student Advisory Committees
Graduate Program in Molecular Biology, Cell Biology, and Biochemistry
Member

1997 Graduate Admissions Committee, MCB Department
Chair

1997-1998 Planning Committee for Life Sciences Building
Member

1998 Graduate Admissions Committee, MCB Department
Chair

1998 Faculty Search Committee
Department of Neurosurgery, Rhode Island Hospital
Member

1998–2001 Executive Committee
Graduate Program in Molecular Biology, Cell Biology, and Biochemistry
Member

1998–2003 Executive Committee
Center for Gerontology and Health Care Research
Member

1998–2000 Faculty Search Committee
Greer Chair in Gerontology
Member

1999 Committee for Competitive Review and Site Visit
NIH Training Grant in Molecular Biology, Cell Biology, and Biochemistry
Member

1999 Advisory Committee to Dean of Medicine and Biological Sciences
Working Group on Genetics
Member

1999 Faculty Search Committee
Molecular Geneticist Faculty Position, MCB Department
Chair

1999 Assistant Director
Graduate Program in Molecular Biology, Cell Biology, and Biochemistry

2000–2005 Executive Planning Committee
Center for Genetics and Genomics
Chair

2000–2005 Principal Investigator and Director
Center of Biomedical Research Excellence (COBRE)
Center for Genetics and Genomics

2000–2006 Director of COBRE Core A (Administrative)

2000–2001 COBRE Core B (Transgenics)

2000–2006 Director of COBRE Core C (Genomics)

2000 Faculty Search Committee
Molecular Geneticist Faculty Position, MCB Department
Member

2000	Faculty Search Committee Bioinformatics Faculty Position, MCB Department Member
2001	Faculty Search Committee Director of Brown Cancer Center Member
2001–2003	Faculty Search Committee Director of Division of Cardiology, Lifespan Academic Medical Center Member
2001	Faculty Search Committee Director of COBRE Imaging core Chair
2001	Faculty Search Committee Bioinformatics Faculty Position, MCB Department Member
2001	Faculty Search Committee Biochemistry Faculty Position, MCB Department Member
2002	Advisory Committee to Dean of Medicine and Biological Sciences Strategic Planning Working Group, BioMed Division Member
2002	Faculty Search Committee Director of COBRE Transgenic core Chair
2002	Faculty Search Committee Neuroscience Faculty Positions, Neuroscience Department Member
2003–2006	Faculty Search Committee Genomics and Proteomics Faculty Positions, Bio-Med Division Chair
2003 - 2004	Building Committee for Laboratories for Molecular Medicine Member
2003–2006	Executive Committee Center for Computational Molecular Biology Member

- 2004–present Steering Committee
Laboratories for Molecular Medicine
Member
- 2004–present Executive Committee
Graduate Program in Molecular Biology, Cell Biology, and Biochemistry
Member
- 2005 Faculty Search Committee
Center for Statistical Sciences Faculty Positions
Member
- 2005 Dean's Action Group on Scientific Taxonomy
Brown Medical School
Chair
- 2005–present Executive Committee
Department of Molecular Biology, Cell Biology, and Biochemistry
Chair
- 2005–2006 Principal Investigator and Director
Center of Biomedical Research Excellence (COBRE)
Center for Cancer Signaling Networks
- 2006–present Executive Committee
Center for Genomics and Proteomics
Chair

Ph.D. Thesis Committees (Brown)

- 1996–1997 Zitek, Melanie, Pathobiology (Elaine Bearer, thesis supervisor)
1996–1997 Wehbe, Tarek, Pathobiology (John Sedivy, thesis supervisor)
1996–2000 Stevenson, Lisa, Pathobiology (Ray Frackelton, thesis supervisor)
1996–1997 Yoon, Jung-Won, MCB (Kristi Wharton, thesis supervisor)
1996–1999 Myung, Kyung-Jae, MCB (Eric Hendrickson, thesis supervisor)
1996–2000 Jung, Joonil, MCB (Ken Zaret, thesis supervisor)
1996–2000 Mateyak, Maria, MCB (John Sedivy, thesis supervisor)
1996–2000 Meszaros, Adraina, Pathobiology (Jorge Albina, thesis supervisor)
1997–2002 Azaro, Marco, MCB (Arthur Landy, thesis supervisor)
1997–2002 Braastad, Corey, MCB (Eric Hendrickson, thesis supervisor)
1997–2003 Li, Gang, MCB (Eric Hendrickson, thesis supervisor)
1997–2004 Wei, Shan, MCB (John Sedivy, thesis supervisor)
1998–2000 Mills, David, Pathobiology (Cynthia Jackson, thesis supervisor)
1998–2001 Pan, Jennifer, Pharmacology (Diane Lipscombe, thesis supervisor)
19982001 Wei, Wenyi, MCB (John Sedivy, thesis supervisor)
19982005 Yang, Zhongfa, MCB (Alan Rosmarin, thesis supervisor)
1999–2003 Ashok, Aarthi, MCB, (Walter Atwood, supervisor)
1999–2005 Creely, Hilliary, MCB (Justin Fallon, thesis supervisor)
1999–2000 Dunaway, Stephen, MCB (Eric Hendrickson, thesis supervisor)

1999–2005	Mumm, Jeffrey, MCB (Arthur Landy, thesis supervisor)
1999–2003	Pearson, Brooke, Pathobiology (Andrew Campbell, thesis supervisor)
1999–2003	Voronina, Katia, MCB (Gary Wessel, thesis supervisor)
2000–2004	Lizotte, Donna, MCB (Alison DeLong, thesis supervisor)
2000–2004	O'Connell, Brenda, MCB (John Sedivy, thesis supervisor)
2000–2004	Williams, Lisa, MCB (Ray Frackelton, thesis supervisor)
2000–2004	Chung, Alicia, MCB (Eugene Chin, thesis supervisor)
2000–2005	Jobling, Wendy, MCB, (John Sedivy, thesis supervisor)
2001–2007	Justina Gonzales, MCB, (Jeffrey Singer, thesis supervisor)
2001–2005	Sanders, Jennifer, MCB (Philip Gruppuso, thesis supervisor)
2002–2006	Isil Guney, MCB, (John Sedivy, thesis supervisor)
2002–2007	Pooja Agrawal, MCB, (John Sedivy, thesis supervisor)
2002–2007	Amy Whiting, MCB, (John Sedivy, thesis supervisor)
2002–2007	Kate Manley, MCB (Walter Atwood, thesis supervisor)
2003–2006	William Querbes, Pathobiology (Walter Atwood, thesis supervisor)
2004–present	William Tsiaras, MD/PhD (Robert Smith, thesis supervisor)

Ph.D. Thesis Committees (outside examiner)

2003	Cynthia Ho, University of Toronto (Linda Penn, thesis supervisor)
2005	Liza Konikova, Tufts Medical School (Brent Cochran, thesis supervisor)
2006	Jesse Boehm, Harvard Medical School (William Hahn, thesis supervisor)

Undergraduate Advising (Brown only)

1998–2000	Peter Benjamin, Hannah Cohen, Irene Ho, Caron Nelsen, Joanne Sylvia, Diane Yaros, Alenka Zeman, Brian Zipser
-----------	--

TEACHING

Yale

1989	MBB 251La "Laboratory for Biochemistry" MBB 744b "Topics in Eukaryotic Molecular Genetics"
1990	MBB 476b "Senior Seminar" MBB 755b "Critical Readings in Molecular Genetics"
1991	MBB 744b "Topics in Eukaryotic Molecular Genetics" MBB 776b "Responsible Conduct of Research"
1992	MBB 301b "Principles of Biochemistry II" MBB 776b "Responsible Conduct of Research"
1993	MBB 361Lb "Laboratory for Biochemistry" MBB 744b "Topics in Eukaryotic Molecular Genetics" MBB 776b "Responsible Conduct of Research"

1994 MBB 360Lb "Laboratory for Biochemistry"
MBB 610a "Gene Therapy"
MBB 743b "Molecular Genetics of Eukaryotes"

1995 MBB 360Lb "Laboratory for Biochemistry"

Brown

1996 BI047 "Genetics"
Course Leader (Fyodor Urnov, co-instructor)
Enrollment: 203

1997 BI047 "Genetics"
Course Leader (Marc Tatar, co-instructor)
Enrollment: 284

1998 BI047 "Genetics"
Course Leader (Marc Tatar, co-instructor)
Enrollment: 186

1998 BI0154 "Molecular Genetics"
Co-instructor with Arthur Landy (course leader)
Enrollment: 34

1999 BI047 "Genetics"
Course Leader (Marc Tatar, co-instructor)
Enrollment: 162

1999 BI220 "Current Topics in Biochemistry and Molecular Biology"
Course Leader (Arthur Landy, co-instructor)
Enrollment: 11

2000 BI047 "Genetics"
Course Leader (Marc Tatar, co-instructor)
Enrollment: 198

2001 Sabbatical leave

2002 BI028 "Biochemistry"
Co-instructor with Kimberly Mowry (course leader)
Enrollment: 108

2003 BI221 "Current Topics in Biochemistry and Molecular Biology"
Co-instructor with Jeffrey Singer (course leader)
Enrollment: 8

- 2003–present BI213 "Techniques in Molecular and Cellular Sciences"
Jeffrey Morgan, Course leader
Responsible for 1 lecture (Gene Expression Microarrays)
Enrollment: 12-16
- 2003–present BC261 "Statistical Methods in Bioinformatics"
Constantine Gatsonis, Course leader
Responsible for 2 lectures (Gene Expression Microarrays)
Enrollment: 12-18

TRAINEES

Undergraduate Independent Research (Brown only)

- 1997–1998 Leslie Stephens
1997–1998 Bechien Wu
1997–1998 Theresa Allenghat
1998–1999 Kathryn Davis
1998–1999 Marcus Gustafsson
1998–2000 Wanny Tam
1999–2000 Diane Yaros
1999–2000 Alenka Zeman
2000–2001 Mark Ewalt
2000–2001 Karen Livne
2000–2002 Lily Wang
2000–2002 Ann Cheung
2001–2002 Sabrina Richards
2002–2003 Jennifer Rosenberg
2003–2004 Shirley Wu
2005-2006 Mark Fereira

MD Independent Research

- 2005-2006 Clara Kim

PhD Candidates (all)

- 1989–1994 Keith Hanson (Yale degree)
1994–1999 Alex Bazarov (Yale degree)
1995–2000 Maria Mateyak
1996–2004 Shan Wei
1997–2001 Wenyi Wei
1998–2004 Brenda O'Connell
2000–2005 Isil Guney
2000–2007 Pooja Agrawal
2002–2005 Wendy Jobling
2002–2007 Amy Whiting
2004–2005 Isin Cakir
2005-present Chui-Sun Yap

Graduate Rotation Students (Brown only)

1996	Oxana Karpenko
1996	Maria Hleb
1997	Xiaolan Hu
1999	Tom Bell
1999	Alicia Chung
1999	Prasana Satpute
1999	Isil Guney
2001	Amy Whiting
2002	Wananit Wimuttisuk
2003	James Gagnon
2003	Isin Cakir
2004	Tsedensodnom Orkhontuya
2005	Chui-Sun Yap
2006	Courtney Klaips
2007	Edward Peckham

Postdoctoral Associates (all)

1990–1993	Steve Prouty
1990–1993	Masayoshi Shichiri
1990–1994	Shengfeng Li
1993–1996	Susumu Adachi
1994–1996	Jeremy Brown
1995–1999	Annie Dutriaux
1996–2000	Alvaro Obaya
1997–2000	Noemi Ramos-De Simone
1998–2000	Ruth Hemmer
2001–2002	Wenyi Wei
2000–2007	Christoph Schorl
2000–2006	Utz Herbig
2002–2003	Antonei Csoka
2004–2005	Brenda O'Connell
2005–present	Jessie Chandika Jeyapalan
2005–present	Ursula Munoz-Najar

Investigator

2001–2005	Carl Simkevich
-----------	----------------

Assistant Professor (Research)

1996–2001	Kam Yeung
-----------	-----------

Associate Professor (Research)

1994–1997	Peter Rabinovich
-----------	------------------

GRANT SUPPORT

Past

Agency: National Institutes of Health
Type: BRSG Fluid Funds
Period: 11/01/88-10/31/89
Title: N/A
Principal Investigator: John Sedivy

Agency: American Cancer Society
Type: Institutional Research Grant
Period: 01/01/89-12/31/89
Title: *The Function of the Src Oncogene in Cellular Physiology*
Principal Investigator: John Sedivy

Agency: American Cancer Society
Type: Research Grant #CD-430
Period: 07/01/89-06/30/92
Title: *The Function of Myc Oncogene in Cellular Physiology*
Principal Investigator: John Sedivy

Agency: March of Dimes Birth Defects Foundation
Type: Basil O'Connor Starter Scholar Research Award # 5-755
Period: 09/1/89-08/31/91
Title: *Gene Therapy of Mammals Using Targeted Homologous Recombination*
Principal Investigator: John Sedivy

Agency: National Science Foundation
Type: Presidential Young Investigator Award DMB-907715
Period: 01/01/90-03/31/95
Title: N/A
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: R01 GM41690-01-05
Period: 01/01/90-12/31/94
Title: *Gene Disruption by Homologous Recombination in Mammals*
Principal Investigator: John Sedivy

Agency: Eli Lilly and Company
Type: unrestricted gift
Period: 1993
Title: N/A
Direct costs (total): 5,000
Principal Investigator: John Sedivy

Agency: The Alternatives Research & Development Foundation
Type: Private
Period: 08/01/94-07/31/95
Title: *A New Human Cell Culture Assay for the Identification of Anti-Cancer Drugs*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: P01 AR41492-03
Period: 09/01/94-08/31/95
Title: *A New Cell Culture Model of Human Skin Cancer (Sedivy portion)*
Principal Investigator: Robert Tigelaar

Agency: National Institutes of Health
Type: P01 AR41492-04
Period: 09/01/95-08/31/96
Title: *A New Cell Culture Model of Human Skin Cancer (Sedivy portion)*
Principal Investigator: Robert Tigelaar

Agency: National Science Foundation
Type: MCB 9514179
Period: 07/01/96-06/30/97
Title: *Structure and function of hnRNP proteins*
Principal Investigator: Kenneth Williams

Agency: National Institutes of Health
Type: R01 HG00982-01-03
Period: 06/01/94-05/31/97
Title: *Cloning system based on the E. coli F factor*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: R01 GM41690-07-10
Period: 07/01/95-06/30/99
Title: *Genetic studies of c-myc gene function in the cell cycle*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: R01 GM55435-01-03
Period: 07/01/96-06/30/99
Title: *Substrates of the Raf-1 protein kinase*
Principal Investigator: John Sedivy

Agency: Eli Lilly and Company
Type: Private
Period: 07/01/98-06/30/99
Title: *Gene targeting in human cells*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: R01 AG16694-01-05
Period: 04/01/99-03/31/04
Title: *Effectors of senescent states in human fibroblasts*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: R01 GM41690-11-14
Period: 07/01/99-06/30/03
Title: *Genetic studies of c-myc gene function in the cell cycle*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: P20 RR15578-01-05
Period: 10/01/00-06/30/05
Title: *Center for Genetics and Genomics*
Principal Investigator: John Sedivy

Agency: Progeria Research Foundation
Type: Private
Period: 07/01/01-06/30/03
Title: *Cloning the Gene for Hutchinson-Guilford Progeria Syndrome by Somatic Cell Complementation*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: P20 RR15578-06-10
Period: 7/01/05-06/30/10
Title: *Center for Cancer Signaling Networks*
Principal Investigator: John Sedivy, as of 05/01/06: Walter Atwood

Current

Agency: National Institutes of Health
Type: R01 GM41690-15-18
Period: 07/01/03-06/30/07
Title: *Genetic studies of c-myc gene function in the cell cycle*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: R01 AG16694-06-10
Period: 04/01/04-03/31/09
Title: *Effectors of senescent states in human fibroblasts*
Principal Investigator: John Sedivy

Agency: National Institutes of Health
Type: R01 GM41690-17S1-18S1
Period: 02/01/06-06/30/07
Title: *Biological complexity supplement to Genetic studies of c-myc gene function in the cell cycle*
Principal Investigator: John Sedivy

Pending

None

Postdoctoral Fellowships Awarded to Trainees

Steve Prouty	American Cancer Society Postdoctoral Fellowship
Masayoshi Shichiri	Argall L. and Anna G. Hull Fund Postdoctoral Fellowship (Yale Comprehensive Cancer Center)
Shengfeng Li	The Patrick and Catherine Weldon Donaghue Medical Research Foundation (Hartford, CT) Postdoctoral Fellowship
Susumu Adachi	Swebilius Cancer Research Award (Yale Comprehensive Cancer Center)
Annie Dutriaux	Association pour la Recherche sur le Cancer (France) Postdoctoral Fellowship
Alvaro Obaya	Ministerio de Educacion y Cultura (Spain) Postdoctoral Fellowship
Noemi Ramos-DeSimone	Minority supplement to NIH grant R01-GM41690-06-10, John M. Sedivy, P.I.
Utz Herbig	NRSA individual postdoctoral research award, F32 CA099388
Ursula Munoz_Najar	Philip Morris postdoctoral fellowship

Medical Student Research Fellowships Awarded to Trainees

Clara Kim Howard Hughes Medical Student Research Fellowship

PUBLICATIONS (102 total)

Books

1. Sedivy, J.M. and Joyner, A. (1992). *Gene Targeting*. W.H. Freeman Press, NY.

Invited Commentaries

1. Brown, J.P. and Sedivy, J.M. (1995). What could be simpler? Using human cells to study human cancer. *J. Am. Anti-Vivisect. Soc.* **103**: 15-18.

2. Sedivy, J.M. (2002). Gene targeting comes to top-down drug screens. *Trends Biotechnol.* **20**: 92-93.
3. Sedivy, J.M., Shippen, D.E. and Shakirov, E.V. (2003). Surprise ending (News & Views article). *Nat. Genet.* **33**: 114-116.
4. Sedivy, J.M. (2003). Reproductive cloning conserves cellular senescence (News & Views article). *Nat. Cell Biol.* **5**: 495-496.
5. Sedivy, J.M. (2007). Telomeres limit cancer growth by inducing senescence: Long-sought in vivo evidence obtained (Preview article). *Cancer Cell*, in press.

Refereed Reviews and Methods Chapters

1. Sedivy, J.M. (1988). New genetic methods for mammalian cells. *Bio/Technology*, **6**: 1192-1196.
2. Sedivy, J.M. (1991). Pilot scale protein production using inducible gene amplification. In: *Animal Cell Culture and Production of Biologicals*, R. Sasaki and K. Ikura (eds.), Kluwer Academic Publishers, Dordrecht, Netherlands, pp. 251-258.
3. Sedivy, J.M. (1998). Can ends justify the means?: Telomeres and the mechanisms of replicative senescence and immortalization in mammalian cells. *Proc. Natl. Acad. Sci. USA*, **95**: 9078-9081.
4. Sedivy, J.M. and Dutriaux, A. (1999). Gene targeting and somatic cell genetics: a rebirth or a coming of age? *Trends Genet.* **14**: 88-90.
5. Obaya, A.J., Mateyak, M.K. and Sedivy, J.M. (1999). Mysterious liaisons: the relationship between c-Myc and the cell cycle. *Oncogene* **18**: 2934-2941.
6. Sedivy, J.M. (2001). The cellular immortalization process: relevant issues for the generation of cell substrates for production of vaccines and other biologicals. In: F. Brown, A.M. Lewis, K. Peden and P. Krause (eds.), *Evolving Scientific and Regulatory Perspectives on Cell Substrates for Vaccine Development*. *Dev. Biol. (Basel)* **106**: 479-488.
7. Obaya, A.J. and Sedivy, J.M. (2002). Regulation of Cyclin-Cdk Activity in Mammalian Cells. *Cell. Mol. Life Sci.* **59**: 126-142.
8. Hemmer, R.M., Wei, W., Dutriaux, A. and Sedivy, J.M. (2003). Somatic cell knockouts of tumor suppressor genes. In: *Methods in Molecular Biology*, vol. 223, Tumor Suppressor Genes. Wafik S. El-Deiry, Editor. Humana Press, Totowa, New Jersey, USA. pp. 187-206.
9. Collins, C.J. and Sedivy, J.M. (2003). Involvement of the INK4a/ARF gene locus in senescence. *Aging Cell* **2**: 145-150.

10. Herbig, U. and Sedivy, J.M. (2006). Regulation of growth arrest in senescence: telomere damage is not the end of the story. *Mech. Ageing Dev.* **127**: 16-24 (PMID: 16229875).
11. Guney, I. and Sedivy, J.M. (2006). Cellular senescence, epigenetic switches and c-Myc. *Cell Cycle* **5**: 2319-2323 (PMID: 17102614).
12. Schorl, C. and Sedivy, J.M. (2007). Analysis of cell cycle phases and progression in cultured mammalian cells. *Methods* **41**: 143-150 (PMID: 17189856).
13. Sedivy, J.M., Munoz-Najar, U.M., Jeyapalan, J.C. and Campisi, J. (2007). Cellular senescence: A link between tumor suppression and organismal aging? In: *The Molecular Biology of Aging*, L. Guarente and L. Partridge, Eds., Cold Spring Harbor Laboratory Press, in press.

Refereed Research Articles

1. Goldstein, R., Sedivy, J.M. and Ljungquist, E. (1982). Propagation of satellite phage P4 as a plasmid. *Proc. Natl. Acad. Sci. USA* **79**: 515-519.
2. Geisselsoder, J., Sedivy, J.M., Walsh, R.B. and Goldstein, R. (1982). Capsid structure of satellite phage P4 and its P2 helper. *J. Ultrastruct. Res.* **79**: 165-173.
3. Sedivy, J.M., Daldal, F. and Fraenkel, D.G. (1984). Fructose biphosphatase of *Escherichia coli*: Cloning of the structural gene (*fbp*) and preparation of a chromosomal deletion. *J. Bacteriol.* **158**: 1048-1053.
4. Sedivy, J.M. and Fraenkel, D.G. (1985). Fructose biphosphatase of *Saccharomyces cerevisiae*: cloning, disruption and regulation of the *FBP1* gene. *J. Mol. Biol.* **186**: 307-319.
5. Sedivy, J.M., Babul, J. and Fraenkel, D.G. (1986). AMP-insensitive fructose biphosphatase in *Escherichia coli* and its consequences. *Proc. Natl. Acad. Sci. USA* **83**: 1656-1659.
6. Capone, J.P., Sedivy, J.M., Sharp, P.A. and RajBhandary, U.L. (1986). Introduction of UAG, UAA and UGA nonsense mutations at a specific site in the *Escherichia coli* chloramphenicol acetyltransferase gene: use in measurement of amber, ochre and opal suppression in mammalian cells. *Mol. Cell. Biol.* **6**: 3059-3067.
7. Sedivy, J.M., Capone, J.P., RajBhandary, U.L. and Sharp, P.A. (1987). An inducible mammalian amber suppressor: propagation of a poliovirus mutant. *Cell* **50**: 379-389.
8. Sedivy, J.M. and Sharp, P.A. (1989). Positive genetic selection for gene disruption in mammalian cells by homologous recombination. *Proc. Natl. Acad. Sci. USA* **86**: 227-231.
9. Schnipper, L.E., Chan, V., Sedivy, J.M., Jat, P.S. and Sharp, P.A. (1989). Gene activation by induced DNA rearrangements. *Cancer Res.* **49**: 6640-6644.

10. Leonardo, E.D. and Sedivy, J.M. (1990). A new vector for cloning large eukaryotic DNA segments in *E. coli*. *Bio/Technology* **8**: 841-844.
11. Prouty, S.M., Hanson, K.D., Boyle, A.L., Brown, J.R., Shichiri, M., Follansbee, M.R., Kang, W. and Sedivy, J.M. (1993). A cell culture model system for genetic analyses of the cell cycle by targeted homologous recombination. *Oncogene* **8**: 899-907.
12. Shichiri, M., Hanson, K.D. and Sedivy, J.M. (1993). The effects of *c-myc* expression on proliferation, quiescence, and the G₀ to G₁ transition in nontransformed cells. *Cell Growth Diff.* **4**: 93-104.
13. Li, S. and Sedivy, J.M. (1993). Raf-1 protein kinase activates the NF- κ B transcription factor by dissociating the cytoplasmic NF- κ B/I κ B complex. *Proc. Natl. Acad. Sci. USA* **90**: 9247-9251.
14. Karantza, V., Maroo, A., Fay, D. and Sedivy, J.M. (1993). Overproduction of Rb protein after the G₁/S boundary causes G₂ arrest. *Mol. Cell. Biol.* **13**: 6640-6652.
15. Hanson, K.D., Shichiri, M., Follansbee, M.R. and Sedivy, J.M. (1994). Effects of *c-myc* expression on cell cycle progression. *Mol. Cell. Biol.* **14**: 5748-5755.
16. Hanson, K.D., and Sedivy, J.M. (1995). Analysis of biological selections for high efficiency gene targeting. *Mol. Cell. Biol.* **15**: 45-51.
17. Li, S., Janosch, P., Tanji, M., Rosenfeld, G.C., Waymire, J.C., Mischak, H., Kolch, W. and Sedivy, J.M. (1995). Regulation of Raf-1 kinase activity by the 14-3-3 family of proteins. *EMBO J.*, **14**: 685-696.
18. Yang, T.-A., Heiser, W.C. and Sedivy, J.M. (1995). Efficient *in situ* electroporation of mammalian cells grown on microporous membranes. *Nucleic Acids Res.* **23**: 2803-2810.
19. Janosch, P., Schellerer, M., Seitz, T., Reim, P., Eulitz, M., Brielmeier, M., Kolch, W., Sedivy, J.M. and Mischak, H. (1996). Characterization of I κ B kinases: I κ B- α is not phosphorylated by Raf-1 or protein kinase C isozymes, but is a casein kinase II substrate. *J. Biol. Chem.* **271**: 13868-13874.
20. Weissinger, E.M., Eissner, G., Grammer, C., Fackler, S., Haefner, B., Yoon, L.S., Lu, K.L., Bazarov, A., Sedivy, J.M., Mischak, H. and Kolch, W. (1997). Inhibition of the Raf-1 kinase by cAMP agonists causes apoptosis of v-abl transformed cells. *Mol. Cell. Biol.* **17**: 3229-3241.
21. Brown, J.P., Wei, W. and Sedivy, J.M. (1997). Bypass of senescence after disruption of p21^{CIP1/WAF1} gene in normal diploid human fibroblasts. *Science* **277**: 831-834.
22. Mateyak, M.K., Obya, A.J., Adachi, S. and Sedivy, J.M. (1997). Phenotypes of c-Myc-deficient fibroblasts isolated by targeted homologous recombination. *Cell. Growth Diff.* **8**: 1039-1048.

23. Shichiri, M., Adachi, S., Sedivy, J.M. and Marumo, F. (1997). Biphasic regulation of the preproendothelin-1 gene by *c-myc*. *Endocrinology* **138**: 4584-4590.
24. Shichiri, M., Sedivy, J.M., Marumo, F. and Hirata, Y. (1997). Endothelin-1 is a potent survival factor for *c-Myc*-dependent apoptosis. *Mol. Endocrinol.*, **12**: 172-180.
25. Prouty, S.M., Maroo, A., Maucher, C., Mischak, H., Kolch, W. and Sedivy, J.M. (1998). Studies of perinuclear and nuclear translocation of the Raf-1 protein in rodent fibroblasts. *Biochim. Biophys. Acta*, **1404**: 6-16.
26. Lu, K.K., Bazarov, A.V., Yoon, L.S. and Sedivy, J.M. (1998). Isolation of temperature-sensitive mutations in the *c-raf-1* catalytic domain and expression of conditionally active and dominant-defective forms of Raf-1 in cultured mammalian cells. *Cell Growth Diff.*, **9**: 367-380.
27. Bunz, F., Dutriaux, A., Lengauer, C., Waldman, T., Zhou, S., Brown, J.P., Sedivy, J.M., Kinzler, K.W. and Vogelstein, B. (1998). The induction of p21 by p53 is required for sustained G2 arrest following DNA damage. *Science* **282**: 1497-1501.
28. Counter, C.M., Hahn, W.C., Wei, W., Dickinson-Caddle, S., Beijersbergen, R.L., Lansdorp, P.M., Sedivy, J.M. and Weinberg, R.A. (1998). Dissociation between in vitro telomerase activity, telomere maintenance and cellular immortalization. *Proc. Natl. Acad. Sci. USA* **95**: 14723-14728.
29. Bush, A., Mateyak, M.K., Dugan, K., Obaya, A., Adachi, S., Sedivy, J.M. and Cole, M.D. (1998). *c-myc* null cells misregulate *cad* and *gadd45* but not other proposed *c-Myc* targets. *Genes Dev.* **12**: 3797-3802.
30. Xiao, Q., Claassen, G., Shi, J., Adachi, S., Sedivy, J.M. and Hann, S.R. (1998). Transactivation-defective *c-Myc*S retains the ability to regulate growth and apoptosis. *Genes Dev.* **12**: 3803-3808.
31. Sedivy, J.M., Vogelstein, B., Liber, H.L., Hendrickson, E. and Rosmarin, A. (1999). Gene targeting in human cells without isogenic DNA. *Science* **283**: 9-9a.
32. Wei, S., Wei, W. and Sedivy, J.M. (1999). Expression of catalytically active telomerase does not prevent premature senescence caused by overexpression of oncogenic Ha-Ras in normal human fibroblasts. *Cancer Res.* **59**: 1539-1543.
33. Mateyak, M.K., Obaya, A.J. and Sedivy, J.M. (1999). *c-Myc* regulates cyclin D/Cdk4/6 activity but affects cell cycle progression at multiple independent steps. *Mol. Cell. Biol.* **19**: 4672-4683.
34. Yeung, K.C., Seitz, T., Li, S., Janosch, P., McFerran, B., Kaiser, C., Fee, F., Katsanakis, K.D., Rose, D.W., Mischak, H., Sedivy, J.M. and Kolch, W. (1999). Suppression of Raf-1 kinase activity and MAP kinase signalling by RKIP. *Nature* **401**: 173-177.

35. Wei, W. and Sedivy, J.M. (1999). Differentiation between senescence (M1) and crisis (M2) in human fibroblast cultures. *Exp. Cell Res.* **253**: 519-522.
36. Chuang, Y.Y.E., Chen, Q., Brown, J.P., Sedivy, J.M. and Liber, H.L. (1999). Radiation-induced mutations at the autosomal thymidine kinase locus are not elevated in p53-null cells. *Cancer Res.* **59**: 3073-3076. Published correction appears in *Cancer Res.* **59**: 5400.
37. Hermeking, H., Rago, C., Schuhmacher, M., Li, Q., Barrett, J.F., Obaya, A.J., O'Connell, B.C., Mateyak, M.K., Tam, W., Kohlhuber, F., Dang, C.V., Sedivy, J.M., Eick, D., Vogelstein, B. and Kinzler, K.W. (2000). Identification of CDK4 as a target of c-MYC. *Proc. Natl. Acad. Sci. U. S. A.* **97**: 2229-2234.
38. Yeung, K.C, Janosch, P., McFerran, B., Rose, D.W., Mischak, H., Sedivy, J.M. and Kolch, W. (2000). The mechanism of suppression of the Raf/MEK/ERK pathway by the RKIP inhibitor protein. *Mol. Cell. Biol.* **20**: 3079-3085.
39. Oster, S.K., Marhin, W.W., Asker, C., Facchini, L.M., Bion, P.A., Funa, K., Post, M., Sedivy, J.M. and Penn, L.Z. (2000). Myc is an essential negative regulator of platelet-derived growth factor beta receptor expression. *Mol. Cell. Biol.* **20**: 6768-6778.
40. Landay, M., Oster, S.K., Khosravi, F., Grove, L.E., Yin, X., Sedivy, J.M., Penn, L.Z. and Prochownik, E.V. (2000). Promotion of growth and apoptosis in c-myc nullizygous fibroblasts by other members of the myc oncoprotein family. *Cell Death Differ.* **7**: 697-705.
41. Bazarov, A.V., Adachi, S., Li, S., Mateyak, M.K., Wei, S. and Sedivy, J.M. (2001). A modest reduction in c-Myc expression has minimal effects on cell growth and apoptosis but dramatically reduces susceptibility to Ras and Raf transformation. *Cancer Res.* **61**: 1178-1186.
42. Soucie, E.L., Annis, M.G., Sedivy, J.M., Filmus, J., Leber, B., Andrews, D.W. and Penn, L.Z. (2001), Myc potentiates apoptosis by stimulating Bax activity at the mitochondria. *Mol. Cell. Biol.* **21**: 4725-4736.
43. Bowman, T., Broome, M.A., Sinibaldi, D., Wharton, W., Pledger, W.J., Sedivy, J.M. Irby, R., Yeatman, T., Courtneidge, S.A. and Jove, R. (2001). Stat3-mediated Myc expression is required for Src transformation and PDGF-induced mitogenesis. *Proc. Natl. Acad. Sci. USA* **98**: 7319-7324.
44. Adachi, S., Obaya, A.J., Han, Z., Ramos-Desimone, N., Wyche, J.H. and Sedivy, J.M. (2001). c-Myc is necessary for DNA damage-induced apoptosis in the G2 phase of the cell cycle. *Mol. Cell. Biol.* **21**: 4929-4937.
45. Wei, W., Hemmer, R.M. and Sedivy, J.M. (2001). The role of p14^{ARF} in replicative and induced senescence of human fibroblasts. *Mol. Cell. Biol.* **21**: 6748-6757.

46. Yeung, K.C., Rose, D.W., Dhillon, A.S., Yaros, D., Gustafsson, M., Chatterjee, D., McFerran, B., Wyche, J., Kolch, W. and Sedivy, J.M. (2001). Raf kinase inhibitor protein interacts with NF- κ B-inducing kinase and TAK1 and inhibits NF- κ B activation. *Mol Cell. Biol.* **21**: 7207-7217.
47. Raderschall, E., Bazarov, A., Cao, J., Lurz, R., Smith, A., Mann, W., Ropers, H.-H., Sedivy, J.M., Golub, E.I., Fritz, E. and Haaf, T. (2002). Formation of nuclear Rad51 structures is functionally linked to p21 expression and protection from DNA-damage-induced apoptosis. *J. Cell Sci.* **115**: 153-164.
48. Han, Z., Wei, W., Dunaway, S., Darnowski, J.W., Calabresi, P., Sedivy, J.M., Hendrickson, E.A., Balan, K., Pantazis, P. and Wyche, J.H. (2002). Role of p21 in apoptosis and senescence of human colon cancer cells treated with camptothecin. *J. Biol. Chem.* **277**: 17154-17160.
49. Bunz, F., Fauth, C., Speicher, M.R., Dutriaux, A., Sedivy, J.M., Kinzler, K.W., Vogelstein, B. and Lengauer, C. (2002). Targeted inactivation of p53 in human cells does not result in aneuploidy. *Cancer Res.* **62**: 1129-1133.
50. Obaya, A.J., Kotenko, I., Cole, M.D. and Sedivy, J.M. (2002). The protooncogene c-Myc acts through the cyclin-dependent kinase inhibitor p27^{Kip1} to facilitate the activation of cyclin-dependent kinase 4/6 and early G1 phase progression. *J. Biol. Chem.* **277**: 31263-31269.
51. Nikiforov, M.A., Chandriani, S., O'Connell, B., Petrenko, O., Kotenko, I., Beavis, A., Sedivy, J.M. and Cole, M.D. (2002). A functional screen for Myc-responsive genes reveals serinehydroxymethyltransferase, a major source of the one-carbon unit for cell metabolism. *Mol. Cell. Biol.* **22**: 5793-5800.
52. Wang, Z., Bhattacharya, N., Mixter, P.F., Wei, W., Sedivy, J.M. and Magnuson, N.S. (2002). Phosphorylation of the cell cycle inhibitor p21^{Cip1/WAF1} by Pim-1 kinase. *Biochim. Biophys. Acta* **1593**: 45-55.
53. You, Z., Madrid, L.V., Saims, D., Sedivy, J.M. and Wang, C.Y. (2002). c-Myc sensitizes cells to tumor necrosis factor-mediated apoptosis by inhibiting nuclear factor κ B transactivation. *J. Biol. Chem.* **277**: 36671-36677.
54. Schorl, C. and Sedivy, J.M. (2003). Loss of protooncogene c-Myc function impedes G1 phase progression both before and after the restriction point. *Mol. Biol. Cell.* **14**: 823-835.
55. O'Connell, B.C., Cheung, A.F., Simkevich, C.P., Tam, W., Ren, X., Mateyak, M.K. and Sedivy, J.M. (2003). A large scale genetic analysis of c-Myc-regulated gene expression patterns. *J. Biol. Chem.* **278**: 12563-12573.
56. Wei, W., Jobling, W.A., Chen, W., Hahn, W.C. and Sedivy, J.M. (2003). Abolition of cyclin-dependent kinase inhibitors p16^{Ink4a} and p21^{Cip1/Waf1} functions permits Ras-induced anchorage-independent growth in telomerase-immortalized human fibroblasts. *Mol. Cell. Biol.* **23**: 2859-2870.

57. Junqueira, D., Cilenti, L., Musumeci, L., Sedivy, J.M. and Zervos, A.S. (2003). Random mutagenesis of the PDZ_{Omi} domain and selection of mutants that specifically bind the Myc protooncogene and induce apoptosis. *Oncogene* **22**: 2772-2781.
58. Young, J.I., Sedivy, J.M. and Smith, J.R. (2003). Telomerase expression in normal human fibroblasts stabilizes DNA 5-methylcytosine transferase I (DNMT1). *J. Biol. Chem.* **278**: 19904-19908.
59. Lindvall, C., Hou, M., Komurasaki, T., Zheng, C., Henriksson, M., Sedivy, J.M., Bjorkholm, M., Teh, B.T., Nordenskjold, M. and Xu, D. (2003). Molecular characterization of human telomerase reverse transcriptase-immortalized human fibroblasts by expression profiling: activation of the Epiregulin gene. *Cancer Res.* **63**: 1743-1747.
60. Ma, W., Hommel, C., Brenneisen, P., Peters, T., Smit, N., Sedivy, J.M., Scharffetter-Kochanek, K. and Wlaschek, M. (2003). Long-term growth arrest of PUVA-treated fibroblasts in G2/M in the absence of p16^{INK4a}, p21^{CIP1} or p53. *Exp. Dermatol.* **12**: 629-637.
61. Wei, W., Herbig, U., Wei, S., Dutriaux, A. and Sedivy, J.M. (2003). Loss of Rb but not p16 function allows bypass of replicative senescence in human fibroblasts. *EMBO R.* **4**: 1061-1066.
62. Herbig, U., Wei, W., Dutriaux, A., Jobling, W.A. and Sedivy, J.M. (2003). Real time imaging of transcriptional activation in live cells reveals rapid upregulation of the cyclin-dependent kinase inhibitor gene *CDKN1A* in replicative cellular senescence. *Aging Cell* **2**:295-304.
63. Hindley, A.D., Park, S., Wang, L., Shah, K., Wang, Y., Hu, X., Shokat, K.M., Kolch, W., Sedivy, J.M. and Yeung, K.C. (2004). Engineering the serine/threonine protein kinase Raf-1 to utilize an orthogonal analogue of ATP substituted at the N⁶ position. *FEBS Lett.* **556**: 26-34.
64. Chatterjee, D., Bai, Y., Wang, Z., Beach, S., Mott, S., Roy, R., Braastad, C., Sun, Y., Mukhopadhyay, A., Aggarwal, B.B., Darnowski, J., Pantazis, P., Wyche, J., Fu, Z., Kitagawa, Y., Keller, E.T., Sedivy, J.M. and Yeung, K.C. (2004). RKIP sensitizes prostate and breast cancer cells to drug-induced apoptosis. *J. Biol. Chem.* **279**: 17515-17523.
65. Martin-Ruiz, C., Saretzki, G., Petrie, J., Ladhoff, J., Jeyapalan, J., Wei, W., Sedivy, J.M. and von Zglinicki, T. (2004). Stochastic variation in telomere shortening rate causes heterogeneity of human fibroblast replicative lifespan. *J. Biol. Chem.* **279**: 17826-17833.
66. Herbig, U., Jobling, W.A., Chen, B.P.C., Chen, D.J. and Sedivy, J.M. (2004). Telomere shortening triggers replicative senescence of human cells through a signaling pathway involving ATM, p53 and p21^{CIP1} but not p16^{INK4a}. *Mol. Cell* **14**: 501-513.

67. Csoka, A.B., English, S.B., Simkevich, C.P., Ginzinger, D.G., Butte, A.J., Schatten, G.P., Rothman, F.G. and Sedivy, J.M. (2004). Genome-scale expression profiling of Hutchinson-Gilford Progeria Syndrome reveals widespread transcriptional misregulation leading to mesodermal/mesenchymal defects and accelerated atherosclerosis. *Aging Cell* **3**: 235-243.
68. Charrier-Savourin, F.B., Chateau, M.T., Gire, V., Sedivy, J.M., Piette, J. and Dulic, V. (2004). p21-mediated nuclear retention of cyclin B1-Cdk1 in response to genotoxic stress. *Mol. Biol. Cell* **15**: 3965-3976.
69. Smith, K.P., Byron, M., O'Connell, B., Tam, R., Schorl, C., Guney, I., Hall, L.L., Agrawal, P., Sedivy, J.M. and Lawrence, J.B. (2004). c-Myc localization within the nucleus: evidence for association with the PML nuclear body. *J. Cell. Biochem.* **93**: 1282-1296.
70. Rothermund, K., Rogulski, K., Fernandes, E., Whiting, A., Sedivy, J.M., Pu, L. and Prochownik, E.V. (2005). c-Myc-independent restoration of multiple phenotypes by two c-Myc target genes with overlapping functions. *Cancer Res.* **65**: 2097-2107.
71. Munoz-Alonso, M.J., Acosta, J.C., Richard, C., Delgado, M.D., Sedivy, J.M. and Leon, J. (2005). p21 Cip1 and p27 Kip1 induce distinct cell cycle effects and differentiation programs in myeloid leukemia cells. *J. Biol. Chem.* **280**: 18120-18129.
72. Remondini, D., O'Connell, B., Intrator, N., Sedivy, J.M., Neretti, N., Castellani, G.C. and Cooper, L.N. (2005). Targeting c-Myc activated genes via a correlation method: detection of global changes in large gene expression network dynamics. *Proc. Natl. Acad. Sci. USA* **102**: 6902-6906.
73. Tamura, K., Hua, B., Adachi, S., Guney, I., Kawauchi, J., Morioka, M., Tamamori-Adachi, M., Tanaka, Y., Nakabeppu, Y., Sunamori, M., Sedivy, J.M. and Katajima, S. (2005). Stress response gene ATF3 is a target of c-myc in serum-induced cell proliferation. *EMBO J.* **24**: 2590-2601 (PMID: 15990869).
74. Kujoth, G.C., Hiona, A., Pugh, T.D., Someya, S., Panzer, K., Wohlgemuth, S., Hofer, T., Hacker, T.A., Seo, A.Y., Sullivan, R., Jobling, W.A., Morrow, J., Van Remmen, H., Sedivy, J.M., Yamasoba, T., Tanokura, M., Saupe, K.W., Weindruch, R., Leeuwenburgh C. and Prolla, T.A. (2005). Mitochondrial DNA mutations, oxidative stress and apoptosis in mammalian aging. *Science* **309**: 481-484 (PMID: 16020738).
75. Sheffler, W., Upfal, E., Sedivy, J.M. and Noble, W.S. (2005). A learned comparative expression measure for Affymetrix GeneChip DNA microarrays. *Proc. IEEE Comput. Syst. Bioinform. Conf.* **2005**: 144-154 (PMID: 16447972).
76. Herbig, U., Ferreira, M., Condell, L., Carey, D. and Sedivy, J.M. (2006). Cellular senescence in aging primates. *Science* **311**: 1257 (PMID: 16456035).

77. Guney, I., Wu, S. and Sedivy, J.M. (2006). Reduced c-Myc signaling triggers telomere-independent senescence by regulating the polycomb repressor Bmi-1 and the CDK inhibitor p16^{INK4a}. *Proc. Natl. Acad. Sci. USA* **103**: 3645-3650 (PMID: 16537449).
78. Lee, H.C., Tian, B., Sedivy, J.M., Wands, J.R. and Kim, M. (2006). Loss of Raf Kinase Inhibitor Protein promotes cell proliferation and migration of human hepatoma cells. *Gastroenterology* **131**: 1208-1217 (PMID: 17030190).
79. Manley, K., O'Hara, B. A., Gee, G.V., Simkevich, C.P., Sedivy, J.M. and Atwood, W.J. (2006). NFAT4 is required for JCV infection of glial cells. *J. Virol.* **80**: 12079-12085 (PMID: 17035332).
80. Jeyapalan, J.C., Ferreira, M., Sedivy, J.M. and Herbig, U. (2007). Accumulation of senescent cells in mitotic tissues of aging primates. *Mech. Ageing Dev.* **128**: 36-44 (PMID: 17116315).
81. Theroux, S., Pereira, M., Casten, K.S., Burwell, R.D., Yeung, K.C., Sedivy, J.M. and Klysik, J. (2007). Raf kinase inhibitory protein knockout mice: expression in the brain and olfaction deficit. *Brain Res. Bull.* **71**: 559-567 (PMID: 17292798).
82. Neretti, N., Remondini, D., Tatar, M., Sedivy, J.M., Mazzatti, D., Powell, J., Franceschi, C. and Castellani, G.C. (2007). Correlation analysis reveals the emergence of coherence in the gene expression dynamics following system perturbation. *BMC Bioinformatics* **8**: S16 (PMID: 17430560).
83. Remondini, D., Neretti, N., Sedivy, J.M., Franceschi, C., Milanesi, L., Tieri, P. and Castellani, G.C. (2006). Networks from gene expression time series: characterization of correlation patterns. *Int. J. Bifurcation and Chaos*, in press.

PUBLISHED ABSTRACTS (Brown only)

The 12th Annual Meeting on Oncogenes, June 18-22, 1996, Frederick, MD

Mateyak, M., Adachi, S. and Sedivy, J.M. Characterization of c-Myc-deficient cells: growth and expression of cyclins.

Weissinger, E.M., Eisner, G., Grammer, C., Fackler, S., Yoon, L.S., Lu, K.S., Bazarov, A., Sedivy, J.M. and Kolch, W. Activation of cAMP-dependent protein kinase induces apoptosis in v-abl transformed cells.

Adachi, S. and Sedivy, J.M. Characterization of c-Myc-deficient cells: apoptosis.

Brown, J.P. and Sedivy, J.M. Efficient gene targeting in nonimmortalized human somatic cells.

Bazarov, A., Lu, K.S., Yoon, L.S. and Sedivy, J.M. A genetic analysis of Raf-1 requirement in the cell cycle.

The 13th Annual Meeting on Oncogenes, June 18-21, 1997, Frederick, MD

Bazarov, A., Li, S., Wei, S. and Sedivy, J.M. C-myc is required for malignant transformation by v-Raf, v-Ras and Bcr-Abl.

Seitz, T., Li, S., Mischak, H., Sedivy, J.M. and Kolch, W. Negative regulation of Raf-1 signalling by morphine/ethanolamine-binding protein.

Bush, A., Dugan, K., Mateyak, M.M., Adachi, S., Sedivy, J.M. and Cole, M. Expression of c-Myc target cells in c-myc null cells.

Dutriaux, A. and Sedivy, J.M. Introduction of discrete mutations into the promoter of the c-myc gene in rat fibroblasts by homologous recombination.

Mateyak, M.M., Obaya, A.J. and Sedivy, J.M. Characterization of a G1 phase defect in c-myc deficient cells.

Xiao, Q., Shi, J., Claassen, G., Sedivy, J.M. and Hann, S.R. The downstream-initiated c-Myc S protein is incapable of transactivation yet promotes cell cycle progression, anchorage-independent growth and apoptosis in fibroblasts.

Cold Spring Harbor Meeting on the Biology of Aging, April 2-5, 1998

Wei, W., Brown, J.P. and Sedivy, J.M. Bypass of senescence and crisis in normal human fibroblasts by defined genetic events.

Cold Spring Harbor Meeting on the Cell Cycle, May 20-24, 1998

Mateyak, M.K., Obaya, A.J. and Sedivy, J.M. Absence of c-Myc results in a defect in Rb phosphorylation and a delay in the expression of subsequent cell cycle regulatory genes.

Obaya, A.J., Mateyak, M.K. and Sedivy, J.M. The activity of cyclin D dependent kinases is the earliest defect observed in the cell cycle machinery in a c-myc null background.

The 14th Annual Meeting on Oncogenes, June 24-27, 1998, The Salk Institute

Wei, S., Wei, W. and Sedivy, J.M. Expression of catalytically active telomerase does not prevent premature senescence caused by overexpression of oncogenic Ha-Ras in normal human fibroblasts.

Marhin, W., Asker, C., Chen, S., Oster, S., Facchini, L., Dion, P., Post, M., Funa, K., Sedivy, J.M. and Penn, L.Z. Myc suppresses platelet derived growth factor β receptor expression.

Obaya, A.J., Mateyak, M.K. and Sedivy, J.M. Reduction of Cdk4/6 kinase activity is the earliest cell cycle defect in c-myc null cells.

Wei, S. and Sedivy, J.M. Knockout of the p21^{CIP1/WAF1} gene prevents premature senescence caused by oncogenic Ha-Ras in primary rodent but not human fibroblasts.

Wei, W. and Sedivy, J.M. Expression of catalytically active telomerase is not sufficient to elicit immortalization in some normal human fibroblast cell strains.

The 15th Annual Meeting on Oncogenes, June 22-27, 1999, Frederick, MD

Wei, S. and Sedivy, J.M. Inactivation of Rb is sufficient for bypass of senescence and onset of crisis in human fibroblasts.

Wei, W. and Sedivy, J.M. Inactivation of p21^{CIP1/WAF1} in normal human fibroblasts results in crisis.

Yeung, K.C., Shokat, K.M. and Sedivy, J.M. Engineering of the Raf-1 kinase ATP-binding site to accept the unnatural ATP analog N6 (2-phenethyl) ATP.

Yeung, K.C., Seitz, T., Li, S., Janosch, P., McFerran, B., Kaiser, C., Fee, F., Katsanakis, K.D., Rose, D.W., Mischak, H., Sedivy, J.M. and Kolch, W. Negative regulation of Raf-1 kinase activity and MAP kinase pathway signaling by a novel protein inhibitor.

Mateyak, M.K., Obaya, A.J. and Sedivy, J.M. c-Myc regulates cyclin D-Cdk4/6 activity but affects cell cycle progression at multiple independent points.

The 16th Annual Meeting on Oncogenes, June 22-25, 2000, The Salk Institute

Obaya, A.J., O'Connell, B. and Sedivy, J.M. Conditional over-Expression of p27^{KIP1} mimics the cell cycle defects observed in *c-myc* ^{-/-} cells.

Obaya, A.J., Mateyak, M.K. and Sedivy, J.M. Restoration of cyclin D - CDK4/6 activity or cyclin E - cdk2 activity is not sufficient to rescue the proliferation defect of *c-myc* ^{-/-} cells.

The 17th Annual Meeting on Oncogenes, June 20-23, 2001, Frederick, MD

Agrawal, P., O'Connell, B., Obaya, A.J. and Sedivy, J.M. Regulation of cyclin D-Cdk4/6 complexes by c-Myc.

Soucie, E.L., Annis, M.G., Sedivy, J.M., Filmus, J., Leber, B., Andrews, D.W. and Penn, L.Z. Myc potentiates apoptosis by stimulating Bax activity at the mitochondria.

Wei, W., Hemmer, R. and Sedivy, J.M. The role of p14(Arf1) in replicative senescence of human fibroblasts.

The Cell Cycle Meeting, June 22-6, 2001, The Salk Institute

O'Connell, B., Obaya, A.J. and Sedivy, J.M. Regulation of cyclin D-Cdk4/6 complexes by c-Myc.

The Cell Cycle Meeting, May 15-19, 2002, Cold Spring Harbor Laboratory

Schorl, C., O'Connell, B., Livne, K. and Sedivy, J.M. Kinetic analysis of cell cycle progression in *c-myc*-null fibroblasts - A major role in G1 and passage through the restriction point.

The 18th Annual Meeting on Oncogenes, June 21-24, 2002, The Salk Institute

Schorl, C., Guney, I., Agrawal, P. and Sedivy, J.M. Kinetic analysis of cell cycle progression in *c-myc* null fibroblasts.

O'Connell, B., Cheung, A., Simkevich, C., Tam, W., Mateyak, M., Ren, X. and Sedivy, J.M. A "ray" of hope in the identification of *c-myc* target genes.

Molecular Genetics of Aging, October 2-6, 2002, Cold Spring Harbor Laboratory

Herbig, U., Wei, W., Jobling, W., Dutriaux, A. and Sedivy, J.M. Independent pathways regulate p21 and p16INK4a levels during replicative senescence in human fibroblasts.

Jobling, W., Herbig, U., Wei, W. and Sedivy, J.M. Elevated levels of reactive oxygen species (ROS) correlate with high p16INK4a in human fibroblasts.

Molecular Therapeutics of Cancer, July 13-18, 2003, Queen's College, Oxford, UK

Guney, I., O'Connell, B.C. and Sedivy, J.M. Subcellular localization of cyclin D1-Cdk4 complexes in *c-myc*^{-/-} Rat Fibroblasts.

Agrawal, P. and Sedivy, J.M. The slow growth phenotype of *c-myc* null fibroblasts is not an adaptive response to loss of c-Myc.

O'Connell, B.C., Mateyak, M.K. and Sedivy, J.M. Regulation of pre- and post-restriction point progression by c-Myc.

Cell Cycle, Senescence, Apoptosis and Cancer International Conference, Beatson Institute, June 20-23, 2004, Glasgow, UK

Guney, I. and Sedivy, J.M. c-Myc regulates p16-induced senescence via Bmi-1.

Jobling, W. and Sedivy, J.M. Reactive oxygen species affect replicative lifespan, cellular signaling, and can be moderated through the use of anti-oxidants.

Herbig, U. and Sedivy, J.M. Telomere shortening triggers replicative senescence of human cells through a signaling pathway involving ATM, p53 and p21CIP1 but not p16INK4a.

AACR Special Conference on The Role of Telomeres and Telomerase in Cancer, November 3-7, 2004, San Francisco

Herbig, U. and Sedivy, J.M. Regulation of Growth Arrest in Senescent Human Fibroblasts and ATM^{-/-} Cells.

Jobling, W. and Sedivy, J.M. Effects of reactive oxygen species (ROS) on senescence, DNA/telomere damage, and lipid peroxidation.

8th Cancer Research UK Beatson International Conference on Human Cancer: Modelling the Disease, June 21-24, 2004, Glasgow, UK

Schorl, C., Agrawal, P. and Sedivy, J.M. Analysis of conditional loss of c-Myc in mouse tail fibroblasts.

Salk Institute/EMBL Meeting on Oncogenes and Growth Control, August 12-16, 2005, Salk Institute, La Jolla, CA

Whiting, A.H. and Sedivy, J.M. Nucleostemin: A direct c-Myc target gene that may play a role in ribosome biogenesis.

Agrawal, P., Schorl, C. and Sedivy, J.M. Comparative analysis of c-Myc loss in Rat-1 fibroblasts and primary mouse fibroblasts.

Keystone Symposium on Genome Instability and Repair, January 17-22, 2007, Breckenridge, CO

Jeyapalan, J.C., Ferreira, M., Sedivy, J.M. and Herbig, U. Accumulation of senescent cells in mitotic tissues of aging primates

PATENTS

Title: Kinase Inhibitors and Methods of Use in Screening Assays and Modulation of Cell Proliferation and Growth
Inventors: John M. Sedivy, Ph.D., Brown University
Walter Kolch, M.D., Beatson Institute for Cancer Research, Glasgow, UK
Kam Chi Yeung, Ph.D., Medical College of Ohio, Toledo
Status: Patent 6,864,224, issued March 8, 2005.

Title: Kinase Inhibitors and Methods of Use in Screening Assays and Modulation of Cell Proliferation and Growth
Inventors: John M. Sedivy, Ph.D., Brown University
Walter Kolch, M.D., Beatson Institute for Cancer Research, Glasgow, UK
Kam Chi Yeung, Ph.D., Medical College of Ohio, Toledo
Status: Filed March 6, 2003, assigned number 10/382,970, pending.

Title: Transcriptional Regulation of Kinase Inhibitors
Inventors: John M. Sedivy, Ph.D., Brown University
Walter Kolch, M.D., Beatson Institute for Cancer Research, Glasgow, UK
Kam Chi Yeung, Ph.D., Medical College of Ohio, Toledo
Status: Filed March 7, 2003, assigned number 10/384,435, pending.

INVITED PRESENTATIONS

Institutions

1988–1993 Creative Biomolecules, Inc., Hopkinton, MA
Genzyme, Inc., Framingham, MA

- University of California, San Diego, CA
University of Connecticut, Farmington, CT
University of Indiana, Bloomington, IN
- 1994 Brown University, Providence, RI
 Creative Biomolecules, Inc., Hopkinton, MA
 Duke University, Durham, NC
 Immunogen Inc., Cambridge, MA
 MIT, Cambridge, MA
- 1995 Jefferson Cancer Center, Philadelphia, PA
 Johnson & Johnson, Inc., Raritan, NJ
 Mass General Hospital, Boston, MA
- 1996 MacMaster University, Hamilton, Canada
 Ontario Cancer Institute, Toronto, Canada
 Tufts Medical Center, Boston, MA
 York University, Toronto, Canada
- 1997 Ariad Pharmaceutical, Inc., Cambridge, MA
 Lawrence Berkeley National Laboratory, Berkeley, CA
 Burnham Institute, La Jolla, CA
 Dana Farber Cancer Institute, Boston, MA
 DNAX Inc., San Francisco, CA
 Eli Lilly, Inc., Indianapolis, IN
 Fred Hutchinson Cancer Center, Seattle, WA
 Genentech, Inc., San Francisco, CA
 Oregon Health Sciences University, Portland, OR
 University of California, San Diego, CA
 University of Florida, Gainesville, FL
 University of Virginia, Charlottesville, VA
- 1998 Tufts Medical Center, Boston, MA
 Albert Einstein College of Medicine, Bronx, NY
 Universität Marburg, Marburg, Germany
 Swiss Institute for Experimental Cancer Research, Lausanne, Switzerland
 University of Massachusetts, Amherst, MA
 Genetics Institute, Inc., Cambridge, MA
 Eli Lilly, Inc., Indianapolis, IN
 University of Texas Southwestern Medical Center, Dallas, TX
- 1999 University of British Columbia, Vancouver, Canada
 Pfizer Pharmaceuticals, Groton, CT
 Rutgers University, Piscataway, NJ
 Millenium Pharmaceuticals, Cambridge, MA
- 2000 Baylor College of Medicine, Houston, TX
 State University of New York, Syracuse, NY
 Yale University, New Haven, CT

Ludwig Institute, London, UK

- 2001 University of Kentucky, Lexington, KY
University of Jerusalem, Jerusalem, Israel
University of Dundee, Dundee, UK
Advanced Cell Technology, Inc., Worcester, MA
- 2002 Dupont Pharmaceuticals, Inc.
University of Rhode Island, Kingstown, RI
Abbott Laboratories, Chicago, IL
- 2003 University of Connecticut, Farmington, CT
University of Illinois, Chicago, IL
Mt. Sinai School of Medicine, New York, NY
Rhode Island Hospital, Providence, RI
- 2004 University of California, San Francisco, CA
Harvard Medical School, Boston, MA
Washington University, St. Louis, MO
Virginia Commonwealth University, Norfolk, VA
Fox Chase Cancer Center, Philadelphia, PA
- 2005 Yale School of Medicine, New Haven, CT
Massachusetts General Hospital Cancer Center, Boston, MA
Lawrence Berkeley National Lab, Berkeley, CA
- 2006 Harvard Medical School, Boston, MA
Roger Williams Medical Center, Providence, RI
Tufts School of Medicine, Boston, MA
European Institute of Oncology, Milan, Italy
University of Rhode Island, Kingstown, RI
Lawrence Berkeley National Laboratory, Berkeley, CA
Medical College of Ohio, Toledo, OH
University of Massachusetts Medical School. Worcester, MA
- 2007 Liver Research Center, Lifespan Medical Center, Providence, RI
University of Bologna, Bologna, Italy
University of Minnesota, Minneapolis, MN
University of Wisconsin, Madison, WI
Fred Hutchinson Cancer Research Center, Seattle, WA
Stowers Institute, Kansas City, MO
University of Rochester, Rochester, NY
University of Medicine and Dentistry of New Jersey, Newark, NJ
Lady Davis Institute for Medical Research, Montreal, Canada

Meetings

- 1991 3rd. Annual Meeting of the Japanese Association for Animal Cell Technology,
Kyoto, Japan

- 1995 Gordon Conference on Cell Proliferation
- 1997 13th. Annual Meeting on Oncogenes, Frederick, MD
- 1998 Biology of Aging Meeting, Cold Spring Harbor, NY
Massachusetts Biotechnology Council, Boston, MA
- 1999 American Society for Biochemistry and Molecular Biology, International Meeting, San Francisco, CA
- Office of Vaccines Research and Review, Centers for Biologics Evaluation and Research, and U.S. Food and Drug Administration: joint meeting on Novel Cell Substrates for Vaccine Production, Washington, DC
- Gerontological Society of America Symposium on Advances in Embryonic Stem Cell and Nuclear Transfer Technologies, Asilomar, CA
- MIT Genome Center Target Validation Meeting, Boston, MA
- 2000 American Association for Cancer Research Special Conference on Transcription Factor Pathogenesis of Cancer at the Lillienium, Laguna Beach, CA
- Telomerase and Telomere Dynamics in Cancer and Aging, San Francisco, CA
- Symposium on Therapeutic Applications of Human Stem and Precursor Cells, Hannover, Germany
- European Tissue Culture Society and European Society for Animal Cell Technology joint Workshop on Gene Manipulation in Animal Cells, Bristol, UK
- UK Molecular Biology & Cancer Network Genes and Cancer Meeting XVI, University of Warwick, Coventry, UK
- 2001 Beatson International Cancer Conference, Glasgow, UK
- The 2001 Spring School in Jerusalem "The Cell Cycle and Cancer", Jerusalem, Israel
- 5th Gene Delivery and Cellular Protein Expression Conference, Semmering, Austria
- Gerontological Society of America, 2001 Annual Meeting, Chicago, IL
- 2002 NIH Workshop on Hutchinson-Gilford Progeria, Bethesda, MD
Banbury Conference on Cellular Immortalization, Cold Spring Harbor Laboratory, NY
- AACR Special Conference on The Role of Telomeres and Telomerase in Cancer, San Francisco, CA

- 2004 Gordon Conference on the Biology of Aging, Aussois, France
- AACR Special Conference on The Role of Telomeres and Telomerase in
 Cancer, San Francisco, CA
- 2005 NIA Special Workshop on Cellular Senescence and Extracellular Matrix, Buck
 Institute, Novato, CA
- L'Oreal Symposium on Cutaneous Biology, Harvard Medical School, Boston,
 MA
- 2006 3rd International Conference on the Functional Genomics of Aging, Palermo,
 Italy
- ESF-WellcomeTrust Conference on Signalling to Chromatin: Epigenetics,
 Hixton, UK
- 2007 Gordon Research Conference on Oxidative Stress and Disease, Ventura, CA
- 12th. Congress of the International Association for Biomedical Gerontology,
 Spetses, Greece
- 16th. Annual Growth Factor and Signal Transduction Symposium,
 Senescence, Aging and Cancer, Ames, IA
- International Meeting of the German Genetics Society, Genetics of Aging, Jena,
 Germany