Curriculum Vitae
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JAY CLARK DUNLAP

PERSONAL

Born	May 9, 1952 Ludlow, MA
Address:	Department of Genetics, Dartmouth Medical School, Hanover, NH 03755-3844
Phone:	(603) 650-1108 email: jay.c.dunlap@dartmouth.edu
Position:	Chairman, Department of Genetics, Professor of Biochemistry
Affiliations:	Core Member, Molecular Genetics Center
	Molecular and Cellular Biology Graduate Program
	Chairman, Genetics Graduate Program

EDUCATION

University of California, Santa Cruz, CA. Postdoctoral Research in Genetics, Molecular Genetics1980-1984.

Harvard University, Cambridge, MA. PhD in Biology, 1979.

Harvard University, Cambridge, MA. AM in Biology, 1975.

University of Washington, Seattle. BS in Oceanography with College Honors, Magna cum Laude, 1974.

University of Washington, Seattle. BS in Chemistry with College Honors, Magna cum Laude, 1974.

PREVIOUS EMPLOYMENT AND PROFESSIONAL EXPERIENCE

Nathan Smith Chair, 2010

Inaugural Chair, Department of Genetics, November, 1999

Professor of Biochemistry July, 1994

Associate Professor of Biochemistry, 1990

Assistant Professor of Biochemistry and Core Member, Molecular Genetics Laboratory, 1984

National Institutes of Health Postdoctoral Fellow, Dept. Biology, University of California, Santa Cruz, CA. 1983-1984.

Damon Runyon - Walter Winchell Memorial Fellow in Cancer Research, Dept. Biology, University of California, Santa Cruz, CA. 1980-1983.

Laboratory Coordinator, Phytoplankton Ecology Course, Friday Harbor Laboratories of the University of Washington, San Juan Island, WA. 1978

Teaching Fellow in Biology, Harvard University, Cambridge, 1974-1979. Introductory Biology (1974-1976), Cell Biochemistry and Physiology (1975), Biological Oceanography (1976-1978), Independent Tutorial (full year mini-course) on Biological Clocks (1979-1980), Resident Tutor in Biology, Dunster House (1977-1980).

Workshop on Biological Clocks, Hopkins Marine Station, Pacific Grove, CA. 1977.

Marine Botany Course, Marine Biological Laboratory, Woods Hole. 1975.

Physiology Course, Marine Biological Laboratory, Woods Hole. 1974.

Project Director/Principal Investigator, NSF Student Originated Studies Grant GY-10751, University of Washington, Seattle. 1972-1974.

Tutor in Science and Mathematics, Minority Affairs Office, University of Washington, Seattle. 1972-1974.

SCHOLARSHIPS AND FELLOWSHIPS

National Institutes of Health Postdoctoral Fellowship in Genetics, 1983-1984.

Damon Runyon - Walter Winchell Memorial Fellow in Cancer Research, 1980-1983.

National Institutes of Health Predoctoral Traineeship, 1974-1979.

Tuition Award, NSF Workshop on Biological Clocks, 1977.

Tuition Award, Marine Biological Laboratory, Woods Hole, 1975.

ACADEMIC HONORS AND AWARDS

2013 selected Fellow of the Texas A&M Univ. Institute for Advanced Studies

2010 elected to the American Academy of Microbiology

2010 elected a fellow of the American Association for the Advancement of Science

2009 elected to the National Academy of Sciences

2009 George W. Beadle Medal (Genetics Society of America) for contributions and service to the community of geneticists

2005 (first) recipient of Robert L. Metzenberg Award for contributions to Neurospora genetics

1998- 2008 - MERIT Award, NIGMS

1998 - Visiting Professor, University of Rome

1992 - 1997 Senior Scientist Award, National Institute of Mental Health

1991 Honma International Prize For Biological Rhythms Research - a prize of ¥1,000,000, awarded no more frequently than every other year to an investigator of any nationality under 40 who has made "exceptional contributions in the field of circadian rhythms". The 1991 award was the first given for work in genetics and molecular biology.

Damon Runyon - Walter Winchell Fellowship in Cancer Research - 1980

Phi Beta Kappa, 1974.

Phi Lambda Upsilon (National Chemistry Honorary), 1974.

Graduation with degrees in Oceanography and Chemistry, Magna cum Laude in each, 1974.

NATIONAL and PROFESSIONAL SERVICE

National Institutes of Health
Microbial Genetics and Physiology Study Section, 1993 -
Trans-NIH Workshop to coordinate research by the National Center for Sleep Disorders Research (1995)
Special Study Section for Circadian Rhythms, 1997, 00, 01; ad hoc
Site Visit, evaluating Circadian Rhythms Program Project, Brandeis Univ. 1997
Ad Hoc reviewer of proposals for Genetics Study Section, Microbial Genetics and Physiology Study Section
Board of Scientific Advisors, Laboratory of Molecular and Cellular Regulation, NIMH Intramural Program, 1999
National Advisory Council, National Institute of General Medical Sciences, National Institutes of Health, Bethesda 1999 – 2003; 2011, 2014
NIH –CSR 2000 – present: 1-2 study sections per year - including ZRG1 NCF-D, EUREKA (2008), NIH Director's Pioneer Awards (2008, 2009; selection committee chair, 2011), NIH New Innovator Awards (2012), Systems Biology Centers 2013
NIH-NIGMS - Select Committee for Evaluation of Protein Structure Initiative (2013); Select Committee for Evaluation of Systems Biology Centers Initiative (2014-2015)

National Science Foundation
Regular Member - NSF Grant Review Panel on Microbial Genetics (1989 - 1992)
Ad Hoc reviewer for Eukaryotic Genetics Panel, Metabolic Biology Panel, Biochemical Genetics

US Department of Agriculture
Ad Hoc reviewer of proposals

Air Force Office of Scientific Research
Ad Hoc reviewer of proposals

National Academy of Sciences:
1984 Workshop on Nonmammalian Models for the Study of Biological Regulation
1989 One of 5 member Advisory Panel for documentary entitled "Chronobiology", a part of the series called The Infinite Voyage co-produced by WQED (Pittsburgh) and the NAS under the auspices of the National Academy of Sciences Film Committee

NSF Center for Biological Timing - External Advisory Committee, 1991 - 2002

UK Medical Research Council, outside reviewer for the Laboratory of Molecular Biology, Neurobiology Division, , Cambridge. 2004

External Advisory Committee, UO1 (Glue Grant) GM61388 "Pharmacogenetics of Phase II Drug Metabolizing Enzymes, Mayo Clinic. 2004 –

Meetings: 1991 - co-Organizer, 16th Biennial Fungal Genetics Meeting; 1995 - co-Organizer, APS meeting, The Genetics and Physiology of Circadian Rhythms; 1998 - Chair, Cellular and Molecular Mycology Gordon Conference; 2007-co-Proposer 72st Cold Spring Harbor Symposium: Circadian Rhythms; 2008, co-Organizer, Keystone meeting Genetics and Biochemistry of Sleep; 2009, co-organizer 25th Biennial Fungal Genetics Meeting

EDITORIAL ACTIVITIES

co-Editor-in-Chief -	**Advances in Genetics**, Academic Press, 1992 - Present
Editor	**Eukaryotic Cell (ASM Press),** 2001 - 2011
Editorial Advisory Boards -	**G3: Genes | Genomes | Genetics**, 2011-present
	Dartmouth Medicine, 1993 - 1999
	Journal of Biological Rhythms, 1994 – 2002, 2013 -

Journals
Ad Hoc reviewer for Science, Nature, Cell, Neuron, Genetics, Genes & Development, Journal of Biological Chemistry, Proceedings of the National Academy of Sciences (USA), Current Biology, Molecular Cell, Developmental Cell, EMBO Journal, Journal of Molecular Biology, Molecular and Cellular Biology, Archives of Biochemistry and Biophysics, Journal of Biological Rhythms, Molecular Microbiology, Journal of Neuroscience

SERVICE and ELECTED OFFICES- professional societies

FASEB - Board of Directors, 2012 -

Genetics Society of America - Board of Directors, 2009 – 2012

Society for Research on Biological Rhythms (500+ members) – President 1998 - 2000
Society for Research on Biological Rhythms - President-Elect, 1996 - 1998
Society for Research on Biological Rhythms - Treasurer, 1992 - 1994

Committee to Sequence the *Neurospora* Genome - Chair, 1996 -1999
Committee to Order the *Neurospora* Genome - Chair, 1993 - 1995
Neurospora Policy Committee - Chair, 1993 - 1995

Fungal Genetics Policy Committee (oversight board for the Fungal Genetics Stock Center, the Fungal Genetics Newsletter, and the biennial Fungal Genetics Conference); 1989 - 1995

MEMBERSHIPS – professional societies: GSA, ASM, ASCB, Soc. Res. Biol. Rhythms, AAAS

FORMER POSTDOCTORAL FELLOWS (duration of training)

William Belden (postdoc 2003 – 2009) Assistant Professor, Rutgers

Christian Hong (postdoc 2004 – 2009) Assistant Professor University of Cincinnati College of Medicine
Luis Larrondo (postdoc 2004 – 2009) Assistant Professor, Pontificia Universidad Católica de Chile
Carsten Schwerdtfeger (Postdoc 2002 – 2008) Staff Scientist, Boston Biochem.
Giles Duffield (postdoc 1999-2001; 2004-2006) Assoc. Professor of Biology, University of Notre Dame
Patrick Collopy (postdoc 2005-2008) manager, FMC Corp.
Han Cho Postdoc (2003–2005) Doing second postdoc with Ron Evans, The Salk Institute
Kwangwon Lee (1997-2003) Assoc. Professor Biology Rutgers University
Deanna Denault (1997-2002) Professor and Head, Dept. General Ed., NH Comm. Technical Coll.
Minou Nowrousian (1999-2002) Privatdozent (Associate Prof.) Lehrstuhl fuer Allgemeine und Molekulare Botanik Ruhr-Universitaet Bochum
Christopher Pitt (2001-2001) Staff Scientist Telomere Biology Laboratory MRC UK
Christian Heintzen (1996-2001) Assoc. Prof. (Sr. Lecturer) Biological Sciences Univ. Manchester, UK
Michael Collett (1997-2000) Research Scientist, New Zealand Dairy Research Institute
Jonathan Best (1998-2000) Senior Research Biochemist Merck Sharp & Dohme, UK
Yi Liu (1995 - 1999) Professor Department of Physiology UT Southwestern Medical Center
Mari Shinohara (1995 - 1998), Ass't. Professor, Dept. Immunology, Duke Univ.Sch. Medicine
Susan Crosthwaite (1993-1997) Assoc. Prof. (Sr. Lecturer), Biological Sciences, Univ. Manchester, UK
Deborah Bell-Pedersen (1990-1996) Professor and Assoc. Head of Department, Biological Sciences Texas A&M University
Hyeseon Cho (1994-1996) Senior Research Assoc. B Cell Immunology Section NIAID, NIH
Martha Merrow (1992 – 1997) Professor, Behaviour Biology, University of Groningen, Netherlands
Benjamin D. Aronson (1991-1994) Professor of Biology University of Redlands
Ann Lichens-Park (1988 - 1990) National Program Leader USDA Cooperative State Research, Education and Extension Service
Rob McClung (1986 - 1988) Professor Department of Biological Sciences Dartmouth College
Jennifer Loros (1985 – 1988), Professor of Biochemistry, Dartmouth Medical School

INVITED LECTURES AND PLENARY PRESENTATIONS (not updated since late 2012)

2012 Texas A&M University
Janelia Farms, HHMI
University of Minnesota
University of Wisconsin
Chinese Academy Of Sciences, Shanghai
Chinese Society for Microbiology (Keynote) Beijing
Photobiology Gordon Research Conference
Skirball Institute
Neurospora 2012
Society for Research on Biological Rhythms

2011 University of Wisconsin Madison
Plenary lecture, International Fungal Genetics Conference, Asilomar, CA
University of Padua Distinguished lectureship
University of Iowa Distinguished Biomedical Scholars Lecture

2010 Dept. Molecular Genetics, Ohio State University
Burroughs Wellcome Workshop on Pan-Fungal Genomics
Center for Biological Timing, UCSD
Neurospora 2010, Asilomar
Photobiology Gordon Research Conference, Il Ciocco, Italy

Society for Research on Biological Rhythms, Florida
International Congress of Mycology, Edinburgh
Center for Genome Research and Biocomputing, Oregon State
Mathematical Biology Inst., Columbus Ohio
Aspergillus fumigatus genomics, Inst. Pasteur

2009 Swerling Memorial Lecture, Dana Farber Cancer Center
Fungal Genetics Conference
Biology of Yeasts and Filamentous Fungi, Hyderabad, India
Carnegie Institution, Baltimore MD
Chronobiology Gordon Conference
German Society for Microbiology annual meeting
Department of Cell Biology at Harvard Medical School
International Conference of Systems Biology, San Francisco
International Symposium on Biological Rhythms, Sapporo, Japan
Keystone meeting on Epigenetics, Development and Human Disease
50th Annual Meeting, Korean Society for Microbiology, Jeju, Korea
Department of Cellular and Molecular Physiology, Yale University School of Medicine
Symposium for International Prize in Biology, Kyoto Japan

2008 Keystone Symposium on Genetics and Biochemistry of Sleep
Keynote talk, Neurospora 2008
Society for Research on Biological Rhythms
Metzenberg Memorial Lecture, Univ. California Irvine
Dept. Microbiology, University of Vermont

2007 American Society for Cell Biology minisymposium
Fungal genetics Conference
72nd Cold Spring Harbor Symposium
Department of Genetics and Microbiology, Duke University
German Society for Cell Biology annual meeting, Frankfurt
Kavli Institute, UC Santa Barbara

2006 Plenary Lecture Neurospora 2006
Photobiology Gordon research Conference, Barga Italy
Society for Research on Biological Rhythms, Florida

2005 Plenary lecture, Mexican Conference on Cellular and Molecular Biology
Guidant corporation
Univ. California San Francisco
Univ. Connecticut

2004 Cellular and Molecular Mycology Gordon Conference
Univ. California Los Angeles
Keynote speaker, Chronobiology Futures Meeting, Tokyo
Univ. California Riverside
Neurospora 2004

2003 National Academy of Sciences "Future Initiatives" meeting, Irvine
2003 Keynote Address, SUNY upstate graduate programs retreat

2003 University of Vermont
2003 Division of Sleep Medicine, Brigham and Women's Hospital, Boston
2003 Workshop on Photobiology, Fungal Genetics meeting, Asilomar
2003 Harvard College
2003 ITP Workshop on Mathematical Modeling
2003 Chronobiology Gordon Conference, Italy
2003 British Society for Microbiology (declined due to conflict)
2003 World Congress on Chronobiology (declined due to conflict)

2002 – Harvard Medical School
2002 – CIBA Foundation meeting on Clocks
2002 – Univ. Arizona
2002 – SRBR Meeting Symposium lecture
2002 – invited lecture – Neurospora 2002
2002 – Kobe University

2001 - Keystone Symposium on Circadian Clocks
2001 – Lunenberg Institute, Univ. Toronto
2001 – Univ. Tennessee
2001 - CIBA Foundation /Novartis Institute
2001 – Gordon Conference on Chronobiology

2000 - Institute for Biomolecular Science
2000 - UCSF
2000 - Medical Research Council Lecturer, Cambridge University, Cambridge, UK
2000 - Neurospora 2000
2000 - Society for Research on Biological Rhythms, Plenary Lecture
2000 - MD Anderson, Department of Molecular Biology, Houston, TX
2000 - PAS Domains in Biology, Invited lecturer, Research Triangle, NC
2000 - Cellular and Molecular Mycology Gordon Conference, session chair
2000 - 3éme Cycle Romand en Sciences biologiques, Villars-sur-Ollon, Switzerland

1999 - Juan March Symposium on Molecular Clocks, Madrid Spain
1999 - Plenary Lecturer, American Society Human Genetics Annual Meeting, San Francisco, CA
1999 - Fondation de Treilles, Provence, France
1999 - Chronobiology Gordon Conference, Barga Italy
1999 - University of Connecticut
1999 - Developmental Biology Gordon Conference, Andover, NH
1999 - University of Virginia
1999 - Davis Memorial Lecturer, University of Kansas, Lawrence, KS
1999 - Colorado State, Fort Collins, CO
1999 - Plenary Lecturer, Fungal Genetics Conference, Asilomar, CA
1999 - Special Lecturer, Franklin and Marshall College, Lancaster, PA

1998 - Juan March Symposium, Madrid Spain
1998 - Frontiers in Biochemistry, Biochemistry Graduate Students, Stanford University
1998 - Dept. Cellular and Developmental Biology, Harvard Univ.
1998 - Dept. Neurosciences, Tufts University
1998 - Society for Research on Biological Rhythms
1998 - Society for General Microbiology, Nottingham, UK Plenary Lecture, Main Symposium

1998 - Keynote Speaker, Neurospora Conference
1998 - Dept Biochemistry, Baylor University
1998 - Dept. Biochemistry, UMDNJ
1998 - Kobe Univ., Okayama Univ., Nagoya Univ., Yamaguchi Univ., Nara College
1998 - Japanese Society for Chronobiology - Invited Plenary lecture

1997 - Fungal Genetics Meeting, Asilomar, CA
1997 - Department of Molecular Biology, University of Alberta, Edmonton
1997 - Gordon Research Conference - Chronobiology, Session Chair and Speaker
1997 - Symposium "Gene Function to Cell Differentiation, National Inst. of Genetics, Tokyo
1997 - European Society for Chronobiology, Paris
1997 - Program in Genetics, Duke Univ.
1997 - Dept. Biological Sciences, Univ. Illinois

1996 - Department of Microbiology, New Jersey School of Medicine and Dentistry, Newark, NJ
1996 - Department of Genetics, University of North Carolina at Chapel Hill
1996 -Wadsworth Laboratories, New York State Department of Health, Albany, NY
1996 - Society for Research on Biological Rhythms
1996 - Sensory Transduction in Microorganisms Gordon Conference, Ventura, CA
1996 - Cellular and Molecular Mycology Gordon Conference, Holderness, NH
1996 - Department of Physiological Medicine, Ludwig-Maximilians-University, Munich, FRG

1995 - Department of Biology, Yale University, New Haven , CT
1995 - National Center on Sleep Disorders Research Workshop - Bethesda
1995 - World Conference on Chronobiology, Ferrara Italy (declined)
1995 - World Federation of Sleep Research Societies, Nassau, Bahamas (declined)
1995 - 19th International Summer School for Brain Research, Amsterdam
1995 - American Physiological Society Conference on Circadian Rhythms and Biological Clocks
1995 - Department of Biochemistry, Ohio State University, Columbus, Ohio

1994 Circadian Rhythms Symposium, Franklin and Marshal College, Lancaster, PA
1994 US/Japan Conference on Circadian Rhythmicity, Hawaii
1994 NSF/CBT Workshop on Circadian Rhythms of Drosophila and Related Insects, Charlottesville, VA
1994 Departments of Genetics and Biochemistry, University of Washington, Seattle, WA
1994 Institute of Molecular Biology, University of Oregon, Eugene, OR

1993 Ciba Foundation Symposium, "Circadian Clocks and Their Adjustment", London, England
1993 Department of Biology, Texas A&M, College Station, TX
1993 Gordon Conference on Chronobiology
1993 Department of Biology, University of Maine, Orono, ME

1992 Yamaguchi International Symposium on Circadian Rhythmicity, Yamaguchi, Japan
1992 FESN Workshop on Circadian Rhythms, New York City
1992 Society for Photochemistry and Photobiology, Florida
1992 EMBO Workshop on Molecular Biology of Circadian Rhythms, Leicester England
1992 Department of Biology, Stanford University, Stanford, CA
1992 Department of Biology, University of Massachusetts, Amherst, MA
1992 Center for Sleep and Respiratory Neurobiology, University of Pennsylvania, Philadelphia
1992 First Center for Biological Timing Symposium, Charlottesville, VA

1992 Department of Biology, Northeastern University, Boston, MA

1991 Fourth Sapporo Symposium on Biological Rhythms, Sapporo Japan
1991 EMBO Symposium on Fungal Genetics, Berlin Germany
1991 Gordon Conference on Chronobiology, Irsee Germany
1991 Genetics Society of Canada, Kingston, Ontario
1991 FESN Study Group on Circadian Rhythms, Geneva, Switzerland
1991 Twentieth International Conference on Chronobiology, Tel Aviv, Israel
1991 Department of Neurobiology, Northwestern University, Evanston, IL

1990 California Institute of Technology, Division of Biology, Pasadena, CA
1990 Society for Research on Biological Rhythms, Jacksonville, FL
1990 Fungal Genetics Gordon Conference, Andover, NH
1990 Department of Microbiology, University of Kansas Medical Center, Kansas City, KS
1990 Wadsworth Labs, New York State Department of Health, Albany, NY
1990 Department of Microbiology, University of Vermont, Burlington, VT
1990 Department of Biology, Columbia University, New York City, NY
1990 Department of Biology, Temple University, Philadelphia, PA

1989 Gordon Conference on Chronobiology, Plymouth, NH
1989 FASEB Meeting on Molecular Neurogenetics, Saxtons River, Vermont
1989 Department of Human Genetics, Yale University School of Medicine, New Haven, CT
1989 Department of Molecular and Cell Biology, University of Connecticut, Storrs, CT
1989 Marine Biological Laboratory, Woods Hole, MA
1989 Fifteenth Biennial Fungal Genetics Conference, Asilomar, CA
1989 Department of Biology /Biotechnology, Worcester Polytechnic Institute, Worcester, MA
1989 Department of Biology, Clarkson Univ., Pottsdam, New York

1988 Department of Cellular and Developmental Biology, Harvard University, Cambridge, MA
1988 Department of Biology, State University of New York, Albany, New York
1988 Laboratory of Plant Molecular Biology, Rockefeller University, New York, NY
1988 Meeting of the Society for Research on Biological Rhythms, Wild Dunes, NC
1988 Department of Biology, University of Virginia, Charlottesville, VA

1987 FASEB Meeting on Molecular Neurobiology, Copper Mountain, CO
1987 Gordon Conference on Chronobiology, Plymouth, NH

1986 Neurosciences Group, Department of Biology, Brandeis University, Waltham, MA

1984 National Academy of Sciences: Workshop on Nonmammalian Model Systems for Biological Regulation, Washington, D.C.

1983 Gordon Conference on Chronobiology, Colby-Sawyer College, New London, NH.
1983 Department of Biochemistry, Dartmouth Medical School, Hanover, NH

1981 Gordon Conference on Chronobiology (discussant), Andover, NH.
1981 Hopkins Marine Station, Stanford University, Pacific Grove, CA.

1980 Department of Botany, Massey University, Palmerston North, New Zealand.
1980 Department of Physics, University of Tasmania, Hobart, Tasmania, Australia.

1980 Department of Biology, University of Aukland, Auckland, New Zealand.
1980 Department of Agricultural Chemistry, Nagoya University, Nagoya, Japan.
1980 DFG Workshop on the Molecular Mechanism of the Biological Clock, Heidelberg, Federal Republic of Germany.
1980 DARPA Workshop on Bioluminescence in the Marine Environment, San Diego, CA.

Current Research Support

R01 GM34985 27-30 Dunlap (PI) 7/01/12-6/30/16
Genetic and Molecular Dissection of the *Neurospora* Clock
This effort has focused for the past 26 years on the molecular mechanism of eukaryotic circadian oscillators and the means through which they are reset by environmental cues.

R01 GM083336-23 - 27 Role: Co-Investigator, Loros (PI) 4/1/12 - 3/31/16
Identification and Analysis of Circadian Clock-Controlled Genes
This grant has focused for the past 22 years on analysis of clock output, how circadian oscillators control gene expression and metabolism in cells. Emphasis is now on Neurospora and on mammalian cells in culture.

P01 GM 068087 – 6 -10 Dunlap (PI) 4/1/09–3/31/14
Functional Analysis of a Model Filamentous Fungus

This Program Project has 3 major goals: to complete gene disruptions for Neurospora, make casettes for knockouts in A. nidulans; implement systems biology modeling of Neurospora development; and carry out an ENCODE like project to map DNA regulatory elements through development. 7 institutions participate.
Role: Overall PI, and PI of Project #1, Systematic Gene Knockouts, co-PI Project #3 RNA-seq and ChIP-seq

PUBLICATIONS

Books

Chronobiology: Biological Timekeeping, 382 pages, 278 illustrations, ISBN 0-87893-149-X, written and/or edited by Jay C. Dunlap, Jennifer J. Loros, and P. J. DeCoursey, April 2003, Sinauer Associates. At the time, the first textbook on circadian biology to be published in 18 years.

Advances in Genetics, volumes 32 through 88, co-edited with Theodore Friedman, Jeff Hall, Stephen F. Goodwin, and others

Invited Reviews and Chapters in books:

Dunlap, J. C., Taylor, W. and Hastings, J. W. 1981. The control and expression of bioluminescence in dinoflagellates. In: **Bioluminescence** (K. H. Nealson, ed.), pp. 108-124, Burgess Publ. Co., Minneapolis.

Krasnow, R., Dunlap, J. C., Taylor, W. R., Hastings, J. W., Vetterling, W. and Haas, E, 1981. Measurements of Gonyaulax bioluminescence, including that of single cells. In: **Bioluminescence** (K. H. Nealson, ed.), pp. 52-65, Burgess Publ. Co., Minneapolis.

Hastings, J. W., Dunlap, J. C. and Taylor, W. R. 1981. Biochemical analysis of circadian clocks. In: **Current Topics in Metabolic Regulation** , vol. 18 (B. Horecker and E. Stadtman, eds.), pp. 519-529, Academic Press, New York.

Hastings, J. W. and Dunlap, Jay. C. 1986. Cell free components in dinoflagellate bioluminescence. **Methods in Enzymology** 133: 307-327.

Dunlap, Jay C. and Jennifer, J. Loros. 1990. Genetics and Molecular Genetics of the Circadian Biological Clock in *Neurospora* , **Seminars in Developmental Biology** 1: 221-232.

Dunlap, Jay C., Qiuyun Liu, Keith Johnson, and Jennifer J. Loros. 1992. Molecular Genetics of the *Neurospora* Biological Clock, invited review for the book **Molecular Genetics of Biological Rhythms** (Michael Young, ed.) pp. 37 - 54.

Loros, Jennifer, J., Kristin M. Lindgren, Ann Lichens-Park and Jay C. Dunlap. 1992. Molecular Genetic Analysis of Clock-Controlled Genes in *Neurospora,* invited review for the book **Molecular Genetics of Biological Rhythms** (Michael Young, ed) pp. 55 - 72.

Dunlap, Jay C. 1992. Analysis of Control Elements and Controlled Elements in the Neurospora Clock System, In: **Discussions in Neuroscience** 8: 84 - 88.

Dunlap, Jay C. 1992. Genetic and Molecular Dissection of the *Neurospora* Circadian System, In: **Biological Clocks - from Cell to Human** (Hiroshige, T. and Honma, K., eds) Hokkaido University Press, Sapporo, Japan, pp. 3 - 18

Dunlap, Jay C., Jennifer J. Loros, Benjamin D. Aronson, Keith A. Johnson, Qiuyun Liu, Kristin M. Lindgren, Deborah Bell-Pedersen, and Norman Garceau. 1992. Genetic and Molecular Analysis of the

Neurospora Circadian Clock, In: **Molecular Biology of Filamentous Fungi**, (Tudzynski, P. and Stahl, U., Verlag Chemie, eds.) Berlin, pp. 253 - 265.

Aronson, B.D., Keith A. Johnson, Qiuyin Liu, and Jay C. Dunlap. 1992. Molecular Analysis of the *Neurospora* Clock: Cloning and characterization of the *frequency* and *period*-4 genes. **Chronobiology International** 9: 231 - 239.

Dunlap, Jay C. Genetic Analysis of Circadian Clocks. 1993. **Annual Review of Physiology** 55, 683 - 728.

Dunlap, Jay C., Jennifer J. Loros, Benjamin D. Aronson, Keith A. Johnson, Qiuyun Liu, Kristin M. Lindgren, Deborah Bell-Pedersen, and Norman Garceau. Genetic and Molecular Analysis of the Neurospora Clock. 1993. **Brain Research Reviews** 18, 329 - 330.

Dunlap, Jay C. Jennifer J. Loros, Benjamin Aronson, Martha Merrow, Susan Crosthwaite, Deborah Bell-Pedersen, Kristin Lindgren, Norman Y. Garceau and Keith Johnson. 1994. Genetic Basis of the Circadian Clock, In: **Circadian Clocks and Their Adjustment**, (J. Waterhouse, ed.) Wiley, Chichester. Ciba Foundation Symposium No. 183, pp. 3 - 25.

Jay C. Dunlap, Jennifer J. Loros, Martha Merrow, Susan Crosthwaite, Deborah Bell-Pedersen, Norman Garceau, Mari Shinohara, Hyeseon Cho, and Chenghua Luo. 1996. The Genetic and Molecular Dissection of a Prototypic Circadian System, In: **Progress in Brain Research**, (R.M. Buijs, A. Kalsbeck, H. J. Romijn, C. M. A. Pennartz, and M. Miriman, eds.) Elsevier, Amsterdam, Progress in Brain Research 111: 11 - 27.

Dunlap, Jay C. Genetic and Molecular Analysis of Circadian Rhythms, **Annual Review of Genetics** 30: 579 - 601, 1996.

Jennifer J. Loros, Jay C. Dunlap, Susan Crosthwaite, Deborah Bell-Pedersen, Norman Garceau, Mari Shinohara, Hyeseon Cho, and Chenghua Luo, Yi Liu, Michael Collett, Anne Cole, Christian Heintzen and Martha Merrow. 1996. Light, Light Responsive Genes, and the Mechanism of the Circadian Clock in Neurospora, In: **Landmarks in Photobiology** from Proceedings of the 12th International Congress on Photobiology , pp. 129-133.

Dunlap. Jay C. 1998. Biological Clocks, In: **The McGraw Hill Yearbook of Science and Technology**, (S. Parker, ed.) McGraw Hill, New York, pp. 21 - 24.

Dunlap, J. C., Loros, J. J., Crosthwaite, S., Liu, Y., Garceau, N. Y., Bell-Pedersen, D., Shinohara, M., Luo, C., Collett, M., Cole, A. & Heintzen, C. 1998. The Circadian Regulatory System in *Neurospora*. In: **Microbial Responses to Light and Time** (D. Roberts, ed.) pp. 279 - 294, Cambridge: Cambridge Univ. Press.

Dunlap, Jay C. 1998. Clock genes and temperature effects: how to build a cellular oscillator. **NeuroReport** 9: 9

Dunlap, Jay C. 1998. Common Threads in Eukaryotic Rhythms Research. **Curr. Opinions in Genetics and Developmental Biology** 8: 400-406.

Dunlap, Jay C. 1998. An end in the beginning. **Science** 280: 1548 - 1549.

Dunlap, Jay C., Loros, J. J., Liu, Y., Crosthwaite, S.1999. Eukaryotic Circadian Systems: Cycles in Common, **Genes to Cells** 4, 1-10.

Dunlap, Jay C. Molecular Bases of Circadian Oscillators. 1999. **Cell** 96: 271 - 290[1]

Liu, Y., Heintzen, C., Loros, J. J., and Dunlap, Jay C. 1999. Regulation of Clock Genes, **Cellular and Molecular Life Sciences** 55, 1195 - 1205.

Dunlap, Jay C., Jennifer J. Loros. 2001. Molecular Genetics of Circadian Rhythms in *Neurospora*, In: **Handbook of Behavioral Neurobiology**, (Takahashi, J. Turek, F.W. and Moore, eds.) R.Y. Plenum Press, New York.

McWatters H, Dunlap JC , Millar A. 1999. Clocks for the real world. **Curr Biol.** 9: 633-635.

Iwasaki, H. and Jay C. Dunlap. 2000. Microbial Circadian Oscillatory Systems in Neurospora and Synechococcus: Models for Cellular Clocks, **Curr. Opin. Micro.** 3, 189 - 196.

Dunlap, J.C. (2000) A new slice on an old problem. **Nature Neurosci.** 3, 305 - 306.

Dunlap, J.C. (2001) Neurospora circadian clocks. **Encyclopedia of Life Sciences,** published online by **Nature** at http://www.els.net/els/els/els/index.html
.
Loros, J. J. and J. C. Dunlap (2001) Genetics and Molecular Genetics of the Neurospora Circadian System. **Ann. Rev. Physiol.** 63, 757 - 794.

Nowrousian, M., Nelson, M. A. and J. C. Dunlap. 2004. Functional Genomics and Transcriptomics, In **The Mycota II**, U. Kuck (ed). Springer-Verlag, Berlin., pp. 115 - 127.

Froehlich, A. F., Pregueiro, A., Lee, K., Denault, D., Colot, H., Nowrousian, M., Loros, J. J. and J. C. Dunlap. 2003. The Molecular Workings of the Neurospora Clock. **Novartis Found Symp**. 253:184-98

Dunlap, J.C. 2004. The Molecular Mechanism of Circadian Oscillators, In **Chronobiology: Biological Timekeeping**. Sinauer Associates, pp. 212 - 253.

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METHODS FOR REGULATING GENE EXPRESSION USING LIGHT

2. **Dunlap, Jay C., Jennifer Loros, Arun Mehra, Van Gooch United States Patent number 7,666,616 B2 issued**
Feb 23, 2010
NUCLEIC ACID SEQUENCES ENCODING LUCIFERASE FOR EXPRESSION IN FILAMENTOUS FUNGI