

## Biographical Sketch

**Andrew S. Belmont**

Birth Date: 8/9/56

### Education:

Princeton University, Princeton, NJ	AB	1977	Physics
Temple University, Phila., PA	M.D.	1982	Medicine
Temple University, Phila., PA	Ph.D.	1983	Physiology/Biophysics
The Johns Hopkins Univ, Baltimore, MD		1983	Postdoc
University of California, SF, CA		1983-89	Postdoc

### Research and Professional Experience:

1977-1983	Medical and graduate student, Temple University
1983	Postdoctoral Fellow with Dr. Paul Ts'o, Division of Biophysics, School of Hygiene and Public Health, The Johns Hopkins University
1983-1989	Postdoctoral fellow with Dr. David Agard, Department of Biochemistry and Biophysics, University of California, San Francisco
1989-1995	Assistant Professor, Department of Cell and Structural Biology, University of Illinois, Urbana
1995-1999	Associate Professor, Department of Cell and Structural Biology, University of Illinois, Urbana
1999-2005	Professor, Department of Cell and Structural Biology University of Illinois, Urbana
1/04 - 6/04	Interim Head, Department of Cell and Structural Biology
2005-present	Professor, Department of Cell and Developmental Biology University of Illinois, Urbana
1/2008-1/2014	Head, Department of Cell and Developmental Biology University of Illinois, Urbana

### Awards, Honors, Recognition:

1977	AB, magna cum laude, Phi Beta Kappa, Sigma Xi, Princeton University
1979-1980, 1981-1982	University Graduate Fellowship, Temple University
1984-1986	Damon Runyon-Walter Winchell Postdoctoral Fellowship
1986-1987	NIH Postdoctoral Fellowship
1990-1994	Whitaker Foundation Biomedical Engineering Research Grant for New Researchers
1998	University Scholar, University of Illinois
2001, 2006-2008, 2010-2012	Incomplete List of Teachers Rated Excellent
2011	Program Committee for ASCB 2011 Annual Meeting
4/1/14-3/31/17	Visiting Professor at National Institute of Genetics (NIG), Japan

## Research Support:

1. NSF equipment grant, 6/15/89-11/30/91, \$92,140, "Acquisition of an Optical Sectioning Workstation"
2. NIH R29 grant, 7/1/90-6/31/95, \$348,900 direct costs total, "Nuclear and Chromosome Decondensation During G1-S"
3. The Whitaker Foundation, Biomedical Engineering Grant, 12/1/90-4/31/94, \$149,859 direct costs total, "Computational Unraveling of Interphase Chromosome Structure"
4. BRSG, 4/01/90-9/3/91, \$10,000, "Support for Optical Sectioning Workstation"
5. NIH BRSG Small Instrumentation Program, 6/91-5/92, \$11,275, "Acquisition of a high vacuum evaporator"
6. NIH phase II SBIR grant, 5/1/94-4/30/96, \$31,264 direct costs total (consultant costs, PI is Dr. Rick Powell, Nanoprobe, Inc.)
7. NSF Instrumentation grant, 6/15/94- 5/31/96, \$266,382, "Acquisition of 200 Kev Transmission Electron Microscope" (co-PI)
8. NIH RO1 grant, 7/1/95-6/31/99, \$649,453 direct costs total, "Large-scale Chromatin Structure and Function"
9. NIH SBC-B-0394, 3/1/98-2/28/00, \$41,967 direct costs total, "Fluorescent and large metal cluster combination probes", (PI is Dr. Rick Powell, Nanoprobe, Inc)
10. NIH R01 GM58460, 2/1/99- 1/31/03, "\$697,423 direct Chromatin Domain Structure and Function"
11. NIH R01 GM42516, 7/1/99-6/30/04, \$688,057 direct, "Large-scale chromatin structure and function"
12. NIH R01 GM58460, 2/1/03-1/31/07, \$810,000 direct, "Chromatin Domain Structure and Function"
13. Research Board Grant: 4/30/02- 4/30/03, "Probing Genome Organization using Chemical Genetics", \$24,200 total (Arnold O. Beckman Research Award)
14. Human Frontier Science Program Organization, 6/03-1/07, \$300,000 (to ASB) "Investigation of the changes in nuclear and chromosome organization during mammalian X inactivation"
15. NIH R01 GM42516, 7/1/04-6/30/09, \$746,000 direct, "Large-scale chromatin structure and function"
16. NIH R01 GM58460-08S1, 2/1/06-7/31/07, \$65,914 direct, "Chromatin Domain Structure and Function"
17. NIH R01 GM58460, 8/1/07-1/31/11, \$902,702 direct, "Chromatin Domain Structure and Function"
18. Roy J. Carver Charitable Trust #08-3189, \$330,000 "Acquisition of the OMX Light Microscope and Creation of a MCB Imaging Facility"
19. NIH R01 GM058460-10S1, 2/01/08-1/31/10, \$71,260 Administrative Supplement in response to NOT-NS-08-013 for Human Pluripotent Stem Cell Research to "Chromatin Domain Structure and Function" grant

20. NIH SBIR grant R43 EB0008621-01A2 "3-15 nm Covalent Gold for High Resolution Electron microscopy, subcontract to A. Belmont, 7/15/09-1/14/10, \$13,061 direct
21. NIH R01 GM058460-13, 6/1/11-5/31/15, \$960,824 direct, \$1,399,964 total, "Chromatin Domain Structure and Function"
22. NIH R01 GM098319-01, 8/15/2011- 7/31/2015, \$760,000 direct, \$1,158,112 total, " Engineering stable, independent multi-transgene expression in mammalian cells"

Courses Taught:

Fall 1989- Spring 1990:	CSB 360: 13 contact hours
	Biophysics 301: 1.5 contact hours
Fall 1990- Spring 1991	CSB 360: 26 contact hours
	Biophysics 301: 1.5 contact hours
Fall 1991- Spring 1992	CSB 300: 25 contact hours
	CSB 335: 44 contact hours
	Biophysics 301: 1.5 contact hours
Fall 1992	CSB 300: 29 contact hours
Fall 1993- Spring 1994	CSB 300: 26 contact hours
	CSB 410: 42 contact hours
	Bio 350: 1 contact hour
Fall 1994	CSB 300: 36 contact hours
Spring 1995	Biophysics Tutorial
Fall 1995	CSB 300: 22 contact hours
Spring 1996	CSB 410: 42 contact hours, Biophysics Tutorial
Fall 1996	CSB 300: 20 contact hours
Fall 1997	CSB 300: 20 contact hours
Spring 1998	CSB 410 (Research Ethics): 8 contact hours
Fall 1998	CSB 300: 20 contact hours
	CSB 490: 5 contact hours
Spring 1999	Biochem 494A: 2 contact hours
Fall 1999	CSB 300: 20 contact hours
	CSB 490: 6 contact hours
Spring 2000	Biological Physics 001 Seminar: 1 hour
Fall 2000	CSB 300: 23 contact hours
Spring 2001	CSB 410G: 44 contact hours
	CSB 410: 4.5 contact hours
Fall 2002	CSB 300: 23 contact hours
Spring 2005	MCB 501: Functional genomics in Cell Biology Seminar, 44 contact hours
Spring 2006	MCB 529 AB1: Graduate Survey Course in Molecular Cell Biology, 17 contact hours teaching, course manager (44 hours overall)
Spring 2007	MCB 529AB1: Cell Biology, 31.5 contact hrs

Spring 2008	MCB 529AB1: Cell Biology, 29.5 contact hrs
Spring 2009	MCB 529AB1: Cell Biology, 22.5 contact hrs
Spring 2010	MCB 529AB1: Cell Biology, 13.5 contact hrs
Spring 2011	MCB 529AB1: Cell Biology, 19.5 contact hrs
Spring 2012	MCB 493.acb: Cell Biology, 17 contact hrs
Fall 2012	MCB 529WRI: Writing Class, 14 contact hrs
Spring 2013	MCB 493acb: Cell Biology, 17 contact hrs
Fall 2013	MCB 529WRI: Writing Class, 14 contact hrs
Spring 2014	MCB 493acb: Cell Biology, 14 contact hrs

Previous and Current Students and Associates:

Undergraduate Research Projects: Anja Thilenius, Madhuri Wadehra, Scott Hofman, Jason Hoeksam, Gina Gottlieb, Corrie Tolerico, Allison Kehoe, Jon Radosta, Gena Bloth, Sarah Scheiderich, Yvonne Kehinde, Shani Pullappally, Ashouri Anousheh, Mary Anne Floyd, Rebecca Taggart, Nazanin Ashourian, Rashi Chandra, Paul Donlin-Asp, Jurgis Alvikas, Sudeep Soni, Nathaniel Ryckman, Taylor Graff

Master Thesis Advisor: Carmen Robinett, Lan Zhao (Biology), Mei-Chun Lai

PhD Thesis Advisor: Cell and Developmental Biology: Gang Li, Ann Nye, Chien-Hui Chuang, Yan Hu, Wei-Cheng Wu, Yu Chen, Xiang Deng, Nimish Khanna, Binhui Zhong, Liguozhang  
Biophysics: Yuri Strukov, Tudorita Tumber, Qian Bian, Jiah Kim

Visiting Graduate Student: Sevinci Memedula (University of Bucharest)

PhD Research Advisor: Alexander Delaney (Electrical and Computer Engineering)

Postdoctoral Fellow Advisor: Steffen Dietzel, Sevi Memedula, Tao Wei, Alena Rego, Paul Sinclair, Hanna Walukiewicz, Gabriela Sustackova, David Zimmerman, Pankaj Chaturvedi, Hatice Kaya

Visiting Scientist: Igor Kireev (Moscow State University)

On-Campus Activities:

Departmental:

- Search Committee (1989,1990,1998)
- Seminar Committee (1989-1995, 1996-1999)
- Curriculum Committee (1989-1994, 1996-1997, 2000, 2002-2003)

Chair, Graduate Advising Committee (1996)  
Graduate Advising Committee (1996-1997)  
Chair, Seminar Committee (1997-1998)  
Chair, Research Resources Committee (1998-2000)  
Research Resources Committee (1998- 2003)  
Advisory Committee (1998-2000, 2003- present)  
Interim Department Head, Cell and Structural Biology (Spring 2004)  
Graduate Program and Fellowship Committee (2006)  
Graduate Admissions Committee, Chair (2007)  
Department Head, 1/08- 12/31/13  
Preliminary Exam Committee, 1/14-present

School:

Chair, MCB Seminar Committee (1998-1999)  
Cell Biology Ad Hoc Search Committee (1999)  
Strategic Planning Committee (1998, 2000-present)  
MCB Executive Committee (2002-2004, 2008-2013)  
Tenure and Promotion Committee (2003-present)  
Head, Cell Biology Search Committee (2004-2005)  
Review Committee for Biochemistry (Spring 2005)  
Confocal Facility Committee, Chair (2007- present)  
Light Microscopy Facility Committee (2008-2009)

Beckman:

Computer Visualization Committee (1989-1994)

Campus:

Electron Microscopy Advisory Committee (1990-1991, 1993-1995)  
Chairman, CEM Review Committee (1995)  
Biophysics Training Grant Advisory Committee (1992-1995)  
Campus Research Board Reviewer  
School of Life Sciences Reorganization Committee (1996)  
Advisory Committee of Fluorescence Dynamics Laboratory, NIH Regional Resource (1999-present)  
Cell as a Micromachine working group (2003-2004)  
Review Committee for MCB Director (elected departmental representative) (2005)  
University Scholars Award Committee (2006)  
Chair, Graduate College Doctoral Candidacy and Tuition Committee (12/13-4/14)

Off-Campus Activities

Program Committee for American Society for Cell Biology 2011 Meeting

Reviewer: BBRC, Biochemistry, Bioimaging, Biophysical Journal, Cell, Chromosoma, Chromosome Research, Current Biology, Developmental Cell, EMBO, EMBO Reports, Epigenetics and Chromatin, Experimental Cell Research, Genes and Chromosomes, Genome Biology, IEEE Transactions in Biomedical Engineering, Journal of Biological Structure, Journal Biomedical Optics, Journal of Biomolecular Structure and Dynamics, Journal of Cell Biology, Journal of Cell Science, Journal of Cellular Biochemistry, Journal of Histochemistry and Cytochemistry, Journal of Structural Biology, JOVE, Microbiology and Molecular Biology Reviews, Molecular and Cellular Biology, Molecular Biology of the Cell, Molecular Cell, Nature, Nature Communications, Nature Genetics, Nature Cell Biology, Nature Methods, Nucleus, Physics Review E, PLOS Biology, PLOS Genetics, PNAS, RNA, Science, Trends in Cell Biology

Reviewer: NIH Special Review Section, 1990, 1994  
NIH Reviewer, Special Genetics Study Section, 1991  
NIH Reviewer, Shared Instrumentation Special Study Section, 1993-1994  
NIH Special Reviewer, Molecular Cytology Study Section, 1994, 1995  
NIH Site Visit member, Shared Instrument Study Section, 1994  
NIH Special Reviewer, Molecular Biology Study Section, 1995  
NSF Panel Member, Cellular Organization, 1995  
NSF Panel Member, Cellular Organization, 1996 (declined)  
NIH Reviewer, Shared Instrumentation Special Study Section, 1997 (declined)  
NIH Reviewer, Postdoctoral Fellowship, Molecular Cytology Study Section, 1997 (declined)  
NIH, Site visit, Visualization of Biological Complexity Resource, ZRG1 SSSI 03S  
NIH, Special Emphasis Panel ZRG1 CDF-3 (01)  
National Science Foundation, Cell Biology Panel (1998)  
NIH CDF-2 study section, ad hoc 10/02, 6/04  
NIH NCSD, ad hoc 2/12  
United States-Israel Binational Science Foundation  
Human Frontier Science Program  
The Wellcome Trust  
Alberta Heritage Foundation  
NOW, Aard- en Levenswetenschappen, From Molecule to Organism ALW (Dutch grant review) (2005-2006)  
Austrian Science Fund (2005-2006)  
NIH T01 and Challenge grant mail reviewer, 2009  
NIH T01 grant mail reviewer 2010, 2013  
Medical Research Council  
Janiella Farms Research Campus Project Team Review Panel, June 2012  
NIH NCSD study section, ad hoc 6/13

Editor: Journal of Cell Biology, 8/99- 12/08  
Chromosome Research, 1/00- 2003  
Epigenetics and Chromatin, 4/08-present  
Nucleus, 2008-present  
Current Opinion in Cell Biology, 2008-present

Current Biology, 2014-

Member of "Faculty of 1000"

Invited Talks:

12th International Congress for Electron, Microscopy, Seattle, Washington, Aug. 1990

Congress for Electron Microscopy, 1991

Weiss Center for Research, Geisinger Clinic, 5/91

Northwestern University, 1/92

Northern Illinois University, 3/92

ASCB 1994 meeting, Minisymposium speaker

Workshop, Joint Histochemical Society - Microscopy Society of America Meeting, 1995

Discussion leader, Gordon Conference, Biological Structure and Gene Expression, 1995

Northwestern University, 3/96

Bowling Green State University, 4/96

Stoney Brook University, 4/96

Cambridge Symposia, Nuclear Structure-Gene Expression Interrelationships, 5/96

Scripps Research Institute, 6/96

NATO Advanced Study Institute, Genome Structure and Function, 6/96

Session Chair, Keystone Symposia, Functional Organization of the Nucleus, 2/97

Ringberg Castle, Germany, Electron Tomography Workshop, 3/97

University of Amsterdam, E.C. Slater Institute, 3/97

Gordon Conference, Biological Structure and Gene Expression, 3/97

International Society of Analytical Cytology, 3/98

Keystone Symposia, Epigenetic Regulation of Gene Expression, 4/98

University of Iowa, Genetics Program, 4/98

British Society of Cell Biology, 4/98 (declined)

Fred Hutchison Cancer Research Center, 5/98

Gordon Conference, Nucleic Acids, 6/98

Gordon Conference, Molecular Cytogenetics, 7/98 (declined)

CSHL Meeting, Discussion Leader, Dynamic Organization of Nuclear Function, 10/98

Princeton University, Molecular Biology Department, 11/98

National Institutes of Health, 11/98

ASCB 1998 meeting, Special Interest Subgroup, 12/98

University of Wisconsin, Madison, Pharmacology Department, 1/99

Syracuse University, Biochemistry and Molecular Biology Department, 4/99

6th Congress, European Society for Analytical Cellular Pathology, Heidelberg, 4/99 (declined)

FASEB Summer Research Conference, Chromatin and Transcription, 7/99

Gordon Conference, Red Cell, 7/99 (declined)

EMBO Workshop, The Functional Organization of the Cell Nucleus, 9/99

Pennsylvania State University, Department of Biochemistry and Molecular Biology, 9/99

Iowa State University, Molecular, Cellular, and Developmental Biology program, 10/99

University of California, Irvine, Department of Biological Chemistry, 1/00

University of Virginia, Department of Biochemistry and Molecular Genetics, 1/00  
Keystone Symposia, Chromatin Structure and Function, 2/00  
Cold Spring Harbor Laboratory, 3/00  
German Society of Human Genetics, 3/00 (declined)  
Northwestern University, Department of Cell and Molecular Biology, 3/00  
Gordon Conference, Chromatin Structure and Function, 7/00  
DNA and Chromosomes, Corsica, 8/00  
XIth International Congress of Histochemistry and Cytochemistry, York, England, 9/00  
(declined)  
UTSW, Departments of Developmental and Molecular Biology, 10/00  
University of Chicago, Department of Cell Biology, 1/01  
Southern Illinois University, Department of Biochemistry, 2/01  
DNA Repair Workshop, Noordwijkerhout, the Netherlands, 2/01 declined  
DIMACS/PMMB/MBBC Workshop on DNA Sequence and Topology, Rutgers, 4/01  
Workshop, Regulation of Chromatin Functions, Madrid, 5/01  
Massachusetts General Hospital, Cutaneous Biology Research Center, 6/01  
Workshop on The Nuclear Envelope And Disease, National Cancer Institute, 6/01, declined  
FASEB Conference, Nuclear Structure and Cancer, 7/01 declined  
John Innes Symposium, Chromosome Dynamics and Expression, Norwich, 9/01  
Understanding chromosome behaviour: prospects for constructing chromosome-based vectors for  
gene therapy, European Science Foundation Workshop, Munich, 9/01 (declined)  
Genes and Chromosomes, Palm Beach, 10/01  
Albert Einstein Medical College, Department of Cell Biology, 10/01  
Genomics meets Nanoscience, Jackson Laboratory, Bar Harbor, ME, 10/01 (declined)  
The Johns Hopkins University, Department of Cell Biology, 12/01  
Leidse Genetische Colloquia, Leiden University Medical Center, Spring 2002 (declined)  
DNA in Chromatin, International Workshop, Plenary Lecture, Arcachon, France, 3/02 (declined)  
University of Virginia Medical School, Department of Biochemistry and Molecular Genetics,  
3/7/02  
Institute Curie, 6/3/02  
Netherlands Cancer Institute, Amsterdam, 6/02 (declined)  
Workshop: The dynamic nucleus, Imperial College, London, 6/02  
Gordon Conference, Chromatin Structure and Function, Tilton, NH, 7/02  
Session Chair, Nuclear Structure and Function, 15th International Congress of Electron  
Microscopy, Durban, South Africa, 9/02 (declined)  
Nanogenomics, Jackson Laboratory, 10/02, declined  
Loyola University (postponed)  
University of Massachusetts, Amherst (declined)  
UCSF, Department of Biochemistry and Biophysics, 1/03  
Keystone Meeting, Dynamics of Cellular Organization, 2/03  
AAAS Meeting, Symposium, "The 'New' Nucleus, Mothership of the Human Genome", 3/03  
Third International Symposium on the Biology of the Eukaryotic Nucleus,  
organized by National Institute of Child Health and Human Development, 3/03  
Nuclear Structure and Cancer, FASEB meeting, 7/03 (declined)  
Nanogenomics, Jackson Laboratory, 10/03



Cold Spring Harbor Laboratory, Instructor for Live Cell Imaging and Cytochemistry course, 10/03  
 University of Rochester, 11/03  
 University of Illinois, Chicago, 2/04  
 Predictive Oncology and Intervention Strategies, Plenary Session on Cancer Cell Structure, Nice, France, 2/04 (declined)  
 The Johns Hopkins University, Department of Biochemistry, Invited speaker for graduate course, The Nucleus, spring 04, declined  
 Cell Division and Chromosome Symposia, Academia Sinica, Taipei, Taiwan, 7/04  
 15<sup>th</sup> International Chromosome Conference, London, 9/04  
 Purdue University, Department of Biochemistry, 11/04  
 Osaka University, 10/04  
 Nano and Visual Biology of Chromosome Dynamics Symposium, Kyoto, 10/04  
 University of Florida, Gainesville, Department of Biochemistry, 4/05  
 FASEB Summer Course on Nuclear Structure and Cancer, Principal Speaker, 7/05 (declined)  
 University of Munich, Department of Molecular Biology, 9/05  
 UIUC, Department of Physics, Biophysics Seminar Series, 10/05  
 EMBO Conference on Nuclear Structure and Dynamics, Montpellier, France, 9/05  
 Northwestern Medical School, Department of Cell Biology, 10/05  
 Banbury Conference on “The Intracellular Molecular Environment”, CSHL, 11/05  
 Cornell University, Department of Molecular Genetics and Biochemistry, 11/05  
 Iowa State University, Department of Biochemistry, Biophysics, and Molecular Biology, 3/06  
 UIUC, Institute of Genomics Biology, Advanced Proteomics Theme, 3/06  
 EMBO Workshop “Functional Organization of the Cell Nucleus”, Prague, 5/06  
 Chromatin Structure and Function Gordon Conference, Ill Ciocco, Italy, 5/06  
 Yale University, MCDB Program, 11/06  
 Int. Symp. Functional Organization of the Nucleus, Awaji, Japan, 1/07  
 Colorado State University, Department of Biochemistry & Molecular Biology, 2/5/07  
 UCLA, Institute of Molecular Biology, 2/22/07  
 FASEB Meeting, Nuclear Structure and Cancer, Saxtons River, Vermont, 6/07  
 FEBS Congress, Vienna, Austria, 7/07  
 EMBO meeting on Nuclear Structure and Dynamics, Montpellier, France, 9/07  
 FASEB Meeting, Nuclear Structure and Cancer, Saxtons River, Vermont, 6/07  
 FEBS Congress, Vienna, Austria, 7/07 (cancelled due to family emergency)  
 EMBO meeting on Nuclear Structure and Dynamics, Montpellier, France, 9/07  
 University of Colorado, Denver, Department of Pharmacology, 2/11/08  
 University of Alberta, Edmonton, Department of Oncology, 2/15/08  
 Friedrich Meischer Institute for Biomedical Research, Basel, Switzerland, 3/27/08  
 University of Munich, Munich, Germany, 4/1/08  
 CNRS, Institute of Human Genetics, Institute of Molecular Genetics, Montpellier, France, 4/3/08-4/4/08  
 London Research Institute Symposium on Chromosome Biology, London, England, 5/08  
 Emory University, Biology Department, 11/08  
 Higher Order Genome Organization, The University of Edinburgh, UK 4/09  
 Netherlands Institute for Systems Biology Workshop on Epigenetic Gene Control and Engineered Cell Systems, University of Amsterdam, 4/09

Department of Biochemistry and Molecular Biology Annual Symposium, University of Virginia, 5/09  
University of Chicago, Molecular and Cell Biology Training Grant Seminar, 5/09  
17<sup>th</sup> Jerusalem Fall School in Life Sciences, Nuclear Organization and Dynamics, Hebrew University, 9/09  
Indiana University, Medical Science Program Seminar, 11/16/09  
Nuclear Organization Workshop, Keynote Speaker, Curie Institute, Paris, 11/09  
Janelia Imaging Transcription Conference, Janiela Farm Campus, HHMI, 3/10  
75<sup>th</sup> Symposium on Quantitative Biology, The Nucleus, CSHL, 6/10  
The Jackson Laboratory, Bar Harbor, 11/4//10  
Special Interest Subgroup, Synergistic Advances to Study Gene Expression and Next-Gen Imaging, ASCB Annual Meeting, 12/11/10  
Keynote Speaker, Northwestern University 1st Annual Genetics and Genomics Cluster Symposium, 1/20/10  
NIH Center of Excellence in Chromosome Biology and Laboratory of Receptor Biology Seminar, 2/23/11  
University of California, Santa Cruz, Department of Molecular, Cell, and Developmental Biology, 3/7/11  
University of North Carolina, Chapel Hill, Department of Biology, 3/29/11  
Moscow State University, Belozersky Institute of Physico-Chemical Biology, 4/18/11  
EMBO Workshop on Chromatin and Nuclear Structure, Prague, 4/10/11  
Carnegie Institute, Department of Embryology, Baltimore, 5/9/11  
Chromatin and Nuclear Organization Minisymposium, Northwestern University, 5/23/11  
Chromatin and Epigenetic Regulation of Transcription, Penn State University, 6/22/11  
Wenner-Gren Foundations International Symposium, "Actin and actin associated proteins from gene to polysomes", Stockholm, 9/7/11  
Yale University, Department of Genetics, 3/6/12  
Beijing University, Department of Cell Biology, 5/12 (postponed)  
University of Massachusetts Medical School, Worcester, Department of Cell Biology, 2/13  
German Society of Cell Biology, Plenary Session, 3/13  
H Symposium, The Dynamic Nucleus of the Cell: Chromatin, Chromosome and Disease, Northwestern University, 6/13  
FEBS 2013 Conference, Genome / Nucleus Symposium, St. Petersburg, Russia, 7/13  
19th International Chromosome Conference, Bologna, Italy, 9/13  
Northwestern University School of Medicine, Department of Cell and Molecular Biology, 1/14  
Florida University School of Medicine, Department of Anatomy and Cell Biology, 1/14  
Microscopy and Microanalysis Meeting, Nuclear Architecture and Chromatin Structure Session, Hartford, 7/14  
CSHL Nuclear Organization and Function Meeting, 8/14  
Genome Organization and Cell Fate Meeting, University of Hyderabad (UH), India, 12/14

#### Featured Talks:

Nuclear Organization Workshop, Keynote Speaker, Curie Institute, Paris, 11/09  
University of Chicago, Molecular and Cell Biology Training Grant Seminar, 5/09

Keynote Speaker, Northwestern University 1st Annual Genetics and Genomics Cluster  
Symposium, 1/20/10

- Symposia:
- Co-organizer, EM Tomography in Biology  
Microscopy Society of America Meeting, 1995
  - Co-organizer, 3-D Structural Function of Cells and Organelles,  
Microscopy Society of America Meeting, 1997
  - Cold Spring Harbor Laboratory Meeting, Dynamic Organization of Nuclear  
Function, Session Leader, Genome Organization and Transcription, 9/00
  - Co-chair, Minisymposium on Nuclear Structure and Function,  
ASCB meeting, 2001
  - Session Chair, Dynamics of Nuclear Structure, Third International Symposium  
on the Biology of the Eukaryotic Nucleus, organized by National Institute of  
Child Health and Human Development, 3/03
  - Session Chair, Dynamics of Nuclear Structure and Function, at Nuclear Structure  
and Cancer, FASEB meeting, 7/03 (declined)
  - Session Chair, Gene Expression and Genome Function, at CSHL meeting,  
Dynamic Organization of Nuclear Function, 9/08
  - Session Chair, Chromatin and Chromosome Structure, 17<sup>th</sup> International  
Chromosome Congress, Boone, NC, 7/09
  - Co-Chair, Minisymposium on Chromatin Organization and Dynamics, American  
Society Cell Biology, San Diego., CA, 12/2009
  - Chair, “Spatial Gene Regulation” Session, Janelia Farm meeting, Imaging  
transcription in living cells, 3/10
  - Symposium Chair, ASCB 2011 meeting, 12/11
  - Discussion Leader, CSHL Nuclear Organization and Function Meeting, 8/14

Society Memberships: AAAS, ASCB

Community: Coach, U9 Boys Classic, Little Illini Soccer Club (1997-1998)  
Assistant Coach, U10 Boys Classic, Little Illini Soccer Club (1998), Co-chair

University High School Soccer Booster Club (2003-2005)

Publications:

1. A. Chiabera, M. Hisenkamp, A.A. Pilla, J. Ryaby, D. Ponia, A. Belmont, F. Beltrame, M. Grattorola, C. Nicolini, Cytofluorimetry of electromagnetically controlled cell differentiation, *J. Histochem. Cytochem.* 27:375-381 (1979)
2. C. Nicolini, A. Belmont, S. Parodi, S. Lessin, S. Abraham, Mass action and acridine orange staining: static and flow cytometry, *J. Histochem. Cytochem.* 27:102-113 (1979)
3. C. Nicolini, A. Belmont, M. Grattarola, C. Moore, E. Milgram, Pharmacoenzyme kinetic simulations of experimental interactions among multiple anti-neoplastic drugs, *Biochem. Pharm.* 28:2891-2908 (1979)
4. A. Belmont, F. Kendall, C. Nicolini, Coupling of nuclear morphometry to cell geometry and growth in human fibroblasts, *Cell Biophysics* 2:165-175 (1980)
5. F. Kendall, F. Beltrame, S. Zietz, A. Belmont, C. Nicolini, The quinternary chromatin-DNA structure: three dimensional reconstruction and functional significance, *Cell Biophysics* 4:19-38 (1980)
6. M. Grattarola, A. Belmont, C. Nicolini, Correlation between Barr body and overall chromatin decondensation in vitro, *J. Cell Sci.* 47:187-195 (1981)
7. A. Belmont, C. Nicolini, Polyelectrolyte theory and chromatin quaternary structure: role of ionic strength and H1 histone, *J. Theor. Biol.* 90:169-179 (1981)
8. T. Dolby, A. Belmont, T. Borun, C. Nicolini, DNA replication, chromatin structure, and histone phosphorylation altered by theophylline in synchronized HeLa S-3 cells, *J. Cell Biol.* 89:78-85 (1981)
9. A. Belmont, C. Nicolini, Cell versus nuclear morphometry of serum stimulated fibroblasts: nuclear leads cell changes, *J. Cell Sci.* 58:201-209 (1982)
10. S. Zietz, A. Belmont, C. Nicolini, Differential scattering of circularly polarized light as a unique probe of polynucleosome superstructures- a simulation by multiple scattering of dipoles, *Cell Biophysics* 5: 163 (1983)
11. C. Nicolini, A. Belmont, S. Zietz, M. Maura, A. Pino, L. Rabbiano, G. Brambilla, Physico-chemical model for DNA alkaline elution: new experimental evidence and differential role of DNA length, chain flexibility, and superpacking, *J. Theor. Biol.* 100:344-357 (1983)

12. A. Belmont, F.M. Kendall, C. Nicolini, Relationship between nuclear morphometry and intranuclear DNA organization during the G1-S transition- evidence for discrete states of DNA condensation, *J. Cell Sci.* 65:123-138 (1984)
13. A. Belmont, S. Zietz, C. Nicolini, Differential light scattering of circularly polarized light by chromatin modeled as a helical array of dielectric ellipsoids within the Born approximation, *Biopolymers* 24:1301-1321 (1985)
14. A. Belmont, F. Bignone, P.O.P. Ts'o, The relative intranuclear positions of Barr bodies in XXX nontransformed human fibroblasts, *Exp. Cell Res.* 165:165-179 (1986)
15. A. Belmont, J. Sedat, D.A. Agard, A three dimensional approach to mitotic chromosome structure: evidence for a hierarchical organization, *J. Cell Biol.* 105:77-92 (1987)
16. A. Belmont, M. Braunfeld, J. Sedat, D.A. Agard, Large-scale chromatin structural domains in mitotic and interphase chromosomes in vivo and in vitro, *Chromosoma* 98:129-143 (1989)
17. M. Paddy, A. Belmont, H. Saumweber, D. Agard, J. Sedat, Nuclear envelope lamins form a discontinuous network in interphase nuclei which interact with only a fraction of the chromatin in the nuclear periphery, *Cell* 62:89-106 (1990)
18. A. S. Belmont, Y. Zhai, A. Thilenius, Lamin B distribution and association with peripheral chromatin revealed by optical sectioning and EM tomography, *J. Cell Biol.* 123:1671-1685 (1993)
19. A. S. Belmont, K. Bruce, G. Li, Three-dimensional visualization of G1 chromosomes: a folded, twisted, supercoiled chromonema model of interphase chromatid structure, *J. Cell Biol.* 127: 287-302 (1994)
20. A. Delaney, A. S. Belmont, Deblurring of high tilt projections for EM tomography, *Ultramicroscopy* 56: 319-335 (1994)
21. R. Brady, J. Pixton, G. Baxtor, P. Moran, C. S. Potter, B. Carragher, A. Belmont, Crumbs: a virtual environment tracking tool for biological imaging, in *Proc. IEEE Symp., 1995 Biomedical Visualization*, pp. 18-25, Editors, Murray Loew, Nahum Gershon, IEEE Comp. Soc. Press, Los Alamitos, CA (1995)
22. J. Pixton, A. S. Belmont, Newvision: a program for interactive navigation and analysis of multiple 3-D data sets using coordinated virtual cameras, *J. Struct. Biol.* 116: 77-85 (1996)
23. C. Robinett, A. Straight, G. Li, C. Willhelm, G. Sudlow, A. Murray, A. S. Belmont, In vivo localization of DNA sequences and visualization of large-scale chromatin organization using lac operator/repressor recognition, *J. Cell Biol.* 135: 1685-1700 (1996)

24. A.F. Straight, A.S. Belmont, C.C. Robinett, A.W. Murray, GFP tagging of budding yeast chromosomes reveals that protein-protein interactions can mediate sister chromatid cohesion, *Curr. Biol.* 6: 1599-1608 (1996)
25. J. Minshull, A. Straight, A. Rudner, A. Dernburg, A. Belmont, A.W. Murray, Protein phosphatase 2A regulates MPF activity and sister chromatid cohesion in budding yeast, *Curr. Biol.* 6: 1609-1620 (1996)
26. C.D. Webb, A. Teleman, S. Gordon, A. Straight, A. Belmont, D.C. Lin, A.D. Grossman, A. Wright, R. Losick, Bipolar localization of the replication origin regions of chromosomes in vegetative and sporulating cells in *B. subtilis*, *Cell* 88: 667-674 (1997)
27. Marshall, W.F., Straight, A., Marko, J.F., Swedlow, J., Dernburg, A., Belmont, A., Murray, A.W., Agard, D.A., J.W. Sedat., Interphase chromosomes undergo constrained diffusional motion in living cells, *Curr. Biol.* 7: 930-939 (1997)
28. A.S. Belmont, Large-scale Chromatin Structure, in "Genome Structure and Function", NATO Advanced Study Institute, Kluwer Acad. Pub., 261-278 (1997)
29. A. S. Belmont, Nuclear ultrastructure: Transmission electron microscopy and image analysis, *Methods Cell Biol.* 53: 99-124 (1998)
30. Li, G., Sudlow, G., A.S. Belmont, Interphase cell cycle dynamics of a late replicating, heterochromatic HSR: precise choreography of condensation/decondensation and nuclear positioning, *J. Cell Biol.* 140: 975-989 (1998)
31. Belmont, A.S., A.F. Straight, In vivo visualization of chromosomes using lac operator - repressor binding, *Trends in Cell Biol.* 8: 121-124
32. Belmont, A.S., Li, G., Sudlow, G., Robinett, C., Visualization of large-scale chromatin structure and dynamics using the lac operator / lac repressor reporter system, *Methods Cell Biol.* 58: 203-222 (1998)
33. Tumber, T., Sudlow, G., A.S. Belmont., Large-scale chromatin unfolding and remodeling induced by VP16 acidic activation domain, *J. Cell Biol.* 145: 1341-1354 (1999)
34. Belmont AS, Dietzel S, Nye AC, Strukov YG, T. Tumber, Large-scale chromatin structure and function, *Curr. Opin. Cell Biol.* 11(3):307-11 (1999)
35. Tsukamoto, Hashiguchi, N., Janicki, S., Tumber, T., Belmont, A.S., D.L. Spector, Visualization of gene activity in living cells, *Nature Cell Biology*, 2:871-878 (2000)
36. Tumber, T. and A.S. Belmont, Interphase movements of a DNA chromosome region modulated by VP16 transcriptional activator, *Nature Cell Biology*, 3: 134-139 (2001)

38. Dietzel, S. and A.S. Belmont, Reproducible but dynamic positioning of DNA within chromosomes during mitosis, *Nature Cell Biology*, 3: 767-770 (2001)
39. A.S. Belmont, Visualizing chromosome dynamics with GFP, *Trends in Cell Biology*, 6: 250-257 (2001) **(Cited as number 1 downloaded article in TCB during 2001 and 2002)**
40. Stenoien, D.L., Nye, A.C., Mancini, M.G., Patel, K., Dutertre, M., O'Malley, B., Smith, C.L., Belmont, A.S., M.A. Mancini, Ligand-mediated assembly and altered dynamics of estrogen receptor-SRC-1 complexes in living cells, *Molecular and Cellular Biology*, 21: 4404-4412 (2001)
41. Vazquez, J., Belmont, A.S., J.W. Sedat, Multiple regimes of constrained chromosome motion are regulated during interphase in *Drosophila*, *Current Biology*, 11: 1227-1239 (2001)
42. Ye, Q., Hu, Y-F., Zhong, H., Nye, A.C., Belmont, A.S., R. Li, BRCA1-induced large-scale chromatin unfolding and allele-specific effects of cancer-predisposing mutations, *J. Cell Biol.* 155:911-921 (2001)
43. Nye, A.C., Rajendran, R.R., Stenoien, D.L., Mancini, M.A., Katzenellenbogen, B.S., Belmont, A.S., Alterations of large-scale chromatin structure by the estrogen receptor, *Mol. Cell. Biol.*, 22: 3437-3449 (2002)
44. Belmont, A.S, Mitotic chromosome scaffold structure: new approaches to an old controversy, *PNAS* 99:15855-15857 (2002)
45. Vazquez, J., Belmont, A.S., J.W. Sedat, The dynamics of homologous chromosome pairing during male *Drosophila* meiosis, *Curr. Biol.* 12:1473-1483 (2002)
46. Memedula, S. and A.S. Belmont, Sequential recruitment of HAT and SWI/SNF components to condensed chromatin by VP16, *Curr. Biol.* 13: 241-246 (2003)
47. Li, Y., Danzer, J.R., Alvarez, P., Belmont, A.S., L.L. Wallrath, Effects of tethering HP1 to euchromatic regions of the *Drosophila* genome, *Development* 130:1817-1824 (2003)
48. Belmont, A.S., Dynamics of chromatin, proteins, and bodies within the cell nucleus, *Curr. Opin. Cell Biol.* 15:1-7 (2003)
49. Strukov, Y.G., Wang, Y., A.S. Belmont, Engineered chromosome regions with altered sequence composition demonstrate hierarchical large-scale folding within metaphase chromosomes, *J. Cell Biol.* 162:23-35 (2003)
50. Strukov, Y.G. and A.S. Belmont, Development of Mammalian Cell Lines with Lac Operator Tagged Chromosomes, in "Live Cell Imaging: A Laboratory Manual", CSHL press, 2004
51. Carpenter, A.E. and A.S. Belmont, Direct visualization of transcription factor induced chromatin remodeling and cofactor recruitment in vivo, in "Methods in Enzymology: Chromatin and Chromatin Remodeling Enzymes", Academic Press, Vol 375:366-381 (2004)
52. Nye, A.C., Ashouri, A., A.S. Belmont, Automated microscopy identifies estrogen receptor subdomains with large-scale chromatin structure unfolding activity, *Cytometry* 58A(2):157-166 (2004)

53. Kireeva, N., Lakonishok, M., Kireev, I., Hirano, T., A.S. Belmont, Visualization of Early Chromosome Condensation: A Hierarchical Folding, Axial Glue Model of Chromosome Structure, *J. Cell Biol.* 166: 775-785 (2004)
54. Dietzel, S., Zolghadr, K., Hepperger, C., A.S. Belmont, Differential large-scale chromatin compaction and intranuclear positioning of transcribed versus non-transcribed transgene arrays containing beta-globin regulatory sequences, *J. Cell Sci.* 117: 4603-4614 (2004)
55. Chen, D., Belmont, A.S., Huang, S., Upstream binding factor association induces large-scale chromatin decondensation, *PNAS* 101: 15106-11 (2004)
56. Carpenter, A.E., Memedula, S., Plutz, M.J., A.S. Belmont, Common effects of acidic activators on large-scale chromatin structure and transcription, *Mol. Cell Biol.* 25: 958-68 (2005)
57. Verschure, P.J., van der Kraan, I., de Leeuw, W., van der Vlag, J., Carpenter, A.E., Belmont, A.S., van Driel, R., In vivo HP1 targeting causes large-scale chromatin condensation and enhanced lysine methylation, *Mol. Cell Biol.*, 25:4552-64 (2005)
58. Levi, V., Ruan, Q., Plutz, M., Belmont, A.S., Gratton, E., Chromatin dynamics in interphase cells revealed by tracking in a two-photon excitation microscope, *Biophysical J.* 89(6): 4275-85 (2005)
59. Chuang, C.H. and A.S. Belmont, Close encounters between active genes in the nucleus. *Genome Biol.* 6:237 (2005)
60. Brink, M.C., van der Velden, Y., de Leeuw, W., Mateos-Langerak, J., Belmont, A.S., van Driel, R., Verschure, P.J., Truncated HP1 lacking a functional chromodomain induces heterochromatinization upon in vivo targeting, *Histochem Cell Biol.* 125:53-61 (2006)
61. Chuang, C., Carpenter, A.E., Fuchsova, B., Johnson, T., de Lanerolle, P., Belmont, A.S., Long-range directional movement of an interphase chromosome site. *Curr. Biol.* 16:825- 831 (2006)
62. Belmont, A.S., Mitotic chromosome structure and condensation, *Curr. Opin. Cell Biol.* 18:632-638 (2006)
63. Novikov, D.V., Kireev, I., Belmont, A.S., High-pressure treatment of polytene chromosomes improves structural resolution, *Nat. Methods* 4:483-485 (2007)
64. Chuang, C.H. and A.S. Belmont, Moving chromatin within the interphase nucleus- controlled transitions?, *Semin Cell Dev Biol* 18:698-706 (2007)
65. Deng, H., Bao X., Cai W., Blacketer, M.J., Belmont, A.S., Girton, J., Johansen, K.M. Johansen, Ectopic histone H3S10 phosphorylation causes chromatin structure remodeling in *Drosophila*, *Development* 135:669-705 (2008)
66. Rego, A., Sinclair, P.B., Tao, W., Kireev, I., A.S. Belmont, The facultative heterochromatin of the inactive X chromosome has a distinctive condensed ultrastructure, *J. Cell Sci.* 121:1119-1127 (2008)



67. Kireev, I, Lakonishok, M., Liu, W.,, Joshi, V.N., Powell, R., A.S. Belmont, In vivo immunogold labeling confirms large-scale chromatin folding motifs, *Nat Methods* 5:311-313 (2008)
68. Strukov, Y.G. and A.S. Belmont, Mitotic chromosome structure: reproducibility of folding and symmetry between sister chromatids, *Biophys. J.* 96: 1617-1628 (2009)
69. Hu, Y., Kireev, I., Plutz, M., Ashourian, N., A.S. Belmont, Large-scale chromatin structure of inducible genes: transcription on a condensed, linear template, *J. Cell. Biol.* 185: 87-100 (2009)
70. Balamotis, M.A., Pennella, M.A., Stevens J.L., Wasylyk, B., Belmont, A.S., A.J. Berk, Complexity in transcription control at the activation domain-mediator interface, *Sci. Signal.* 2(69):ra20 (2009)
71. Belmont, A. (2009), "Mitotic chromosome condensation", in Millar, J. (ed.), *The Cell Division Cycle: Controlling when and where cells divide and differentiate*, The Biomedical & Life Sciences Collection, Henry Stewart Talks Ltd, London (online at <http://www.hstalks.com/?t=BL0422468-Belmont>)
72. Strukov, Y.G., Plutz, M. and A.S. Belmont, Development of Mammalian Cell Lines with Lac Operator Tagged Chromosomes, in "Live Cell Imaging: A Laboratory Manual", 2<sup>nd</sup> edition, Cold Spring Harbor Laboratory Press, 2010, pp. 541-563
73. Bian, Q, A.S. Belmont, BAC TG-Embed: one step method for high-level, copy-number-dependent, position-independent transgene expression, *Nucleic Acids Res.* 38(11):e127 (2010) PMID: PMC2887973201
74. Sinclair, P., Bian, Q., Plutz, M., Heard, E., A.S. Belmont, Dynamic plasticity of large-scale chromatin structure revealed by self-assembly of engineered chromosome regions, *JCB* 190: 761-776 (2010) PMID: PMC2935575 (subject of a JCB biobytes Podcast: <http://jcb.rupress.org/content/190/5/761/suppl/DC2>)
75. Hu, Y., Plutz, M., A. S. Belmont, Hsp70 gene-nuclear speckle association is Hsp70 promoter specific, *JCB* 191:711-719 (2010) PMID: PMC2983068
76. Belmont, A.S., Estrogen fueled, nuclear kiss: did it move for you?, *Nucleus* 1: 440-443 (2010) PMID: 21326827
77. Masui, O., Bonnet, I., Le Baccon, P., Brito, I., Pollex, T., Murphy, N., Hupe, F., Barillot, E., Belmont, A.S., Heard, E., Live-cell chromosome dynamics and outcome of X chromosome pairing events during ES cell differentiation, *Cell* 145:447-458 (2011) NIHMSID 381118
78. Belmont, A.S., Hu, Y., Sinclair, P.B., Wu, W., Bian, Q., Kireev, I., Insights into interphase large-scale chromatin structure from analysis of engineered chromosome regions, *Cold Spring Harb Symp Quant Biol.* 75:453-460. 2010. PMID=21467143
79. Bian, Q., Belmont, A.S., Revisiting higher-order and large-scale chromatin organization, *Curr Opin Cell Biol.* 24: 359-366 (2012) PMID: 22459407

80. Khanna, N., Bian, Q., Plutz, M., Belmont, A.S., BAC Manipulations for Making BAC Transgene Arrays, *Methods in Molecular Biology, Imaging Gene Expression*, 1042: 197-210 (2013) PMID: 23980009
81. Bian, Q., Khanna, N., Alvikas, J., A.S. Belmont, Beta-Globin cis-elements determine differential nuclear targeting through epigenetic modifications, *J. Cell Biol.* 203: 767-783 (2013), PMID 24297746, PMCID not yet available
82. Belmont A.S. Large-scale chromatin organization: The good, the surprising, and the still perplexing. *Curr Opin Cell Biol.* 26:69-78 (2014) PMID: 24529248
83. Khanna, N., Hu, Y., A.S. Belmont, Hsp70 transgene directed motion to nuclear speckles facilitates shock activation. *Current Biology* (in press, May 1, 2014)