

## **MINA J. BISSELL, Ph.D.**

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Lawrence Berkeley National Laboratory  
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### **EDUCATION AND TRAINING:**

Bryn Mawr College, Bryn Mawr, PA		1961	Chemistry, transferred
Radcliffe/Harvard College, Cambridge, MA	B.A.	1963	Chemistry (Honors)
Harvard University, Cambridge, MA	M.A.	1965	Bacteriology and Biochemistry
Harvard University, Cambridge, MA	Ph.D.	1969	Microbiology and Molecular Genetics

### **POSITIONS:**

1969-1970	Milton Fellow, Harvard University
1970-1972	American Cancer Society Fellow
1972-1976	Staff Biochemist
1976-Present	Senior Staff, Lawrence Berkeley National Laboratory (LBNL)
1979-Present	Faculty, Graduate Group in Comparative Biochemistry, UCB
1986-1988	Visiting Wellcome Professor, Kettering Institute, University of Cincinnati Medical School
1988-1992	Director, Cell & Molecular Biology Division, LBNL
1992-2002	Director, Life Sciences Division (includes Cell & Molecular Biology Division), LBNL
1995-2002	Associate Director, Biosciences, LBNL
2001-Present	Faculty, Graduate Group in Endocrinology, UCB
2002-Present	Faculty, Graduate Group in Molecular Toxicology, UCB
2002-Present	Distinguished Scientist, LBNL
2002-Present	Senior Advisor to the Laboratory Director on Biology, LBNL
2008-Present	Faculty, Graduate Group in Bioengineering, UCB/UCSF
2009-Present	Advisor to the Life Sciences Division Director, LBNL
2010-Present	Mentor, Biology Scholars Program (IMSD), UCB

### **AWARDS AND HONORS (selected):**

1958	Medal for top high school student in the country, Iran
1962	Medal of American Institute of Chemists for top Chemistry student at Radcliffe/Harvard College, Cambridge, MA
1982	Distinguished Visiting Scientist, Queensland Institute Medical Research, Brisbane, Australia
1983-1984	Fogarty Senior Fellow, International Clinical Research Fellows Program (ICRF), London
1985	First Joseph Sadusk Award for Breast Cancer Research
1987	Wellcome Visiting Professor in Cell Biology, University of Cincinnati Medical School
1992-1993	John Simon Guggenheim Fellow, Ecôle Normale Supérieure, Paris
1993	ASCB Women in Cell Biology Career Recognition Senior Award
1994	<i>Elected Fellow, American Association for Advancement of Science</i>
1996	E.O. Lawrence Award, U.S. Dept. of Energy
1997	President, American Society of Cell Biology
1997	Exceptional Service Award, OBER, U.S. Dept. of Energy
1997	<i>Elected Fellow, Institute of Medicine of the National Academies</i>
1998	Mellon Award, University of Pittsburgh
1999	Clowes /Eli Lily Award of the American Association for Cancer Research
2000-2002	President, International Society of Differentiation
2001	Honoris Docteur Causa, Pierre et Marie Curie University, Paris, France
2002-2008	First Innovator Award in Breast Cancer, U.S. Department of Defense
2002	<i>Elected Fellow, American Academy of Arts and Sciences</i>

2003	Susan G. Komen Foundation Brinker Award
2004	First Discovery Health Channel Medical Honor Medal
2004	Honorary Doctorate, University of Copenhagen
2005	First Distinguished Scientist Fellowship Award in Medical Sciences, OBER, U.S. Dept. of Energy
2006–Present	Member, UCSF Comprehensive Cancer Center, University of California, San Francisco
2006–2009	Member, Life Sciences Division Representative on the Laboratory Staff Committee, LBNL
2007	Ted Couch Award and Lectureship in Cancer Research, H. Lee Moffitt Cancer
2007	Pezcoller Foundation–AACR International Award for Cancer Research
2007	Inserm International Foreign Scientist of the Year Award, France
2007	<i>Elected Fellow, American Philosophical Society</i>
2008	Mina J. Bissell Award, University of Porto, Portugal (to be given every two years to a person who has changed a field)
2008	FASEB – Excellence in Science Award
2008	American Cancer Society's Medal of Honor
2009	Rothschild-Yvette Mayent-Institut Curie Award, Institut Curie
2009	MERIT Award, US, NIH
2010	<i>Elected Fellow, Royal Society of Chemistry</i>
2010	<i>Elected Fellow, National Academy of Sciences</i>
2010	American-Italian Cancer Foundation's The Alexander Bodini Foundation Prize for Scientific Excellence in Medicine
2011	Breast Cancer Research Foundation's Jill Rose Award for distinguished biomedical research.
2011	Susan Bulkeley Butler Leadership Excellence Award, Purdue University
2012	AACR Distinguished Lectureship in Breast Cancer Research
2012	Lifetime Achievement Prize, Lawrence Berkeley National Laboratory
1980–Present	More than 120 distinguished & named lectures including the Harvey lecture, Nobel Forum lecture and Aaron Katzir lecture at Weizmann Institute

#### **NATIONAL COMMITTEES AND REVIEW BOARDS :**

1981–1985	NIH Molecular Cytology Study Section
1987–1989	NIH Gerontology & Geriatrics Review Study Section
1989–1992	NIH Pathology B Study Section
1993–1998	Board of Directors, Gordon Conferences
1993, '96, '98-'05	Chair, 2 Gordon Research Conferences and 2 Keystone Conferences
1995–1999	Member, Secretary of Energy's Advisory Committee, BERAC
1995	Chair, BERAC Subcommittee on Application of Genome and Structural Biology
1995–1998	Integration Panel, U.S. Army Breast Cancer Research Program
1996–1997	Chair, NASA Committee on the Role of Animal Research in Space
1997–1998	NCI Panel on “Preclinical Models of Cancer”
1997/1999	Howard Hughes Medical Institute. Evaluation Panels,, Washington, D.C.
1997–1998	Member, Rhoads Memorial Award Committee
1998–2002	Advisory Committee, Burroughs Wellcome Career Awards
1997	Scientific Advisory Board, University of Chicago Cancer Research Center
1999–2001	Board of Directors, AACR
1999–2005	Human Rights Committee of National Academies
2000–2009	Mentor, Institute of Defense Analysis, DSSG, Alexandria, VA
2001–2004	AACR Science Policy and Legislative Affairs Committees
2001–2004	Kansas–Biomedical Research Infrastructure Network
2002–2004	Scientific Advisory Board, MIT Center for Environmental Health Sciences
2003	Member, Kirk A. Landon–AACR Prize for Basic Cancer Research Committee
2003–2004	Scientific Advisory Board, Pacific Northwest National Laboratory
2004	NCI/NCAB Focus Group on Cancer in the Organism
2003–2006	Scientific Advisory Board, Susan Love Breast Cancer Research Foundation
2005–2007	Chair, Group on Cancer and Cancer Biology of the IOM of the National Academies
2005–2009	Member, Tumor Microenvironment Study Section, NIH
2006–2009	Member, Scientific Advisory Board, Biomega
2006–2008	Member, Nominating Committee, AACR

2006–2012 Member, Faculty 1000  
 2007–2008 Member, Selection Committee for the Pezcoller Foundation–AACR International Award for Cancer Research  
 2009 Member, Program Committee, AACR Annual Meeting  
 2009 Member, Search Committee, Director, LBNL  
 2009 Member, Search Committee, Deputy Director, LBNL  
 2009 Chair, TME Nominating Committee, AACR  
 2009–Present Member, Scientific Advisory Committee, Center for Research on Women's and Children's Health  
 2010–Present Advisor, Institute of Defense Analysis, DSSG, Alexandria, VA  
 2010–Present Member, committee for Cancer Post-GWAS Initiative, NIH/NCI  
 2010 Member, AACR Education Committee  
 2011–Present Scientific Advisory Board, Oregon Health and Sciences University

#### **INTERNATIONAL COMMITTEES AND REVIEW BOARDS (Current Only)::**

1999–Present Advisory Committee, Instituto de Biologia Molecular e Celular (IBMC), Porto, Portugal  
 2002–Present Advisory Committee, Breakthrough Breast Cancer, London, UK  
 2007–Present Advisory Committee, Italian National Cancer Institute, Rome, Italy  
 2007–Present Advisory Committee, Euro Consortium for Cancer Stem Cell Research, Italy, Sweden, Denmark, UK  
 2009–Present Member, Scientific Advisory Board, American Portuguese Biomedical Research Fund, Oporto, Portugal  
 2009–Present Member, The International Scientific Committee, Cancer Research Centre, Lyon, France  
 2011–Present Advisory Committee, European Union's Innovative Medicines Initiative program, Paris, France  
 2011–Present Advisory Committee, Manchester Breakthrough Breast Cancer Unit, Manchester, England  
 2012–Present Advisory Board, World Premier International Research Center Initiative, Japan

#### **PROFESSIONAL ACTIVITIES:**

##### **BIOTECHNOLOGY (Current Only):**

2006–Present Member, Scientific Advisory Board, Biomega  
 2010–Present BioArray Therapeutics Inc. Collegetown, PA  
 2010–Present Advisory Board, Mimvi, San Francisco, CA  
 2011–Present OncoSynergy, San Francisco, CA

##### **MEMBERSHIP IN PROFESSIONAL SOCIETIES (Current Only):**

1973–Present American Society for Cell Biology  
 1980–Present Society for In Vitro Biology  
 1983–Present Society for Developmental Biology  
 1988–Present American Association for Cancer Research  
 1988–Present International Society of Differentiation  
 1988–Present Sigma Xi, The Scientific Research Society  
 1993–Present American Society for Microbiology  
 1997–Present Institute of Medicine  
 2000–Present American Society for Matrix Biology (Co–Founder)  
 2001–Present American Association for the Advancement of Science  
 2001–Present American Society for Biochemistry and Molecular Biology  
 2001–Present Association for Women in Science  
 2002–Present American Academy of Arts and Sciences  
 2004–Present Anticancer Therapeutics and Oncology Society  
 2004–Present EMT International Association  
 2007–Present American Philosophical Society  
 2007–Present Rosalind Franklin Society (Charter Member)  
 2010–Present National Academy of Sciences  
 2010–Present Royal Society of Chemistry  
 2011–Present International Society for Stem Cell Research

**ASSOCIATE EDITOR & EDITORIAL BOARDS (Current Only):**

1990–Present Journal of Cellular Biochemistry  
 1993–Present Molecular Carcinogenesis  
 1994–Present Cell Structure and Function  
 1995–Present Journal of Mammary Gland Biology and Neoplasia  
 1995–Present Journal of Experimental Therapeutics and Oncology  
 1997–Present Molecular Aspects of Medicine  
 1998–Present Journal of Clinical Investigation  
 1999–Present Breast Cancer Research (Senior Editor 2003–Present)  
 1999–Present International Journal of Cancer  
 2006–Present Journal of Cell Science  
 2007–Present Molecular Oncology  
 2008–Present Integrative Biology (Editorial Board Chair 2008-2011; Advisory Board 2011-Present)  
 2010–Present BioArchitecture  
 2010–Present Cancer Microenvironment  
 2011–Present Frontiers in Molecular and Cellular Oncology  
 2011–Present Oncotarget  
 2011–Present Systems Biomedicine  
 2012–Present Biology Open  
 2012–Present PeerJ

**PATENTS:****Issued:** (9)

United States Patent #6004805 Transcriptional Enhancer from Milk Protein Genes  
 United States Patent #6982151 Design of Novel Assays Based on the Newly Found Role of Dystroglycan and a-Dystroglycan Proteolysis in Tumor Cell Growth  
 United States Patent #5846536 Restoration Of Normal Function In Cancer Cells  
 United States Patent #6123941 Method for Restoration of Normal Phenotype In Cancer Cells  
 United States Patent #8246952 Method of Increasing Radiation Sensitivity by Inhibition of Beta One Integrin  
 United States Patent #6753154 Human AZ-1 Gene, Variants thereof and Expressed Gene Products  
 United States Patent #6287790 Utilization of Nuclear Structural Proteins for Targeted Therapy and Detection of Proliferative and Differentiation Disorder  
 United States Patent #7618627 Method of Increasing Radiation Sensitivity by Inhibition of Beta One Integrin  
 United States Patent #7666850 Design of Novel Drug Screens based on the Newly Found Role of Dystroglycan Proteolysis in Tumor Cell Growth

**Pending:** (10)

**LECTURES (2011–Present only):** *Plenary, distinguished, and named lectures are marked with an asterisk.*

**2011**

- \* University of Chicago, Chicago, IL (Cancer Biology Seminar Series)
- \* Bryn Mawr College, Bryn Mawr, PA (The Bernard Rothenberg Lecture in Biology and Public Policy)
- \* Boston University, Boston, MA (Evans Center – Biochemistry Thematic Seminar Series)
- \* American Association for Cancer Research, Orlando, FL (Plenary Lecture)
- \* Karolinska Institute Nobel Forum, Stockholm, Sweden (Karolinska Research Lecture)
- \* Cold Spring Harbor Laboratory, New York, NY (Plenary Lecture)
- \* IMPAKT 2011 Breast Cancer Conference, Brussels, Belgium (Plenary Lecture)
- \* National Institutes of Health, Bethesda, MD ((NIH Wednesday Afternoon Lecture Series)
- \* University of California, Davis, CA (The Michael W. Chapman Lecture)
- \* Japan Society for Cell Biology, Sapporo, Japan (Plenary Lecture)
- \* Texas A&M Health Science Center, College Station, TX (Distinguished Speaker)
- \* The Jackson Laboratory, Bar Harbor, ME (Distinguished Visitor)
- \* University of Windsor, Ontario, Canada (Robert J. Doyle Lecture)

- \* Karmanos Cancer Institute, Detroit, MI (Grand Rounds Seminar Series)
- \* European Association for Cancer Research-European Society for Medical Oncology Multidisciplinary Cancer Congress, Stockholm, Sweden (Plenary Lecture)
- \* International Symposium on Breast Cancer Prevention, Rennes, France (Keynote Speaker)
- \* Frontiers in Cancer Science, Singapore (Distinguished Speaker);
- \* International Symposium on Cancer Translational Research, Taiwan (Keynote Speaker)

**Other Lectures:** Champalimaud Cancer Research Symposium, Lisbon, Portugal; University of California, San Francisco, CA; University of Illinois, Champaign-Urbana, IL; Oregon Health & Science University, Portland, OR; RIKEN Center for Developmental Biology, Kobe, Japan; Institute of Pharmacology and Structural Biology, Toulouse, France; Interdisciplinary Research Institute, Lille, France; The Breast Cancer Research Foundation, New York, NY; Columbia University, New York, NY.

## 2012:

- \* Sanford | Burnham Medical Research Institute, La Jolla, CA (President's Lecture Series)
- \* University of California, Irvine, CA (Distinguished Seminar Series)
- \* Harbor-UCLA Medical Center (Brasel Basic Science Conference Series)
- \* University of Arizona, Phoenix, AZ (Special Seminar Series)
- \* University of California, San Francisco, CA
- \* Gilead Sciences, Inc.
- \* Florida State University, Tallahassee, FL
- \* Cold Spring Harbor Laboratory, Cold Spring Harbor, NY
- \* Extracellular Matrix Symposium, Napa, CA (Keynote Address)
- \* Society of Investigative Dermatology, Raleigh, NC (Herman Beerman Award Lecture)
- \* University of Kentucky, Lexington, KY (Susan B. Lester Memorial Lecture)
- \* Nobel Symposium, Stockholm, Sweden
- \* Gordon Research Conference, Waterville, ME (Keynote Speaker)
- \* TEDGlobal2012 Conference, Edinburgh, Scotland
- \* Personalized Cancer Care Symposium, Oslo, Norway
- \* University of Arkansas for Medical Sciences, Little Rock, AR (Blass Lecture in Cancer Genetics)
- \* International M. Judah Folkman Conference, Cambridge, MA (Keynote Speaker)
- \* Oncology at the Limits, London, UK
- \* University of Missouri, Columbia, MO (Franklin Lecture)
- \* City of Hope, Duarte, CA (Leading Edge Lecture Series)
- \* San Antonio Breast Cancer Symposium, San Antonio, TX (AACR Distinguished Breast Cancer Research Lectureship)

Other Lectures:

NCI Think Tank Meeting, Bethesda, MD

## 2013: to be given

- \* Cancer Research Center of Lyon International Symposium, Lyon, France (Keynote)
- \* 17<sup>th</sup> AEK Congress, Heidelberg, Germany (Keynote Lecture)
- \* Cleveland Clinic/Case Western Reserve University, Cleveland, OH (Keynote Address)
- \* Royal Society Theo Murphy International Scientific Meeting, Bucks, UK (Plenary Lecture)
- \* Cleary University, Howell, MI
- \* NDPK/Nm23 Congress, Boston, MA (Keynote Speaker)

**Other Lectures:** Berlin, Indiana University School of Medicine, Indianapolis, IN; Cleary University, Howell, MI; Baylor College of Medicine, Houston, TX

## I. PUBLICATIONS:

(\*\* denotes seminal publications; \* denotes noteworthy publications)

1. **Bissell MJ** (1969). Mechanism of excretion of an extracellular enzyme (Coccus P). Ph.D. Thesis, Harvard University.

2. Sarner NZ, **Bissell MJ**, Di Girolamo M and Gorini L (1971). Mechanism of excretion of a bacterial proteinase: demonstration of two proteolytic enzymes produced by a *Sarcina* strain (Coccus P). *J Bacteriol.* 1971 Mar; 105(3):1090–8.
3. **Bissell MJ**, Tosi R and Gorini L (1971). Mechanism of excretion of a bacterial proteinase: factors controlling accumulation of the extracellular proteinase of a *Sarcina* strain (Coccus P). *J Bacteriol.* 1971 Mar; 105(3):1099–109.
4. **Bissell MJ**, Rubin H and Hatié C (1971). Leakage as the source of overgrowth stimulating activity in Rous sarcoma transformed cultures. *Exp Cell Res.* 1971 Oct; 68(2):404–10.
5. **Bissell MJ**, Hatié C and Rubin H (1972). Patterns of glucose metabolism in normal and virus-transformed chick cells in tissue culture. *J Natl Cancer Inst.* 1972 Aug; 49(2):555–65.
6. \***Bissell MJ**, White RC, Hatié C and Bassham JA (1973). Dynamics of metabolism of normal and virus-transformed chick cells in culture. *Proc Natl Acad Sci USA.* 1973 Oct; 70(10):2951–5.
7. **Bissell MJ**, Hatié C, Tischler AN and Calvin M (1974). Preferential inhibition of the growth of virus-transformed cells in culture by rifazone-82, a new rifamycin derivative. *Proc Natl Acad Sci USA.* 1974 Jun; 71(6):2520–4.
8. Dolberg D and **Bissell MJ** (1974). Side effects of amphotericin B–deoxycholate (fungizone) and nystatin in chick cells in culture. *In Vitro.* 1974 Jul–Aug; 10:26–9.
9. Bassham JA, **Bissell MJ** and White RC (1974). Quantitative tracer studies of metabolic dynamics of animal cells growing in tissue culture. *Anal Biochem.* 1974 Oct; 61(2):479–91.
10. Rambeck WA, **Bissell MJ** and Bassham JA (1975). Metabolism in normal and virus-transformed chick embryo fibroblasts as observed with glucose labeled with <sup>14</sup>C and tritium and with tritium-labeled water. *Hoppe Seylers Z Physiol Chem.* 1975 Feb; 356(2):203–12.
11. Dolberg DS, Bassham JA and **Bissell MJ** (1975). Selective inhibition of the facilitated mode of sugar uptake by cytochalasin B in cultured chick fibroblasts. *Exp Cell Res.* 1975 Nov; 96(1):129–37.
12. Hawkes SP, Meehan TD and **Bissell MJ** (1976). The use of fluorescamine as a probe for labeling the outer surface of the plasma membrane. *Biochem Biophys Res Commun.* 1976 Feb 23; 68(4):1226–33.
13. \*\***Bissell MJ**, Rambeck WA, White RC and Bassham JA (1976). Glycerol phosphate shuttle in virus-transformed cells in culture. *Science.* 1976 Feb 27; 191(4229):856–8.
14. Szabo C, **Bissell MJ** and Calvin M (1976). Inhibition of infectious Rous virus production by rifamycin derivative. *J Virol.* 1976 May; 18(2):445–53.
15. DeFrancesco L, Scheffler IE and **Bissell MJ** (1976). A respiration-deficient Chinese hamster cell line with a defect in NADH-coenzyme Q reductase. *J Biol Chem.* 1976 Aug 10; 251(15):4588–95.
16. Teng MH, Bartholomew JC and **Bissell MJ** (1976). Insulin effect on the cell cycle: analysis of the kinetics of growth parameters in confluent chick cells. *Proc Natl Acad Sci USA.* 1976 Sep; 73(9):3173–7.
17. \***Bissell MJ** (1976). Transport as a rate limiting step in glucose metabolism in virus-transformed cells: studies with cytochalasin B. *J Cell Physiol.* 1976 Dec; 89(4):701–9.
18. \***Bissell MJ**, Farson D and Tung AS (1977). Cell shape and hexose transport in normal and virus-transformed cells in culture. *J Supramol Struct.* 1977; 6(1):1–12.
19. Neff NT, Ross PA, Bartholomew JC and **Bissell MJ** (1977). Leucine in cultured cells: its metabolism and use as a marker for protein turnover. *Exp Cell Res.* 1977 Apr; 106(1):175–83.
20. Warshawsky D, Kerns E, **Bissell MJ** and Calvin M (1977). Characterization of a photoproduct of 7,12-dimethylbenz[ $\alpha$ ]anthracene and its effects on chick-embryo cells in culture. *Biochem J.* 1977 Jun 15; 164(3):481–6.
21. \*\*Teng MH, Bartholomew JC and **Bissell MJ** (1977). Synergism between anti-microtubule agents and growth stimulants in enhancement of cell cycle traverse. *Nature.* 1977 Aug 25; 268(5622):739–41.
22. \*Schwarz RI and **Bissell MJ** (1977). Dependence of the differentiated state on the cellular environment: modulation of collagen synthesis in tendon cells. *Proc Natl Acad Sci USA.* 1977 Oct; 74(10):4453–7.
23. Brooks GA, **Bissell MJ** and Bassham JA (1977). Ion-retardation desalting of blood and other animal tissues for separation of soluble metabolites by two-dimensional chromatography. *Anal Biochem.* 1977 Dec; 83(2):580–8.
24. Chin S, **Bissell MJ** and Bassham JA (1977). The consequences of bisulfite exposure in primary chick embryo fibroblast in culture. *Bull Environ Contam Toxicol.* 1977 Dec; 18(6):749–57.
25. **Bissell MJ** (1978). Equality for women scientists. *Grants Magazine.* 1978; 1(4):331–4.
26. Hughes AM, Tenforde TS, Calvin M, **Bissell MJ**, Tischler AN and Bennett EL (1978). Inhibition of adenocarcinoma TA3 ascites tumor growth by rifamycin derivatives. *Oncology.* 1978; 35(2):76–82.

27. Bissell DM, Levine GA and **Bissell MJ** (1978). Glucose metabolism by adult hepatocytes in primary culture and by cell lines from rat liver. *Am J Physiol.* 1978 Mar; 234(3):C122–30.
28. \*Szabo C and **Bissell MJ** (1978). Antiviral action of a rifamycin derivative: formation of Rous sarcoma virus particles deficient in 60 to 70S RNA. *J Virol.* 1978 Mar; 25(3):944–7.
29. Levine GA, **Bissell MJ** and Bissell DM (1978). Conversion of glucose to sorbitol and fructose by liver-derived cells in culture. *J Biol Chem.* 1978 Sep 10; 253(17):5985–9.
30. Schwarz RI, Farson DA, Soo WJ and **Bissell MJ** (1978). Primary avian tendon cells in culture: an improved system for understanding malignant transformation. *J Cell Biol.* 1978 Dec; 79(3):672–9.
31. **Bissell MJ**, Bartholomew JC, Folkman J, Smith H and Stampfer M (1979). Culture systems for studying malignancy. Meeting Report. *Cancer Res.* 1979 Oct; 39(10):4293–5 (with 19 other contributors).
32. **Bissell MJ**, Hatié C and Calvin M (1979). Is the product of the src gene a promoter? *Proc Natl Acad Sci USA.* 1979 Jan; 76(1):348–52.
33. Emerman JT and **Bissell MJ** (1979). A simple technique for detection and quantitation of lactose synthesis and secretion. *Anal Biochem.* 1979 Apr 15; 94(2):340–5.
34. Schwarz RI, Farson DA and **Bissell MJ** (1979). Requirements for maintaining the embryonic state of avian tendon cells in culture. *In Vitro.* 1979 Dec; 15(12):941–8.
35. Parry G, Soo WJ and **Bissell MJ** (1979). The uncoupled regulation of fibronectin and collagen synthesis in Rous sarcoma virus transformed avian tendon cells. *J Biol Chem.* 1979 Dec 10; 254(23):11763–6.
36. \***Bissell MJ**, Hatié C, Farson DA, Schwarz RI and Soo WJ (1980). Ascorbic acid inhibits replication and infectivity of avian RNA tumor virus. *Proc Natl Acad Sci USA.* 1980 May; 77(5):2711–5.
37. Emerman JT, Bartley JC and **Bissell MJ** (1980). Interrelationship of glycogen metabolism and lactose synthesis in mammary epithelial cells of mice. *Biochem J.* 1980 Nov 15; 192(2):695–702.
38. Vessal M, Choun MO, **Bissell MJ** and Bissell DM (1980). Fructose utilization and altered cytochrome P–450 in cultured hepatocytes from adult rats. *Biochim Biophys Acta.* 1980 Dec 1; 633(2):201–10.
39. \*\*Parry G, Bartholomew JC and **Bissell MJ** (1980). Role of src gene in growth regulation of Rous sarcoma virus–infected chicken embryo fibroblasts. *Nature.* 1980 Dec 25; 288(5792):720–2.
40. \***Bissell MJ** (1981). The differentiated state of normal and malignant cells or how to define a “normal” cell in culture. In: *International Review of Cytology.* 1981; 70:27–100. Academic Press.
41. Emerman JT, Bartley JC and **Bissell MJ** (1981). Glucose metabolite patterns as markers of functional differentiation in freshly isolated and cultured mouse mammary epithelial cells. *Exp Cell Res.* 1981 Jul; 134(1):241–50.
42. \*Schwarz RI, Mandell RB and **Bissell MJ** (1981). Ascorbate induction of collagen synthesis as a means for elucidating a mechanism of quantitative control of tissue–specific function. *Mol Cell Biol.* 1981 Sep; 1(9):843–53.
43. Laszlo A, Radke K, Chin S and **Bissell MJ** (1981). Tumor promoters alter gene expression and protein phosphorylation in avian cells in culture. *Proc Natl Acad Sci USA.* 1981 Oct; 78(10):6241–5.
44. Bartley JC, Emerman JT and **Bissell MJ** (1981). Metabolic cooperativity between epithelial cells and adipocytes of mice. *Am J Physiol.* 1981 Nov; 241(5):C204–8.
45. **Bissell MJ**, Nemethy EK, Riddle L and Calvin M (1981). Testing for tumor promoters in Euphorbia lathyris: analysis of possible health hazards. *Bull Environ Contam Toxicol.* 1981 Dec; 27(6):894–902.
46. Hall HG, Farson DA, Chin S and **Bissell MJ** (1982). Extracellular matrix and morphogenesis: Collagen overlay induces lumen formation by epithelial cell lines. In: *The Extracellular Matrix*, pp. 233–8. Academic Press.
47. Parry G, Lee E and **Bissell MJ** (1982). Modulation of the differentiated phenotype of cultured mouse mammary epithelial cells by collagen substrata. In: *The Extracellular Matrix*, pp. 303–8. Academic Press.
48. \*Hall HG, Farson DA and **Bissell MJ** (1982). Lumen formation by epithelial cell lines in response to collagen overlay: a morphogenetic model in culture. *Proc Natl Acad Sci USA.* 1982 Aug; 79(15):4672–6.
49. \*\***Bissell MJ**, Hall HG and Parry G (1982). How does the extracellular matrix direct gene expression? *J Theor Biol.* 1982 Nov 7; 99(1):31–68.
50. Karczmar GS, Koretsky AP, **Bissell MJ**, Klein MP and Weiner MW (1983). A device for maintaining viable cells at high densities for NMR studies. *J Magn Reson.* 1983 53:123–8.
51. Laszlo A and **Bissell MJ** (1983). TPA induces simultaneous alterations in the synthesis and organization of vimentin. *Exp Cell Res.* 1983 Oct; 148(1):221–34.
52. Lee EY, Parry G and **Bissell MJ** (1984). Modulation of secreted proteins of mouse mammary epithelial cells by the collagenous substrata. *J Cell Biol.* 1984 Jan; 98(1):146–55.

53. Packard BS, Saxton MJ, **Bissell MJ** and Klein MP (1984). Plasma membrane reorganization induced by tumor promoters in an epithelial cell line. *Proc Natl Acad Sci USA*. 1984 Jan; 81(2):449–52.
54. **\*\*Dolberg DS** and **Bissell MJ** (1984). Inability of Rous sarcoma virus to cause sarcomas in the avian embryo. *Nature*. 1984 Jun 7–13; 309(5968):552–6.
55. Parry G, Lee EY, Farson D, Koval M and **Bissell MJ** (1985). Collagenous substrata regulate the nature and distribution of glycosaminoglycans produced by differentiated cultures of mouse mammary epithelial cells. *Exp Cell Res*. 1985 Feb; 156(2):487–99.
56. **Bissell MJ**, Lee EY–H, Li M–L, Chen L–H and Hall HG (1985). Role of extracellular matrix and hormones in modulation in tissue-specific functions in culture: Mammary gland as a model for endocrine sensitive tissues. In: Rogers CH, Coffey DC, Cunha GR, Grayhack JT, Hunman F and Horton R, eds., *Benign Prostatic Hyperplasia*, pp. 39–50. *NIH Publication no. 87–2881*, Vol. 2.
57. Wyke JA, **Bissell MJ**, Gillespie DAF and Levantis P (1985). The molecular basis for phenotypic modulation in cells containing an integrated viral src oncogene. In: Dumont JE, Hamprecht B and Nunez J, eds., *Hormones and Cell Regulation*. Pp 17-35. Amsterdam, Holland: Elsevier Science Publishers B.V. (Biomedical Division), Vol. 9.
58. Lee EY, Lee WH, Kaetzel CS, Parry G and **Bissell MJ** (1985). Interaction of mouse mammary epithelial cells with collagen substrata: regulation of casein gene expression and secretion. *Proc Natl Acad Sci USA*. 1985 Mar; 82(5):1419–23.
59. Kellie S, Holme TC and **Bissell MJ** (1985). Interaction of tumour promoters with epithelial cells in culture: an immunofluorescence study. *Exp Cell Res*. 1985 Oct; 160(2):259–74.
60. **\*\*Dolberg DS**, Hollingsworth R, Hertle M and **Bissell MJ** (1985). Wounding and its role in RSV–mediated tumor formation. *Science*. 1985 Nov 8; 230(4726):676–8.
61. Green AR, Searle S, Gillespie DA, **Bissell M** and Wyke JA (1986). Expression of integrated Rous sarcoma viruses: DNA rearrangements 5' to the provirus are common in transformed rat cells but not seen in infected but untransformed cells. *EMBO J*. 1986 Apr; 5(4):707–11.
62. Hall HG and **Bissell MJ** (1986). Characterization of the intermediate filament proteins of murine mammary gland epithelial cells: response to collagen substratum. *Exp Cell Res*. 1986 Feb; 162(2):379–89.
63. Levantis P, Gillespie DA, Hart K, **Bissell MJ** and Wyke JA (1986). Control of expression of an integrated Rous sarcoma provirus in rat cells: role of 5' genomic duplications reveals unexpected patterns of gene transcription and its regulation. *J Virol*. 1986 Mar; 57(3):907–16.
64. Carter C, Howlett AR, Martin GS and **Bissell MJ** (1986). The tyrosine phosphorylation substrate p36 is developmentally regulated in embryonic avian limb and is induced in cell culture. *J Cell Biol*. 1986 Nov; 103(5):2017–24.
65. **Bissell MJ** and Aggeler J (1987). Dynamic reciprocity: how do extracellular matrix and hormones direct gene expression? In: Cabot MC and McKeehan WL, eds., *Mechanisms of Signal Transduction by Hormones and Growth Factors*, pp. 251–62. New York: Alan Liss. (*Prog Clin Biol Res*. 1987; 249:251–62)
66. **Bissell MJ** and Barcellos-Hoff MH (1987). The influence of extracellular matrix on gene expression: is structure the message? *J Cell Sci Suppl*. 1987; 8:327–43. Review.
67. **Bissell MJ** and Hall HG (1987). Form and function in the mammary gland: The role of extracellular matrix. In: Nevell MC and Neville CWD, eds., *The Mammary Gland: Development, Regulation and Function*, pp. 97–146. New York: Plenum Publishing Corp.
68. **Bissell MJ**, Li M–L, Chen L–H and Lee EY–H (1987). Regulation of milk proteins in the mouse mammary epithelial cells by extracellular matrix and hormones. In: Enami J and Ham R, eds., *Growth and Differentiation of Mammary Epithelial Cells in Culture*, pp. 155–86. Tokyo, Japan: Japan Scientific Societies Press.
69. Smith HS and **Bissell MJ** (1987). Cancer at the cellular level. *Cancer Res*. 47(12):3337–8. Meeting Report.
70. **\*Li ML**, Aggeler J, Farson DA, Hatier C, Hassell J and **Bissell MJ** (1987). Influence of a reconstituted basement membrane and its components on casein gene expression and secretion in mouse mammary epithelial cells. *Proc Natl Acad Sci USA*. 1987 Jan; 84(1):136–40.
71. Lee EY, Barcellos–Hoff MH, Chen LH, Parry G and **Bissell MJ** (1987). Transferrin is a major mouse milk protein and is synthesized by mammary epithelial cells. *In Vitro Cell Dev Biol*. 1987 Mar; 23(3):221–6.
72. Chan LM, Hatier C, Parry G, Werb Z and **Bissell MJ** (1987). Collagen–fibronectin interactions in normal and Rous sarcoma virus–transformed avian tendon cells: possible mechanisms for increased extracellular matrix turnover after transformation. *In Vitro Cell Dev Biol*. 1987 Apr; 23(4):308–14.
73. Howlett AR, Cullen B, Hertle M and **Bissell MJ** (1987). Tissue tropism and temporal expression of Rous sarcoma virus in embryonic avian limb in ovo. *Oncogene Res*. 1987 Aug; 1(3):255–63.



74. Medina D, Li ML, Oborn CJ and **Bissell MJ** (1987). Casein gene expression in mouse mammary epithelial cell lines: dependence upon extracellular matrix and cell type. *Exp Cell Res*. 1987 Sep; 172(1):192–203.
75. Stoker AW and **Bissell MJ** (1987). Quantitative immunocytochemical assay for infectious avian retroviruses. *J Gen Virol*. 1987 Sep; 68(9):2481–5.
76. Chen LH and **Bissell MJ** (1987). Transferrin mRNA level in the mouse mammary gland is regulated by pregnancy and extracellular matrix. *J Biol Chem*. 1987 Dec 25; 262(36):17247–50.
77. **Bissell MJ** and Aggeler J (1988). Regulation of tissue specific gene expression in the mammary gland: The role of extracellular matrix. In: Rich MA, Hager JC and Lopez DM, eds., *Breast Cancer: Scientific & Clinical Progress*, pp. 127–41. Boston, MA: Kluwer Academic Publishers.
78. Emerman JT and **Bissell MJ** (1988). Cultures of mammary epithelial cells: extracellular matrix and functional differentiation. In: Maramorosch K and Sato GH, eds., *Advances in Cell Culture*, pp. 137–55. San Diego, CA: Academic Press, Inc.
79. **Bissell MJ**, Ram TG and Chen L (1988). Regulation of gene expression by extracellular matrix in higher eukaryotes. In: *Gene Expression and Regulation: The Legacy of Luigi Gorini*, pp. 279–87. Elsevier Science Publishers
80. \*Stoker AW and **Bissell MJ** (1988). Development of avian sarcoma and leukosis virus–based vector–packaging cell lines. *J Virol*. 1988 Mar; 62(3):1008–15.
81. Aggeler J, Park CS and **Bissell MJ** (1988). Regulation of milk protein and basement membrane gene expression: the influence of the extracellular matrix. *J Dairy Sci*. 1988 Oct; 71(10):2830–42. Review.
82. \*Howlett AR, Carter VC, Martin GS and **Bissell MJ** (1988). pp60v-src tyrosine kinase is expressed and active in sarcoma–free avian embryos microinjected with Rous sarcoma virus. *Proc Natl Acad Sci USA*. 1988 Oct; 85(20):7587–91.
83. Parry G, Farson D, Cullen B and **Bissell MJ** (1988). p–nitrophenyl– $\beta$ –D–xyloside modulates proteoglycan synthesis and secretory differentiation in mouse mammary epithelial cell cultures. *In Vitro Cell Dev Biol*. 1988 Dec; 24(12):1217–22.
84. **Bissell MJ** and Ram TG (1989). Regulation of functional cytodifferentiation and histogenesis in mammary epithelial cells: role of the extracellular matrix. *Environ Health Perspect*. 1989 Mar; 80:61–70. Review.
85. Barcellos–Hoff MH and **Bissell MJ** (1989). Mammary epithelial cells as a model for studies of regulation of gene expression. In: Matlin K and Valentich JD, eds., *Functional Epithelial Cells in Culture*, pp. 399–433. New York, NY: Alan R. Liss, Inc.
86. Barcellos–Hoff MH and **Bissell MJ** (1989). A role for the extracellular matrix in autocrine and paracrine regulation of gene expression. In: Krey L, Gulyas BJ and McKraken M, eds., *Autocrine and Paracrine Factors in Reproductive Endocrinology*, pp. 137–55. New York, NY: Plenum Publishing Corporation.
87. \*\*Barcellos–Hoff MH, Aggeler J, Ram TG and **Bissell MJ** (1989). Functional differentiation and alveolar morphogenesis of primary mammary cultures on reconstituted basement membrane. *Development*. 1989 Feb; 105(2):223–35.
88. Chen LH and **Bissell MJ** (1989). A novel regulatory mechanism for whey acidic protein gene expression. *Cell Regul*. 1989 Nov; 1(1):45–54.
89. Sieweke MH, Stoker AW and **Bissell MJ** (1989). Evaluation of the cocarcinogenic effect of wounding in Rous sarcoma virus tumorigenesis. *Cancer Res*. 1989 Nov 15; 49(22):6419–24.
90. **Bissell MJ** (1990). Mammary gland as a model for studies of gene expression in normal and malignant cells. In: *Effects of Therapy on Biology and Kinetics of the Residual Tumor, Part A: Pre-clinical Aspects*, pp. 313–6. Wiley–Liss. (*Prog Clin Biol Res*. 1990; 354A:313–6)
91. Howlett AR and **Bissell MJ** (1990). Regulation of mammary epithelial cell function: A role for stromal and basement membrane matrices. In: Keenan TW, ed., *Stuart Patton Commemorative Issue of Protoplasma*, pp. 85–95. Secaucus, NJ: Springer–Verlag New York, Inc.
92. Stoker AW, Streuli CH, Martins–Green M and **Bissell MJ** (1990). Designer microenvironments for the analysis of cell and tissue function. *Curr Opin Cell Biol*. 1990 Oct; 2(5):864–74. Review.
93. Auersperg N, MacLaren IA and **Bissell MJ** (1990). V–K–ras transformation induces reversion to an earlier developmental form in adult rat adrenal cells. *Differentiation*. 1990 Mar; 43(1):29–36.
94. \*Martins–Green M and **Bissell MJ** (1990). Localization of 9E3/CEF–4 in avian tissues: expression is absent in Rous sarcoma virus–induced tumors but is stimulated by injury. *J Cell Biol*. 1990 Mar; 110(3):581–95.

95. \*Streuli CH and **Bissell MJ** (1990). Expression of extracellular matrix components is regulated by substratum. *J Cell Biol.* 1990 Apr; 110(4):1405–15.
96. \*\*Sieweke MH, Thompson NL, Sporn MB and **Bissell MJ** (1990). Mediation of wound-related Rous sarcoma virus tumorigenesis by TGF- $\beta$ . *Science.* 1990 Jun 29; 248(4963):1656–60.
97. \*Stoker AW, Hatier C and **Bissell MJ** (1990). The embryonic environment strongly attenuates v-src oncogenesis in mesenchymal and epithelial tissues, but not in endothelia. *J Cell Biol.* 1990 Jul; 111(1):217–28.
98. \*Schmidhauser C, **Bissell MJ**, Myers CA and Casperson GF (1990). Extracellular matrix and hormones transcriptionally regulate bovine  $\beta$ -casein 5' sequences in stably transfected mouse mammary cells. *Proc Natl Acad Sci USA.* 1990 Dec; 87(23):9118–22.
99. **Bissell MJ**, Howlett AR and Streuli CH (1991). Extracellular matrix (ECM) guides tissue-specific function and developmental processes. In: Parker SP, ed., *The McGraw-Hill Yearbook of Science & Technology*. Pp 107-110. New York, NY: McGraw-Hill.
100. Schmidhauser C, Casperson GF, Myers CA and **Bissell MJ** (1991). Extracellular matrix and hormones regulate bovine  $\beta$ -casein gene 5' sequences in stably transfected mouse mammary cells. In: Lippman M and Mihich H, eds., *The Therapeutic Implications of the Molecular Biology of Breast Cancer*, pp. 121–33. Rome, Italy: Centro Italiano Congressi, *Proceedings of the Second Pezcoller Foundation Symposium*.
101. Streuli CH and **Bissell MJ** (1991). Mammary epithelial cells, extracellular matrix, and gene expression. In: Lippman M and Dickson R, eds., *Regulatory Mechanisms in Breast Cancer*, pp. 365–81. Norwell, MA: Kluwer Academic Publishers. (*Cancer Treat Res.* 1991; 53:365–81. Review.)
102. Aggeler J, Ward J, Blackie LM, Barcellos-Hoff MH, Streuli CH and **Bissell MJ** (1991). Cytodifferentiation of mouse mammary epithelial cells cultured on a reconstituted basement membrane reveals striking similarities to development in vivo. *J Cell Sci.* 1991 Jun; 99(2):407–17.
103. \*Talhok RS, Chin JR, Unemori EN, Werb Z and **Bissell MJ** (1991). Proteinases of the mammary gland: developmental regulation in vivo and vectorial secretion in culture. *Development.* 1991 Jun; 112(2):439–49.
104. \*Martins-Green M, Tilley C, Schwarz R, Hatier C and **Bissell MJ** (1991). Wound-factor-induced and cell cycle phase-dependent expression of 9E3/CEF4, the avian gro gene. *Cell Regul.* 1991 Sep; 2(9):739–52.
105. \*\*Streuli CH, Bailey N and **Bissell MJ** (1991). Control of mammary epithelial differentiation: basement membrane induces tissue-specific gene expression in the absence of cell-cell interaction and morphological polarity. *J Cell Biol.* 1991 Dec; 115(5):1383–95. [Selected as one of the Landmark Papers in Cell Biology (Joseph G. Gall and J. Richard McIntosh, eds.), pp. 336–48 (2001) *Cold Spring Harbor Laboratory Press*, Cold Spring Harbor, NY, and the American Society for Cell Biology, Bethesda, MD.]
106. Reddy ST, Stoker AW and **Bissell MJ** (1991). Expression of Rous sarcoma virus-derived retroviral vectors in the avian blastoderm: potential as stable genetic markers. *Proc Natl Acad Sci USA.* 1991 Dec 1; 88(23):1558–62.
107. Werb Z, Talhok R, Sympton C, Alexander C and **Bissell MJ** (1993). The role of metalloproteinases and their inhibitors in tissue remodeling in the mammary gland. *Tissue Injury and Proteases*, pp. 177–82. Portland Press, London.
108. Parry G, Li J, Stubbs J, **Bissell MJ**, Schmidhauser C, Spicer AP and Gendler SJ (1992). Studies of Muc-1 mucin expression and polarity in the mouse mammary gland demonstrate developmental regulation of Muc-1 glycosylation and establish the hormonal basis for mRNA expression. *J Cell Sci.* 1992 Jan; 101(Pt 1):191–9.
109. Dale TC, Krnacik MJ, Schmidhauser C, Yang CL, **Bissell MJ** and Rosen JM (1992). High-level expression of the rat whey acidic protein gene is mediated by elements in the promoter and 3' untranslated region. *Mol Cell Biol.* 1992 Mar; 12(3):905–14.
110. Martins-Green M, Aotaki-Keen A, Hjelmeland LM and **Bissell MJ** (1992). The 9E3 protein: immunolocalization in vivo and evidence for multiple forms in culture. *J Cell Sci.* 1992 Mar; 101(Pt 3):701–7.
111. \*\*Schmidhauser C, Casperson GF, Myers CA, Sanzo KT, Bolten S and **Bissell MJ** (1992). A novel transcriptional enhancer is involved in the prolactin- and extracellular matrix-dependent regulation of  $\beta$ -casein gene expression. *Mol Cell Biol.* 1992 Jun; 3(6):699–709.
112. Talhok RS, **Bissell MJ** and Werb Z (1992). Coordinated expression of extracellular matrix-degrading proteinases and their inhibitors regulates mammary epithelial function during involution. *J Cell Biol.* 1992 Sep; 118(5):1271–82.
113. \*\*Petersen OW, Rønnev-Jessen L, Howlett AR and **Bissell MJ** (1992). Interaction with basement membrane serves to rapidly distinguish growth and differentiation pattern of normal and malignant human breast epithelial cells. *Proc Natl Acad Sci USA.* 1992 Oct 1; 89(19):9064–8.

114. **Bissell MJ** and Wicha MS (1993). Extracellular matrix is required for milk protein gene expression and secretion in mammary epithelial cells. pp 89-113. Houdebine LM, ed., *Biology of Lactation*. France: INRA.
115. Desprez PY, Roskelley CD, Campisi J and **Bissell MJ** (1993). Isolation of functional cell lines from a mouse mammary epithelial cell strain: the importance of basement membrane and cell–cell interaction. *Mol Cell Differ.* 1993 1(1):99–110.
116. Jones PL, Schmidhauser C and **Bissell MJ** (1993). Regulation of gene expression and cell function by extracellular matrix. *Crit Rev Eukaryot Gene Expr.* 1993; 3(2):137–54. Review.
117. Roskelley CD, Petersen OW and **Bissell MJ** (1993). The significance of the extracellular matrix in mammary epithelial carcinogenesis. In: Heppner G, ed., *Biology of the Cancer Cell*. Greenwich, CT: JAI Press, Inc.
118. Talhouk RS, Streuli CH, Barcellos-Hoff MH and **Bissell MJ** (1993). The extracellular matrix. In: Bittar EE, ed., *Fundamentals of Medical Cell Biology*, pp. 137–78. Greenwich, CT: JAI Press, Inc.
119. Talhouk RS, Werb Z and **Bissell MJ** (1993). Functional interplay between ECM and ECM–degrading proteinases in the mammary gland: A coordinate system for regulating mammary epithelium function. In: Fleming TP, ed., pp 329-351. *Epithelial Organization and Development*. London, England: Chapman and Hall.
120. Streuli CH, Schmidhauser C, Kobrin M, **Bissell MJ** and Derynck R (1993). Extracellular matrix regulates expression of the TGF– $\beta$ 1 gene. *J Cell Biol.* 1993 Jan; 120(1):253–60.
121. Howlett AR and **Bissell MJ** (1993). The influence of tissue microenvironment (stroma and extracellular matrix) on the development and function of mammary epithelium. *Epithelial Cell Biol.* 1993 Apr; 2(2):79–89.
122. **Bissell MJ**, ed. (1993). Introduction: form and function in the epithelia. *Semin Cell Biol.* 1993 Jun; 4(3):157-9.
123. Lin CQ and **Bissell MJ** (1993). Multi–faceted regulation of cell differentiation by extracellular matrix. *FASEB J.* 1993 Jun; 7(9):737–43. Review.
124. Ashkenas J, Damsky CH, **Bissell MJ** and Werb Z (1994). Integrins, signaling and the remodeling of the extracellular matrix. In: Cheresch D and Mecham R, eds., *The Integrins*, pp. 79–109. Academic Press.
125. Blaschke RJ, Howlett AR, Desprez PY, Petersen OW and **Bissell MJ** (1994). Cell differentiation by extracellular matrix components. In: Abelson JN, Simon MI, Ruoslahti E and Engvall E, eds., *Methods in Enzymology: Extracellular Matrix Components*, pp. 535–69. Academic Press, Vol. 245.
126. Sieweke MH and **Bissell MJ** (1994). The tumor–promoting effect of wounding: a possible role for TGF– $\beta$ –induced stromal alterations. *Crit Rev Oncog.* 1994; 5(2–3):297–311. Review.
127. \*Simpson CJ, Talhouk RS, Alexander CM, Chin JR, Clift SM, **Bissell MJ** and Werb Z (1994). Targeted expression of stromelysin–1 in mammary gland provides evidence for a role of proteinases in branching morphogenesis and the requirement for an intact basement membrane for tissue–specific gene expression. *J Cell Biol.* 1994 May; 125(3):681–93.
128. Schmidhauser C, Casperson GF and **Bissell MJ** (1994). Transcriptional activation by viral enhancers: critical dependence on extracellular matrix–cell interactions in mammary epithelial cells. *Mol Carcinog.* 1994 Jun; 10(2):66–71.
129. Martins–Green M, Boudreau N and **Bissell MJ** (1994). Inflammation is responsible for the development of wound–induced tumors in chickens infected with Rous sarcoma virus. *Cancer Res.* 1994 Aug 15; 54(16):4334–41.
130. \*Roskelley CD, Desprez PY and **Bissell MJ** (1994). Extracellular matrix–dependent tissue–specific gene expression in mammary epithelial cells requires both physical and biochemical signal transduction. *Proc Natl Acad Sci USA.* 1994 Dec 20; 91(26):12378–82.
131. \*Howlett AR, Petersen OW, Steeg PS and **Bissell MJ** (1994). A novel function for the nm23–H1 gene: overexpression in human breast carcinoma cells leads to the formation of basement membrane and growth arrest. *J Natl Cancer Inst.* 1994 Dec 21; 86(24):1838–44.
132. Boudreau N, Reddy ST, Stoker AW, Fairman C and **Bissell MJ** (1995). The embryonic environment and the extracellular matrix suppress oncogenic transformation by Rous sarcoma virus in the chick embryo. *Mol Cell Differ.* 3 (3):261–74.
133. Martins–Green M and **Bissell MJ** (1995). Cell–ECM interactions in development. *Semin Dev Biol.* 1995 Apr; 6(2):149–59.
134. Petersen OW, Rønnev–Jessen L and **Bissell MJ** (1995). The microenvironment of the breast: three–dimensional models to study the roles of the stroma and the extracellular matrix in function and dysfunction. *Breast J.* 1995 Jan; 1(1):22–35.

135. Schmidhauser C, Myers CA, Mossi R, Casperson C and **Bissell MJ** (1995). Extracellular matrix dependent gene regulation in mammary epithelial cells. In: Wilde CJ et al., eds., *Intercellular Signalling and the Mammary Gland*, pp. 107–19. New York: Plenum Press.
136. Sympton CJ, Talhouk RS, **Bissell MJ** and Werb Z (1995). The role of metalloproteinases and their inhibitors in regulating mammary epithelial morphology and function in vivo. *Perspect Drug Discov.* 1995 Jul; 2(3):401–11.
137. Boudreau N, Myers C and **Bissell MJ** (1995). From laminin to lamin: regulation of tissue-specific gene expression by the ECM. *Trends Cell Biol.* 1995 Jan; 5(1):1–4.
138. Jones PL, Boudreau N, Myers CA, Erickson HP and **Bissell MJ** (1995). Tenascin-C inhibits extracellular matrix-dependent gene expression in mammary epithelial cells: localization of active regions using recombinant tenascin fragments. *J Cell Sci.* 1995 Feb; 108(Pt 2):519–27.
139. \*Rønnev-Jessen L, Petersen OW, Kotliansky VE and **Bissell MJ** (1995). The origin of the myofibroblasts in breast cancer: recapitulation of tumor environment in culture unravels diversity and implicates converted fibroblasts and recruited smooth muscle cells. *J Clin Invest.* 1995 Feb; 95(2):859–73.
140. \*\*Boudreau N, Sympton CJ, Werb Z and **Bissell MJ** (1995). Suppression of ICE and apoptosis in mammary epithelial cells by extracellular matrix. *Science.* 1995 Feb 10; 267(5199):891–3.
141. Howlett AR, Bailey N, Damsky C, Petersen OW and **Bissell MJ** (1995). Cellular growth and survival are mediated by  $\beta 1$  integrins in normal human breast epithelium but not in breast carcinoma. *J Cell Sci.* 1995 May; 108(Pt 5):1945–57.
142. Lin CQ, Dempsey PJ, Coffey RJ and **Bissell MJ** (1995). Extracellular matrix regulates whey acidic protein gene expression by suppression of TGF- $\alpha$  in mouse mammary epithelial cells: studies in culture and in transgenic mice. *J Cell Biol.* 1995 May; 129(4):1115–26.
143. \*Streuli CH, Schmidhauser C, Bailey N, Yurchenco P, Skubitz AP, Roskelley C and **Bissell MJ** (1995). Laminin mediates tissue-specific gene expression in mammary epithelia. *J Cell Biol.* 1995 May; 129(3):591–603.
144. **Bissell MJ** and Werb Z, eds. (1995). Introduction: basic science aspects of breast cancer. *Semin Cancer Biol.* 1995 Jun; 6(3):117–8.
145. Desprez PY, Hara E, **Bissell MJ** and Campisi J (1995). Suppression of mammary epithelial cell differentiation by the helix-loop-helix protein Id-1. *Mol Cell Biol.* 1995 Jun; 15(6):3398–404.
146. Lochter A and **Bissell MJ** (1995). Involvement of extracellular matrix constituents in breast cancer. *Semin Cancer Biol.* 1995 Jun; 6(3):165–73. Review.
147. Sympton CJ, **Bissell MJ** and Werb Z (1995). Mammary gland tumor formation in transgenic mice overexpressing stromelysin-1. *Semin Cancer Biol.* 1995 Jun; 6(3):159–63.
148. Weaver VM, Howlett AR, Langton-Webster B, Petersen OW and **Bissell MJ** (1995). The development of a functionally relevant cell culture model of progressive human breast cancer. *Semin Cancer Biol.* 1995 Jun; 6(3):175–84. Review.
149. Roskelley CD and **Bissell MJ** (1995). Dynamic reciprocity revisited: a continuous, bidirectional flow of information between cells and the extracellular matrix regulates mammary epithelial cell function. *Biochem Cell Biol.* 1995 Jul–Aug; 73(7–8):391–7.
150. Roskelley CD, Srebrow A and **Bissell MJ** (1995). A hierarchy of ECM-mediated signalling regulates tissue-specific gene expression. *Curr Opin Cell Biol.* 1995 Oct; 7(5):736–47. Review.
151. Boudreau N and **Bissell MJ** (1996). Regulation of gene expression by the extracellular matrix. In: Comper WD, ed., *Extracellular Matrix Volume 2: Molecular Components and Interactions*, pp. 246–61. Overseas Publishers Association.
152. Chen H, Weaver VM, Petersen OW and **Bissell MJ** (1996). Extracellular matrix as a central regulator of function, growth and programmed death in breast cells of both mice and men: implications for therapy. *J Pezcoller Foundation.* 7:2–10.
153. Lelièvre S, Weaver VM and **Bissell MJ** (1996). Extracellular matrix signaling from the cellular membrane skeleton to the nuclear skeleton: a model of gene regulation. *Recent Prog Horm Res.* 1996; 51:417–32. Review.
154. Weaver VM, Fischer AH, Petersen OW and **Bissell MJ** (1996). The importance of the microenvironment in breast cancer progression: recapitulation of mammary tumorigenesis using a unique human mammary epithelial cell model and a three-dimensional culture assay. *Biochem Cell Biol.* 1996; 74(6): 833–51. Review.
155. Lund LR, Rømer J, Thomasset N, Solberg H, Pyke C, **Bissell MJ**, Danø K and Werb Z (1996). Two distinct phases of apoptosis in mammary gland involution: proteinase-independent and -dependent pathways. *Development.* 1996 Jan; 122(1):181–93.

156. \*Rønnov-Jessen L, Petersen OW and **Bissell MJ** (1996). Cellular changes involved in conversion of normal to malignant breast: importance of the stromal reaction. *Physiol Rev.* 1996 Jan; 76(1):69–125. Review.
157. Boudreau N, Werb Z and **Bissell MJ** (1996). Suppression of apoptosis by basement membrane requires three-dimensional tissue organization and withdrawal from the cell cycle. *Proc Natl Acad Sci USA.* 1996 Apr 16; 93(8):3509–13.
158. Werb Z, Sympton CJ, Alexander CM, Thomasset N, Lund LR, MacAuley A, Ashkenas J and **Bissell MJ** (1996). Extracellular matrix remodeling and the regulation of epithelial-stromal interactions during differentiation and involution. *Kidney Intl Suppl.* 1996 May; 54:S68–74. Review.
159. Alexander CM, Howard EW, **Bissell MJ** and Werb Z (1996). Rescue of mammary epithelial cell apoptosis and entactin degradation by a tissue inhibitor of metalloproteinases–1 transgene. *J Cell Biol.* 1996 Dec; 135(6 Pt 1):1669–77.
160. Ashkenas J, Muschler J and **Bissell MJ** (1996). The extracellular matrix in epithelial biology: shared molecules and common themes in distant phyla. *Dev Biol.* 1996 Dec 15; 180(2):433–44. Review.
161. **Bissell MJ** (1997). The central role of basement membrane in functional differentiation, apoptosis and cancer. In: Tilly JL, Strauss III JF and Tenniswood M, eds., *Cell Death in Reproductive Physiology*, pp. 125–40. Sero Symposium USA.
162. Lelièvre SA, Weaver VM, Larabell CA and **Bissell MJ** (1997). Extracellular matrix and nuclear matrix interactions may regulate apoptosis and tissue-specific gene expression: a concept whose time has come. *Adv Mol Cell Biol.* 1997; 24:1–55.
163. Lochter A and **Bissell MJ** (1997). Mammary gland biology and the wisdom of extracellular matrix. In: Wilde CJ, Peaker M and Taylor E, eds., *Biological Signalling and the Mammary Gland*, pp. 77–92. Hannah Research Institute, Ayr, Scotland.
164. Pujuguet P and **Bissell MJ** (1997). Dynamic reciprocity: the extracellular matrix and the molecular dialogue. *Helix.* 1997; 6:16–25.
165. Lochter A, Srebrow A, Sympton CJ, Terracio N, Werb Z and **Bissell MJ** (1997). Misregulation of stromelysin–1 expression in mouse mammary tumor cells accompanies acquisition of stromelysin–1–dependent invasive properties. *J Biol Chem.* 1997 Feb 21; 272(8):5007–15.
166. \*\*Weaver VM, Petersen OW, Wang F, Larabell CA, Briand P, Damsky C and **Bissell MJ** (1997). Reversion of the malignant phenotype of human breast cells in three-dimensional culture and in vivo by integrin blocking antibodies. *J Cell Biol.* 1997 Apr 7; 137(1):231–46 (cover feature).
167. \*\*Lochter A, Galosy S, Muschler J, Freedman N, Werb Z and **Bissell MJ** (1997). Matrix metalloproteinase stromelysin–1 triggers a cascade of molecular alterations that leads to stable epithelial-to-mesenchymal conversion and a premalignant phenotype in mammary epithelial cells. *J Cell Biol.* 1997 Dec 29; 139(7):1861–72.
168. Lelièvre SA and **Bissell MJ** (1998). Communication between the cell membrane and the nucleus: role of protein compartmentalization. *J Cell Biochem Suppl.* 1998; 30–31:250–63. Review.
169. Petersen OW, Rønnov-Jessen L, Weaver VM and **Bissell MJ** (1998). Differentiation and cancer in the mammary gland: shedding light on an old dichotomy. *Adv Cancer Res.* 1998; 75:135–61. Review.
170. Hirai Y, Lochter A, Galosy S, Koshida S, Niwa S and **Bissell MJ** (1998). Epimorphin functions as a key morphoregulator for mammary epithelial cells. *J Cell Biol.* 1998 Jan 12; 140(1):159–69.
171. \*\*Myers CA, Schmidhauser C, Mellentin-Michelotti J, Fragoso G, Roskelley CD, Casperson G, Mossi R, Pujuguet P, Hager G and **Bissell MJ** (1998). Characterization of BCE–1, a transcriptional enhancer regulated by prolactin and extracellular matrix and modulated by the state of histone acetylation. *Mol Cell Biol.* 1998 Apr; 18(4):2184–95.
172. Schmeichel KL, Weaver VM and **Bissell MJ** (1998). Structural cues from the tissue microenvironment are essential determinants of the human mammary epithelial cell phenotype. *J Mammary Gland Biol Neoplasia.* 1998 Apr; 3(2):201–13. Review.
173. **Bissell MJ** (1998). Glandular structure and gene expression: lessons from the mammary gland. *Ann NY Acad Sci.* 1998 Apr 15; 842:1–6. Review.
174. Srebrow A, Friedmann Y, Ravanpay A, Daniel CW and **Bissell MJ** (1998). Expression of Hoxa–1 and Hoxb–7 is regulated by extracellular matrix–dependent signals in mammary epithelial cells. *J Cell Biochem.* 1998 Jun 15; 69(4):377–91.
175. Hagios C, Lochter A and **Bissell MJ** (1998). Tissue architecture: the ultimate regulator of epithelial function? *Philos Trans R Soc Lond B Biol Sci.* 1998 Jun 29; 353(1370):857–70. Review.

176. Desprez PY, Lin CQ, Thomasset N, Sympson CJ, **Bissell MJ** and Campisi J (1998). A novel pathway for mammary epithelial cell invasion induced by the helix–loop–helix protein Id–1. *Mol Cell Biol.* 1998 Aug; 18(8):4577–88.
177. Thomasset N, Lochter A, Sympson CJ, Lund LR, Williams DR, Behrendtsen O, Werb Z and **Bissell MJ** (1998). Expression of autoactivated stromelysin–1 in mammary glands of transgenic mice leads to a reactive stroma during early development. *Am J Pathol.* 1998 Aug; 153(2):457–67.
178. Boudreau N and **Bissell MJ** (1998). Extracellular matrix signaling: integration of form and function in normal and malignant cells. *Curr Opin Cell Biol.* 1998 Oct; 10(5):640–6. Review.
179. Lochter A, Sternlicht MD, Werb Z and **Bissell MJ** (1998). The significance of matrix metalloproteinases during early stages of tumor progression. *Ann NY Acad Sci.* 1998 Oct 23; 857:180–93. Review.
180. Lelièvre SA, Weaver VM, Nickerson JA, Larabell CA, Bhaumik A, Petersen OW and **Bissell MJ** (1998). Tissue phenotype depends on reciprocal interactions between the extracellular matrix and the structural organization of the nucleus. *Proc Natl Acad Sci USA.* 1998 Dec 8; 95(25):14711–6.
181. \*Wang F, Weaver VM, Petersen OW, Larabell CA, Dedhar S, Briand P, Lupu R and **Bissell MJ** (1998). Reciprocal interactions between  $\beta$ 1–integrin and epidermal growth factor receptor in three–dimensional basement membrane breast cultures: a different perspective in epithelial biology. *Proc Natl Acad Sci USA.* 1998 Dec 8; 95(25):14821–6.
182. **Bissell MJ** and Nelson JW, eds. (1999). Cell–to–cell contact and extracellular matrix integration of form and function: the central role of adhesion molecules. *Curr Opin Cell Biol.* 1999 Oct 1; 11(5):537–9.
183. Lochter A and **Bissell MJ** (1999). An odyssey from breast to bone: multi–step control of mammary metastases and osteolysis by matrix metalloproteinases. *APMIS.* 1999 Jan; 107(1):128–36. Review.
184. Lochter A, Navre M, Werb Z and **Bissell MJ** (1999).  $\alpha$ 1 and  $\alpha$ 2 integrins mediate invasive activity of mouse mammary carcinoma cells through regulation of stromelysin–1 expression. *Mol Biol Cell.* 1999 Feb; 10(2):271–82.
185. Péchoux C, Gudjonsson T, Rønnov–Jessen L, **Bissell MJ** and Petersen OW (1999). Human mammary luminal epithelial cells contain progenitors to myoepithelial cells. *Dev Biol.* 1999 Feb 1; 206(1):88–99.
186. Barash I, Faerman A, Richenstein M, Kari R, Damary GM, Shani M and **Bissell MJ** (1999). In vivo and in vitro expression of human serum albumin genomic sequences in mammary epithelial cells with  $\beta$ –lactoglobulin and whey acidic protein promoters. *Mol Reprod Dev.* 1999 Mar; 52(3):241–52.
187. Weaver VM and **Bissell MJ** (1999). Functional culture models to study mechanisms governing apoptosis in normal and malignant mammary epithelial cells. *J Mammary Gland Biol Neoplasia.* 1999 Apr; 4(2):193–201. Review.
188. **Bissell MJ**, Weaver VM, Lelièvre SA, Wang F, Petersen OW and Schmeichel KL (1999). Tissue structure, nuclear organization, and gene expression in normal and malignant breast. *Cancer Res.* 1999 Apr 1; 59(7 Suppl):1757–64s. Review.
189. \*\*Sternlicht MD, Lochter A, Sympson CJ, Huey B, Rougier JP, Gray JW, Pinkel D, **Bissell MJ** and Werb Z (1999). The stromal proteinase MMP3/stromelysin–1 promotes mammary carcinogenesis. *Cell.* 1999 Jul 23; 98(2):137–46.
190. **Bissell MJ** (1999). Tumor plasticity allows vasculogenic mimicry, a novel form of angiogenic switch: a rose by any other name? *Am J Pathol.* 1999 Sep; 155(3):675–9. Review.
191. Muschler J, Lochter A, Roskelley CD, Yurchenco P and **Bissell MJ** (1999). Division of labor among the  $\alpha$ 6 $\beta$ 4 integrin,  $\beta$ 1 integrins, and an E3 laminin receptor to signal morphogenesis and  $\beta$ –casein expression in mammary epithelial cells. *Mol Biol Cell.* 1999 Sep; 10(9):2817–28.
192. Lochter A, Werb Z and **Bissell MJ** (1999). Transcriptional regulation of stromelysin–1 gene expression is altered during progression of mouse mammary epithelial cells from functionally normal to malignant. *Matrix Biol.* 1999 Oct; 18(5):455–67.
193. Spancake KM, Anderson CB, Weaver VM, Matsunami N, **Bissell MJ** and White RL (1999). E7–transduced human breast epithelial cells show partial differentiation in three–dimensional culture. *Cancer Res.* 1999 Dec 15; 59(24):6042–5.
194. Lelièvre SA, **Bissell MJ** and Pujuguet P (2000). Cell nucleus in context. *Crit Rev Eukaryot Gene Expr.* 2000; 10(1):13–20. Review.
195. Sternlicht MD, **Bissell MJ** and Werb Z (2000). The matrix metalloproteinase stromelysin–1 acts as a natural mammary tumor promoter. *Oncogene.* 2000 Feb 21; 19(8):1102–13. Review.
196. Pujuguet P, Simian M, Liaw J, Timpl R, Werb Z and **Bissell MJ** (2000). Nidogen–1 regulates laminin–1–dependent mammary–specific gene expression. *J Cell Sci.* 2000 Mar; 113(5):849–58 (cover feature).

197. Chen HM, Schmeichel KL, Mian IS, Lelièvre S, Petersen OW and **Bissell MJ** (2000). AZU-1: a candidate breast tumor suppressor and biomarker for tumor progression. *Mol Biol Cell*. 2000 Apr; 11(4):1357–67.
198. Hansen RK and **Bissell MJ** (2000). Tissue architecture and breast cancer: the role of extracellular matrix and steroid hormones. *Endocr Relat Cancer*. 2000 Jun; 7(2):95–113. Review.
199. Park CC, **Bissell MJ** and Barcellos–Hoff MH (2000). The influence of the microenvironment on the malignant phenotype. *Mol Med Today*. 2000 Aug; 6(8):324–9. Review.
200. Petersen OW, Lind Nielsen H, Gudjonsson T, Villadsen R, Rønnev–Jessen L and **Bissell MJ** (2001). The plasticity of human breast carcinoma cells is more than epithelial to mesenchymal conversion. *Breast Cancer Res*. 2001; 3(4):213–7. Review.
201. Pujuguet P, Radisky D, Levy D, Lacza C and **Bissell MJ** (2001). Trichostatin A inhibits  $\beta$ -casein expression in mammary epithelial cells. *J Cell Biochem*. 2001; 83(4):660–70.
202. Radisky D, Hagios C and **Bissell MJ** (2001). Tumors are unique organs defined by abnormal signaling and context. *Semin Cancer Biol*. 2001 Apr; 11(2):87–95. Review.
203. Hirai Y, Radisky D, Boudreau R, Simian M, Stevens ME, Oka Y, Takebe K, Niwa S and **Bissell MJ** (2001). Epimorphin mediates mammary luminal morphogenesis through control of C/EBP $\beta$ . *J Cell Biol*. 2001 May 14; 153(4):785–94.
204. Simian M, Hirai Y, Navre M, Werb Z, Lochter A and **Bissell MJ** (2001). The interplay of matrix metalloproteinases, morphogens and growth factors is necessary for branching of mammary epithelial cells. *Development*. 2001 Aug; 128(16):3117–31.
205. Muthuswamy SK, Li D, Lelièvre S, **Bissell MJ** and Brugge JS (2001). ErbB2, but not ErbB1, reinitiates proliferation and induces luminal repopulation in epithelial acini. *Nat Cell Biol*. 2001 Sep; 3(9):785–93.
206. **\*Bissell MJ** and Radisky D (2001). Putting tumours in context. *Nat Rev Cancer*. 2001 Oct; 1(1):46–54..
207. Zantek ND, Walker–Daniels J, Stewart J, Hansen RK, Robinson D, Miao H, Wang B, Kung HJ, **Bissell MJ** and Kinch MS (2001). MCF-10A–NeoST: a new cell system for studying cell–ECM and cell–cell interactions in breast cancer. *Clin Cancer Res*. 2001 Nov; 7(11):3640–8.
208. Boudreau N and **Bissell MJ** (2002). Extracellular matrix: The networking solution. In: Alison MR, ed., *The Molecular Basis of Cell and Tissue Organisation. The Cancer Handbook*, pp. 209–24. London, New York and Tokyo: Nature Publishing Group. Vol. 1 of 2, Ch. 15.
209. Radisky D, Muschler J and **Bissell MJ** (2002). Order and disorder: the role of extracellular matrix in epithelial cancer. *Cancer Invest*. 2002; 20(1):139–53. Review.
210. Gudjonsson T, Rønnev–Jessen L, Villadsen R, Rank F, **Bissell MJ** and Petersen OW (2002). Normal and tumor–derived myoepithelial cells differ in their ability to interact with luminal breast epithelial cells for polarity and basement membrane deposition. *J Cell Sci*. 2002 Jan 1; 115(Pt 1):39–50.
211. **Bissell MJ**, Le Beyec J and Anderson RL (2002). Prostate cancer in bone: importance of context for inhibition of matrix metalloproteinases. *J Natl Cancer Inst*. 2002 Jan 2; 94(1):4–5.
212. **\*Gudjonsson T**, Villadsen R, Nielsen HL, Rønnev–Jessen L, **Bissell MJ** and Petersen OW (2002). Isolation, immortalization, and characterization of a human breast epithelial cell line with stem cell properties. *Genes Dev*. 2002 Mar 15; 16(6):693–706.
213. Roskelley CD and **Bissell MJ** (2002). The dominance of the microenvironment in breast and ovarian cancer. *Semin Cancer Biol*. 2002 Apr; 12(2):97–104. Review.
214. **\*\*Weaver VM**, Lelièvre SA, Lakins JN, Chrenek MA, Jones JC, Giancotti F, Werb Z and **Bissell MJ** (2002).  $\beta$ 4 integrin–dependent formation of polarized three–dimensional architecture confers resistance to apoptosis in normal and malignant mammary epithelium. *Cancer Cell*. 2002 Sep; 2(3):205–16. Also see *Nature* (News & Views) 419:790–1 and *Cell* (MiniReview) 111:923–5.
215. **\*Wang F**, Hansen RK, Radisky D, Yoneda T, Barcellos–Hoff MH, Petersen OW, Turley EA and **Bissell MJ** (2002). Phenotypic reversion or death of cancer cells by altering signaling pathways in three–dimensional contexts. *J Natl Cancer Inst*. 2002 Oct 2; 94(19):1494–503.
216. **Bissell MJ**, Radisky DC, Rizki A, Weaver VM and Petersen OW (2002). The organizing principle: microenvironmental influences in the normal and malignant breast. *Differentiation*. 2002 Dec; 70(9–10):537–46. Review.
217. Muschler J, Levy D, Boudreau R, Henry M, Campbell K and **Bissell MJ** (2002). A role for dystroglycan in epithelial polarization: loss of function in breast tumor cells. *Cancer Res*. 2002 Dec 1; 62(23):7102–9.

218. Bhattacharyya C, Grate LR, Rizki A, Radisky D, Molina FJ, Jordan MI, **Bissell MJ** and Mian IS (2003). Simultaneous relevant feature identification and classification in high-dimensional spaces: application to molecular profiling data. *Signal Process.* 2003 Apr; 83(4):729–43.
219. **Bissell MJ** and Bilder D (2003). Polarity determination in breast tissue: desmosomal adhesion, myoepithelial cells, and laminin 1. *Breast Cancer Res.* 2003; 5(2):117–9.
220. **Bissell MJ**, Mian IS, Radisky D and Turley EA (2003). Tissue-specificity: Structural cues allow diverse phenotypes from a constant genotype. In: Müller GB and Newman SA, eds., *Origination of Organismal Form: Beyond the Gene in Developmental and Evolutionary Biology*, 7:103–17. The Vienna Series in Theoretical Biology. MIT Press.
221. Park C, Zhang H, Peng M and **Bissell MJ** (2003). Cell–ECM mediated radiation response in breast cancer:  $\beta 1$  integrin as a potential molecular target. *Int J Radiat Oncol.* 2003 Oct 1; 57(2 Suppl 1):S161.
222. Petersen OW, Nielsen HL, Gudjonsson T, Villadsen R, Rank F, Niebuhr E, **Bissell MJ** and Rønnov-Jessen L (2003). Epithelial to mesenchymal transition in human breast cancer can provide a nonmalignant stroma. *Am J Pathol.* 2003 Feb; 162(2):391–402.
223. \*Anders M, Hansen R, Ding RX, Rauen K, **Bissell MJ**, and Korn WM (2003). Disruption of 3D tissue integrity facilitates adenovirus infection by deregulating the coxsackievirus and adenovirus receptor. *Proc Natl Acad Sci USA.* 2003 Feb 18; 100(4):1943–8.
224. Schmeichel KL and **Bissell MJ** (2003). Modeling tissue-specific signaling and organ function in three dimensions. *J Cell Sci.* 2003 Jun 15; 116(Pt 12):2377–88. Review.
225. Gudjonsson T, Rønnov-Jessen L, Villadsen R, **Bissell MJ** and Petersen OW (2003). To create the correct microenvironment: three-dimensional heterotypic collagen assays for human breast epithelial morphogenesis and neoplasia. *Methods.* 2003 Jul; 30(3):247–55.
226. Novaro V, Roskelley CD and **Bissell MJ** (2003). Collagen–IV and laminin–1 regulate estrogen receptor  $\alpha$  expression and function in mouse mammary epithelial cells. *J Cell Sci.* 2003 Jul 15; 116(Pt 14):2975–86.
227. Radisky DC, Hirai Y and **Bissell MJ** (2003). Delivering the message: epimorphin and mammary epithelial morphogenesis. *Trends Cell Biol.* 2003 Aug; 13(8):426–34. Review.
228. Wiseman BS, Sternlicht MD, Lund LR, Alexander CM, Mott J, **Bissell MJ**, Soloway P, Itohara S and Werb Z (2003). Site-specific inductive and inhibitory activities of MMP–2 and MMP–3 orchestrate mammary gland branching morphogenesis. *J Cell Biol.* 2003 Sep 15; 162(6):1123–33.
229. \*Park CC, Henshall–Powell RL, Erickson AC, Talhouk R, Parvin B, **Bissell MJ** and Barcellos–Hoff MH (2003). Ionizing radiation induces heritable disruption of epithelial cell interactions. *Proc Natl Acad Sci USA.* 2003 Sep 16; 100(19):10728–33.
230. Itoh M and **Bissell MJ** (2003). The organization of tight junctions in epithelia: implications for mammary gland biology and breast tumorigenesis. *J Mammary Gland Biol Neoplasia.* 2003 Oct; 8(4):449–62. Review.
231. Petersen OW, Gudjonsson T, Villadsen R, **Bissell MJ** and Rønnov-Jessen L (2003). Epithelial progenitor cell lines as models of normal breast morphogenesis and neoplasia. *Cell Prolif.* 2003 Oct; 36 Suppl 1:33–44. Review.
232. **Bissell MJ**, Rizki A and Mian IS (2003). Tissue architecture: the ultimate regulator of breast epithelial function. *Curr Opin Cell Biol.* 2003 Dec; 15(6):753–62..
233. Kenny PA and **Bissell MJ** (2003). Tumor reversion: correction of malignant behavior by microenvironmental cues. *Int J Cancer.* 2003 Dec 10; 107(5):688–95. Review.
234. Fata JE, Werb, Z and **Bissell MJ** (2004). Regulation of mammary gland branching morphogenesis by the extracellular matrix and its remodeling enzymes. *Breast Cancer Res.* 2004; 6(1):1–11. Review.
235. Rizki A and **Bissell MJ** (2004). Extracellular matrix: Tissue specific regulator of cell proliferation. In: Stein GS and Pardee AB, eds., *Cell Cycle & Growth Control: Biomolecular Regulation and Cancer*, 9:297–332. New Jersey: John Wiley & Sons, Inc., 2<sup>nd</sup> Edition.
236. Turley EA and **Bissell MJ** (2004). Extracellular matrix remodeling in breast branching morphogenesis and breast cancer: The double-edged sword. In: Davies J, ed., *Branching Morphogenesis*, 7:121–37. Springer.
237. Come SE, Buzdar AU, Arteaga CL, **Bissell MJ**, Brown MA, Ellis MJ, Goss PE, Green JE, Ingle JN, Lee AV, Medina D, Nicholson RI, Santen RJ, Schiff R and Hart CS (2004). Proceedings of the third international conference on recent advances and future directions in endocrine manipulation of breast cancer: conference summary statement. *Clin Cancer Res.* 2004 Jan 1; 10(1 Pt 2):327S–30S.



238. Novaro V, Radisky DC, Ramos Castro NE, Weisz A and Bissell MJ (2004). Malignant mammary cells acquire independence from extracellular context for regulation of estrogen receptor  $\alpha$ . *Clin Cancer Res*. 2004 Jan 1; 10(1 Pt 2):402S–9S.
239. Radisky DC and **Bissell MJ** (2004). Respect thy neighbor! *Science* (Perspective). 2004 Feb 6; 303(5659):775–7.
240. \*Liu H, Radisky DC, Wang F and **Bissell MJ** (2004). Polarity and proliferation are controlled by distinct signaling pathways downstream of PI3–kinase in breast epithelial tumor cells. *J Cell Biol*. 2004 Feb 16; 164(4):603–12.
241. Blaustein M, Pelisch F, Coso OA, **Bissell MJ**, Kornblihtt AR and Srebrow A (2004). Mammary epithelial–mesenchymal interaction regulates fibronectin alternative splicing via phosphatidylinositol 3–kinase. *J Biol Chem*. 2004 May 14; 279(20):21029–37.
242. Rizki A and **Bissell MJ** (2004). Homeostasis in the breast: it takes a village. *Cancer Cell*. 2004 Jul; 6(1):1–2.
243. Singh J, Itahana Y, Knight–Krajewski S, Kanagawa M, Campbell KP, **Bissell MJ** and Muschler J (2004). Proteolytic enzymes and altered glycosylation modulate dystroglycan function in carcinoma cells. *Cancer Res*. 2004 Sep 1; 64(17):6152–9.
244. Alcaraz J, Nelson CM and **Bissell MJ** (2004). Biomechanical approaches for studying integration of tissue structure and function in mammary epithelia. *J Mammary Gland Biol Neoplasia*. 2004 Oct; 9(4):361–74. Review.
245. Adriance MC, Inman JL, Petersen OW and **Bissell MJ** (2005). Myoepithelial cells: good fences make good neighbors. *Breast Cancer Res*. 2005; 7(5):190–7.
246. \***Bissell MJ**, Kenny PA and Radisky D (2005). Microenvironmental regulators of tissue structure and function also regulate tumor induction and progression: the role of extracellular matrix and its degrading enzymes. *Cold Spring Harb Symp Quant Biol*. 2005; 70:343–56.
247. Lelièvre SA and **Bissell MJ** (2005). Three dimensional cell culture: The importance of microenvironment in regulation of function. In: Meyers RA, ed., *Encyclopedia of Molecular Cell Biology and Molecular Medicine*, Vol. 14, 2<sup>nd</sup> Edition. Meyers RA, ed.
248. **Bissell MJ** and LaBarge MA (2005). Context, tissue plasticity, and cancer: are tumor stem cells also regulated by the microenvironment? *Cancer Cell* (Focus). 2005 Jan; 7(1):17–23.
249. Kaminker P, Plachot C, Kim SH, Chung P, Crippen D, Petersen OW, **Bissell MJ**, Campisi J and Lelièvre SA (2005). Higher–order nuclear organization in growth arrest of human mammary epithelial cells: a novel role for telomere–associated protein TIN2. *J Cell Sci*. 2005 Mar 15; 118(6):1321–30.
250. Maniotis AJ, Valyi–Nagy K, Karavitis J, Moses J, Boddipali V, Wang Y, Nuñez R, Setty S, Arbieva Z, **Bissell MJ** and Folberg R (2005). Chromatin organization measured by AluI restriction enzyme changes with malignancy and is regulated by the extracellular matrix and the cytoskeleton. *Am J Pathol*. 2005 Apr; 166(4):1187–203.
251. Liu H, Radisky DC and **Bissell MJ** (2005). Proliferation and polarity in breast cancer: untying the Gordian knot. *Cell Cycle*. 2005 May; 4(5):646–9.
252. Gudjonsson T, Adriance MC, Sternlicht MD, Petersen OW and **Bissell MJ** (2005). Myoepithelial cells: their origin and function in breast morphogenesis and neoplasia. *J Mammary Gland Biol Neoplasia*. 2005 Jul; 10(3):261–72. Review.
253. \*\*Radisky DC, Levy DD, Littlepage LE, Liu H, Nelson CM, Fata JE, Leake D, Godden EL, Albertson DG, Nieto MA, Werb Z and **Bissell MJ** (2005). Rac1b and reactive oxygen species mediate MMP–3–induced EMT and genomic instability. *Nature*. 2005 Jul 7; 436(7047):123–7.
254. Wu W, Xing EP, Myers C, Mian IS and **Bissell MJ** (2005). Evaluation of normalization methods for cDNA microarray data by k–NN classification. *BMC Bioinformatics*. 2005 Jul 26; 6:191.
255. Krakowski AR, Laboureau J, Mauviel A, **Bissell MJ** and Luo K (2005). Cytoplasmic SnoN in normal tissues and non–malignant cells antagonizes TGF $\beta$  signaling through sequestration of the Smad proteins. *Proc Natl Acad Sci USA*. 2005 Aug 30; 102(35):12437–42.
256. Nelson CM and **Bissell MJ** (2005). Modeling dynamic reciprocity: engineering three-dimensional culture models of breast architecture, function, and neoplastic transformation. *Semin Cancer Biol*. 2005 Oct; 15(5):342–52. Review.
257. Bascom JL, Fata JE, Hirai Y, Sternlicht MD and **Bissell MJ** (2005). Epimorphin overexpression in the mouse mammary gland promotes alveolar hyperplasia and mammary adenocarcinoma. *Cancer Res*. 2005 Oct 1; 65(19):8617–21.
258. Kenny PA, Nelson CM and **Bissell MJ** (2006). The ecology of tumors. *The Scientist*. 2006; 20:30–5.
259. Myers C, Liu H, Lee E and **Bissell MJ** (2006). Three–dimensional cultures of normal and malignant human breast epithelial cells to achieve *in vivo*–like architecture and function. In: Celis JE, ed., pp 139–149. *Cell Biology: A Laboratory Handbook*, 3<sup>rd</sup> Edition.

260. Nelson CM and **Bissell MJ** (2006). Of extracellular matrix, scaffolds, and signaling: tissue architecture regulates development, homeostasis, and cancer. *Ann Rev Cell Dev Biol.* 2006; 22:287–309. Review.
261. Radisky DC and **Bissell MJ** (2006). Matrix metalloproteinase–induced genomic instability. *Curr Opin Genet Dev.* 2006 Feb; 16(1):45–50. Review.
262. \*Park CC, Zhang H, Pallavicini M, Gray JW, Baehner F, Park CJ and **Bissell MJ** (2006).  $\beta_1$  integrin inhibitory antibody induces apoptosis of breast cancer cells, inhibits growth, and distinguishes malignant from normal phenotype in three dimensional cultures and *in vivo*. *Cancer Res.* 2006 Feb 1; 66(3):1526–35.
263. Liu H, Radisky DC, Nelson CM, Zhang H, Fata J, Roth RA and **Bissell MJ** (2006). Mechanism of Akt1 inhibition of breast cancer cell invasion reveals a protumorigenic role for TSC2. *Proc Natl Acad Sci USA.* 2006 Mar 14; 103(11):4134–9.
264. Semeiks JR, Rizki A, **Bissell MJ** and Mian IS (2006). Ensemble attribute profile clustering: discovering and characterizing groups of genes with similar patterns of biological features. *BMC Bioinformatics.* 2006 Mar 16; 7:147.
265. Knowles DW, Sudar D, Bator-Kelly C, **Bissell MJ** and Lelièvre SA (2006). Automated local bright feature image analysis of nuclear protein distribution identifies changes in tissue phenotype. *Proc Natl Acad Sci USA.* 2006 Mar 21; 103(12):4445–50.
266. \*Fournier MV, Martin KJ, Kenny PA, Xhaja K, Bosch I, Yaswen P and **Bissell MJ** (2006). Gene expression signature in organized and growth–arrested mammary acini predicts good outcome in breast cancer. *Cancer Res.* 2006 Jul 15; 66(14):7095–102.
267. Weir ML, Oppizzi ML, Henry MD, Onishi A, Campbell KP, **Bissell MJ** and Muschler JL (2006). Dystroglycan loss disrupts polarity and  $\beta$ –casein induction in mammary epithelial cells by perturbing laminin anchoring. *J Cell Sci.* 2006 Oct 1; 119(Pt 19):4047–58.
268. \*\*Nelson CM, VanDuijn MM, Inman JL, Fletcher DA and **Bissell MJ** (2006). Tissue geometry determines sites of mammary branching morphogenesis in organotypic cultures. *Science.* 2006 Oct 13; 314(5797):298–300.
269. Tolg C, Hamilton SR, Nakrieko KA, Kooshesh F, Walton P, McCarthy JB, **Bissell MJ** and Turley EA (2006). Rhamm–/– fibroblasts are defective in CD44–mediated ERK1,2 mitogenic signaling, leading to defective skin wound repair. *J Cell Biol.* 2006 Dec 18; 175(6):1017–28.
270. \*Kenny PA, Lee GY, Myers CA, Neve RM, Semeiks JR, Spellman PT, Lorenz K, Lee EH, Barcellos-Hoff MH, Petersen OW, Gray JW and **Bissell MJ** (2007). The morphologies of breast cancer cell lines in three-dimensional assays correlate with their profiles of gene expression. *Mol Oncol.* 2007 Jun; 1(1):84–96.
271. LaBarge MA, Petersen OW and **Bissell MJ** (2007). Culturing mammary stem cells. In: Freshney RI, Stacey GN and Auerback JM, eds., pp 281-300. *Culture of Human Stem Cells.* New Jersey: John Wiley & Sons, Inc.
272. Spencer VA, Xu R and **Bissell MJ** (2007). Extracellular matrix, nuclear and chromatin structure, and gene expression in normal tissues and malignant tumors: a work in progress. *Adv Cancer Res.* 2007; 97:275–94.
273. **Bissell MJ** (2007). Modelling molecular mechanisms of breast cancer and invasion: lessons from the normal gland. *Biochem Soc Trans.* 2007 Feb; 35(Pt 1):18–22. Review.
274. \*\*Kenny PA and **Bissell MJ** (2007). Targeting TACE-dependent EGFR ligand shedding in breast cancer. *J Clin Invest.* 2007 Feb; 117(2):337–45.
275. Beliveau A, Bassett E, Lo AT, Garbe J, Rubio MA, **Bissell MJ**, Campisi J and Yaswen P (2007). p53–dependent integration of telomere and growth factor deprivation signals. *Proc Natl Acad Sci USA.* 2007 Mar 13; 104(11):4431–6.
276. \*Lee GY, Kenny PA, Lee EH and **Bissell MJ** (2007). Three–dimensional culture models of normal and malignant breast epithelial cells. *Nat Methods.* 2007 Apr; 4(4):359–65.
277. Radisky DC and **Bissell MJ** (2007). NF– $\kappa$ B links oestrogen receptor signalling and EMT. *Nat Cell Biol.* 2007 Apr; 9(4):361–3.
278. \*\*Villadsen R, Fridriksdottir AJ, Rønno–Jessen L, Gudjonsson T, Rank F, LaBarge MA, **Bissell MJ** and Petersen OW (2007). Evidence for a stem cell hierarchy in the adult human breast. *J Cell Biol.* 2007 Apr 9; 177(1):87–101.
279. Sandal T, Valyi-Nagy K, Spencer VA, Folberg R, **Bissell MJ** and Maniotis AJ (2007). Epigenetic reversion of breast carcinoma phenotype is accompanied by changes in DNA sequestration as measured by *AhuI* restriction enzyme. *Am J Pathol.* 2007 May; 170(5):1739–49 (cover feature).
280. Kenny PA, Lee GY and **Bissell MJ** (2007). Targeting the tumor microenvironment. *Front Biosci.* 2007 May 1; 12:3468–74. Review.

281. \*Itoh M, Nelson CM, Myers CA and **Bissell MJ** (2007). Rap1 integrates tissue polarity, lumen formation, and tumorigenic potential in human breast epithelial cells. *Cancer Res.* 2007 May 15; 67(10):4759–66 (cover highlight).
282. \*Xu R, Spencer VA and **Bissell MJ** (2007). Extracellular matrix–regulated gene expression requires cooperation of SWI/SNF and transcription factors. *J Biol Chem.* 2007 May 18; 282(20):14992–9.
283. \*Fata JE, Mori H, Ewald AJ, Zhang H, Yao E, Werb Z and **Bissell MJ** (2007). The MAPK(ERK–1,2) pathway integrates distinct and antagonistic signals from TGF $\alpha$  and FGF7 in morphogenesis of mouse mammary epithelium. *Dev Biol.* 2007 Jun 1; 306(1):193–207.
284. Labarge MA, Petersen OW, **Bissell MJ** (2007). Of Microenvironments and Mammary Stem Cells. *Stem Cell Rev.* 2007 Jun;3(2):137–46. Review
285. Hamilton SR, Fard SF, Paiwand FF, Tolg C, Veiseh M, Wang C, McCarthy JB, **Bissell MJ**, Koropatnick J and Turley EA (2007). The hyaluronan receptors CD44 and Rhamm (CD168) form complexes with ERK1,2, which sustain high basal motility in breast cancer cells. *J Biol Chem.* 2007 Jun 1; 282(22):16667–80.
286. Radisky DC, Kenny PA and **Bissell MJ** (2007). Fibrosis and cancer: do myofibroblasts come also from epithelial cells via EMT? *J Cell Biochem.* 2007 Jul 1; 101(4):830–9. Review.
287. Le Beyec J, Xu R, Lee SY, Nelson CM, Rizki A, Alcaraz J and **Bissell MJ** (2007). Cell shape regulates global histone acetylation in human mammary epithelial cells. *Exp Cell Res.* 2007 Aug 15; 313(14):3066–75.
288. Andarawewa KL, Erickson AC, Chou WS, Costes SV, Gascard P, Mott JD, **Bissell MJ** and Barcellos–Hoff MH (2007). Ionizing radiation predisposes nonmalignant human mammary epithelial cells to undergo transforming growth factor  $\beta$ -induced epithelial to mesenchymal transition. *Cancer Res.* 2007 Sep 15; 67(18):8662–70.
289. **Bissell MJ** (2007). Architecture is the message: the role of extracellular matrix and 3–D structure in tissue–specific gene expression and breast cancer. *J Pezcoller Foundation.* 2007 Nov; 29:2–17.
290. \*Rizki A, Mott JD and **Bissell MJ** (2007). Polo–like kinase 1 is involved in invasion through extracellular matrix. *Cancer Res.* 2007 Dec 1; 67(23):11106–10.
291. \*\*Rizki A, Weaver VM, Lee SY, Rozenberg GI, Chin K, Myers CA, Bascom JL, Mott JD, Semeiks JR, Grate LR, Mian IS, Borowsky AD, Jensen RA, Idowu MO, Chen F, Chen DJ, Petersen OW, Gray JW and **Bissell MJ** (2008). A human breast cell model of preinvasive to invasive transition. *Cancer Res.* 2008 Mar 1; 68(5):1378–87 (cover highlight).
292. Faddy HM, Smart CE, Xu R, Lee GY, Kenny PA, Feng M, Rao R, Brown MA, **Bissell MJ**, Roberts–Thomson SJ and Monteith GR (2008). Localization of plasma membrane and secretory calcium pumps in the mammary gland. *Biochem Biophys Res Comm.* 2008 May 9; 369(3):977–81.
293. Turley EA, Veiseh M, Radisky DC and **Bissell MJ** (2008). Mechanisms of disease: epithelial–mesenchymal transition – does cellular plasticity fuel neoplastic progression? *Nat Clin Pract Oncol.* 2008 May; 5(5):280–90.
294. Nelson CM, Inman JL and **Bissell MJ** (2008). Three–dimensional lithographically defined organotypic tissue arrays for quantitative analysis of morphogenesis and neoplastic progression. *Nat Protoc.* 2008; 3(4):674–8.
295. Triffo WJ, Palsdottir H, McDonald KL, Lee JK, Inman JL, **Bissell MJ**, Raphael RM and Auer M (2008). Controlled microaspiration for high–pressure freezing: a new method for ultrastructural preservation of fragile and sparse tissues for TEM and electron tomography. *J Microscopy.* 2008 May; 230(Pt 2):278–87.
296. Hu M, Yao J, Carroll DK, Weremowicz S, Chen H, Carrasco D, Richardson A, Violette S, Nikolskaya T, Nikolsky Y, Bauerlein EL, Hahn WC, Gelman RS, Allred C, **Bissell MJ**, Schnitt S and Polyak K (2008). Regulation of in situ to invasive breast carcinoma transition. *Cancer Cell.* 2008 May; 13(5):394–406 (cover feature).
297. Weigelt B and **Bissell MJ** (2008). Unraveling the microenvironmental influences on the normal mammary gland and breast cancer. *Semin Cancer Biol.* 2008 Oct; 18(5):311–21.
298. LaBarge MA and **Bissell MJ** (2008). Is CD133 a marker of metastatic colon cancer stem cells? *J Clin Invest.* 2008 Jun 2; 118(6):2021–4.
299. Nelson CM, Khauv D, **Bissell MJ** and Radisky DC (2008). Change in cell shape is required for matrix metalloproteinase–induced epithelial–mesenchymal transition of mammary epithelial cells. *J Cell Biochem.* 2008 Sep 1; 105(1):25–33 (cover feature).
300. \*\*Park CC, Zhang HJ, Yao ES, Park CJ and **Bissell MJ** (2008).  $\beta_1$  integrin inhibition dramatically enhances radiotherapy efficacy in human breast cancer xenografts. *Cancer Res.* 2008 Jun 1; 68(11):4398–405.
301. Veiseh M, Turley EA and **Bissell MJ** (2008). A top–down analysis of a dynamic environment: extracellular matrix structure and function. In: Laurencin C and Nair L, eds., *Nanotechnology and Tissue Engineering: The Scaffold*, pp. 33–51. Boca Raton, FL: CRC Press/Taylor and Francis Group.

302. Martin KJ, Patrick DR, **Bissell MJ** and Fournier MV (2008). Prognostic breast cancer signature identified from 3D culture model accurately predicts clinical outcome across independent datasets. *PLoS ONE*. 2008 Aug 20; 3(8):e2994.
303. **Bissell MJ** and Inman J (2008). Reprogramming stem cells is a microenvironmental task. *Proc Natl Acad Sci USA*. 2008 Oct 14; 105(41):15637–8.
304. **\*\*Alcaraz J, Xu R, Mori H, Nelson CM, Mroue R, Spencer VA, Brownfield D, Radisky DC, Bustamante C and Bissell MJ** (2008). Laminin and biomimetic extracellular elasticity enhance functional differentiation in mammary epithelia. *EMBO J*. 2008 Nov 5; 27(21):2829–38.
305. Ghajar CM and **Bissell MJ** (2008). Extracellular matrix control of mammary gland morphogenesis and tumorigenesis: insights from imaging. *Histochem Cell Biol*. 2008 Dec; 130(6):1105–18.
306. Rønnov-Jessen L and **Bissell MJ** (2009). Breast cancer by proxy: can the microenvironment be both the cause and consequence? *Trends Mol Med*. 2009 Jan; 15(1):5–13.
307. **\*\*LaBarge MA, Nelson CM, Villadsen R, Fridriksdottir A, Ruth JR, Stampfer M, Petersen OW and Bissell MJ** (2009). Human mammary progenitor cell fate decisions are products of interactions with combinatorial microenvironments. *Integr Biol*. 2009 Jan; 1:70–9.
308. Simian M, **Bissell MJ**, Barcellos-Hoff MH, Shyamala G (2009). Estrogen and progesterone receptors have distinct roles in the establishment of the hyperplastic phenotype in PR-A transgenic mice. *Breast Cancer Research* 2009, 11:R72 (29 September 2009)
309. **\*\*Xu R, Nelson CM, Muschler JL, Veiseh M, Vonderhaar BK and Bissell MJ** (2009). Sustained activation of STAT5 is essential for chromatin remodeling and maintenance of mammary-specific function. *J Cell Biol*. 2009 Jan 12; 184(1):57–66.
310. Mirzoeva OK, Das D, Heiser LM, Bhattacharya S, Siwak D, Gendelman R, Bayani N, Wang NJ, Neve RM, Guan Y, Hu Z, Knight Z, Feiler HS, Gascard P, Parvin B, Spellman PT, Shokat KM, Wyrobek AJ, **Bissell MJ**, McCormick F, Kuo WL, Mills GB, Gray JW and Korn WM (2009). Basal-subtype and (MAPK)/ERK kinase (MEK)-phosphoinositide 3-kinase feedback signaling determine susceptibility of breast cancer cells to MEK inhibition. *Cancer Res*. 2009 Jan 15; 69(2):565–72.
311. **\*Radisky DC, Stallings-Mann M, Hirai Y and Bissell MJ** (2009). Single proteins might have dual but related functions in intracellular and extracellular microenvironments. *Nat Rev Mol Cell Biol*. 2009 Mar; 10(3):228–34.
312. Zhang X, Fournier MV, Ware JL, **Bissell MJ**, Yacoub A and Zehner ZE (2009). Inhibition of vimentin or  $\beta_1$  integrin reverts morphology of prostate tumor cells grown in laminin-rich extracellular matrix gels and reduces tumor growth in vivo. *Mol Cancer Ther*. 2009 Mar 1; 8(3):499–508.
313. **\*Chen A, Cuevas I, Kenny PA, Miyake H, Mace K, Ghajar C, Boudreau A, Bissell MJ and Boudreau, N.** (2009). Endothelial Cell Migration and VEGF Expression are the result of Loss of Breast Tissue Polarity. *Cancer Res*. 2009 69: 6721-6729
314. Chen CS, Nelson CM, Khauv D, Bennett S, Radisky ES, Hirai Y, **Bissell MJ** and Radisky DC (2009). Homology with vesicle fusion mediator syntaxin-1a predicts determinants of epimorphin/syntaxin-2 function in mammary epithelial morphogenesis. *J Biol Chem*. 2009 Mar 13; 284(11):6877–84.
315. **\*Fournier MV, Fata JE, Martin KJ, Yaswen P and Bissell MJ** (2009). Interaction of E-cadherin and PTEN regulates morphogenesis and growth arrest in human mammary epithelial cells. *Cancer Research*. 2009 May 15; 69(10):4545-52.
316. Xu R, Boudreau A and **Bissell MJ** (2009). Tissue architecture and function: dynamic reciprocity via extra- and intra-cellular matrices. *Cancer Metastasis Rev*. 2009 Jun; 28(1-2):167–76.
317. Ghajar CM, Meier R and **Bissell MJ** (2009). Quis custodiet ipsos custodiet: who watches the watchmen? *Am J Pathol*. 2009 Jun; 174(6):1996-9.
318. **\*Weigelt B, Lo AT, Park CC, Gray JW and Bissell MJ** (2009). HER2 signaling pathway activation and response of breast cancer cells to HER2 targeting agents is dependent strongly on the 3D microenvironment. *Breast Cancer Res Treat*. Breast Cancer Res Treat. 2009 Aug 22.
319. **\*Mori H, Gjorevskib N, Inman JL, Bissell MJ and Nelson CM** (2009). Self-organization of engineered epithelial tubules by differential cellular motility. *PNAS. Proc Natl Acad Sci U S A*. 2009 Sep 1;106(35):14890-5.
320. Inman JL and **Bissell MJ** (2010). Apical polarity in three-dimensional culture systems: where to now? *J Biol*. 2010 Jan 21;9(1):2
321. Spencer VA, Xu R, **Bissell MJ** (2010). Gene Expression in the Third Dimension: The ECM-nucleus Connection. *J Mammary Gland Biol Neoplasia*. 2010 Mar; 15(1):65-71.

322. Han J, Chang H, Giricz O, Lee GY, Baehner FL, Gray JW, **Bissell MJ**, Kenny PA, and Parvin B (2010). Molecular Predictors of 3D Morphogenesis by Breast Cancer Cell Lines in 3D Culture. *PLoS Comput Biol.* 2010 February; 6(2)
323. Ghajar CM and Bissell MJ (2010). Tumor engineering: the other face of tissue engineering. *Tissue Engineering: Part A.* 2010 Apr 14.
324. Nam JM, Onodera Y, **Bissell MJ**, Park CC (2010). Breast Cancer Cells in Three-dimensional Culture Display an Enhanced Radioresponse after Coordinate Targeting of Integrin  $\alpha_5\beta_1$  and Fibronectin. *Cancer Res.* 2010 Jun 1.
325. Xu R, Spencer VA, Groesser DL, **Bissell MJ** (2010). Laminin regulates PI3K basal localization and activation to sustain STAT5 activation. *Cell Cycle.* 2010 Nov;9(21):4315-22.
326. \*Tanner K, Boudreau A, **Bissell MJ**, Kumar S (2010). Dissecting regional variations in stress fiber mechanics in living cells with laser nanosurgery. *Biophys J.* 2010 Nov 3;99(9):2775-83.
327. **Bissell MJ** (2010). Cell Biology: A Love Affair. ASCB 50th Anniversary Essay. Molecular Biology of the Cell. *Mol Biol Cell.* 2010 Nov;21(22):3790
328. \*\*Beliveau A, Mott JD, Lo A, Chen EI, Koller AA, Yaswen P, Muschler J and **Bissell MJ**(2010). Raf-induced MMP9 Disrupts Tissue Architecture of Human Breast Cells in Three-Dimensional Culture and is Necessary for Tumor Growth in vivo. *Genes Dev.* 2010 Dec 15;24(24):2800-11.
329. Andersen K, Mori H, Fata J, Oyjord T, Mælandsmo GM, **Bissell MJ** (2010). The metastasis-promoting protein S100A4 regulates mammary branching morphogenesis. *Dev Biol.* 2010 Dec 31.
330. \*\*Spencer VA, Costes S, Inman JL, Xu R, Chen J, Hendzel MJ and **Bissell MJ** (2011) Depletion of Nuclear Actin is a Key Mediator of Quiescence in Epithelial Cells. *J Cell Sci.* 2011 Jan 1;124(Pt 1):123-32.
331. \*Chanson L, Brownfield D, Garbe JC, Kuhn I, Stampfer MR, **Bissell MJ** and Labarge MA (2011). Self-organization is a dynamic and lineage-intrinsic property of mammary epithelial cells. *Proc Natl Acad Sci U S A.* 2011 Feb 22;108(8):3264-9. *Proc Natl Acad Sci U S A.* 2011 Feb 7.
332. \*\***Bissell MJ** and Hines, WC(2011). Why don't we get more cancer? A proposed role of the microenvironment in restraining cancer progression. *Nat Med.* 2011. Mar; 17(3): 320-9.
333. Furuta S, Jeng YM, Zhou L, Huang L, Kuhn I, **Bissell MJ\*** and Lee WH\* (2011). IL-25 Causes Apoptosis of IL-25R-Expressing Breast Cancer Cells Without Toxicity to Nonmalignant Cells. *Sci Transl Med* 13 April 2011 3:78ra31. \*Both senior authors contributed equally.
334. **Bissell MJ**, Rosen JM and Polyak K (2011) Cold Spring Harbor Perspectives in Biology. The Mammary Gland as an Experimental Model. Cold Spring Harbor Laboratory Press.
335. Huang C, Park CC, Hilsenbeck SG, Ward R, Rimawi M, Wang YC, Shou J, **Bissell MJ**, Osborne CK, Schiff R. beta1 Integrin mediates an alternative survival pathway in breast cancer cells resistant to lapatinib (2011). *Breast Cancer Res.* 2011 Aug 31;13(4):R84.
336. Pontiggia O, Sampayo R, Raffo D, Motter A, Xu R, **Bissell MJ**, Joffe EB and Simian M (2011.) The tumor microenvironment modulates tamoxifen resistance in breast cancer: a role for soluble stromal factors and fibronectin through  $\beta_1$  integrin. *Breast Cancer Res Treat.* 2011 Sep 21.
337. Alcaraz J, Mori H, Ghajar CM, Brownfield D, Galgoczy R and **Bissell MJ** (2011). Collective epithelial cell invasion overcomes mechanical barriers of collagenous extracellular matrix by a narrow tube-like geometry and MMP14-dependent local softening. *Integr Biol* (Camb). 2011 Oct 13. (cover highlight).
338. Furuta S, Ghajar CM and **Bissell MJ** (2011). Caveolin-1: Would-be Achilles' heel of tumor microenvironment? *Cell Cycle.* 2011 Oct 31;10(20).
339. Inman JL, Mott JD and **Bissell MJ** (2011). The extracellular matrix as a multivalent signaling scaffold that orchestrates tissue organization and function. Tumor-associated Fibroblasts and their Matrix. Prof. Dr. Margareta M. Mueller and Dr. Norbert E. Fusenig eds. pp. 285-300. Springer Dordrech Heidelberg London New York.
340. **Bissell MJ** (2011) Heeding a mentor's advice: A lesson in persistence. *Nature Cell Biol.* 2011 Dec; 13(12).
341. Veisoh M, Breadner D, Ma J, Akentieva N, Savani RC, Harrison RE, Mikilus D, Collis L, Gustafson S, Lee TY, Koropatnick J, Luyt LG, **Bissell MJ**, Turley EA (2011). Imaging of homeostatic, neoplastic and injured tissues by HA-based probes. *Biomacromolecules.* 2012 Jan9;13(1):12-22.
342. Neumaier T, Swenson J, Pham C, Polyzos A, Lo AT, Yang P, Dyball J, Asaithamby A, Chen DJ, **Bissell MJ**, Thalhammer S and Costes S. (2012) Evidence for formation of DNA repair centers and dose-response non-linearity in human cells. *Proc Natl Acad Sci U S A.* 2012 Jan 10;109(2):443-8.

343. Freed-Pastor WA, Mizuno H, Zhao X, Langerød A, Moon SH, Rodriguez-Barrueco R, Barsotti A, Chicas A, Li W, Polotskaia A, **Bissell MJ**, Osborne TF, Tian B, Lowe SW, Silva JM, Børresen-Dale AL, Levine AJ, Bargonetti J and Prives C (2012) Mutant p53 Disrupts Mammary Tissue Architecture via the Mevalonate Pathway. *Cell*. 2012 Jan 20;148(1-2):244-58.
344. Nistico P, **Bissell MJ** and Radisky D (2012.) Epithelial-mesenchymal transition: general principles and pathological relevance with special emphasis on the role of matrix metalloproteinases. *Cold Spring Harb Perspect Biol*. 2012 Feb 1;4(2). (cover feature).
345. \*\*Tanner K, Mori H, Mroue R, Bruni-Cardoso A and **Bissell MJ** (2012) Coherent angular motion in the establishment of multicellular architecture of glandular tissues. *Proc Natl Acad Sci U S A*. 2012 Jan 25.
346. Vidi PA, Chandramouly G, Gray M, Wang L, Liu E, Kim JJ, Roukos V, **Bissell MJ**, Moghe PV, Lelievre SA (2012). Interconnected Contribution of Tissue Morphogenesis and the Nuclear Protein NuMA to the DNA Damage Response. *Journal of Cell Science. J Cell Sci*. 2012 Jan 15;125(Pt 2):350-61. Epub 2012 Feb 13.
347. Correia AL and **Bissell MJ** (2012). The tumor microenvironment is a dominant force in multidrug resistance. *Drug Resistance Updates. Drug Resist Updat*. 2012 Feb 13.
348. **Bissell MJ**, Ghajar CM, Lee LP (2012). From single cells to biology. *Integr Biol (Camb)*. 2012 Apr;4(4):357-9.
349. \*\*Kim J, Villadsen R, Sørli T, Fogha L, Grønlund SZ, Fridriksdóttir AJ, Kuhn I, Rank F, Wieleng VT, Solvang H, Edwards PAW, Børresen-Dale AL, Rønnev-Jessen L, **Bissell MJ\***, Petersen OW\* (2012). Tumor initiating but differentiated luminal-like breast cancer cells are highly invasive in the absence of basal-like activity. *Proc Natl Acad Sci U S A*. 2012 Apr 17;109(16):6124-9. \*Both senior authors contributed equally.
350. Dusek RL, Bascom JL, Vogel H, Baron S, Borowsky AD, **Bissell MJ**, Attardi LD (2012). Deficiency of the p53/p63 target Perp alters mammary gland homeostasis and promotes cancer. *Breast Cancer Res*. 2012 Apr 20;14(2):R65.
351. Nakasone ES, Askautrud HA, Kees T, Park JH, Plaks V, Ewald AJ, Fein M, Rasch MG, Tan YX, Qiu J, Park J, Sinha P, **Bissell MJ**, Frengen E, Werb Z, Egeblad M (2012). Imaging tumor-stroma interactions during chemotherapy reveals contributions of the microenvironment to resistance. *Cancer Cell*. 2012 Apr 17; 21 (4):488-503.
352. Mori H, Borowsky AD, Bhat R, Ghajar CM, Seiki M and **Bissell MJ** (2012). LS-TAFI, a new technique for analysis of microanatomy in whole mount tissues. *Am J Pathol*. 2012 Apr 26.
353. Lo AT, Mori H, Mott J, **Bissell MJ** (2012). Constructing Three-Dimensional Models to Study Mammary Gland Branching Morphogenesis and Functional Differentiation. *J Mammary Gland Biol Neoplasia*. 2012 May 10
354. \*\*Liu H, Radisky DC, Yang D, Xu R, Radisky ES, **Bissell MJ\***, Bishop JM\*. MYC suppresses cancer metastasis by direct transcriptional silencing of  $\alpha(v)$  and  $\beta(3)$  integrin subunits. *Nat Cell Biol*. 2012 May 13;14(6):567-74. \*Both senior authors contributed equally. (cover feature.)
355. Lee SE, Sasaki DY, Park Y, Xu R, Brennan JS, **Bissell MJ**, Lee LP. Photonic Gene Circuits by Optically Addressable siRNA-Au Nanoantennas. *ACS Nano*. 2012 Jul 24. (cover feature).
356. Jahchan NS, Wang D, **Bissell MJ**, Luo K. SnoN regulates mammary gland alveologenesis and onset of lactation by promoting prolactin/Stat5 signaling. *Development*. 2012 Jul 25.
357. Boudreau A, van't Veer LJ and **Bissell MJ** (2012). An “elite hacker” Breast tumors exploit the normal microenvironment program to instruct their progression and biological diversity. *Cell Adhesion and Migration* 6:3, 1-13; May/June 2012.
358. \*\*Lee SY, Meier R, Furuta S, Lenburg ME, Kenny PC, Xu R and **Bissell MJ** (2012) Identification and characterization of FAM83A, a clinically-relevant cancer-associated gene which interacts with c-RAF and PI3K, and confers EGFR-TKI resistance in breast cancer cells. *Journal Clinical Investigation*. 2012 Aug 13. pii: 60498. doi: 10.1172/JCI60498.
359. Meier R, Radisky DC and **Bissell MJ** (2012). The importance of the microenvironment in cancer induction and progression. In: *Cancer The Outlaw Cell*. Richard E. LaFond ed. Oxford University Press. London New York.
360. Ashton RS, Conway A, Pangarkar C, Bergen J, Lim KI, Shah P, **Bissell MJ**, Schaffer DV. Astrocytes regulate adult hippocampal neurogenesis through ephrin-B signaling. *Nat Neurosci*. 2012 Oct;15(10):1399-406. doi: 10.1038/nn.3212.
361. \*Di Modugno F, Iapicca P, Boudreau A, Mottolese M, Terrenato I, Perracchio L, Carstens RP, Santoni A, **Bissell MJ**, Nisticò P. Splicing program of human MENA produces a previously undescribed isoform associated with invasive, mesenchymal-like breast tumors. *Proc Natl Acad Sci U S A*. 2012 Nov 5

362. Ordinario E, Han HJ, Furuta S, Heiser LM, Jakkula LR, Rodier F, Spellman PT, Campisi J, Gray JW, **Bissell MJ**, Kohwi Y and Khowi-Shigematsu T (2012.) ATM suppresses SATB1-induced malignant progression in breast epithelial cells. *PLoS One*. 2012;7(12):e51786. doi: 10.1371/journal.pone.0051786.
363. Vidi PA, **Bissell MJ**, Lelièvre SA (2013). Three-dimensional culture of human breast epithelial cells: the how and the why. *Methods Mol Biol*. 2013;945:193-219. doi: 10.1007/978-1-62703-125-7\_13.
364. Mroue R, **Bissell MJ** (2013). Three-dimensional cultures of mouse mammary epithelial cells. *Methods Mol Biol*. 2013;945:221-50. doi: 10.1007/978-1-62703-125-7\_14.
365. **\*\*Mori H, Lo AT, Ghajar CM, Inman JL, Alcaraz J, Chen CS, Nelson CM, Zhang H, Mott JD, Bascom JL, Seiki M, and Bissell MJ**(2013). Transmembrane/cytoplasmic, rather than catalytic, domains of Mmp14 signal to MAPK activation and mammary branching morphogenesis via binding to integrin  $\beta$ 1. *Development*. Development. 2013 Jan;140(2):343-52. doi: 10.1242/dev.084236.
366. Lee SE, Alivisatos AP and **Bissell MJ** (2013). Towards Plasmonics-enabled Spatiotemporal Activity Patters in Three-dimensional Culture Models. *Systems Biomedicine*. *Systems Biomedicine* 1:1, 1–8; January/February/March 2013.
367. Brownfield DG, Venugopalan G, Lo A, Mori H, Tanner K, Fletcher DA, **Bissell MJ** (2013). Patterned Collagen Fibers Orient Branching Mammary Epithelium through Distinct Signaling Modules. *Curr Biol*. 2013 Apr 2. doi:pii: S0960-9822(13)00334-5. 10.1016/j.cub.2013.03.032.
368. Correia AL, Mori H, Chen EI, Schmitt FC and **Bissell MJ** (2013). Correia AL, Mori H, Chen EI, Schmitt FC, Bissell MJ. The hemopexin domain of MMP3 is responsible for mammary epithelial invasion and morphogenesis through extracellular interaction with HSP90 $\beta$ . *Genes Dev*. 2013 Apr 1;27(7):805-17. doi: 0.1101/gad.211383.112.
369. Ghajar CM, Peinado H, Mori H, Matei IR, Evason KJ, Brazier H, Almeida D, Koller A., Hajjar KA, Stainer D, Chen EI, Lyden D and **Bissell MJ** (2013). The perivascular niche regulates breast tumor dormancy. *Nat Cell Biol*. 2013 Jun 2. doi: 10.1038/ncb2767.
370. Bascom JL, Radisky DC, Koh E, Fata JE, Lo A, Mori H, Roosta N, Hirai Y, **Bissell MJ** (2013). Epimorphin is a novel regulator of the progesterone receptor isoform-A. *Cancer Res*. 2013 Jul 18.
371. **Bissell MJ** (2012). [The Microenvironment/Genome Axis In Breast Cancer: The Role Of Extracellular Matrix And Architecture In Tissue-Specificity](#). [The Harvey Society Lecture Series](#). Wiley-Liss, Inc. (*In Press*)

## PAST RECORD OF TRAINING

### Previous Postdoctoral Fellows and Graduate Students, and their highest ranked position after leaving the laboratory:

Dean: 1; Tenured Professors: 20; Assistant Professors: 14; Senior Biotechnology Positions: 16; Principal Investigators: 10; Senior Scientists: 5; Lab Managers: 2; General Educators: 1