

## **Robert Patrick (Bob) Goldstein**

James L. Peacock III Distinguished Professor  
Biology Department  
University of North Carolina at Chapel Hill  
Chapel Hill, NC 27599-3280 USA  
bobg@unc.edu  
<http://www.bio.unc.edu/faculty/goldstein/>

### **PROFESSIONAL EXPERIENCE**

1999-current Faculty, UNC Chapel Hill Biology Department and Member, Lineberger Comprehensive Cancer Center

### **EDUCATION**

PhD: University of Texas at Austin, 1992, Zoology  
BS: Union College, Schenectady, New York, 1988, Biology

### **RESEARCH TRAINING**

1996-1999 Miller Institute Postdoctoral Research Fellow, University of California, Berkeley, Department of Molecular and Cell Biology, Laboratory of Dr. David Weisblat.  
1992-1996 Postdoctoral Fellow, MRC Laboratory of Molecular Biology, Cambridge, England. Laboratory of Dr. John White 1992-1993. Independent 1993-1996.  
1988-1992 PhD student, University of Texas at Austin. Laboratory of Dr. Gary Freeman.

### **AWARDS AND HONORS**

2018 Chapman Family Teaching Award, UNC Chapel Hill  
2016 James L. Peacock III Distinguished Professor  
2008 Elected Life Member of Clare Hall, Cambridge University  
2007 Guggenheim Fellow  
2007 Visiting Fellow, Clare Hall, Cambridge University  
2005 Phillip and Ruth Hettleman Prize for Artistic and Scholarly Achievement by Young Faculty at UNC Chapel Hill  
2000-2004 Pew Scholar  
2000-2002 March of Dimes Basil O'Connor Scholar  
1996-1998 Miller Institute Research Fellow, University of California, Berkeley  
1996 Medical Research Council Postdoctoral Fellow, Cambridge, England  
1995 Development Traveling Fellow  
1994-1996 Human Frontiers Science Program Postdoctoral Fellow  
1993-1994 American Cancer Society Postdoctoral Fellow  
1993 Outstanding Doctoral Dissertation Award, University of Texas

## PROFESSIONAL SERVICE

### Editorial

2019-current	Editorial Board, <i>Developmental Cell</i>
2011-current	Associate Editor for Cellular Genetics, <i>Genetics</i>
2011-current	Editorial Board, PLoS One
2007-2015	Editorial Board, <i>Developmental Dynamics</i>
2005-2015	Board of Reviewing Editors, <i>Molecular Biology of the Cell</i>
2004-2021	Editorial Board, <i>BMC Developmental Biology</i>
1999-current	Editorial Board, <i>Development</i>

### Grant Review panels

2018	NIH study section ZRG1 CBJ02
2015	NIH study section DEV-1
2011	NIH study section DEV-1
2006	NIH study section CHHD-C
2006	NIH study section NCF
2005	NIH study section NCF
2004	NIH study section DEV-1
2004-current	NSF Developmental Mechanisms Panel, four times

### Other Professional Service

2022-current	Pew Scholars National Advisory Committee
2022	Co-Editor, <i>Emerging Model Systems in Developmental Biology</i> , eds B. Goldstein and M. Srivastava (book in the Current Topics in Developmental Biology series), Elsevier.
2021-current	Postdoc mentoring to foster diversity, equity and inclusion in the field: ASCB MOSAIC Program (2021-present) and <i>C. elegans</i> Community Mentor Match Program (2021-present)
2016-current	Advisory Board, <i>Caenorhabditis</i> Genetics Center
2016-current	MBL Embryology Course faculty
2007-current	Faculty Opinions / Faculty of 1000, Morphogenesis and Cell Biology Section Member
2019-2020	Chair, ASCB Nominating Committee
2017-2019	ASCB Council (3-year term)
2019	Invited presenter to members of Congress and their staff, Celebrate Life Science Fair hosted by Coalition for the Life Sciences & FASEB, June 2019
2019, 2021	ASCB Minority Affairs Committee's Accomplishing Career Transitions Program, Panel Moderator, June 2019 and June 2021
2018	ASCB Annual Meeting Program Committee
2016-2018	Co-founder and co-organizer, annual ASCB Subgroup Meeting on Emerging Model Organisms (co-organized with Nicole King in 2016 and with Mansi Srivastava in 2017-2018)
2016	ASCB minisymposium co-chair, Multicellular Interactions, Tissues, and Development
2016	Co-editor, Cellular Mechanisms of Morphogenesis issue of Seminars in Cell & Developmental Biology (with Jen Zallen, HHMI, Sloan Kettering)
2014, 2015	MBL Physiology Course faculty
2014	Co-Organizer, ASCB Cell Biology of Morphogenesis Subgroup Meeting (with Jen Zallen, HHMI, Sloan Kettering)

- 2012 Organizer, Santa Cruz Developmental Biology Meeting (with Amander Clark, UCLA and John Tamkun, UCSC)
- 2011 External site reviewer, Duke University Developmental and Stem Cell Biology Training Program (with Gail Martin, UCSF)
- 2009 ASCB Annual Meeting Program Committee
- 2007-current Member, *Faculty Opinions*, Developmental Biology section

## UNIVERSITY SERVICE

- Faculty Mentor for UNC's Carolina Covenant program for low-income student scholars  
2006-current
- Mentor Task Force member for Carolina Covenant program, 2002-current
- Selection committee for UNC Searle & Rita Allen award candidates, 2020
- Search committee for Carolina Covenant director, 2019
- B BSP program graduate student admissions committee 2008-2009, 2011-2013, 2015-2017, 2020-2021
- UNC Internal Selection Committees for Keck Award (2004), Pew Award (2002-2004, 2016) and Searle Award (2002-2004)
- Curriculum in Genetics and Molecular Biology PhD written exam committee, 2005-2007, 2021-2022
- Faculty Advisor, UNC Undergraduate Research Society, 2018-current
- Biology Department Seminar Committee, 1999-current (Co-chair 2003-current)
- Biology Department Microscopy Committee, 2003-current
- Biology Department Faculty Development Committee, 2005-current
- Biology Department Library Committee, 2005-current
- Biology Department Strategic Planning Committee, 2016-2017
- Biology Department MCDB Faculty Job Search Committee, 2005-2006
- Biology Department Faculty Job Search Committees, 2004, 2006, 2012, 2013
- Biology Department Advising Committee, 2000-2004
- Biology Department MCDB Written Exam Committee, 2006
- Biology Department Advisor to 1st year MCDB grad students, 2001-2005

## LAB TRAINEES

### Postdocs

- Jean-Claude Labbé, 1999 - 2002; currently Full Professor, University of Montreal and Principal Investigator, Institute for Research in Immunology and Cancer
- Daniel Marston, 2004 - 2008; currently Research Assistant Professor, UNC Chapel Hill
- Gideon Shemer, 2005 - 2009; currently Teaching Associate Professor and Advisor, UNC Chapel Hill Biology Department
- Jennifer Tenlen, 2007 - 2012, currently Associate Professor and Co-Chair of Biology, Seattle Pacific University
- Jessica Sullivan-Brown, 2009-2014, currently Associate Professor, West Chester University
- Thomas Boothby, 2013-2016, currently Assistant Professor, University of Wyoming
- Daniel Dickinson, 2011-2017, currently Assistant Professor, University of Texas at Austin
- Frank Smith, 2013-2017, currently Assistant Professor, University of North Florida
- Ari Pani, 2013-2019, currently Assistant Professor, University of Virginia
- Mark Slabodnick, 2014-2020, currently Assistant Professor, Knox College
- Jonathan Hibshman, 2018-current

Courtney Clark-Hachtel, 2018-current  
Emily Bowie, 2020-current  
Taylor Medwig-Kinney, 2022-current

#### Grad students

Rebecca Cheeks, PhD 2003, currently yoga and meditation instructor in New York City  
Jen-Yi Lee, PhD 2004, currently Advanced Workflow Specialist, Leica Microsystems,  
California  
Nathaniel Dudley, PhD 2006, currently Research Scientist, KU Medical Center and Director,  
TrySci Community Biolabs, Kansas City  
Erin McCarthy Campbell, PhD 2007, Founder and Executive Director, Athens Area Diaper  
Bank, Athens, Georgia  
Willow Gabriel, PhD 2007, currently Academic Editor, American Journal Experts  
Minna Roh-Johnson, PhD 2010, currently Assistant Professor of Biochemistry at the  
University of Utah  
Jessica Harrell, PhD 2010, currently Director of Academic Engagement in the Natural and  
Quantitative Sciences at Duke University  
Jacob Sawyer, PhD 2010, currently Advanced Imaging Specialist with Nikon  
Adam Werts, PhD 2011, currently PI and Veterinary Research Scientist, Lovelace  
Biomedical, Albuquerque, NM  
Chris Higgins, PhD 2016, currently Manager, Contracts and Proposals at Nuventra Pharma  
Sciences  
Tim Cupp, MS 2017, currently EC Teacher at Evergreen Community Charter School,  
Asheville, NC  
Jennifer Heppert, PhD 2017, currently a postdoc at University of Tennessee  
Sophie Tintori, PhD 2017, currently a postdoc at NYU  
Allyson Roberts, MS 2018, currently teaching in Japan  
Kira Heikes, 2016-current  
Pu Zhang, 2019-current  
Addie Coke, 2021-current

#### Undergraduate research students

Meaghan Bowling, MD (5/00-1/02), currently an MD and Reproductive Endocrinologist at  
Carolina Conceptions  
Shatil Amin, MD (9/01-4/02, 5/03-5/04), currently an MD and Assistant Professor of  
Dermatology at Northwestern University Feinberg School of Medicine  
Sapna Patel (8/03- 8/05), currently Physical Therapist at Triangle Orthopedic Associates  
Thurston Lindberg (4/04-8/05), currently Field Operations Manager for the National  
Ecological Observatory Network  
Shefali Chudgar (1/06-6/06), currently Director of Labor Performance Improvement at Bon  
Secours Mercy Health, Greenville SC  
Trudy Li, MD, MPH (6/06-6/08), currently an Internal Medicine Resident at UNC Chapel  
Hill  
Charlene Mangi (5/07-12/07), currently School Psychologist at Manchester Community  
Schools, Indiana  
Joe McClellan, MD (8/07-5/10), currently a resident at Oregon Health & Science University  
Patty Wang, MD (5/10-6/10), currently a Gastroenterology Fellow, Wake Forest School of  
Medicine  
Shaina McCaskill (5/10-7/10), visiting undergraduate researcher from Fayetteville State  
University, currently Lead Medical Technologist at Piedmont Rockdale Hospital,  
Conyers, Georgia

Stephanie Glass Clark, MD (8/09-5/11), currently a resident at Virginia Commonwealth University, Richmond  
Susan Clark, PhD (1/11-5/12), currently Assistant Professor of Physics, Stanford University  
Kim Bird (1/11-5/12), currently a Research Project Manager at UNC Lineberger Comprehensive Cancer Center  
Taylor Moquist Jones (9/12-5/13), currently an Associate, GTM Strategy at Teradata  
Emily Louise Lane (1/13-8/13), visiting undergraduate researcher from Meredith College, currently a Chemistry teacher at Luhe International School in Beijing  
Kiera Patanella (5/14-8/15), currently Scientific Programmer, Q2 Solutions  
Kristen McGreevy (9/16-5/18), currently a PhD student in Biostatistics at UCLA  
Alicia Chen, (5/17-5/19), currently a medical student at Baylor College of Medicine, Houston, TX  
Heather Barber (8/18 – 5/20), currently a PhD student at University of Virginia  
Emily Shaljian (8/18 – 5/20)  
Sydney Lai (1/20 – 5/22)  
Lilly Papell (1/22 – current)

**INVITED TALKS** (*special invitations in italics*)

2022

Cell Bio 2022 ASCB/EMBO Meeting; Symposium speaker: New Organisms, New Directions; scheduled for Dec 2022  
NYU/Skirball, scheduled for Oct 2020 (*hosted by the Developmental Genetics and Stem Cell Biology Programs' grad students and postdocs*)  
Gordon Conference, Signaling by Adhesion Receptors, scheduled for July 2022 (*Keynote speaker*)  
Cincinnati Children's Hospital Medical Center, May 2022  
Fred Hutchinson Cancer Research Center, Seattle, April 2022 (*hosted by the FHCRC postdocs*)  
High Point University, April 2022  
Duke University Department of Art, Art History & Visual Studies, April 2022 (*Visiting Artist series talk*)  
University of Kansas Center for Genomics, March 2022

Postponed by COVID-19 pandemic:

iBiology seminar, scheduled for Nov 2020  
Northwestern University, scheduled for April 2020 (*hosted by the Interdisciplinary Biological Sciences grad students*)  
University of Illinois Urbana-Champaign, scheduled for April 2020 (*hosted by the CDB grad students*)

2021

Bangalore Developmental Biology Club (by Zoom), Oct 2021  
ASCB Webinar, "Building Simple Microscopes for Schools: Leveraging Hands-on Activities for Effective Science Engagement", Oct 2021

2020

Yale Cell Biology, March 2020

2019

Duke STEAM Forum, Sept 2019 (*Keynote address*)  
Canadian Society for Molecular Biosciences Annual Conference, Model Systems in Cancer  
Research, Montreal, June 2019  
University of Colorado Anschutz Medical Campus, March 2019 (*hosted by the Cell Biology,  
Stem Cells & Development grad students*)  
Georgetown University, March 2019 (*hosted by the Biology grad students*)  
George Washington University, March 2019

2018

Indiana University, Oct 2018  
Brown University, Oct 2018  
University of Texas, Austin, Aug 2018  
Gordon Conference on Cell Polarity Signaling, Aug 2018  
Icahn School of Medicine at Mount Sinai, New York, May 2018  
Sloan Kettering, New York, May 2018  
MPI CBG Dresden, Germany, April 2018  
University of Zurich, Switzerland, April 2018 (*hosted by the Molecular Life Sciences grad  
students*)  
EPFL, Lausanne, Switzerland, April 2018  
USC, March 2018 (*hosted by the Molecular Biology graduate students*)  
Alberta Children's Hospital Research Institute, Calgary, March 2018  
Oakland University, Jan 2018

2017

Haverford College, December 2017  
SDB Annual Meeting, Minneapolis, July 2017  
Harvard Med School, Genetics Department, June 2017 (*hosted by the Genetics grad  
students*)  
Marian Koshland Memorial Lecture, UC Berkeley Dept of Molecular & Cell Biology,  
March 2017 (*hosted by the MCB grad students*)  
Stony Brook University, March 2017  
UC Santa Cruz, March 2017

2016

IRIC/University of Montreal, Nov 2016  
Cell Polarity and Signaling Gordon Research Seminar, June 2016 (*Keynote speaker*)  
Stanford University, May 2016  
University of Washington, May 2016 (*hosted by the Biochemistry Department postdocs*)  
University of Oregon, May 2016 (*hosted by the Developmental Biology Training Program  
grad students*)  
MD Anderson, Houston, May 2016  
Ohio State University, April 2016  
University of Kentucky, April 2016  
Whitney Marine Lab, March 2016 (*public lecture*)  
Washington University, St Louis, March 2016 (*hosted by the Developmental Biology  
postdocs*)

2015

Carnegie Institution Department of Embryology, Sept 2015  
University of Colorado, Boulder, Sept 2015  
University of Georgia, Athens, Sept 2015

International *C. elegans* Conference, Los Angeles, June 2015 (*plenary speaker*)  
Bay Area Worm Meeting, UCSF, May 2015 (*keynote speaker*)  
Hospital for Sick Children, Toronto, Canada, May 2015  
University of Chicago, May 2015 (*hosted by the Genetics, Genomics and Systems Biology grad students*)  
ABRF meeting, St. Louis, March 2015

2014

Physics of Living Matter symposium, Cambridge, England, September 2014  
UPenn, September 2014  
Rocky Mountain Cytoskeleton Meeting, Fort Collins, CO, May 2014 (*keynote speaker*)  
Workshop on Mechanics and Growth of Tissues: From Development to Cancer, Curie Institut, Paris, Jan 2014  
Pasteur Institut Dept of Developmental and Stem Cell Biology, Paris, Jan 2014  
SICB Annual Meeting, society-wide symposium: The cell's view of animal body plan evolution. Austin, Texas, Jan 2014

2013

University of Chicago, Nov 2013 (*hosted by the Development, Regeneration and Stem Cell Biology grad students*)  
Columbia University, Nov 2013  
Stanford University Beckman Symposium: Growth Control Across Kingdoms, Oct 2013  
Gordon Conference, Developmental Biology, Italy, June/July 2013 (*invited speaker and session chair*)  
Stanford University, Hopkins Marine Lab, May 2013 (*12th annual Daniel Mazia lecture*)  
National Institutes of Health, NHLBI, Bethesda, MD, May 2013 (*invited by the Cell Biology and Physiology Center grad students and postdocs*)  
Duke University Program in Genetics and Genomics, April 2013  
Mount Sinai School of Medicine, NY, April 2013  
Iowa State, March 2013  
University of Maryland, March 2013

2012

ASCB Meeting, Building The Cell session, December 2012  
University of Richmond, November 2012  
University of California, Davis, April 2012

2011

NYU Developmental Genetics Symposium, December 2011  
Gordon Conference, Motile & Contractile Systems, New London, NH, August 2011 (*invited speaker and session chair*)  
UCSF Developmental Biology Symposium, June 2011 (*invited by the Developmental Biology graduate students and postdocs*)  
UMDNJ/Rutgers, May 2011 (*invited by the Joint Molecular Biosciences graduate students*)  
IGBMC, Strasbourg, France, March 2011  
Basel Worm Meeting, Switzerland, March 2011  
Utrecht University, Netherlands, March 2011  
Max Planck CBG, Dresden, Germany, March 2011

2010

College of William and Mary, October 2010

Johns Hopkins Department of Cell Biology, September 2010  
Santa Cruz Developmental Biology Meeting, June 2010 (*invited speaker and session chair*)  
Caltech, Division of Biology, May 2010  
UCSF Biochemistry, May 2010  
University of California, Santa Barbara, May 2010  
University of California, Berkeley, Department of Molecular and Cell Biology, April 2010

2009

Carnegie Institution Embryology Department, Baltimore, November 2009  
University of Arizona, November 2009  
University of Utah, June 2009 (*invited by the Genetics graduate students*)  
University of Miami, May 2009  
Virginia Tech, April 2009  
RIKEN CDB Symposium, Kobe, Japan, March 2009 (*invited speaker and session chair*)  
Buck Institute, California, March 2009  
Duke University Developmental Biology Colloquium, Jan 2009

2008

Duke University Evo-Devo Club, Oct 2008  
Society for Developmental Biology Annual Meeting, Philadelphia, PA, July 2008  
Skirball Institute, New York, June 2008 (*invited by the Developmental Genetics graduate students and postdocs*)  
University of Chicago, May 2008  
Columbia University, Department of Biological Sciences, April 2008  
Institute for Research in Immunology and Cancer, University of Montreal, May 2008  
University of Texas Southwestern Medical Center, April 2008

2007

Developmental Biology Institute of Marseilles, France, December 2007  
Cambridge University, Developmental Biology Seminar Series, October 2007  
L'Institut Jacques Monod, Paris, September 2007  
Symposium in Developmental Biology, University of Minnesota, September 2007  
Fourth International Tunicate Meeting, Villefranche-sur-Mer, France, June 2007 (*invited Plenary Lecturer*)  
University of Oregon, March 2007

2006

University of Toronto, Department of Cell & Systems Biology, December 2006  
*C. elegans* Development meeting, Madison, Wisconsin, June 2006 (*Keynote speaker on Polarity, Cell Fate and Morphogenesis*)  
University of Calgary, Department of Biochemistry & Molecular Biology, June 2006  
University of Washington, Biology Department, June 2006 (*invited by the Developmental Biology graduate students*)  
Robert Wood Johnson Med School/UMDNJ, May 2006

2005

BSDB meeting: Wnt Signalling in Development, Disease and Cell Biology, Aberdeen, Scotland, September 2005  
University of Washington Friday Harbor Labs, Center for Cell Dynamics, July 2005  
Society for Developmental Biology, Southeast Regional Meeting, Athens, GA, June 2005  
Emory University, May 2005



UConn Health Center, Department of Genetics & Developmental Biology, March 2005  
The Rockefeller University, March 2005

2004

National Institutes of Health, NIDDK, Bethesda, MD, October 2004

Santa Cruz Developmental Biology Meeting, August 2004

MD Anderson Cancer Center, Program in Genes & Development, April 2004 (*Blaffer Lecture*)

University of Wisconsin, Madison, Anatomy Department, April 2004

American Association for Cancer Research Annual Meeting, Orlando, Florida, March 2004  
(*invited Chair, RNA Interference session*)

2003

Wake Forest University, Biology Department, November 2003

Vanderbilt University Medical Center, Department of Cell and Developmental Biology,  
November 2003

Cold Spring Harbor Laboratory *C. elegans* course, August 2003

Duke University Developmental Biology Colloquium, April 2003

East Carolina University's Brody School of Medicine, Department of Cell Biol & Anatomy,  
April 2003

2002

Cold Spring Harbor Laboratory Meeting on Evolution of Developmental Diversity, April  
2002

2001

University of California, Berkeley, Department of Molecular and Cell Biology, October  
2001

University of California, Irvine, Department of Developmental and Cell Biology, October  
2001

13th Biennial International *C. elegans* Conference, Los Angeles, June 2001. (*Co-Chair,  
Mitosis & Asymmetry in the Early Embryo Session*)

2000

Gulbenkian Institute Meeting on Cellular Differentiation, Lisbon, Portugal, October 2000

Samuel Lunenfeld Research Institute of Mount Sinai Hospital, Toronto, Canada, October,  
2000

Cold Spring Harbor Laboratories Meeting on Germ Cells, Cold Spring Harbor, October  
2000

Society for Developmental Biology Annual Meeting, Boulder, CO, June 2000

North Carolina State University, Zoology Department, March 2000

1999

EMBO Workshop, Molecular Medicine of the Gut, Arolla, Switzerland, August 1999

Society for Developmental Biology Annual Meeting, Charlottesville, VA, June 1999  
(*Plenary Session on Development and Evolution*)

1998

Gordon Conference, Developmental Physiology, Plymouth State College, Plymouth, NH,  
August 1998

## TEACHING

BIOL 205H, Cellular and Developmental Biology  
1st half of course, each Spring (2016-current)

BIOL 409L and ARTS 409H, Art & Science: Merging Printmaking and Biology  
co-teaching these co-requisite courses with Prof. Beth Grabowski each Fall (2018-current)

BIOL 801, Graduate Seminar in Biological Sciences  
Fall 2009, 2011, 2013, 2015: "Great Experiments"

BIOL 514H, Evolution and Development  
Half of course, Fall semesters (BIOL514 2002-2012, BIOL514H 2013-2017)

BIOL 649, Graduate Seminar in Cell Biology  
Fall 2001: "The Cytoskeleton and Development"  
Fall 2003: "Early Development of *C. elegans*"  
Fall 2005: "Cytoskeletal Dynamics in Development"  
Fall 2016: "*C. elegans* Cell Biology and Development"

BIOL 205, Cellular and Developmental Biology  
1st half of course, each Spring (2000-2015)

## GRANTS

### Current:

*C. elegans* Gastrulation: a Model for Understanding Apical Constriction Mechanisms  
National Institutes of Health R35 GM134838 (PI: Goldstein)  
1/1/2020 – 12/31/2024  
Total amount of award: \$1,886,900

Using Tardigrades and Other Animals to Investigate Adaptations to Extreme Stresses  
NSF IOS 2028860  
8/15/20 – 7/31/2025  
Total amount of award: \$1,035,111

### Completed:

*C. elegans* Gastrulation: a Model for Understanding Apical Constriction Mechanisms  
National Institutes of Health R01 GM083071 (PI: Goldstein)  
8/31/16 - 7/31/20  
Total amount of award: \$899,200 plus indirect costs

Using Water Bears to Investigate Adaptations to Extreme Stresses  
NSF IOS 1557432 (PI: Goldstein)  
6/15/16-5/31/20  
Total amount of award: \$973,848

Using Water Bears To Identify Biological Countermeasures To Stress During  
Multigenerational Spaceflight  
NASA Space Biology grant NNX15AB44G (PI: T. Boothby, Co-I: B. Goldstein)  
Budget: \$393,418  
11/1/04-8/26/19  
(SpaceX CRS-22 was launched on 3 June 2021 carrying the tardigrades for this  
experiment to the International Space Station).

*C. elegans* Gastrulation: a Model for Understanding Apical Constriction Mechanisms  
National Institutes of Health R01 GM083071 (PI: Goldstein)  
9/30/12-8/31/16  
Total amount of award: \$1,491,810

Uncovering the Origins of Arthropod Body Plan Patterning  
National Science Foundation IOS-1257320 (PI: Goldstein)  
7/1/13-6/30/16  
Total amount of award: \$450,000

MRI: Acquisition of an OMX Super-Resolution Microscope  
NSF Major Research Instrumentation Program (PI: Peifer, Co-PIs B Goldstein, P  
Maddox, V Bautch).  
8/6/14-8/5/17  
Total amount of award: \$496,998

Cell Polarization in Response to Wnt Signaling in *C. elegans*  
National Science Foundation IOS-0917726 (PI: Goldstein)  
7/1/09-6/30/13 plus NCE to 6/30/14  
Total amount of award: \$600,000

Mechanisms of *C. elegans* Gastrulation  
National Institutes of Health R01 GM83071 (PI: Goldstein)  
6/1/08-5/31/12, NCE to 5/31/13  
Total amount of award: \$1,101,872 plus \$100,000 ARRA equipment supplement

A Novel System for Investigating Wnt-Dependent Cell Polarization  
UNC UCRF Innovation Award (PI: Goldstein)  
2/1/08-6/30/09  
Total amount of award: \$84,000

Asymmetric Cell Division in the *C. elegans* embryo  
National Institutes of Health R01 GM68966 (PI: Goldstein)  
5/1/03-4/30/08 plus 1 year no-cost extension  
Total amount of award: \$1,227,865

Characterization of a New Gene Required for RNA Interference  
National Science Foundation IBN 0235654 (PI: Goldstein)  
4/15/03-3/31/06  
Total amount of award: \$390,000

Embryonic Development of a Tardigrade  
National Science Foundation IBN-0235658 (PI: Goldstein)

1/1/03-12/31/07 plus 1 year no-cost extension  
Total amount of award: \$328,206

Asymmetric Cell Division in *C. elegans*  
Pew Scholars in the Biomedical Sciences (PI: Goldstein)  
7/1/00-6/30/05  
Total amount of award: \$240,000

The Dynamics and Genetics of Asymmetric Cell Division  
March of Dimes Basil O'Connor Starter Scholar Award 5-FY99-730 (PI: Goldstein)  
2/1/00-1/31/02  
Total amount of award: \$100,000

High-Volume Confocal Imaging System. NIH/NCRR 1 S10 RR021055. July 2005-June 2006. Steven Crews PI, Mark Peifer and Bob Goldstein, co-PIs. \$250,839 total and direct costs from the NIH plus \$60,000 in University matching funds.

Member of UNC Chapel Hill NIH-funded training programs:  
NIH MiBio Training Program  
NIH Genetics and Molecular Biology Training Program  
NIH Cellular Systems and Integrative Physiology Training Program  
NIH Cancer Cell Biology Training Program  
NIH Lineberger Cancer Center training Program

## **PUBLICATIONS (110)**

Goldstein B, Srivastava, M., eds. (2022) *Emerging Model Systems in Developmental Biology* (a volume with chapters by scientists who have developed new model organisms and/or advanced tools for emerging models, in the Current Topics in Developmental Biology series). Academic Press.

Goldstein B (2022). Tardigrades and their emergence as model organisms. doi: 10.20944/preprints202201.0188.v1 (preprint of a chapter in the volume above).

Giovannini I, Boothby TC, Cesari M, Goldstein B, Guidetti R, Rebecchi L (2022). Production of reactive oxygen species and involvement of bioprotectants during anhydrobiosis in the tardigrade *Paramacrobiotus spatialis*. *Scientific Reports* 12:1938.

Hibshman JD, Goldstein B (2021). LEA motifs promote desiccation tolerance in vivo. *BMC Biology*, 19:263. <https://doi.org/10.1186/s12915-021-01176-0>.

Goldstein B, Avasthi P (2021). A Guide to Setting Up and Managing a Lab at a Research-Intensive Institution. *BMC Proceedings* 15(Suppl 2):8. <https://doi.org/10.1186/s12919-021-00214-7>

Goldstein B (2021). A Lab of Her Own. *Nautilus* 41: 20-33.

Ashley G, Duong T, Levenson MT, Martinez MAQ, Johnsen LC, Hibshman JD, Saeger HN, Palmisano NJ, Doonan R, Martinez-Mendez R, Davidson B, Zhang W, Ragle JM, Medwig-Kinney TN, Sirota SS, Goldstein B, Matus DQ, Dickinson DJ, Reiner DJ, Ward

- JD. An expanded auxin-inducible degron toolkit for *Caenorhabditis elegans*. *Genetics*, in press.
- Hibshman JD, Clegg JS, Goldstein B (2020). Mechanisms of Desiccation Tolerance: Themes and Variations in Brine Shrimp, Roundworms, and Tardigrades. *Frontiers in Physiology* 11:592016.
- Goldstein B, Nance J (2020). *C. elegans* gastrulation: a model for understanding how cells polarize, change shape, and journey toward the center of an embryo. *Genetics* 214:265-277.
- Tintori SC, Golden P, Goldstein B (2020). Differential Expression Gene Explorer (DrEdGE): A tool for generating interactive online visualizations of gene expression datasets. *Bioinformatics* 36:2581-2583.
- Gordon KL, Payne SG, Linden-High LM, Pani AM, Goldstein B, Hubbard EJA, Sherwood DR (2019). Ectopic germ cells can induce niche-like enwrapment by neighboring body wall muscle. *Current Biology* 29:823-833.
- Conradt B, Claycomb JM, Goldstein B, Shen K, Oegema K, Desai A, Colón-Ramos DA, Murphy CT, Sherwood DR, Walhout M (2019). The Power of *C. elegans*: A Tribute to Sydney Brenner. *Developmental Cell* 49:496-498.
- Pani AM and B Goldstein (2018). Direct visualization of a native Wnt in vivo reveals that a long-range Wnt gradient forms by extracellular dispersal. *eLife* 7:e38325.
- Smith FW, Cumming M, Goldstein B (2018). Analyses of nervous system patterning genes in the tardigrade *Hypsibius exemplaris* illuminate the evolution of panarthropod brains. *EvoDevo* 9:19.
- Heppert JK, Pani AM, Roberts AM, Dickinson DJ, and B Goldstein (2018). A CRISPR tagging-based screen reveals localized players in Wnt-directed asymmetric cell division. *Genetics* 208:1147-1164.
- Goldstein B (2018). The emergence of the tardigrade *Hypsibius exemplaris* as a model system. *CSH Protocols*, 10:859-866.
- McGreevy KM, Heikes KL, Kult S, Tharp ME, and B Goldstein (2018). Fluorescent cell staining methods for living *Hypsibius exemplaris* embryos. *CSH Protocols* 10:878-884.
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