

## **CURRICULUM VITAE**

**Sean J. Morrison**

### **PERSONAL DATA**

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### **EDUCATION**

September 1986 - May 1991: B.Sc. with First Class Honors in Biology and Chemistry,  
Dalhousie University (Halifax, Canada)

September 1991- June 1996: Ph.D. in Immunology, Stanford University (Stanford, CA)  
Supervisor, Dr. Irving L. Weissman

### **POSTDOCTORAL TRAINING**

July 1996 - August 1999: Postdoctoral Scholar in the laboratory of Dr. David J.  
Anderson, California Institute of Technology (Pasadena, CA)

### **EMPLOYMENT AND ACADEMIC APPOINTMENTS**

September 1987 - September 1990  
President, Endogro Systems Inc., a company that developed technology for the  
agricultural use of plant growth-promoting fungi.

August 1999 – August 2004  
Assistant Professor, Departments of Internal Medicine (Division of Molecular Medicine  
and Genetics) and Cell and Developmental Biology, University of Michigan.

June 2000 – Present  
Investigator, Howard Hughes Medical Institute

September 2004 – September 2008  
Associate Professor, Departments of Internal Medicine (Division of Molecular Medicine  
and Genetics) and Cell and Developmental Biology; Research Associate Professor, Life  
Sciences Institute, University of Michigan.

September 2005 – August 2011  
Director, University of Michigan Center for Stem Cell Biology and Henry Sewall  
Professor in Medicine, University of Michigan

September 2008 – August 2011

Professor, Departments of Internal Medicine (Division of Molecular Medicine and Genetics) and Cell and Developmental Biology; Research Professor, Life Sciences Institute, University of Michigan.

September 2011 – present

Director, Children's Research Institute; Professor, Department of Pediatrics; Mary McDermott Cook Chair in Pediatric Genetics, University of Texas Southwestern Medical Center

## **SCIENTIFIC ACTIVITIES**

### **Editorial Boards:**

10/03 – 05/09	Stem Cells
01/06 – 04/15	Faculty of 1000, Section Head "Stem cells & Regeneration"
12/06 – present	Cell Stem Cell
01/10 – present	Journal of Experimental Medicine
03/11 – present	EMBO Journal
09/11 – present	Current Opinion in Cell Biology
04/12 – present	Cancer Cell
04/12 – present	eLife, Senior Editor
09/12 – present	EMBO Reports
12/12 – present	Stem Cell Reports
08/14 – present	Cancer Discovery

### **Grant Reviewer:**

02/04	National Institutes of Health: Ad Hoc, Neurogenesis and Cell Fate (NCF) Study Section
10/06	California Institute for Regenerative Medicine: periodic ad hoc reviewer
01/07 – 02/11	Italian Association for Cancer Research (AIRC)
02/08	National Institutes of Health: Ad Hoc, Hematopoiesis (HP) Study Section
05/09	Damon Runyon Cancer Research Foundation Postdoctoral Fellowship Review Committee
10/09 – 04/11	Cancer Prevention and Research Institute of Texas, Basic Science Review Panel
11/10	National Inst. of Health: Chair, Special Emphasis Panel ZAG1 ZIJ-2
01/11 – present	National Institutes of Health, College of Reviewers
05/11 – 01/13	Chair, Howard Hughes Medical Institute International Predoctoral Fellowship selection committee
09/13	National Institutes of Health: Center for Regenerative Medicine Therapeutic Challenge Program
01/15	California Institute for Regenerative Medicine: Center for Excellence in Stem Cell Genomics

### **Meeting Organizer:**

07/06	American Society for Cell Biology Summer Meeting, Stem Cell Niches; Boston, MA
02/08	Keystone Symposium Tumor Suppressors and Stem Cell Biology, Vancouver

08/09 – 07/10	International Society for Stem Cell Research Annual Meeting Chair, Program Committee
02/11	Abcam Symposium Therapeutic approaches to neurodegeneration: age modifiers, proteostasis, and stem cells
02/13	Keystone Symposium Stem Cell Regulation in Homeostasis and Disease Banff, Alberta, Canada

**Scientific Advisory Boards:**

02/07 - present	University of California-Los Angeles Stem Cell Center
12/10 – 07/11	External Advisory Committee, National Heart Lung and Blood Institute Progenitor Cell Biology Consortium
01/11 – 09/11	National Academy of Sciences panel to consider whether there should be a new taxonomy for disease
05/11 – present	University of Washington Institute for Stem Cells and Regenerative Medicine
07/11 – 01/13	Morgridge Institute of Research (University of Wisconsin)
10/12 – present	Common Fund External Consultant for the NIH Center for Regenerative Medicine
08/13 – present	California Institute for Regenerative Medicine
10/14 – 03/15	Chair, New York State stem cell program (NYSTEM) External Review Panel

**GRANT SUPPORT**

**ONGOING**

001823 (PI, Morrison)	6/1/00 - 6/30/20
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Howard Hughes Medical Institute  
Funding is not associated with a specific project

2 R37 AG024945 (PI, Morrison)	9/15/04 - 6/30/19
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NIH/NIA (MERIT Award)

“The Regulation of Stem Cell Aging”

The goals of this project are to test whether let-7 microRNAs, the JunB transcription factor, and the p19Arf tumor suppressor regulate the decline in neural stem cell function and neurogenesis during aging.

2 R01 NS040750 (PI, Morrison)	2/1/01 - 12/31/15
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NIH/NINDS

“Stem Cells in Peripheral Nervous System Development”

The goals of this project are to study the function of Lgi4 in the regulation of stem cell function and gliogenesis throughout the developing peripheral nervous system.

Cancer Prevention and Research Institute of Texas (PI, Morrison)

Established Investigator Award	9/1/11 - 8/31/16
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“Stem Cells and Cancer”

The goal of this project is to study the extent to which the mechanisms used by normal stem cells to self-renew and migrate are hijacked by cancer cells to undergo neoplastic

proliferation and metastasis.

1 R01 DK100848 (PI, Morrison) 2/1/14 – 1/31/17  
NIH/NIDDK

“The regulation of protein synthesis in stem cells”

The goal of this study is to expand existing studies related to protein synthesis in rare cell populations in vivo and open areas of inquiry related to the role of regulated protein synthesis in hematopoiesis and stem cell function.

## RECENT

1 R01 HL097760 (PI, Morrison) 8/24/09 - 7/31/14  
NIH/NHLBI

“Genetic analysis of stem cell maintenance in vivo”

The goals of this project are to determine whether osteoblasts, megakaryocytes, and/or endothelial cells are the physiologically important sources of factors that regulate hematopoietic stem cell maintenance in vivo.

1 R01 DK083288 (PI, Morrison) 9/10/09 - 7/31/11  
NIH/NIDDK

“The derivation of enteric neural crest stem cells from human embryonic stem cells”

The goals of this project are to derive enteric neural crest stem cells from embryonic stem cells, and to test whether these cells can give rise to enteric neurons and glia upon transplantation into a rodent model of Hirschsprung disease.

The Ellison Medical Research Foundation 9/01/07 – 8/31/11  
Principal Investigator: Sean Morrison

“The physiological role of stem cells in the maintenance and function of the aging brain”

The goal of this project is to test whether ongoing stem cell activity and neurogenesis in the adult brain is required for adult brain maintenance, learning, or memory.

The Melanoma Research Foundation 1/1/10 - 12/31/11  
Research Grant

“The regulation of melanoma metastasis”

The major goal of this project is to study the mechanisms that regulate the metastasis of human melanoma cells in vivo.

## HONORS AND AWARDS

1986	Young Canadians Award for Excellence in Science
1986	Waverly Award, Dalhousie University
1987	Dalhousie University McKenzie Trust Scholarship
1988	Dalhousie University Ross S. Smith and Alan Pollok Scholarships
1990	Dalhousie University Ross S. Smith Scholarship
1991	Natural Sciences and Engineering Research Council of Canada Research Award
1991	Dalhousie University Medal in Biology
1991	United Kingdom Commonwealth Scholarship, Oxford University (declined)
1991	Natural Sciences and Engineering Research Council 1967 Scholarship (declined)

- 1991-96 Howard Hughes Medical Institute Predoctoral Fellowship in Biological Sciences
- 1996 Guenther Foundation Postdoctoral Fellowship
- 1996-98 Natural Sciences and Engineering Research Council Postdoctoral Fellowship
- 1997-99 American Cancer Society, California Division Junior Postdoctoral Fellowship
- 1999 American Cancer Society, California Division Senior Postdoctoral Fellowship
- 2000-03 Searle Scholar
- 2000 Mental Illness Research Association Milestone Award
- 2002 Named to TR100 list: MIT Technology Review Magazine's list of 100 young innovators
- 2003 Wired Magazine Rave Award for Science
- 2003 Presidential Early Career Award for Scientists and Engineers, White House Office of Science and Technology Policy
- 2004 Dean's Award for Basic Science, University of Michigan Medical School
- 2006 Detroit News Michigania of the Year
- 2007 Pfizer Young Michigan Biomedical Investigator of the Year Award
- 2007 McCulloch and Till Award, International Society for Hematology & Stem Cells
- 2008 American Association of Anatomists Harland Winfield Mossman Award
- 2009 MERIT Award, National Institute on Aging
- 2009 Keynote Address, Keystone Symposium on Stem Cell Niche Interactions
- 2012 Roy M. Huffington Distinguished Lecture, Baylor College of Medicine
- 2013 Vice President, International Society for Stem Cell Research
- 2014 President-Elect, International Society for Stem Cell Research
- 2015 President, International Society for Stem Cell Research
- 2016 Keynote Address, Keystone Symposium on Stem Cells and Cancer

#### **MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

- 1994-present American Association for the Advancement of Science
- 1999-present Society for Developmental Biology
- 2001-present Society for Neuroscience
- 2002-present International Society for Stem Cell Research
- 2004-present American Society for Cell Biology
- 2007-present International Society for Hematology and Stem Cells

#### **OFFICES IN PROFESSIONAL SOCIETIES**

##### American Society for Cell Biology

- 01/04 – 12/09 Public Policy Committee
- 06/04 – 05/05 Program Committee

##### International Society for Stem Cell Research

- 09/02 – 07/06 Membership Committee
- 10/03 – 07/06 Government Affairs Committee
- 06/04 – 12/12 Board of Directors
- 07/06 – 07/09 Treasurer, Member of the Executive Committee
- 07/07 – present Finance Committee
- 07/10 – 06/11 Chair, Program Committee for the Annual Meeting
- 10/10 – present Co-chair, Legislative and Education Committee
- 06/13 – 05/14 Vice-President
- 06/14 – 05/15 President-elect

06/15 – present President

### **PUBLIC EDUCATION/POLICY ACTIVITIES**

May 16, 2005 Testimony before the Ad Hoc Congressional Hearing on Stem Cells, Chicago, IL

April 21, 2006 Testimony before the State of Michigan Health Policy Committee Hearing on Stem Cells, Lansing, MI

June, 2006 to June, 2011: Director, Michigan Citizens for Stem Cell Research and Cures

2008 Numerous media and public appearances to educate the public regarding stem cell research in the context of Michigan's Proposal 2 (a successful ballot proposal to protect stem cell research in the state constitution).

September 16, 2010: Testimony before U.S. Senate Subcommittee on Labor, Health and Human Services, Education and Related Agencies on "Human embryonic stem cell Research", Washington, D.C.

### **TEACHING ACTIVITIES AT UT SOUTHWESTERN MEDICAL CENTER**

- 2012** 02/17 Cancer Biology I: Hallmarks of Cancer "Cancer Stem Cells"  
04/18 Experimental Approaches to Complex Genetic Diseases "Stem cells"  
10/25 BSCI 5212-01 – Experimental Approaches to Complex Diseases "Stem cells"
- 2013** 01/09 BSCI 5197 Graduate School of Biomedical Sciences Responsible Conduct of Research  
02/11 Cancer Biology I "Cancer Stem Cells"  
04/10 Cancer Biology II "Advanced Concepts in Cancer Biology"
- 2014** 02/07 Cancer Biology I Hallmarks of Cancer "Cancer Stem Cells"  
04/02 BSCI 5172 – Advances in Stem Cell Biology "Hematopoietic Stem Cells"  
04/11 Cancer Biology II "Cancer Stem Cells: Impact, Heterogeneity, and Uncertainty"  
11/11 Experimental Approaches to Complex Genetic Diseases "Stem Cells"
- 2015** 02/20 Cancer Biology I "Cancer Stem Cells"  
04/24 Cancer Biology II "Cancer Stem Cells: Impact, Heterogeneity, and Uncertainty"
- 2016** 02/10 Cancer Biology I "Cancer Stem Cells"  
03/01 Developmental Principles in Regenerative Science and Medicine "Hematopoietic Regeneration"

### **Mentoring Graduate Students:**

- 07/00 - 07/04 Genevieve Marie Kruger, UM Medical Scientist Training Program  
Current position: Pathology Resident at Johns Hopkins University
- 06/01 – 08/06 Nancy Joseph, UM Medical Scientist Training Program  
Current position: Assistant Professor, UCSF
- 07/01 – 07/05 Anna Molofsky, UM Medical Scientist Training Program  
Current position: Assistant Professor, UCSF
- 09/01 – 08/06 Omer Yilmaz, UM Medical Scientist Training Program  
Current position: Assistant Professor, MIT

08/02 – 07/08	Mark Kiel, UM Medical Scientist Training Program Current position: Pathology Fellow, University of Michigan
01/04 – 01/13	Shenghui He, UM Cellular and Molecular Biology Program, then transitioned to temporary postdoctoral fellowship for family reasons Current position: Postdoctoral fellow, University of North Carolina
01/04 – 04/05	Alana Lysholm, UM Neuroscience Program (left for health reasons) Current position: Deceased
07/06 – 07/10	Jae Lee, UM Medical Scientist Training Program Current position: Resident, Radiation Oncology, University of Michigan
05/10 – 07/15	James Peyer, UM Cellular and Molecular Biology Program then transferred to the Genetics and Development Graduate Program at UTSW Current position: Associate, McKinsey & Co.
10/10 – 05/15	Christopher Inra, UTSW Medical Scientist Training Program Current position: Completing the clinical phase of the MD/PhD program
01/14 – present	Le Qi, UTSW Cancer Biology
07/14 – present	Stacy Yuan, UTSW Medical Scientist Training Program

**Mentoring Postdoctoral Fellows:**

07/01 - 08/04	Ricardo Pardal Current Position: Associate Professor, University of Seville, Spain
09/00 – 03/05	Toshihide Iwashita Current Position: Professor, Hamamatsu University School of Medicine, Japan
07/01 – 09/06	Jack Mosher Current Position: Scientific Affairs Manager, International Society for Stem Cell Research
12/01 – 05/07	Merritt Taylor Current Position: Associate Professor, Grand Valley State University
10/02 – 08/08	Injune Kim Current Position: Associate Professor, Korea Advanced Institute of Science and Technology
11/04 – 11/11	Johanna Buchstaller Current Position: Unknown
01/05 – 09/11	Elsa Quintana Rodriguez Current Position: Senior Scientist, Oncomed Pharmaceuticals
02/05 – 09/07	Shalom Guy Slutsky Current Position: Head, ALS Unit, Kadistem Inc.
03/05 – present	Jinsuke Nishino
07/06 – 07/08	Mick Savona Current Position: Associate Professor and Director of Hematology Early Therapeutics Program, Vanderbilt University, Nashville
08/05 – 11/11	Sergei Chuikov Current Position: Research Investigator, University of Michigan
02/06 – 11/11	Daisuke Nakada Current Position: Assistant Professor, Baylor College of Medicine
08/06 – 12/09	Mark Shackleton Current position: Group Leader of the Melanoma Research Laboratory, Peter McCallum Cancer Institute (Melbourne, Australia)
10/06 – 09/11	Boaz Levi Current Position: Manager, In vitro human cell types, Allen Institute for Brain Research, Seattle
01/07 – 01/13	Lei Ding

11/07 – 07/08	Current Position: Assistant Professor, Columbia University Michel Perron
01/08 – present	Current Position: Research Scientist II, Gilead Melih Acar
07/08 – 07/13	Jeff Magee
05/09 – 01/11	Current position: Assistant Professor, Washington University Qing Li
09/09 – present	Current position: Assistant Professor, University of Michigan Hideyuki Oguro
09/09 – 11/15	Robert Signer
01/10 – 05/15	Current position: Assistant Professor, University of California at San Diego John Mich
05/11 – present	Current position: Scientist II, Allen Institute for Brain Research Michaelis Agathocleus
09/11 – 12/14	Issei Shimada
09/11 – present	Current position: Postdoctoral fellow, UT Southwestern Medical Center Ugur Eskiocak
09/11 – present	Elena Piskounova
10/11 – present	Rui Yue
10/11 – present	Bo Zhou
03/12 – present	Corbin Meacham
11/12 – present	Malea Murphy
02/13 – present	Rebecca Burgess
02/14 – present	Salma Hasan
01/15 – present	Stefano Comazzetto
11/15 – present	Elise Jeffery
12/15 – present	Andrew DeVilbiss
12/15 – present	Bo Shen
01/16 - present	Kati Ahlqvist

#### **Intramural Seminars at the University of Texas Southwestern Medical Center:**

- 2011**    09/17    Medical Scientist Training Program “Stem cells and cancer”  
               10/25    Graduate Student Organization “Stem cells and cancer”
  
- 2012**    01/31    Cell Biology Department “The hematopoietic stem cell niche”  
               02/29    Development Biology Department “The regulation of stem cell self-renewal”  
               05/09    University Lecture Series “The regulation of stem cell self-renewal”  
               09/07    Cancer Center Grand Rounds “The regulation of melanoma metastasis”
  
- 2013**    01/07    Department of Physiology “Regulation of Stem Cell Self-Renewal”  
               04/09    President’s Research Council “Hijacked: How cancer cells commandeer stem cell mechanisms to fuel tumor growth”
  
- 2014**    02/20    President’s Lecture “Understanding cancer through the lens of stem cell biology”  
               03/01    Big Ideas Lecture to incoming medical students “A failure to create policy based on factors is eroding science, health care, and American competitiveness”  
               05/08    O’Brien Kidney Center Symposium “The regulation of stem cell self-renewal”  
               10/11    Department of Pediatrics “Melanoma metastasis and therapy”
  
- 2015**    04/22    Comprehensive Cancer Center “Treating cancer more effectively”



12/14 Angiogenesis seminar series "Bidirectional regulation between hematopoietic stem cells and their niche"

**Membership in the following graduate programs at UTSW:**

Genetics and Development  
Cancer Biology

**Graduate Student Rotations:**

Summer, 2000	Dale Bixby, Medical Student, Summer Research, UM
Summer, 2000	Brett Mobley, Medical Student, Summer Research, UM
Summer, 2000	Eve Kruger, Medical Scientist Training Program, UM
Summer, 2000	JennYah Yu, Neuroscience Program, UM
Spring, 2001	Kwan-Ho Chung, Neuroscience Program, UM
Spring, 2001	Nancy Joseph, Medical Scientist Training Program, UM
Summer, 2001	Anna Rotberg, Medical Scientist Training Program, UM
Summer, 2001	Chandan Reddy, Medical Student, Summer Research, UM
Fall, 2001	Omer Yilmaz, Medical Scientist Training Program, UM
Summer, 2002	Mark Kiel, Medical Scientist Training Program, UM
Summer, 2003	Edward Oh, Neuroscience Program, UM
Fall, 2003	Chong Chen, Cellular and Molecular Biology, UM
Winter, 2004	Alana Lysholm, Neuroscience Program, UM
Winter, 2004	Shenghui He, Cellular and Molecular Biology, UM
Summer, 2006	Jae Lee, Medical Scientist Training Program, UM
Summer, 2008	Ajay Prakash, Medical Scientist Training Program, UM
Summer, 2008	Charlie Kuang, Medical Scientist Training Program, UM
Summer, 2009	Danny Yang, Medical Scientist Training Program, UM
Summer, 2009	Heiko Yang, Medical Scientist Training Program, UM
Fall, 2009	James Peyer, Program in Genetics and Development, UTSW
Fall, 2011	Chris Inra, Medical Scientist Training Program, UTSW
Fall, 2011	Ge Zheng, Graduate School of Biomedical Sciences, UTSW
Summer, 2012	Stacy Yuan, Medical Scientist Training Program, UTSW
Fall, 2012	Jenny Weon, Medical Scientist Training Program, UTSW
Summer, 2013	Edward Daniel, Medical Scientist Training Program, UTSW

**Dissertation Committees at UTSW:**

11/12 – 07/15	Annika Butler, Genetics and Development
06/12 – 12/15	Ziying Liu, Genetics and Development
08/11 – present	Ana Uruena, Genetics and Development
01/14 – present	Xiaolei Shi, Cancer Biology
02/14 – present	Barrett Updegraff, Cancer Biology
01/16 – present	Stephen Li, Genetics and Development
01/16 – present	Andres Nevarez, Cancer Biology

**Preliminary Exam Committees at UTSW:**

05/12	Angelica Sanchez, Cancer Biology
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**EXTRAMURAL INVITED PRESENTATIONS**

<b>2000</b>	04/08	Great Lakes Development Meeting, Toronto, Canada "Notch Activation instructs rapid glial differentiation by purified neural crest stem cells"
	05/03	University of Toronto, Hospital for Sick Children, "The role of notch and neural

- crest stem cells in peripheral nervous system development”
- 05/10 Michigan Biotech Association, Ann Arbor, MI “Stem cell biology at the interface: science as an academic and entrepreneur”
- 06/10 Society for Developmental Biology Meeting, Boulder, CO “Transient notch activation initiates an irreversible switch from neurogenesis to gliogenesis by neural crest stem cells”
- 07/02 Developmental Neurobiology Gordon Conference, Newport, RI, “Notch and neural crest stem cells in peripheral nervous system development”
- 09/22 Fondation des Treilles, Tourtour, France, “Notch and neural crest stem cells in peripheral nervous system development”
- 11/06 University of Kentucky, Lexington, KY, “Notch and neural crest stem cells in peripheral nervous system development”
- 11/17 Foundation for Fighting Blindness, Bethesda, MD, “An in vivo analysis of neural crest stem cell developmental potential”
- 11/29 Osaka University, Osaka, Japan, “Neural crest stem cells: developmental potential and differentiation”
- 12/01 Center of Excellence Int’l Symposium on Molecular Bases of Neuronal Development and Neurodegenerative Diseases, Nagoya, Japan, “The surprising roles of notch and neural crest stem cells in peripheral nervous system development”
- 2001**
- 01/31 University of California at Los Angeles, CA, “Notch and neural crest stem cells in peripheral nervous system development”
- 02/13 Ernst Klenk Symposium, Cologne, Germany, “Neural crest stem cells and peripheral nervous system development”
- 02/14 National Institute for Medical Research (Mill Hill), London, UK, “Neural crest stem cells and peripheral nervous system development”
- 04/07 University of California at San Francisco Stem Cell Mini-symposium, San Francisco, CA, “Neural crest stem cells and PNS development”
- 04/22 The Sherman Lecture, West Bloomfield Jewish Community Center, West Bloomfield, MI “Stem cell biology and ethics”
- 05/23 National Neurofibromatosis Association, Aspen, CO, “Neural crest stem cells and peripheral nervous system development”
- 06/11 Neurotrophins Gordon Conference, Newport, RI, “Neural crest stem cells and peripheral nervous system development”
- 09/10 Howard Hughes Medical Institute Science Meeting, Chevy Chase, MD, “Neural crest stem cells and the generation of diversity”
- 10/06 4<sup>th</sup> International Symposium on Organogenesis, University of Michigan, Ann Arbor, MI, “Neural crest stem cells and the generation of diversity”
- 2002**
- 01/25 University of California at Santa Cruz, CA, “Neural crest stem cells and the generation of diversity”
- 02/07 Case Western Reserve University, Cleveland, OH, “Neural crest stem cells and the generation of diversity”
- 02/22 Stem Cell Challenge Symposium, Vienna, Austria “Neural crest stem cells and the generation of neural diversity”
- 03/11 New York Academy of Medicine, Cell and Tissue Engineering Symposium, New York, NY, “Neural crest stem cells and peripheral nervous system development”
- 03/20 Engineering Tissue Growth International Conference, Pittsburgh, PA, “Neural crest stem cells and peripheral nervous system development”

- 04/24 Children's Hospital Medical Center, Cincinnati, OH, "Neural stem cells and the generation of diversity"
- 05/08 Department of Neurobiology, Stanford University, CA, "Neural stem cells and the generation of neural diversity"
- 05/14 Massachusetts General Hospital, Neuroscience Center, Charlestown, MA, "Neural crest stem cells and the generation of neural diversity"
- 06/03 Nobel Conference on Stem Cell Biology, Stockholm, Sweden, "Neural stem cells and the generation of neural diversity"
- 06/12 Midland Center for the Arts, Midland, MI, "An introduction to stem cell biology"
- 06/19 Indiana University, Indianapolis, IN, "Strategies for the generation of diversity in the nervous and hematopoietic systems"
- 09/19 12<sup>th</sup> Biennial Meeting of the American Motility Society, Galveston, TX, "Critical steps in the development of the ENS and their regulation"
- 09/25 Central Society for Clinical Research, Chicago, IL, "Stem cell plasticity"
- 10/14 University of Pennsylvania, Philadelphia, PA, "Neural crest stem cells and the generation of diversity"
- 12/07 American Society for Hematology Annual Meeting, Philadelphia, PA, "Stem cells and the generation of spatial diversity"
  
- 2003** 01/22 University of California at Los Angeles, CA, "The generation of diversity from stem cells"
- 02/06 Johns Hopkins University, Baltimore, MD, "The generation of diversity from stem cells"
- 02/12 Wayne State University, Detroit, MI, "The self-renewal and diversification of stem cells"
- 03/05 St. Jude's Hospital, Memphis, TN, "The self-renewal and diversification of stem cells"
- 03/20 University of North Carolina, Chapel Hill, NC, "The diversification and self-renewal of neural stem cells"
- 04/22 University of Kentucky, Lexington, KY, "Age-related changes in stem cell properties"
- 05/14 Maine Medical Research Institute, Portland, ME, "Self renewal of neural crest stem cells"
- 05/18 American Gastroenterological Association Annual Meeting, Orlando, FL, "Hirschsprung disease is caused by defects in neural crest stem cell function."
- 06/09 International Society of Stem Cell Research Annual Meeting, Washington, DC, "Self renewal of neural crest stem cells"
- 06/20 Cold Spring Harbor Developmental Neurobiology Course, Cold Spring Harbor, NY, "The self-renewal and differentiation of neural stem cells"
- 08/02 Mount Desert Island Stem Cell Symposium, Salisbury Cove, ME, "Neural stem cells and their plasticity potential"
- 09/10 Ottawa Health Research Inst., Ottawa, Ontario, Canada, "The molecular regulation of neural crest stem cell function"
- 09/25 Emerging Technologies Conference, MIT, Boston, MA, "Adult stem cells"
- 10/21 University of Utah, Salt Lake City, UT, "The self-renewal and differentiation of neural stem cells"
- 10/29 Washington University, Stem Cell Symposium, St. Louis, MO, "Stem cell self renewal"
- 11/17 Howard Hughes Medical Institute, Chevy Chase, MD, "Stem cell self renewal"
- 11/18 Howard Hughes Medical Institute-National Institutes of Health Research Scholars, Bethesda, MD, "The genetic regulation of stem cell function"

- 12/08 Sloan-Kettering Institute, New York, NY, "The genetic regulation of neural stem cells"
- 12/15 Vanderbilt University, Nashville, TN, "The regulation of neural stem cell migration and self-renewal"
- 2004**
  - 01/15 University of California at San Diego, CA, "The self-renewal and differentiation of neural stem cells"
  - 02/24 University of Toronto Institute of Biomaterials and Biomedical Engineering, Distinguished Speakers in Bioengineering, Toronto, Ontario, Canada, "The genetic regulation of stem cell function"
  - 03/03 University of California at San Francisco, CA, "The genetic regulation of stem cell function"
  - 03/09 Moffitt Cancer Center and Research Institute, Tampa, FL, "The genetic regulation of stem cell function"
  - 03/27 American Association for Cancer Research 95<sup>th</sup> Annual Meeting, Orlando, FL, "The regulation of stem cell self-renewal"
  - 04/01 Second Canadian Developmental Biology Symposium, Banff, Alberta, Canada, "The regulation of stem cell self-renewal"
  - 04/15 NIH Organ Innervations Workshop, Bethesda, MD, "Neural stem cells in gut"
  - 04/28 Association for Research in Vision and Ophthalmology (ARVO) 2004 Annual Meeting, Ft. Lauderdale, FL, "Stem Cells in Biology and Medicine: An Overview"
  - 05/20 Jackson Laboratory Seminar, Bar Harbor, ME, "The genetic regulation of stem cell function"
  - 06/06 Midwest Developmental Biology Meeting, Kansas City, MO, "The genetic regulation of stem cell function"
  - 06/08 McDonnell Foundation 2004 Annual Meeting, Palisades, NY, "The role of Bmi-1 in stem cell and cancer cell proliferation"
  - 06/11 International Society for Stem Cell Research Annual Meeting, Boston, MA, "Adult stem cell self-renewal requires repression of senescence pathways by Bmi-1"
  - 06/21 Tumor Stem Cell Mini-Symposium, Pittsburgh, PA, "Applying the principles of stem cell biology to cancer"
  - 07/12 Federation for European Neuroscience Annual Meeting, Lisbon, Portugal, "The regulation of neural stem cell self-renewal"
  - 07/16 University of Seville, Seville, Spain, "The genetic regulation of stem cell function"
  - 08/17 Gordon Conference on Neural Development, Newport, RI, "The regulation of neural stem cell self-renewal"
  - 08/18 Cold Spring Harbor Cancer Genetics & Tumor Suppressor Genes Meeting, Cold Spring Harbor, NY, "The regulation of neural stem cell self-renewal"
  - 09/05 Cold Spring Harbor Mouse Molecular Genetics Meeting, Cold Spring Harbor, NY, "Determination of hematopoietic stem cell identity"
  - 09/13 Howard Hughes Medical Institute Science Meeting, Chevy Chase, MD, "Determination of hematopoietic stem cell identity"
  - 10/01 Columbia University, New York, NY, "Genetic regulation of stem cell function"
  - 11/03 Novartis Institutes for BioMedical Research, Cambridge, MA, "Genetic regulation of stem cell function"
  - 11/08 National Institute on Aging, Stem Cells and Aging Meeting, Bethesda, MD, "Stem cell self-renewal and senescence"
  - 11/21 2004 Hanson Symposium, Adelaide, Australia, "The genetic regulation of stem cell function"

- 11/26 Walter & Eliza Hall Institute, Melbourne, Australia, "Distinguishing stem cells from progenitors"
- 12/09 American Society for Cell Biology Annual Meeting, Washington, DC, co-chaired Mini-symposium on Stem Cells and presented "Distinguishing stem cells from progenitors"
- 12/15 Weill Medical Center, Cornell University, New York, "The genetic regulation of stem cell function"
  
- 2005** 01/13 Scripps Institute, San Diego, California, "The regulation of stem cell self-renewal and aging"
- 01/19 Duke University, Durham, North Carolina, "The regulation of stem cell self-renewal and aging"
- 02/12 Keystone Symposium, Molecular Regulation of Stem Cell Function, Banff, Alberta, Canada, "The regulation of stem cell self-renewal and aging"
- 02/25 University of California at Los Angeles Symposium, Los Angeles, California, "Applying the principle of stem cell biology to cancer"
- 03/03 Howard Hughes Medical Institute and CSIS Congressional Briefing on Stem Cells, Washington, DC, "Somatic stem cells"
- 03/17 Days of Molecular Medicine Meeting 2005, San Diego, CA, "Hematopoietic stem cell niches"
- 03/31 Dana-Farber Children's Hospital, Boston, MA, "The identification and regulation of stem cells"
- 04/06 MGH Cancer Center, Charlestown, MA "The identification, localization, and regulation of stem cells"
- 04/18 Chair of Symposium on Stem Cells and Cancer at the American Association for Cancer Research 96<sup>th</sup> Annual Meeting, Anaheim, CA, and presented "Pten regulates hematopoietic stem cell function and leukemogenesis"
- 04/28 Program Directors-General Clinical Research Centers Meeting, Washington, DC, "Stem cell research"
- 05/27 EMBO Workshop and Institute for Cancer Research and Treatment International Cancer Conference, Turin, Italy, "Stem cell self-renewal and cancer proliferation"
- 06/04 Cold Spring Harbor Symposium on Quantitative Biology, Cold Spring Harbor, NY, "Pten distinguishes the self-renewal of normal and leukemic stem cells"
- 06/24 International Society for Stem Cell Research, San Francisco, CA, "Differential expression of SLAM family members distinguishes stem and progenitor cells in the hematopoietic system and reveals endothelial niches for stem cells"
- 07/28 Society for Developmental Biology, San Francisco, CA, "Differential expression of SLAM family members distinguishes stem and progenitor cells in the hematopoietic system and reveals endothelial niches for stem cells"
- 09/13 HHMI Science Meeting, "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 10/04 National Cancer Research Institute Meeting, Birmingham, UK, "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 10/11 Tanenbaum Symposium, University of Toronto, Toronto, Canada, Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 10/27 Keystone Symposium, Stem Cells, Senescence, and Cancer, Singapore, "Stem cell self renewal"
- 11/10 International Workshop on Cancer Stem Cells, Milan Italy, "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 11/16 Society for Neuroscience, Washington, D.C., "Stem cell self renewal versus cancer cell proliferation"

- 11/29 The Institute for Research in Immunology and Cancer, Montreal, Canada, "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 12/02 Harvard Stem Cell Institute, Boston, MA, "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 12/05 The Banbury Center, Cold Spring Harbor, NY, Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 12/14 University of North Carolina, Chapel Hill, NC, "Stem cell self renewal versus cancer cell proliferation"
  
- 2006** 01/11 Oregon Health and Science University, Portland, OR, "Stem cell self renewal versus cancer cell proliferation"
- 01/12 University of Oregon, Eugene, OR, "Stem cell self renewal versus cancer cell proliferation"
- 01/24 Stanford University, Stanford, CA, "Stem cell self renewal versus cancer cell proliferation"
- 02/03 ESH/AACR Conference, Cascais, Portugal, "Stem cell self renewal versus cancer cell proliferation"
- 02/17 AAAS Annual Meeting, St. Louis, MO, "Adult stem cells"
- 03/06 International Conference on Cell Therapy and Regenerative Medicine, Madrid, Spain, "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 03/29 Development of the Enteric Nervous System: Cells, Signals and Genes Conference, New York, NY, "Neurogenesis in the adult gut"
- 04/18 Abramson Family Cancer Research Institute, University of Pennsylvania, Pittsburgh, PA, "Stem cell self renewal versus cancer cell proliferation"
- 04/19 University of Wisconsin-Madison NIH Stem Cell Training Program, Madison, WI, "Neural stem cell aging"
- 04/27 University of Oklahoma, Oklahoma City, OK, "Stem cell self renewal versus cancer cell proliferation"
- 04/30 NIA Stem Cells and Aging 2006 Annual Meeting, Potomac, MD, "Stem cell aging"
- 05/02 NIH Stem Cell Seminar Series, Bethesda, MD, "Stem cell self renewal versus cancer cell proliferation"
- 05/25 University of Texas-Southwestern Seminar, Dallas, TX, "Stem cell self renewal versus cancer cell proliferation"
- 07/01 International Society for Stem Cell Research, 4<sup>th</sup> Annual Meeting, Toronto, Canada, "Stem cell aging"
- 07/16 American Society for Cell Biology, Summer Meeting, Boston, MA, "Hematopoietic stem cell niche"
- 09/12 Howard Hughes Medical Institute, Science Meeting, Chevy Chase, MD, "The regulation of stem cell aging"
- 09/18 Howard Hughes Medical Institute, Meeting of Predoctoral and Postdoctoral Research Fellows, Chevy Chase, MD, "Stem cell aging"
- 09/28 International Society for Experimental Hematology, 35<sup>th</sup> Annual Meeting, Minneapolis, MN, "Hematopoietic stem cell niche"
- 09/30 Michigan State Medical Society, 10<sup>th</sup> Annual Conference on Bioethics, Traverse City, MI, "Embryonic stem cells"
- 10/09 Genomics Institute of the Novartis Research Foundation, San Diego, CA, "Stem cell self-renewal, cancer cell proliferation and aging"
- 10/17 Center for Advanced Biotechnology and Medicine Symposium, Piscataway, NJ, "Stem cell self-renewal, cancer cell proliferation and aging"

- 11/06 Cincinnati Children's Hospital, Cincinnati, OH, "Stem cell self-renewal, cancer cell proliferation and aging"
- 11/10 Stanford Regenerating Life Symposium, Stanford CA, "Stem cell aging"
- 12/07 Mount Sinai School of Medicine, New York, NY, "Identifying hematopoietic stem cells and their niche"
- 12/14 Keystone Symposium, Cancun, Mexico, "Identifying hematopoietic stem cells and their niche"
- 2007**
  - 02/01 INTACT 2007 Annual Meeting, Copenhagen, Denmark, "Stem cell self-renewal, cancer cell proliferation and aging"
  - 02/16 University of California at Los Angeles Stem Cell Center Symposium, Los Angeles, CA "Stem cell self-renewal throughout life"
  - 03/04 Keystone Symposium on Stem Cell Niches, Keystone, Colorado "The vascular niche for hematopoietic stem cells"
  - 03/15 University of California at San Diego, San Diego, CA "Stem cell self-renewal throughout life"
  - 03/20 USA-Japan Cooperative Cancer Workshop, Kauai, HI "Pten and leukemogenesis"
  - 03/29 Children's Hospital Boston, Boston, MA "Stem cell self-renewal throughout life"
  - 04/02 Pfizer, Ann Arbor, MI "Stem cell self-renewal throughout life"
  - 04/24 The University of Washington, Seattle, WA "Stem cell self-renewal throughout life"
  - 05/22 Days of Molecular Medicine, Boston, MA "Stem cell self-renewal throughout life"
  - 05/24 University of Virginia, Charlottesville, VA "Stem cells in the nervous system and other tissues"
  - 05/25 Robarts Regenerative Medicine Symposium, Toronto, ON "Stem cell self-renewal throughout life"
  - 06/04 American Aging Association Conference, San Antonio, TX "Stem cell self-renewal, cancer cell proliferation and aging"
  - 06/11 Children's Tumor Foundation NF Conference, Park City, UT "Stem cell self-renewal throughout life"
  - 06/19 ISSCR Annual Meeting, Cairns, Australia "Sox17 dependence distinguishes the transcriptional regulation of fetal from adult hematopoietic stem cells"
  - 07/15 Aspen Cancer Conference, Aspen CO "Stem cell self-renewal, cancer cell proliferation and aging"
  - 09/28 ISEH Society for Hematology, Hamburg, Germany "Hematopoietic stem cell maintenance throughout life"
  - 10/03 IRB Barcelona Biomed Conference, Barcelona, Spain "Neural crest stem cells, neurofibromatosis and MPNST"
  - 10/05 CNIO (Spanish National Cancer Research Centre), Madrid, Spain "Stem cell self-renewal and cancer"
  - 10/08 Merck-Cancer Stem Cell Symposium, Rome, Italy "Stem cell self-renewal, cancer cell proliferation and aging"
  - 10/16 New York Stem Cell Foundation, Fall Conference, New York, NY "Stem cell self-renewal"
  - 10/17 Silverstein Lecture, Northwestern University, Chicago, IL "Stem cell biology at the interface of science and politics"
  - 11/07 University of California at San Francisco, San Francisco, CA "Stem cell self-renewal"
  - 11/09 Stem Cell Network 7<sup>th</sup> Annual Scientific Meeting, Toronto, Canada "Stem cell self-renewal"

- 2008**
- 01/10 Southern California Stem Cell Consortium, Burnham Institute, San Diego, CA "Stem cells and cancer"
  - 01/14 University of Toronto Program in Immunology, Toronto, Canada "Stem cells and cancer"
  - 02/14 American Association for Cancer Research Meeting on Cancer and Stem Cells, Los Angeles, CA "Stem cells and cancer"
  - 02/27 Keystone Symposium on Tumor Suppressors and Stem Cell Biology, Vancouver, Canada "Stem cell self-renewal versus cancer cell proliferation"
  - 03/28 Keystone Symposium on Signaling Pathways in Cancer and Development, Steamboat Springs, CO "Stem cells and cancer"
  - 04/08 American Association of Anatomists, Annual Meeting 2008, San Diego, CA H.W. Mossman Award Lecture in Developmental Biology. "The regulation of stem cell self-renewal"
  - 04/15 University of Pennsylvania, Immunology Colloquium Seminar, Philadelphia, PA "The regulation of stem cell self-renewal"
  - 04/16 University of Wisconsin, 3<sup>rd</sup> Annual Wisconsin Stem Cell Symposium, Madison, WI "Loss of Nf1 transiently promotes self-renewal but not tumorigenesis by neural crest stem cells"
  - 04/25 University of North Carolina, Chapel Hill, NC "The regulation of stem cell self-renewal"
  - 05/06 Massachusetts Institute of Technology, Cambridge, MA The regulation of stem cell self-renewal"
  - 05/22 Chicago Transduction Symposium, Northwestern University, Chicago, IL "The regulation of stem cell self-renewal"
  - 05/23 University of California-San Francisco, San Francisco, CA "Stem cell self-renewal versus cancer cell proliferation"
  - 06/10 Dana Farber Cancer Institute, Seminars in Oncology, Boston, MA "The regulation of stem cell self-renewal"
  - 06/12 ISSCR Annual Meeting, Philadelphia, PA "The regulation of stem cell self-renewal"
  - 07/23 Weissman Lab Symposium 2008, Hamilton, MT "The regulation of stem cell self-renewal"
  - 09/08 Howard Hughes Medical Institute, Science Meeting, Chevy Chase, MD, "How frequent are tumorigenic human cancer cells?"
  - 09/16 Van Andel Research Institute, Grand Rapids, MI "Stem cell self-renewal"
  - 09/26 Nobel Conference on Stem Cells, Stockholm, Sweden, "Stem cell self-renewal throughout life"
  - 10/03 Keystone Symposia, Stem Cells, Cancer and Aging, Singapore, "Stem cells, aging and cancer"
  - 10/15 Foundation Singer-Polignac, Paris, France, "Cancer Stem Cells"
  - 11/10 Columbia University Dept. of Biology, New York, NY, "Stem cell self-renewal"
  - 11/18 UCLA Department of Pharmacology, Los Angeles, CA, "Stem cell self-renewal"
  - 12/12 Merck Research Labs, Cambridge MA, "Cancer stem cells and self-renewal"
- 2009**
- 01/15 American Association for Cancer Research, Mouse Models of Cancer, San Francisco, CA, "What percentage of human cancer cells are tumorigenic?"
  - 01/28 Keystone Symposium, Emerging Tumor Suppressors, Taos, NM, "Hmga2 increases the self-renewal of fetal and young adult stem cells"
  - 02/24 CNIO(Spanish National Cancer Research Centre), Cancer Conference, Madrid, Spain, "Tumorigenic potential is a common attribute of human melanoma cells,



- rather than a property of rare melanoma stem cells"
- 03/17 National Institute of Aging, Baltimore, MD "The regulation of stem cell aging"
  - 03/27 USA-Japan Cooperative Cancer Workshop, Kona, HI "A forward genetic screen for regulators of hematopoietic and leukemic stem cell self-renewal"
  - 04/06 The University of Iowa, Neuroscience Seminar, Iowa City, IA, "Stem cell self-renewal"
  - 04/14 University of Pennsylvania, Institute for Regenerative Medicine, Philadelphia, PA "The regulation of stem cell renewal"
  - 04/17 Boston University School of Medicine, Stem Cell Symposium, Boston, MA, "Stem cell self-renewal versus cancer cell proliferation"
  - 04/21 Keystone Symposium, Stem Cell Niche Interactions, Whistler, British Columbia, Canada, Keynote Address "Hematopoietic stem cell self-renewal"
  - 05/11 Carnegie Institution, Baltimore, MD, "The regulation of stem cell self-renewal"
  - 05/23 University of Ulm, Symposium on Molecular Mechanisms of Adult Stem Cell Aging, Reisensburg, Germany, "The regulation of stem cell aging"
  - 06/02 Harvard Stem Cell Institute, Brookline, MA, "Stem cell self-renewal"
  - 06/11 Pezcoller Symposium, Trento, Italy, "Cancer stem cells?"
  - 06/18 Massachusetts Institute of Technology, Boston, MA, "Cancer stem cells?"
  - 07/25 Society for Developmental Biology Annual Meeting, San Francisco, CA, "A forward genetic screen for stem cell self-renewal genes"
  - 08/03 International Union of Biochemistry and Molecular Biology International Congress, Shanghai, China, "A forward genetic screen for self-renewal genes"
  - 09/14 Howard Hughes Medical Institute, Science Meeting, Chevy Chase, MD, "A forward genetic screen for stem cell self-renewal genes"
  - 09/17 Keynote Speaker, Wayne State University Graduate Student Research Day, Detroit, MI, "The regulation of stem cell self-renewal"
  - 09/22 Cold Spring Harbor Symposium on Stem Cell Biology, Cold Spring Harbor, NY, "A transposon mutagenesis suppressor screen for self-renewal genes"
  - 11/01 Society for Melanoma Research Annual Meeting, Boston, MA, "Tumorigenic cells are common in melanoma and lack obvious hierarchical organization"
  - 12/04 American Society for Cell Biology Annual Meeting, San Diego, CA, "Some cancers follow a stem cell model and some don't"
  - 12/14 American Association for Cancer Research Special Meeting on Brain Tumors, San Diego, CA, "Tumorigenic cells are common in some cancers"
- 2010**
- 01/05 Columbia University, New York, NY, "The regulation of stem cell self-renewal"
  - 01/28 Harvard University, Boston, MA, "The regulation of stem cell self-renewal"
  - 02/03 Keystone Symposium, Tahoe City, CA, "A transposon mutagenesis suppressor screen for genes that regulate stem cell maintenance"
  - 02/10 University of California at San Diego, San Diego, CA, "Some cancers follow a stem cell model, and some don't"
  - 02/09 Pfizer, La Jolla, CA, "The cancer stem cell model describes some cancers but not others"
  - 02/11 Salk Institute, La Jolla, CA, "Heterogeneity among cancer cells: stem cells or clonal evolution"
  - 02/24 University of California at Berkeley, Berkeley, CA, "The regulation of stem cell self-renewal"
  - 03/09 Foundation IPSEN, Beriloché, Argentina, "Some cancers follow a stem cell model, while other cancers have common tumorigenic cells with little or no hierarchical organization"

- 03/19 University of California at San Francisco, San Francisco, CA, "Some cancers follow a stem cell model, and some don't"
- 03/30 Wayne State University, Detroit, MI, "Some cancers follow a stem cell model, and some don't"
- 04/08 Cold Spring Harbor Asia, Suzhou, China, "The regulation of stem cell self-renewal"
- 04/18 New York University, New York, NY, "The regulation of stem cell self-renewal"
- 04/20 AACR Annual Meeting 2010, Washington, D.C., "Some cancers follow a stem cell model, while other cancers have common tumorigenic cells with little or no hierarchical organization"
- 04/27 Tri-Institutional Stem Cell Initiative, New York, NY, "Stem cells and cancer"
- 05/19 Princeton University, Princeton, NJ, "The regulation of stem cell self-renewal"
- 08/23 Jackson Laboratory, Short Course on Experimental Models, Bar Harbor, ME "Cancer stem cells?"
- 10/04 2010 World Stem Cell Summit, Detroit, MI Keynote Scientific Presentation, "Melanoma"
- 10/05 Novartis Cancer Retreat, Keynote Speaker, Atlanta, GA "Cancer stem cells?"
- 11/07 Howard Hughes Medical Institute, Science Meeting, Chevy Chase, MD, "The metabolic regulation of stem cells by Lkb1"
- 11/16 Sloan Kettering, New York, NY "The metabolic regulation of stem cells by Lkb1"
- 12/01 University of Chicago, Chicago, IL "Cancer stem cells?"
- 12/04 Leukemia and Lymphoma Society Symposium, Orlando, FL "The hematopoietic stem cell niche"
  
- 2011** 02/02 Keystone Meeting on Stem Cells, Santa Fe, New Mexico "Developmental changes in PI-3kinase pathway signaling influence stem cells and leukemia"
- 02/09 Broad Center Opening Symposium, UCSF, San Francisco "Reprogramming of adult stem cells to have fetal characteristics"
- 02/16 ABCAM Conference on Neurodegeneration and Stem Cells, Nassau, Bahamas "Bmi-1 regulates neurological function throughout adult life"
- 02/21 Univ of Texas Health Sciences Center San Antonio, Texas "Stem cell self-renewal throughout adult life"
- 03/10 Keystone Meeting on Stem Cells, Cancer, and Metastasis, Keynote Address "Tumorigenesis and metastasis in melanoma"
- 03/30 Keystone Meeting on Hematopoiesis, Big Sky Montana, "Regulation of temporal identity in stem cells."
- 04/02 American Association for Cancer Research Annual Meeting, Orlando, Florida, Workshop on Metastasis and tumor dormancy, "Melanoma tumorigenesis"
- 04/04 American Association for Cancer Research Annual Meeting, Orlando, Florida, Forum on Cancer Stem Cells, "Malignant peripheral nerve sheath tumors"
- 04/05 American Association for Cancer Research Annual Meeting, Orlando, Florida, Plenary session on Stem cell self-renewal mechanisms, "Temporal changes in stem cell self-renewal mechanisms"
- 04/28 Cold Spring Harbor Laboratory meeting on Cancer Biology, "Tumorigenic cell frequency"
- 04/29 National Institutes of Health meeting for grantees studying the hematopoietic stem cell niche, Bethesda, MD, "The hematopoietic stem cell niche"
- 05/05 Howard Hughes Medical Institute science meeting, Janelia Farm, "The hematopoietic stem cell niche"
- 05/10 University of Utah, Salt Lake City, "Intrinsic and extrinsic mechanisms that regulate hematopoietic stem cell function"

- 06/17 International Society for Stem Cell Research Annual Meeting, Toronto CA "The hematopoietic stem cell niche"
- 06/27 Gordon Conference on Cell Growth and Proliferation, Biddeford, Maine "Temporal changes in stem cell self-renewal mechanisms"
- 07/11 Aspen Cancer Conference, Aspen, CO, "Melanoma growth, metastasis, and genetic change"
- 08/04 Ellison Foundation Annual Meeting, Woods Hole, MA, "Bmi-1, stem cell aging, and neurological function"
- 09/14 Center for Cancer Systems Biology Series, Stanford, CA "Stem cell self-renewal and cancer cell proliferation"
- 09/16 American Association for Cancer Research Conference on Frontiers in Basic Cancer Research, San Francisco, CA "Plasticity of melanoma cells"
- 09/20 Cold Spring Harbor Laboratory meeting on Stem Cell Biology, Cold Spring Harbor, NY "Hematopoietic stem cell niches"
- 10/20 St. Jude's Biomedical Symposium, Memphis, TN "Neural stem cell self-renewal"
- 11/01 Frontiers in Cancer Science 2011, Singapore "Developmental changes in PI-3kinase pathway regulation lead to changes in hematopoietic stem cell self-renewal and leukemogenesis"
- 11/17 Cambridge Research Institute, Cambridge, UK "The intrinsic and extrinsic regulation of stem cell self-renewal"
  
- 2012** 01/05 UCLA, Los Angeles, CA "The hematopoietic stem cell niche"
- 01/25 Stanford University, Stanford, CA "The hematopoietic stem cell niche"
- 02/20 Peking University, Beijing, China "The hematopoietic stem cell niche"
- 02/21 National Institute of Biological Sciences, Beijing, China "The hematopoietic stem cell niche"
- 03/09 Nobel Forum, Frontiers in Cancer Research and Therapy, Karolinska Institute, Stockholm, Sweden "Melanoma growth and metastasis"
- 03/21 University of Wisconsin, Madison, WI "The hematopoietic stem cell niche"
- 04/03 American Association for Cancer Research Annual Meeting, Baynard Clarkson Symposium "Ras, stem cells, clonal expansion, and leukemia"
- 04/05 Keystone Symposium, Breckenridge, CO "Pten, stem cells, and leukemogenesis"
- 04/11 Roy M. Huffington Distinguished Lecture, Huffington Center on Aging, Baylor Medical School, Houston, TX "Regulation of stem cell aging"
- 04/30 Weizmann Institute of Science, Rehovot, Israel "The hematopoietic stem cell niche"
- 05/06 Meeting of NHLBI Stem Cell Niche RFA recipients, National Institutes of Health, Bethesda, MD "The hematopoietic stem cell niche"
- 05/15 University of Nebraska, Omaha, NE "The cancer stem cell model?"
- 07/10 Cambridge University, Cambridge, UK "The hematopoietic stem cell niche"
- 09/12 Baker Institute, Houston, TX "Creating stem cell policy at the interface of science and politics"
- 09/13 Rice University/MD Anderson, Houston, TX "Stem cell self-renewal and leukemogenesis"
- 10/01 Geoffrey Beene Symposium-Sloan-Kettering, New York, NY "Stem cell self-renewal and leukemogenesis"
- 10/16 Yale University, New Haven, CT "The hematopoietic stem cell niche"
- 11/05 Abcam Conference at The Salk Institute, La Jolla, CA "Proteostasis and stem cell function"
- 12/04 USC Norris Comprehensive Cancer Center, Los Angeles, CA "Melanoma, tumorigenesis and metastasis"

- 2013**
- 01/15 Keystone Symposium-Hematopoiesis, Steamboat Springs, CO "Hematopoietic stem cell niche"
  - 02/23 American Association for Cancer Research, Maui, Hawaii "Human melanoma metastasis in NSG mice correlates with clinical outcome in patients"
  - 02/26 Keystone Symposium on Stem Cells in Homeostasis and Disease, Banff, Alberta, Canada "Hematopoietic stem cells and lymphoid progenitors occupy distinct niches in the bone marrow"
  - 03/18 Genentech, San Francisco, CA "Stem cell self-renewal and cancer"
  - 03/25 America-Japan Leukemia Meeting, Maui, Hawaii "HSC self-renewal and pre-leukemic expansion"
  - 04/08 American Association for Cancer Research Annual Meeting, Washington, DC "Stem cells in cancer"
  - 04/22 University of Pennsylvania, Philadelphia, PA "Stem cell self-renewal and cancer"
  - 05/16 MD Anderson, Houston, TX "Stem cell self-renewal and cancer"
  - 05/20 Meeting of NHLBI Blood Stem Cell Niche RFA recipients, National Institutes of Health, Bethesda, MD "Genetic analysis of stem cell maintenance in vivo"
  - 07/22 Hebrew University, Stem Cells and Regenerative Biology Summer School "Strengths and weaknesses of the cancer stem cell model"
  - 07/23 Hebrew University, Stem Cells and Regenerative Biology Summer School "Stem cells and leukemia"
  - 08/02 Key Symposium 10: Taming the Cancer Cell, Stockholm, Sweden "Stem cell self-renewal and pre-leukemic clonal expansion"
  - 09/16 International Society for Stem Cell Research Regional Forum, Florence, Italy "Stem cells: lost in translation"
  - 09/27 University of Michigan Comprehensive Cancer Center Annual Research Fall Symposium "Stem cells and leukemogenesis"
  - 10/10 Howard Hughes Medical Institute science meeting, Janelia Farm, Virginia, "Stem cells: lost in translation"
  - 10/17 Nathan Shock Center Conference on Aging, Stem Cells and Aging, UT Health Science Center, San Antonio, TX "The regulation of stem cell aging"
  - 10/29 Nature – Spanish National Cancer Research Centre (CNIO), Madrid, Spain "Human melanoma heterogeneity and metastasis"
  - 11/15 Harvard University/Massachusetts General Hospital Center for Regenerative Medicine 10<sup>th</sup> Anniversary Symposium, Boston MA "Stem cell self-renewal & leukemogenesis"
  - 11/18 McMaster University, Hamilton, Ontario, Canada "Hematopoietic stem cell niche"
  - 11/19 Ontario Stem Cell Initiative, University of Toronto, Ontario "Stem cell self-renewal & leukemogenesis"
  - 11/21 Cold Spring Harbor Laboratory, New York, NY "Stem cell self-renewal and leukemogenesis"
  - 12/12 Lecture Series and Graduate Student Course in Stem Cell Biology, Rockefeller University, New York, NY "Hematopoietic stem cell niche"
- 2014**
- 01/16 Keystone Symposium on Aging, Steamboat Springs, CO "Hematopoietic stem cells require a highly regulated rate of protein synthesis"
  - 01/30 Agensys, Los Angeles, CA "Melanoma tumorigenesis and metastasis"
  - 02/04 Keystone Symposium on Stem Cells and Cancer, Banff, Alberta "Hematopoietic stem cells require a highly regulated rate of protein synthesis"
  - 02/12 Peter MacCallum Cancer Centre, Melbourne, Australia "Stem cell self-renewal and leukemogenesis"

- 02/15 Lorne Cancer Conference, Lorne, Australia "Haematopoietic stem cell self-renewal and leukemogenesis"
- 03/05 MD Anderson Experimental Therapeutics Seminar, Houston, TX "Melanoma tumorigenesis and metastasis"
- 03/26 Cold Spring Harbor Laboratory, Cold Spring Harbor, NY "Haematopoietic stem cells require a highly regulated protein synthesis rate"
- 04/07 American Association for Cancer Research Annual Meeting, San Diego, CA, Bayard Clarkson Symposium "Stem cell self-renewal and cancer"
- 04/08 Lawrence Berkeley National Laboratory, Life Sciences Division, Berkeley, CA "Melanoma tumorigenesis and metastasis"
- 04/09 University of California, San Francisco, Biomedical Sciences Seminar, San Francisco, CA "The hematopoietic stem cell niche"
- 05/05 Oregon Health and Science University, School of Medicine, Portland, OR "Melanoma tumorigenesis and metastasis"
- 05/14 University of Michigan, Life Sciences Institute Annual Symposium, Ann Arbor, MI "The regulation of stem cell self-renewal"
- 05/16 Washington University Neurofibromatosis Center, St. Louis, MO "Regulation of stem cells by Ras signaling"
- 05/22 University of Colorado, Cancer Biology Graduate Program, Denver, CO "Stem cell self-renewal and cancer cell proliferation"
- 05/30 Nature Conference, Genomics and Stem Cell Based Therapies, Guangzhou, China "The hematopoietic stem cell niche"
- 06/06 Weill Cornell Medical College, Ansary Stem Cell Institute 10<sup>th</sup> Anniversary Symposium, New York, NY "The regulation of stem cell self-renewal"
- 07/15 Cambridge University MRC Laboratory of Molecular Biology, Cambridge, UK "Hematopoietic stem cell niche"
- 08/22 International Society for Hematology and Stem Cells Annual Scientific Meeting, Montreal, Canada "Cancer, stem cells, and melanoma"
- 10/2 Cold Spring Harbor Laboratory meeting on Aging, Cold Spring Harbor, NY "Proteostasis in somatic stem cells"
- 10/8 Cincinnati Children's Hospital, Cincinnati, OH "The Hematopoietic stem cell niche"
- 10/17 EMBO Conference, Stem Cells and Epigenetics in Cancer, Hong Kong, China "Distant metastasis by melanoma cells depends upon reversible metabolic changes to cope with oxidative stress"
- 11/04 University of Ottawa, Department of Cellular and Molecular Medicine Trainee Seminar Series, Ottawa, Canada "The regulation of stem cell self-renewal"
- 11/14 Duke Cancer Institute Annual Scientific Retreat, Raleigh, NC "Melanoma heterogeneity and disease progression"
- 12/4 Beth Israel Deaconess Medical Center Distinguished Lecture Seminar, Boston, MA "Novel mechanisms of melanoma progression and treatment"
- 12/9 Cell Symposia, Stem Cell Energetics, Berkeley, CA "Reversible metabolic changes in human melanoma cells enable distant metastasis in vivo"
  
- 2015** 02/25 Keystone Symposia, Hematopoiesis, Keystone, CO "Hematopoietic stem and progenitor cells regulate niche regeneration by secreting angiopoietin-1"
- 03/16 US/Japan Meeting on Malignant Hematopoiesis, Waikoloa, HI "Deep-imaging of stem cells in hematopoietic tissues and digital reconstruction of their microenvironment"
- 03/27 Acute Leukemia Forum, San Francisco, CA "Microenvironment and stem cells in acute leukemia"

- 04/07 New York University School of Medicine Stem Cell Biology Seminar Series, New York, NY "The regulation of stem cell self-renewal"
- 04/15 Duke University School of Medicine Cancer Biology Seminar Series, Raleigh, NC "The hematopoietic stem cell niche"
- 05/06 Howard Hughes Medical Institute science meeting, Janelia Farm, Virginia, "The regulation of melanoma metastasis"
- 08/07 Salk Mechanisms and Models of Cancer Symposium, LaJolla, CA "Mechanisms of melanoma metastasis"
- 09/08 University of Southern California Broad Center for Regenerative Medicine Seminar Series, Pasadena, CA "The hematopoietic stem cell niche"
- 09/18 Summit on Melanoma, Pasadena, CA "Mechanisms of melanoma metastasis"
- 10/04 Southwest Regional Society for Developmental Biology, Dallas, TX "The hematopoietic stem cell niche"
- 10/08 Seattle Children's Research Institute, Seattle, WA "The hematopoietic stem cell niche"
- 10/09 American Society for Bone and Mineral Research Annual Meeting, Seattle, WA "Skeletal stem cells in adult bone marrow"
- 10/30 Sanford-Burnham Prebys Medical Discovery Institute Annual Symposium, La Jolla, CA "The regulation of adult osteogenesis"
- 11/14 Cedars-Sinai Medical Center Symposium, Los Angeles, CA "The hematopoietic stem cell niche"
- 11/17 Bayer Symposia on Hematopoiesis, San Francisco, CA "The hematopoietic stem cell niche"
- 11/20 Society for Melanoma Research 2015 Congress, San Francisco, CA "The regulation of melanoma metastasis"
- 11/30 American Association of Cancer Research Developmental Biology & Cancer Meeting, Boston, MA "Oxidative stress inhibits distant metastasis by human melanoma cells"
  
- 2016 02/11 Stem Cell Research and Regenerative Medicine 2016 Conference, San Antonio, TX "Stem cell niches in the bone marrow"
- 02/22 University of Pennsylvania Institute for Regenerative Medicine Seminar Series, Philadelphia, PA "Adult niches for hematopoiesis and osteogenesis"
- 02/24 Columbia University Microbiology and Immunology Seminar Series, New York, NY "The niche for hematopoiesis and osteogenesis in the bone marrow"
- 03/07 Keystone Conference on Stem Cells and Cancer, Breckenridge, CO Keynote Address "Melanoma metastasis and therapy"
- 03/14 Memorial Sloan Kettering Cancer Center, Cancer as an Evolving and Systemic Disease, New York, NY "The regulation of melanoma metastasis"
- 03/22 University of Oklahoma, Oklahoma City, OK "Stem cell niches for hematopoiesis and osteogenesis"

## **ISSUED PATENTS**

1. M. Csete, **S.J. Morrison**, B. Wold, D.J. Anderson. Low Oxygen Culturing of Neural Crest Stem Cells and Methods of Use, US Patent number 6,759,242 B1, Date of patent 07/06/2004
2. M.F. Clarke, **S. J. Morrison**, M. Wicha, and M. Al-Hajj. Isolation and Use of Solid Tumor Stem Cells, US Patent number 6,984,522 Date of patent 01/10/2006

3. M.F. Clarke, **S. J. Morrison**, M. Wicha, and M. Al-Hajj. Isolation and Use of Solid Tumor Stem Cells, US Patent number 7,115,360 B2, Date of patent 10/03/2006
4. O.H. Yilmaz, M.J. Kiel, **S.J. Morrison**, T. Iwashita. Hematopoietic Stem Cell Identification and Isolation, US Patent number 7,510,877 B2, Date of patent 03/31/2009
5. M.F. Clarke, **S. J. Morrison**, M. Wicha, and M. Al-Hajj. Isolation and Use of Solid Tumor Stem Cells, US Patent number 7,113,710 B2, Date of patent 05/11/2010
6. M.F. Clarke, **S. J. Morrison**, M. Wicha, and M. Al-Hajj. Isolation and Use of Solid Tumor Stem Cells, US Patent number 7,850,961 B2, Date of patent 12/14/2010
7. O.H. Yilmaz, M.J. Kiel, **S.J. Morrison**, T. Iwashita. Hematopoietic Stem Cell Identification and Isolation, US Patent number 7,919,316 B2, Date of patent 04/05/2011
8. M.F. Clarke, **S.J. Morrison**, M. Wicha, and M. Al-Hajj. Isolation and Use of Solid Tumor Stem Cells, US Patent number 8,357,491 B2, Date of patent 01/22/2013
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