#### **CURRICULUM VITAE**

#### Sean J. Morrison

#### **PERSONAL DATA**

Address: Children's Research Institute

University of Texas Southwestern Medical Center

5323 Harry Hines Boulevard Dallas, Texas, 75390-8502

Telephone: 214-648-2352 Fax: 214-648-5517

E-mail: Sean.Morrison@UTSouthwestern.edu

#### **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 01/06 - 04/15 12/06 - present 01/10 - present 03/11 - present 09/11 - 05/17 04/12 - present 04/12 - present 09/12 - present 12/12 - present 08/14 - present	Stem Cells Faculty of 1000, Section Head "Stem cells & Regeneration" Cell Stem Cell Journal of Experimental Medicine EMBO Journal Current Opinion in Cell Biology Cancer Cell eLife, Senior Editor EMBO Reports Stem Cell Reports 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
04/17	National Institutes of Health: Study section to review applications in response to the Pro/Anti-Geronic Factor RFA
07/17	National Institutes of Health: ZRG1 EMNR-P (02) M Nutrient and Lipid Regulation Study Section

**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:**

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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 – 10/13	Common Fund External Consultant for the NIH Center for
	Regenerative Medicine
08/13 - 08/15	California Institute for Regenerative Medicine
10/14 - 03/15	Chair, New York State stem cell program (NYSTEM) External
	Review Panel

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#### **GRANT SUPPORT**

#### **ONGOING**

001823 (PI, Morrison) 6/1/00 - 6/30/20

Howard Hughes Medical Institute

Funding is not associated with a specific project

RP170114 (PI, Morrison) 12/1/16 - 11/30/19

Cancer Prevention and Research Institute of Texas

"Mechanisms of melanoma metastasis"

To test whether metastasizing melanoma cells exhibit increased dependence on pentose phosphate and malic enzyme pathways relative to primary cutaneous melanomas and whether RUNX3 promotes metastasis by regulating metabolic changes.

2 R37 AG024945 (PI, Morrison)

9/15/04 - 7/31/19

NIH/NIA (MERIT Award)

"The Regulation of Stem Cell Aging"

To test whether the Bmi-1 polycomb protein is required to maintain adult neural stem cells and neurogenesis by opposing the age-related increase in p16<sup>lnk4a</sup>/p19<sup>Arf</sup> expression such that Bmi-1 deficiency leads to stem cell depletion and behavioral deficits that worsen with age.

RP170633 Morrison (PI)

9/01/17 -- 8/31/19

Cancer Prevention and Research Institute of Texas

"The Role of Calcium Channels in Melanoma"

To test whether human melanoma cells are sensitive to therapeutic inhibition of L-type Ca2+ channel function.

#### **RECENT**

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.

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

Established Investigator Award "Stem Cells and Cancer"

9/1/11 - 8/31/16

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.

2 R01 NS040750 (PI, Morrison)

2/1/01 - 12/31/15

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.

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.

#### **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 Michiganian 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
2015	President, International Society for Stem Cell Research
2016	Keynote Address, Keystone Symposium on Stem Cells and Cancer
2017	Malkin-Kraft Lecturer, Northwestern University
2017	Sol Sherry Lecture International Society for Hemostasis and Thrombosis

### **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

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01/04 - 12/09	Public Policy Committee
06/04 - 05/05	Program Committee
International Soci	ciety 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 - 06/15	President-elect
06/15 - 06/16	President
06/16 - 06/17	Past-President
	06/04 - 05/05  International Socion 09/02 - 07/06 10/03 - 07/06 06/04 - 12/12 07/06 - 07/09 07/07 - present 07/10 - 06/11 10/10 - present 06/13 - 05/14 06/14 - 06/15 06/15 - 06/16

#### **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
- 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"
  - 04/11 Cancer Biology II "Cancer Stem Cells: Impact, Heterogeneity, and Uncertainty"
- 2017 02/01 Responsible Conduct of Research "Notebooks and Record Keeping"
  - 02/08 Cancer Biology I "Cancer Stem Cells"
  - 02/28 <u>Developmental Principles in Regenerative Science and Medicine</u> "Hematopoietic Regeneration"
  - 03/17 Cancer Biology II "Cancer Stem Cells: Impact, Heterogeneity, and Uncertainty"
  - 10/04 K12 Pediatric Scholars' Training Grant Career Development Session Lecture
  - 10/18 Responsible Conduct of Research "Rigor & Reproducibility"

#### **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
07/01 – 07/05	Current position: Assistant Professor, UCSF Anna Molofsky, UM Medical Scientist Training Program
07701 07700	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
•	Stacy Yuan, UTSW Medical Scientist Training Program
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## **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
0440= 00444	Current Position: Unknown
01/05 – 09/11	Elsa Quintana Rodriguez
00/05 00/05	Current Position: Senior Scientist, Oncomed Pharmaceuticals
02/05 – 09/07	Shalom Guy Slutsky
00/05	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
00/05 44/44	Therapeutics Program, Vanderbilt University, Nashville
08/05 – 11/11	Sergei Chuikov
02/06 11/11	Current Position: Research Investigator, University of Michigan
02/06 – 11/11	Daisuke Nakada Current Position: Assistant Professor, Paylor College of Medicine
00/06 12/00	Current Position: Assistant Professor, Baylor College of Medicine
08/06 – 12/09	Mark Shackleton

10/00 00/11	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 Current Position: Assistant Professor, Columbia University
11/07 — 07/08	Michel Perron
01/08 – 12/15	Current Position: Research Scientist II, Gilead Melih Acar
	Current position: Assistant Professor, Bahçeşehir University, Turkey
07/08 – 07/13	Jeff Magee Current position: Assistant Professor, Washington University
05/09 – 01/11	Current position: Assistant Professor, Washington University  Qing Li
00,00	Current position: Assistant Professor, University of Michigan
09/09 – 1/17	Hideyuki Oguro
	Current position: Associate Director, Cellular Engineering, The Jackson Laboratory in Connecticut
09/09 – 11/15	Robert Signer
	Current position: Assistant Professor, University of California at San Diego
01/10 – 05/15	John Mich
05/11 procent	Current position: Scientist II, Allen Institute for Brain Research
05/11 – present 09/11 – 12/14	Michaelis Agathocleus Issei Shimada
00/11 12/11	Current position: Assistant Instructor, UT Southwestern Medical Center
09/11 – 05/16	Ugur Eskiocak
00/44 07/47	Current position: Scientist II, Compass Therapeutics
09/11 – 07/17 10/11 – 03/17	Elena Piskounova Rui Yue
10/11 – 03/17	Current position: Assistant Professor, Tongji University, Shanghai, China
10/11 – 08/16	Bo Zhou
	Current position: Assistant Professor, Shanghai Institute of Biochemistry and
03/12 - present	Cell Biology, Chinese Academy of Sciences Corbin Meacham
11/12 – present	Malea Murphy
02/13 – present	Rebecca Burgess
02/14 – present	Salma Hasan
01/15 – present	Stefano Comazzetto
08/15 – present 11/15 – present	Jennifer Gill Elise Jeffery
12/15 – present	Andrew DeVilbiss
12/15 – present	Bo Shen
01/16 - present	Kati Ahlqvist
08/16 - 05/17	Genevieve Crane
10/16 – present 05/17 – present	Alpaslan Tasdogan Shay Guela
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## Intramural Seminars at the University of Texas Southwestern Medical Center:

2011 09/17 <u>Medical Scientist Training Program</u> "Stem cells and cancer" 10/25 <u>Graduate Student Organization</u> "Stem cells and cancer"

2012	01/31 02/29 05/09 09/07	Cell Biology Department "The hematopoietic stem cell niche"  Development Biology Department "The regulation of stem cell self-renewal"  University Lecture Series "The regulation of stem cell self-renewal"  Cancer Center Grand Rounds "The regulation of melanoma metastasis"
2013	01/07 04/09	<u>Department of Physiology</u> "Regulation of Stem Cell Self-Renewal" <u>President's Research Council</u> "Hijacked: How cancer cells commandeer stem cell mechanisms to fuel tumor growth"
2014	02/20 03/01 05/08 10/11	<u>President's Lecture</u> "Understanding cancer through the lens of stem cell biology" <u>Big Ideas Lecture</u> to incoming medical students "A failure to create policy based on factors is eroding science, health care, and American competitiveness" <u>O'Brien Kidney Center Symposium</u> "The regulation of stem cell self-renewal" <u>Department of Pediatrics</u> "Melanoma metastasis and therapy"
2015	04/22 12/14	<u>Comprehensive Cancer Center</u> "Treating cancer more effectively" <u>Angiogenesis seminar series</u> "Bidirectional regulation between hematopoietic stem cells and their niche"
2016	04/13 12/16	Science Policy, Ethics and Communication Club seminar series "The intersection of science and public policy"  Mineral Metabolism Lecture "The maintenance of the adult skeleton"
2017	02/03	Endocrine Grand Rounds Series "The maintenance of the adult skeleton"

# Membership in the following graduate programs at UTSW: Genetics and Development

Cancer Biology

#### **Graduate Student Rotations:**

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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
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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 – 05/17	Ana Uruena, Genetics and Development
01/14 - 07/17	Xiaolei Shi, Cancer Biology
02/14 - present	Barrett Updegraff, Cancer Biology
01/16 - present	Stephen Li, Genetics and Development
08/17 – present	Divva Bezwada, Cancer Biology

## Preliminary Exam Committees at UTSW: 05/12 Angelica Sand

Angelica Sanchez, Cancer Biology

EXTRAMURAL INVITED PRESENTATIONS		
2000	04/08	Great Lakes Development Meeting, Toronto, Canada "Notch Activation
	05/03	instructs rapid glial differentiation by purified neural crest stem cells" <u>University of Toronto, Hospital for Sick Children</u> , "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
	09/22	neural crest stem cells in peripheral nervous system development" <u>Fondation des Treilles, Tourtour, France,</u> "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
	11/17	peripheral nervous system development" <u>Foundation for Fighting Blindness, Bethesda, MD,</u> "An in vivo analysis of neural crest stem cell developmental potential"
	11/29	· · · · · · · · · · · · · · · · · · ·
	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
	02/13	stem cells in peripheral nervous system development" <u>Ernst Klenk Symposium, Cologne, Germany,</u> "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 <u>University of California at San Francisco Stem Cell Mini-symposium, San</u> 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 <u>National Neurofibromatosis Association. Aspen, CO,</u> "Neural crest stem cells and peripheral nervous system development"
- 06/11 <u>Neurotrophins Gordon Conference, Newport, RI,</u> "Neural crest stem cells and peripheral nervous system development"
- 09/10 <u>Howard Hughes Medical Institute Science Meeting, Chevy Chase, MD,</u> "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 <u>University of California at Santa Cruz, CA,</u> "Neural crest stem cells and the generation of diversity"
  - 02/07 <u>Case Western Reserve University, Cleveland, OH</u>, "Neural crest stem cells and the generation of diversity"
  - 02/22 <u>Stem Cell Challenge Symposium, Vienna, Austria</u> "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 <u>Children's Hospital Medical Center, Cincinnati, OH,</u> "Neural stem cells and the generation of diversity"
  - 05/08 <u>Department of Neurobiology, Stanford University, CA</u>, "Neural stem cells and the generation of neural diversity"
  - 05/14 <u>Massachusetts General Hospital, Neuroscience Center, Charlestown, MA,</u> "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 <u>Indiana University, Indianapolis, IN</u>, "Strategies for the generation of diversity in the nervous and hematopoietic systems"
  - 09/19 <u>12<sup>th</sup> Biennial Meeting of the American Motility Society, Galveston, TX,</u> "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 <u>University of Pennsylvania, Philadelphia, PA</u>, "Neural crest stem cells and the generation of diversity"
  - 12/07 <u>American Society for Hematology Annual Meeting, Philadelphia, PA,</u> "Stem cells and the generation of spatial diversity"
- **2003** 01/22 <u>University of California at Los Angeles, CA</u>, "The generation of diversity from stem cells"
  - 02/06 <u>Johns Hopkins University, Baltimore, MD</u>, "The generation of diversity from stem cells"
  - 02/12 <u>Wayne State University, Detroit, MI</u>, "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 <u>University of North Carolina, Chapel Hill, NC</u>, "The diversification and self-renewal of neural stem cells"
- 04/22 <u>University of Kentucky, Lexington, KY,</u> "Age-related changes in stem cell properties"
- 05/14 <u>Maine Medical Research Institute, Portland, ME</u> "Self renewal of neural crest stem cells"
- 05/18 <u>American Gastroenterological Association Annual Meeting, Orlando, FL</u> "Hirschsprung disease is caused by defects in neural crest stem cell function."
- 06/09 <u>International Society of Stem Cell Research Annual Meeting, Washington, DC,</u> "Self renewal of neural crest stem cells"
- 06/20 <u>Cold Spring Harbor Developmental Neurobiology Course, Cold Spring Harbor, NY</u>, "The self-renewal and differentiation of neural stem cells"
- 08/02 <u>Mount Desert Island Stem Cell Symposium, Salisbury Cove, ME</u>, "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 <u>University of Utah, Salt Lake City, UT,</u> "The self-renewal and differentiation of neural stem cells"
- 10/29 <u>Washington University, Stem Cell Symposium, St. Louis, MO,</u> "Stem cell self renewal"
- 11/17 Howard Hughes Medical Institute, Chevy Chase, MD, "Stem cell self renewal"
- 11/18 <u>Howard Hughes Medical Institute-National Institutes of Health Research Scholars, Bethesda, MD,</u> "The genetic regulation of stem cell function"
- 12/08 <u>Sloan-Kettering Institute, New York, NY</u>, "The genetic regulation of neural stem cells"
- 12/15 <u>Vanderbilt University, Nashville, TN</u>, "The regulation of neural stem cell migration and self-renewal"
- **2004** 01/15 <u>University of California at San Diego, CA</u>, "The self-renewal and differentiation of neural stem cells"
  - 02/24 <u>University of Toronto Institute of Biomaterials and Biomedical Engineering, Distinguished Speakers in Bioengineering, Toronto, Ontario, Canada,</u> "The genetic regulation of stem cell function"
  - 03/03 <u>University of California at San Francisco, CA,</u> "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 <u>American Association for Cancer Research 95<sup>th</sup> Annual Meeting, Orlando, FL,</u> "The regulation of stem cell self-renewal"
  - 04/01 <u>Second Canadian Developmental Biology Symposium, Banff, Alberta, Canada,</u> "The regulation of stem cell self-renewal"
  - 04/15 NIH Organ Innervations Workshop, Bethesda, MD, "Neural stem cells in gut"
  - 04/28 <u>Association for Research in Vision and Ophthalmology (ARVO) 2004 Annual</u> Meeting, Ft. Lauderdale, FL "Stem Cells in Biology and Medicine: An Overview"
  - 05/20 <u>Jackson Laboratory Seminar, Bar Harbor, ME</u>, "The genetic regulation of stem cell function"
  - 06/06 <u>Midwest Developmental Biology Meeting, Kansas City, MO</u>, "The genetic regulation of stem cell function"
  - 06/08 <u>McDonnell Foundation 2004 Annual Meeting, Palisades, NY</u>, "The role of Bmi-1 in stem cell and cancer cell proliferation"

- 06/11 <u>International Society for Stem Cell Research Annual Meeting, Boston, MA</u>, "Adult stem cell self-renewal requires repression of senescence pathways by Bmi-1"
- 06/21 <u>Tumor Stem Cell Mini-Symposium, Pittsburgh, PA,</u> "Applying the principles of stem cell biology to cancer"
- 07/12 <u>Federation for European Neuroscience Annual Meeting, Lisbon, Portugal,</u> "The regulation of neural stem cell self-renewal"
- 07/16 <u>University of Seville, Seville, Spain,</u> "The genetic regulation of stem cell function"
- 08/17 <u>Gordon Conference on Neural Development, Newport, RI,</u> "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 <u>Cold Spring Harbor Mouse Molecular Genetics Meeting, Cold Spring Harbor, NY,</u> "Determination of hematopoietic stem cell identity"
- 09/13 <u>Howard Hughes Medical Institute Science Meeting, Chevy Chase, MD,</u> "Determination of hematopoietic stem cell identity"
- 10/01 Columbia University, New York, NY, "Genetic regulation of stem cell function"
- 11/03 <u>Novartis Institutes for BioMedical Research, Cambridge, MA,</u> "Genetic regulation of stem cell function"
- 11/08 <u>National Institute on Aging, Stem Cells and Aging Meeting, Bethesda, MD</u>, "Stem cell self-renewal and senescence"
- 11/21 <u>2004 Hanson Symposium, Adelaide, Australia,</u> "The genetic regulation of stem cell function"
- 11/26 <u>Walter & Eliza Hall Institute, Melbourne, Australia,</u> "Distinguishing stem cells from progenitors"
- 12/09 <u>American Society for Cell Biology Annual Meeting, Washington, DC</u>, co-chaired Mini-symposium on Stem Cells and presented "Distinguishing stem cells from progenitors"
- 12/15 <u>Weill Medical Center, Cornell University, New York,</u> "The genetic regulation of stem cell function"
- 2005 01/13 <u>Scripps Institute, San Diego, California</u>, "The regulation of stem cell self-renewal and aging"
  - 01/19 <u>Duke University, Durham, North Carolina</u>, "The regulation of stem cell self-renewal and aging"
  - 02/12 <u>Keystone Symposium, Molecular Regulation of Stem Cell Function, Banff, Alberta, Canada,</u> "The regulation of stem cell self-renewal and aging"
  - 02/25 <u>University of California at Los Angeles Symposium, Los Angeles, California,</u> "Applying the principle of stem cell biology to cancer"
  - 03/03 <u>Howard Hughes Medical Institute and CSIS Congressional Briefing on Stem Cells, Washington, DC,</u> "Somatic stem cells"
  - 03/17 <u>Days of Molecular Medicine Meeting 2005, San Diego, CA,</u> "Hematopoietic stem cell niches"
  - 03/31 <u>Dana-Farber Children's Hospital, Boston, MA</u>, "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 <u>American Association for Cancer Research 96<sup>th</sup> Annual Meeting, Anaheim, CA, and presented "Pten regulates hematopoietic stem cell function and leukemogenesis"</u>

- 04/28 <u>Program Directors-General Clinical Research Centers Meeting, Washington, DC,</u> "Stem cell research"
- 05/27 <u>EMBO Workshop and Institute for Cancer Research and Treatment International Cancer Conference, Turin, Italy,</u> "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 <u>International Society for Stem Cell Research, San Francisco, CA,</u> "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 <u>HHMI Science Meeting</u>, "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 10/04 <u>National Cancer Research Institute Meeting, Birmingham, UK,</u> "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 10/11 <u>Tanenbaum Symposium, University of Toronto, Toronto, Canada, Pten</u> dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 10/27 <u>Keystone Symposium, Stem Cells, Senescence, and Cancer, Singapore,</u> "Stem cell self renewal"
- 11/10 <u>International Workshop on Cancer Stem Cells, Milan Italy,</u> "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 11/16 <u>Society for Neuroscience, Washington, D.C.,</u> "Stem cell self renewal versus cancer cell proliferation"
- 11/29 <u>The Institute for Research in Immunology and Cancer, Montreal, Canada,</u> "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 12/02 <u>Harvard Stem Cell Institute, Boston, MA,</u> "Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 12/05 <u>The Banbury Center, Cold Spring Harbor, NY,</u> Pten dependence distinguishes stem cell self-renewal from cancer cell proliferation"
- 12/14 <u>University of North Carolina, Chapel Hill, NC,</u> "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 <u>University of Oregon, Eugene, OR,</u> "Stem cell self renewal versus cancer cell proliferation"
  - 01/24 <u>Stanford University, Stanford, CA,</u> "Stem cell self renewal versus cancer cell proliferation"
  - 02/03 <u>ESH/AACR Conference, Cascais, Portugal,</u> "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 <u>Development of the Enteric Nervous System: Cells, Signals and Genes Conference, New York, NY, "Neurogenesis in the adult gut"</u>
  - 04/18 <u>Abramson Family Cancer Research Institute, University of Pennsylvania, Pittsburgh, PA,</u> "Stem cell self renewal versus cancer cell proliferation"
  - 04/19 <u>University of Wisconsin-Madison NIH Stem Cell Training Program, Madison, WI,</u> "Neural stem cell aging"

- 04/27 <u>University of Oklahoma, Oklahoma City, OK,</u> "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 <u>University of Texas-Southwestern Seminar, Dallas, TX,</u> "Stem cell self renewal versus cancer cell proliferation"
- 07/01 <u>International Society for Stem Cell Research, 4<sup>th</sup> Annual Meeting, Toronto, Canada, "Stem cell aging"</u>
- 07/16 <u>American Society for Cell Biology, Summer Meeting, Boston, MA, "Hematopoietic stem cell niche"</u>
- 09/12 <u>Howard Hughes Medical Institute, Science Meeting, Chevy Chase, MD,</u> "The regulation of stem cell aging"
- 09/18 <u>Howard Hughes Medical Institute, Meeting of Predoctoral and Postdoctoral Research Fellows, Chevy Chase, MD,</u> "Stem cell aging"
- 09/28 <u>International Society for Experimental Hematology, 35<sup>th</sup> Annual Meeting,</u> Minneapolis, MN, "Hematopoietic stem cell niche"
- 09/30 <u>Michigan State Medical Society, 10<sup>th</sup> Annual Conference on Bioethics, Traverse City, MI, "Embryonic stem cells"</u>
- 10/09 <u>Genomics Institute of the Novartis Research Foundation, San Diego, CA,</u> "Stem cell self-renewal, cancer cell proliferation and aging"
- 10/17 <u>Center for Advanced Biotechnology and Medicine Symposium, Piscataway, NJ,</u> "Stem cell self-renewal, cancer cell proliferation and aging"
- 11/06 <u>Cincinnati Children's Hospital, Cincinnati, OH,</u> "Stem cell self-renewal, cancer cell proliferation and aging"
- 11/10 Stanford Regenerating Life Symposium, Stanford CA, "Stem cell aging"
- 12/07 <u>Mount Sinai School of Medicine, New York, NY</u>, "Identifying hematopoietic stem cells and their niche"
- 12/14 <u>Keystone Symposium, Cancun, Mexico,</u> "Identifying hematopoietic stem cells and their niche"
- 2007 02/01 <u>INTACT 2007 Annual Meeting, Copenhagen, Denmark,</u> "Stem cell self-renewal, cancer cell proliferation and aging"
  - 02/16 <u>University of California at Los Angeles Stem Cell Center Symposium, Los Angeles, CA "Stem cell self-renewal throughout life"</u>
  - 03/04 <u>Keystone Symposium on Stem Cell Niches, Keystone, Colorado</u> "The vascular niche for hematopoietic stem cells"
  - 03/15 <u>University of California at San Diego, San Diego, CA</u> "Stem cell self-renewal throughout life"
  - 03/20 <u>USA-Japan Cooperative Cancer Workshop, Kauai, HI</u> "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 <u>University of Virginia, Charlottesville, VA</u> "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 <u>Children's Tumor Foundation NF Conference, Park City, UT</u> "Stem cell self-renewal throughout life"
- 06/19 <u>ISSCR Annual Meeting, Cairns, Australia</u> "Sox17 dependence distinguishes the transcriptional regulation of fetal from adult hematopoietic stem cells"
- 07/15 <u>Aspen Cancer Conference, Aspen CO</u> "Stem cell self-renewal, cancer cell proliferation and aging"
- 09/28 <u>ISEH Society for Hematology, Hamburg, Germany</u> "Hematopoietic stem cell maintenance throughout life"
- 10/03 <u>IRB Barcelona Biomed Conference, Barcelona, Spain</u> "Neural crest stem cells, neurofibromatosis and MPNST"
- 10/05 <u>CNIO (Spanish National Cancer Research Centre), Madrid, Spain</u> "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 <u>Silverstein Lecture, Northwestern University, Chicago, IL</u> "Stem cell biology at the interface of science and politics"
- 11/07 <u>University of California at San Francisco, San Francisco, CA</u> "Stem cell self-renewal"
- 11/09 <u>Stem Cell Network 7<sup>th</sup> Annual Scientific Meeting, Toronto, Canada</u> "Stem cell self-renewal"
- **2008** 01/10 <u>Southern California Stem Cell Consortium, Burnham Institute, San Diego, CA</u> "Stem cells and cancer"
  - 01/14 <u>University of Toronto Program in Immunology, Toronto, Canada</u> "Stem cells and cancer"
  - 02/14 <u>American Association for Cancer Research Meeting on Cancer and Stem Cells, Los Angeles, CA</u> "Stem cells and cancer"
  - 02/27 <u>Keystone Symposium on Tumor Suppressors and Stem Cell Biology, Vancouver,</u> Canada "Stem cell self-renewal versus cancer cell proliferation"
  - 03/28 <u>Keystone Symposium on Signaling Pathways in Cancer and Development.</u> 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 <u>University of Pennsylvania, Immunology Colloquium Seminar, Philadelphia, PA</u> "The regulation of stem cell self-renewal"
  - 04/16 <u>University of Wisconsin, 3<sup>rd</sup> Annual Wisconsin Stem Cell Symposium, Madison, WI</u> "Loss of Nf1 transiently promotes self-renewal but not tumorgenesis by neural crest stem cells"
  - 04/25 <u>University of North Carolina, Chapel Hill, NC</u> "The regulation of stem cell self-renewal"
  - 05/06 <u>Massachusetts Institute of Technology, Cambridge, MA</u> The regulation of stem cell self-renewal"
  - 05/22 <u>Chicago Transduction Symposium, Northwestern University, Chicago, IL</u> "The regulation of stem cell self-renewal"
  - 05/23 <u>University of California-San Francisco, San Francisco, CA</u> "Stem cell self-renewal versus cancer cell proliferation"

- 06/10 <u>Dana Farber Cancer Institute, Seminars in Oncology, Boston, MA</u> "The regulation of stem cell self-renewal"
- 06/12 <u>ISSCR Annual Meeting, Philadelphia, PA</u> "The regulation of stem cell self-renewal"
- 07/23 <u>Weissman Lab Symposium 2008, Hamilton, MT</u> "The regulation of stem cell self-renewal"
- 09/08 <u>Howard Hughes Medical Institute, Science Meeting, Chevy Chase, MD,</u> "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 <u>Keystone Symposia, Stem Cells, Cancer and Aging, Singapore,</u> "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 <u>American Association for Cancer Research, Mouse Models of Cancer,</u> San Francisco, CA, "What percentage of human cancer cells are tumorigenic?"
  - 01/28 <u>Keystone Symposium, Emerging Tumor Suppressors, Taos, NM,</u> "Hmga2 increases the self-renewal of fetal and young adult stem cells"
  - 02/24 <u>CNIO(Spanish National Cancer Research Centre)</u>, <u>Cancer Conference</u>, <u>Madrid</u>, <u>Spain</u>, "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 <u>USA-Japan Cooperative Cancer Workshop, Kona, HI</u> "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 <u>University of Pennsylvania, Institute for Regenerative Medicine, Philadelphia, PA</u> "The regulation of stem cell renewal"
  - 04/17 <u>Boston University School of Medicine, Stem Cell Symposium, Boston, MA,</u> "Stem cell self-renewal versus cancer cell proliferation"
  - 04/21 <u>Keystone Symposium, Stem Cell Niche Interactions, Whistler, British Columbia, Canada, Keynote Address</u> "Hematopoietic stem cell self-renewal"
  - 05/11 Carnegie Institution, Baltimore, MD, "The regulation of stem cell self-renewal"
  - 05/23 <u>University of Ulm, Symposium on Molecular Mechanisms of Adult Stem Cell Aging, Reisensburg, Germany,</u> "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 Technolgy, Boston, MA, "Cancer stem cells?"
  - 07/25 <u>Society for Developmental Biology Annual Meeting, San Francisco, CA,</u> "A forward genetic screen for stem cell self-renewal genes"
  - 08/03 <u>International Union of Biochemistry and Molecular Biology International</u>
    <u>Congress, Shanghai, China,</u> "A forward genetic screen for self-renewal genes"
  - 09/14 <u>Howard Hughes Medical Institute, Science Meeting, Chevy Chase, MD,</u> "A forward genetic screen for stem cell self-renewal genes"
  - 09/17 <u>Keynote Speaker, Wayne State University Graduate Student Research Day, Detroit, MI,</u> "The regulation of stem cell self-renewal"

- 09/22 <u>Cold Spring Harbor Symposium on Stem Cell Biology, Cold Spring Harbor, NY,</u> "A transposon mutagenesis suppressor screen for self-renewal genes"
- 11/01 <u>Society for Melanoma Research Annual Meeting, Boston, MA,</u> "Tumorigenic cells are common in melanoma and lack obvious hierarchical organization"
- 12/04 <u>American Society for Cell Biology Annual Meeting, San Diego, CA,</u> "Some cancers follow a stem cell model and some don't"
- 12/14 <u>American Association for Cancer Research Special Meeting on Brain Tumors, San Diego, CA,</u> "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 <u>University of California at San Diego, San Diego, CA</u>, "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 <u>Salk Institute, La Jolla, CA, "Heterogeneity among cancer cells: stem cells or clonal evolution"</u>
  - 02/24 <u>University of California at Berkeley, Berkeley, CA, "The regulation of stem cell self-renewal"</u>
  - 03/09 <u>Foundation IPSEN, Beriloche, Argentina,</u> "Some cancers follow a stem cell model, while other cancers have common tumorigenic cells with little or no hierarchical organization"
  - 03/19 <u>University of California at San Francisco, San Francisco, CA,</u> "Some cancers follow a stem cell model, and some don't"
  - 03/30 <u>Wayne State University, Detroit, MI,</u> "Some cancers follow a stem cell model, and some don't"
  - 04/08 <u>Cold Spring Harbor Asia, Suzhou, China,</u> "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 <u>2010 World Stem Cell Summit, Detroit, MI</u> Keynote Scientific Presentation, "Melanoma"
  - 10/05 Novartis Cancer Retreat, Keynote Speaker, Atlanta, GA "Cancer stem cells?"
  - 11/07 <u>Howard Hughes Medical Institute, Science Meeting, Chevy Chase, MD,</u> "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 <u>Leukemia and Lymphoma Society Symposium, Orlando, FL</u> "The hematopoietic stem cell niche"
- 2011 02/02 <u>Keystone Meeting on Stem Cells, Santa Fe, New Mexico</u> "Developmental changes in PI-3kinase pathway signaling influence stem cells and leukemia"

- 02/09 <u>Broad Center Opening Symposium, UCSF, San Francisco</u> "Reprogramming of adult stem cells to have fetal characteristics
- 02/16 <u>ABCAM Conference on Neurodegeneration and Stem Cells, Nassau, Bahamas</u> "Bmi-1 regulates neurological function throughout adult life"
- 02/21 <u>Univ of Texas Health Sciences Center San Antonio, Texas</u> "Stem cell selfrenewal throughout adult life"
- 03/10 <u>Keystone Meeting on Stem Cells, Cancer, and Metastasis</u>, Keynote Address "Tumorigenesis and metastasis in melanoma"
- 03/30 <u>Keystone Meeting on Hematopoiesis, Big Sky Montana,</u> "Regulation of temporal identity in stem cells."
- 04/02 <u>American Association for Cancer Research Annual Meeting, Orlando, Florida, Workshop on Metastasis and tumor dormancy,</u> "Melanoma tumorigenesis"
- 04/04 <u>American Association for Cancer Research Annual Meeting, Orlando, Florida, Forum on Cancer Stem Cells,</u> "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 <u>Cold Spring Harbor Laboratory meeting on Cancer Biology</u>, "Tumorigenic cell frequency"
- 04/29 <u>National Institutes of Health meeting for grantees studying the hematopoietic stem cell niche, Bethesda, MD,</u> "The hematopoietic stem cell niche"
- 05/05 <u>Howard Hughes Medical Institute science meeting, Janelia Farm,</u> "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 <u>International Society for Stem Cell Research Annual Meeting, Toronto CA</u> "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 <u>Aspen Cancer Conference, Aspen, CO,</u> "Melanoma growth, metastasis, and genetic change"
- 08/04 <u>Ellison Foundation Annual Meeting, Woods Hole, MA</u>, "Bmi-1, stem cell aging, and neurological function"
- 09/14 <u>Center for Cancer Systems Biology Series, Stanford, CA</u> "Stem cell self-renewal and cancer cell proliferation"
- 09/16 <u>American Association for Cancer Research Conference on Frontiers in Basic</u> 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 <u>Frontiers in Cancer Science 2011, Singapore</u> "Developmental changes in PI-3kinase pathway regulation lead to changes in hematopoietic stem cell self-renewal and leukemogenesis"
- 11/17 <u>Cambridge Research Institute, Cambridge, UK</u> "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 <u>American Association for Cancer Research Annual Meeting, Baynard Clarkson</u> 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 <u>Weizmann Institute of Science, Rehovot, Israel</u> "The hematopoietic stem cell niche"
- 05/06 <u>Meeting of NHLBI Stem Cell Niche RFA recipients, National Institutes of Health,</u> 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 <u>Baker Institute, Houston, TX</u> "Creating stem cell policy at the interface of science and politics"
- 09/13 <u>Rice University/MD Anderson, Houston, TX</u> "Stem cell self-renewal and leukemogensis"
- 10/01 <u>Geoffrey Beene Symposium-Sloan-Kettering, New York, NY</u> "Stem cell selfrenewal 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 <u>USC Norris Comprehensive Cancer Center, Los Angeles, CA</u> "Melanoma, tumorigenesis and metastasis"
- **2013** 01/15 Keystone Symposium-Hematopoiesis, Steamboat Springs, CO "Hematopoietic stem cell niche"
  - 02/23 <u>American Association for Cancer Research, Maui, Hawaii</u> "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 <u>America-Japan Leukemia Meeting, Maui, Hawaii</u> "HSC self-renewal and pre-leukemic expansion"
  - 04/08 <u>American Association for Cancer Research Annual Meeting, Washington, DC</u> "Stem cells in cancer"
  - 04/22 <u>University of Pennsylvania, Philadelphia, PA</u> "Stem cell self-renewal and cancer"
  - 05/16 MD Anderson, Houston, TX "Stem cell self-renewal and cancer"
  - 05/20 <u>Meeting of NHLBI Blood Stem Cell Niche RFA recipients, National Institutes of</u> Health, Bethesda, MD "Genetic analysis of stem cell maintenance in vivo"
  - 07/22 <u>Hebrew University, Stem Cells and Regenerative Biology Summer School</u> "Strengths and weaknesses of the cancer stem cell model"
  - 07/23 <u>Hebrew University, Stem Cells and Regenerative Biology Summer School</u> "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 <u>University of Michigan Comprehensive Cancer Center Annual Research Fall</u> Symposium "Stem cells and leukemogenesis"
- 10/10 <u>Howard Hughes Medical Institute science meeting, Janelia Farm, Virginia,</u> "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 <u>Nature Spanish National Cancer Research Centre (CNIO), Madrid, Spain</u> "Human melanoma heterogeneity and metastasis"
- 11/15 <u>Harvard University/Massachusetts General Hospital Center for Regenerative</u>
  <u>Medicine 10<sup>th</sup> Anniversary Symposium, Boston MA</u> "Stem cell self-renewal & leukemogeneis"
- 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 <u>Cold Spring Harbor Laboratory, New York, NY</u> "Stem cell self-renewal and leukemogenesis"
- 12/12 <u>Lecture Series and Graduate Student Course in Stem Cell Biology, Rockefeller University, New York, NY</u> "Hematopoietic stem cell niche"
- 2014 01/16 <u>Keystone Symposium on Aging, Steamboat Springs, CO</u> "Hematopoietic stem cells require a highly regulated rate of protein synthesis"
  - 01/30 Agensys, Los Angeles, CA "Melanoma tumorigenesis and metastasis"
  - 02/04 <u>Keystone Symposium on Stem Cells and Cancer, Banff, Alberta</u> "Hematopoietic stem cells require a highly regulated rate of protein synthesis"
  - 02/12 <u>Peter MacCallum Cancer Centre, Melbourne, Australia</u> "Stem cell self-renewal and leukemogenesis"
  - 02/15 <u>Lorne Cancer Conference, Lorne, Australia</u> "Haematopoietic stem cell self-renewal and leukemogenesis"
  - 03/05 <u>MD Anderson Experimental Therapeutics Seminar, Houston, TX</u> "Melanoma tumorigenesis and metastasis"
  - 03/26 <u>Cold Spring Harbor Laboratory, Cold Spring Harbor, NY</u> "Haematopoietic stem cells require a highly regulated protein synthesis rate"
  - 04/07 <u>American Association for Cancer Research Annual Meeting, San Diego, CA, Bayard Clarkson Symposium</u> "Stem cell self-renewal and cancer"
  - 04/08 <u>Lawrence Berkeley National Laboratory, Life Sciences Division, Berkeley, CA</u> "Melanoma tumorigenesis and metastasis"
  - 04/09 <u>University of California, San Francisco, Biomedical Sciences Seminar, San Francisco, CA</u> "The hematopoietic stem cell niche"
  - 05/05 Oregon Health and Science University, School of Medicine, Portland, OR "Melanoma tumorigenesis and metastasis"
  - 05/14 <u>University of Michigan, Life Sciences Institute Annual Symposium, Ann Arbor, MI</u> "The regulation of stem cell self-renewal"
  - 05/16 <u>Washington University Neurofibromatosis Center, St. Louis, MO</u> "Regulation of stem cells by Ras signaling"
  - 05/22 <u>University of Colorado, Cancer Biology Graduate Program, Denver, CO</u> "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 <u>Weill Cornell Medical College, Ansary Stem Cell Institute 10<sup>th</sup> Anniversary Symposium, New York, NY "The regulation of stem cell self-renewal"</u>

- 07/15 <u>Cambridge University MRC Laboratory of Molecular Biology</u>, Cambridge, UK "Hematopoietic stem cell niche"
- 08/22 <u>International Society for Hematology and Stem Cells Annual Scientific Meeting</u>, Montreal, Canada "Cancer, stem cells, and melanoma"
- 10/2 <u>Cold Spring Harbor Laboratory meeting on Aging,</u> Cold Spring Harbor, NY "Proteostasis in somatic stem cells"
- 10/8 <u>Cincinnati Children's Hospital</u>, 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 <u>University of Ottawa, Department of Cellular and Molecular Medicine Trainee</u> <u>Seminar Series</u>, Ottawa, Canada "The regulation of stem cell self-renewal"
- 11/14 <u>Duke Cancer Institute Annual Scientific Retreat</u>, Raleigh, NC "Melanoma heterogeneity and disease progression"
- 12/4 <u>Beth Israel Deaconess Medical Center Distinguished Lecture Seminar</u>, Boston, MA "Novel mechanisms of melanoma progression and treatment"
- 12/9 <u>Cell Symposia, Stem Cell Energetics</u>, Berkeley, CA "Reversible metabolic changes in human melanoma cells enable distant metastasis in vivo"
- **2015** 02/25 <u>Keystone Symposia, Hematopoiesis</u>, Keystone, CO "Hematopoietic stem and progenitor cells regulate niche regeneration by secreting angiopoietin-1"
  - 03/16 <u>US/Japan Meeting on Malignant Hematopoiesis</u>, Waikoloa, HI "Deep-imaging of stem cells in hematopoietic tissues and digital reconstruction of their microenvironment"
  - 03/27 <u>Acute Leukemia Forum</u>, 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 <u>Duke University School of Medicine Cancer Biology Seminar Series</u>, Raleigh, NC "The hematopoietic stem cell niche"
  - 05/06 <u>Howard Hughes Medical Institute science meeting, Janelia Farm, Virginia,</u> "The regulation of melanoma metastasis"
  - 08/07 <u>Salk Mechanisms and Models of Cancer Symposium</u>, LaJolla, CA "Mechanisms of melanoma metastasis"
  - 09/08 <u>University of Southern California Broad Center for Regenerative Medicine</u> <u>Seminar Series</u>, Pasadena, CA "The hematopoietic stem cell niche"
  - 09/18 Summit on Melanoma, Pasadena, CA "Mechanisms of melanoma metastasis"
  - 10/04 <u>Southwest Regional Society for Developmental Biology</u>, Dallas, TX "The hematopoietic stem cell niche"
  - 10/08 <u>Seattle Children's Research Institute</u>, Seattle, WA "The hematopoietic stem cell niche"
  - 10/09 <u>American Society for Bone and Mineral Research Annual Meeting</u>, Seattle, WA "Skeletal stem cells in adult bone marrow"
  - 10/30 <u>Sanford-Burnham Prebys Medical Discovery Institute Annual Symposium,</u> La Jolla, CA "The regulation of adult osteogenesis"
  - 11/14 <u>Cedars-Sinai Medical Center Symposium</u>, Los Angeles, CA "The hematopoietic stem cell niche"
  - 11/17 <u>Bayer Symposia on Hematopoiesis</u>, San Francisco, CA "The hematopoietic stem cell niche"

- 11/20 <u>Society for Melanoma Research 2015 Congress</u>, 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 <u>Stem Cell Research and Regenerative Medicine 2016 Conference</u>, San Antonio, TX "Stem cell niches in the bone marrow"
  - 02/22 <u>University of Pennsylvania Institute for Regenerative Medicine Seminar Series</u>, Philadelphia, PA "Adult niches for hematopoiesis and osteogenesis"
  - 02/24 <u>Columbia University Microbiology and Immunology Seminar Series</u>, New York, NY "The niche for hematopoiesis and osteogenesis in the bone marrow"
  - 03/07 <u>Keystone Conference on Stem Cells and Cancer</u>, 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 <u>University of Oklahoma</u>, Oklahoma City, OK "Stem cell niches for hematopoiesis and osteogenesis"
  - 04/04 <u>European Molecular Biology Organization EMBL Symposium on Tumor Microenvironment and Signaling</u>, Heidelberg, Germany, Keynote address "Oxidative stress inhibits distant metastasis by human melanoma cells"
  - 04/07 <u>German Cancer Institute Distinguished Lecturer Seminar Series</u>, Heidelberg, Germany "The niche for hematopoiesis and osteogenesis in the bone marrow"
  - 05/03 <u>Keystone Conference, Epigenetic and Metabolic Regulation of Aging</u>, Sante Fe, NM "Clec11A is necessary for the maintenance of the adult skeleton"
  - 05/11 New York State Stem Cell Meeting, New York, NY, Keynote address "Niches for hematopoietic and osteogenic stem cells"
  - 05/24 <u>Copenhagen Biosciences Conference</u>, Copenhagen, Denmark "Niches for hematopoietic and osteogenic stem cells in the bone marrow"
  - 05/26 <u>Lund University Stem Cell Center</u>, Lund, Sweden "Niches for hematopoietic and osteogenic stem cells in the bone marrow"
  - 06/02 Cold Spring Harbor Laboratory Symposium on Quantitative Biology, Cold Spring Harbor, NY "Metabolic regulation of stem cell frequency and tumor suppression"
  - 06/03 <u>Vanderbilt University Symposium on Cell Dynamics</u>, Nashville, TN "Osteogenic and hematopoietic niches"
  - 07/11 <u>European Association for Cancer Research Annual Meeting</u>, Manchester, UK "Recent progress in in vivo reprogramming"
  - 08/27 <u>International Society for Experimental Hematology Annual Meeting</u>, San Diego, CA "Bone marrow adipocytes promote hematopoietic regeneration"
  - 09/12 4th Annual German Stem Cell Network Conference, Hannover, Germany, "Stem niches in the bone marrow"
  - 09/14 <u>Biomedicum Helsinki</u>, Helsinki, Finland "Metabolic mechanisms of cancer initiation and progression"
  - 09/16 Wihuri Research Institute, Turku, Finland "Stem niches in the bone marrow"
  - 09/30 <u>University of Michigan Comprehensive Cancer Center Annual Research</u> Symposium "Metabolic control of cancer initiation and metastasis"
  - 10/05 <u>University of Calgary Developmental Biology and Genetics Seminar</u>, Calgary, Alberta "Stem cell niches in the bone marrow"
  - 10/06 MD Anderson Symposium on Cancer Research, Houston, TX "Mechanisms of melanoma metastasis"

- 10/28 AACR Special Conference on Translational Control of Cancer, San Francisco, CA "Protein synthesis in stem cells"
- 11/02 <u>Beth Israel Deaconess Medical Center Annual Cancer Symposium</u>, Boston, MA "Metabolic regulation of stem cell function and tumor suppression"
- 11/04 <u>Beckman Symposium on Stem Cells and Regenerative Medicine</u>, City of Hope, Duarte CA "Niches for stem cells in the bone marrow"
- 11/11 <u>Yale Stem Cell Center</u>, Yale University, New Haven, CT "Stem cell niches in the bone marrow"
- 12/03 <u>American Society for Cell Biology Annual Meeting,</u> San Francisco, CA "Stem cells and cancer"
- **2017** 01/17 <u>Stanford Cancer Biology Seminar Series</u>, Stanford, CA "Metabolic regulation of stem cells and cancer"
  - 02/12 <u>Gordon Research Conference (Stem Cells & Cancer)</u>, Lucca, Italy "Metabolic mechanisms regulating cancer initiation"
  - 02/24 <u>US-Japan Hematologic Symposium</u>, Waikoloa, Hawaii "Metabolic regulation of leukemogenesis"
  - 03/10 <u>UC San Diego Division of Regenerative Medicine Third Annual Symposium</u>, San Diego, CA "Stem cell niches in the bone marrow"
  - 03/23 <u>Fox Chase Cancer Center Distinguished Lecturer Seminar</u>, Philadelphia, PA "Metabolic mechanisms of cancer initiation and progression"
  - 03/30 <u>Dana Farber Cancer Institute BMT/HM Grand Rounds</u>, Boston, MA "The hematopoietic stem cell niche"
  - 03/31 <u>Harvard Stem Cell Institute Cancer Program Symposium</u>, Boston, MA "Metabolic regulation of cancer initiation and progression"
  - 04/10 <u>Columbia Cancer Center Annual Symposium, Keynote Speaker</u>, New York, NY "Metabolic regulation of cancer initiation and progression"
  - 04/11 <u>Banbury Center Meeting "Better Cancer Therapy from Redox Biology"</u>, Cold Spring Harbor, NY. "Distant metastasis requires cancer cells to adapt to oxidative stress"
  - 04/29 <u>Texas Dermatological Society Annual Spring Meeting, James N. Gilliam</u> Memorial Lecturer, Dallas, TX "Antioxidants and melanoma progression"
  - 05/02 Northwestern University Distinguished Annual Cancer Center Malkin-Kraft Lecture, Chicago, IL "Metabolic Mechanisms of Cancer Initiation and Progression"
  - 05/22 <u>University of Oxford Weatherall Institute of Molecular Medicine Seminar Series,</u> Oxford, UK "Stem cell niches in the bone marrow"
  - 05/25 <u>EMBO Conference: Advances in Stem Cells and Regenerative Medicine,</u> Heidelberg, Germany "Metabolic regulation of stem cells in vivo"
  - 06/12 <u>Third Annual Center for Skeletal Research Symposium</u>, Harvard University, Boston, MA "New mechanisms that regulate adult skeleton maintenance"
  - 06/15 <u>International Society for Stem Cell Research 2017 Annual Meeting</u>, Boston, MA "The metabolic regulation of stem cell function and leukemogenesis"
  - 07/18 <u>International Society on Thrombosis and Hemostasis 2017 Congress</u>, Berlin, Germany, Sol Sherry lecture "Bone Marrow Niches"
  - 09/15 <u>Huntsman Cancer Institute Symposium: Frontiers in Cancer Prevention,</u>
    Research and Therapy, Salt Lake City, UT "Metabolic mechanisms of cancer initiation and progression"
  - 09/28 Rockefeller University Stem Cell Lecture, New York, NY "The hematopoietic stem cell niche"

- 09/29 <u>Columbia University Stem Cell Initiative</u>, New York, NY "The hematopoietic stem cell niche"
- 11/16 National Institute of Health, Bethesda, MD "Stem Cell Aging"
- 11/20 <u>Moffitt Cancer Center</u>, Tampa FL "The Metabolic Regulation of Cancer Initiation and Progression"

#### **ISSUED PATENTS**

- 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. **S.J. Morrison** and E. Kruger. Postnatal gut neural crest stem cells, US Patent number 8,043,853, Date of patent 10/25/2011
- 9. 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
- 10. O.H. Yilmaz, M.J. Kiel, **S.J. Morrison**, T. Iwashita. Hematopoietic Stem Cell Identification and Isolation, US Patent number 8,383,404, Date of patent 02/26/2013
- 11. **S.J. Morrison**, J.K. Mich. Identification and Isolation of Neural Stem Cells and Neurosphere Initiating Cells, US Patent application number 15/308,671, Filing date 11/03/2016
- 12. M.F. Clarke, **S.J. Morrison**, M.S. Wicha, M. Al-Hajj. Isolation an duse of solid tumor stem cells., US Patent number 9,492,538, Date of patent 11/15/2016
- 13. **S.J. Morrison**, E. Piskounova, U. Eskiocak. Combination treatments for melanoma, US Patent number 9,561,245, Date of patent 02/07/2017
- 14. **S.J. Morrison**, U. Eskiocak. Treatment for melanoma, US Patent number 9,572,828, Date of patent 02/21/2017

#### **BIBLIOGRAPHY**

#### Peer-Reviewed Publications

- Morrison, S.J., P.A. Nicholl, and P.R. Hicklenton. 1993. VA Mycorrhizal inoculation of landscape trees and shrubs growing under high fertility conditions. Journal of Environmental Horticulture 11:64-71.
- 2. Morrison, S.J., E. Lagasse, and I.L. Weissman. 1994. Demonstration that Thy<sup>lo</sup> subsets of mouse bone marrow that express high levels of lineage markers are not significant hematopoietic progenitors. **Blood** 83:3480-3490. PMID 7515713
- Morrison, S.J. and I.L. Weissman. 1994. The long term repopulating subset of hematopoietic stem cells is deterministic and isolatable by phenotype. Immunity 1:661-673. PMID 7541305
- 4. Morrison, S.J., H.D. Hemmati, A.M. Wandycz, and I.L. Weissman. 1995. The purification and characterization of fetal liver hematopoietic stem cells. **Proceedings of the National Academy of Sciences USA** 92:10302-10306. PMC40784
- Morrison, S.J., K.R. Prowse, P. Ho, and I.L. Weissman. 1996. Telomerase activity in hematopoietic cells is associated with self-renewal potential. Immunity 5:207-216. PMID 8808676
- 6. Morrison, S.J., A.M. Wandycz, K. Akashi, A. Globerson, and I.L. Weissman. 1996. The aging of hematopoietic stem cells. **Nature Medicine** 2:1011-1016.
- 7. Morrison, S.J.\*, D.E. Wright\*, and I.L. Weissman. 1997. Cyclophosphamide/granulocyte colony-stimulating factor induces hematopoietic stem cells to proliferate prior to mobilization. **Proceedings of the National Academy of Sciences USA** 94:1908-1913. \*These authors contributed equally. PMC20016
- 8. Morrison, S.J., A.M. Wandycz, H.D. Hemmati, D.E. Wright, and I.L. Weissman. 1997. Identification of a lineage of multipotent hematopoietic progenitors. **Development** 124:1929-1939. PMID 9169840
- 9. Morrison, S.J., N.M. Shah, and D.J. Anderson. 1997. Regulatory mechanisms in stem cell biology. **Cell** 88:287-298.
- Klug, C.A., <u>S.J. Morrison</u>, M. Masek, K. Hahm, S.T. Smale, and I.L. Weissman. 1998. Hematopoietic stem cells and lymphoid progenitors express different lkaros isoforms and lkaros is localized to heterochromatin in immature lymphocytes. **Proceedings of the National Academy of Sciences USA** 95:657-662. PMC18476
- 11. Morrison, S.J., P.M. White, C. Zock, and D.J. Anderson. 1999. Prospective identification, isolation by flow cytometry and in vivo self-renewal of multipotent mammalian neural crest stem cells. **Cell** 96:737-749. PMID 10089888

- 12. Cheshier, S.H., <u>S.J. Morrison</u>, X. Liao, and I.L. Weissman. 1999. In vivo proliferation and cell cycle kinetics of long-term self-renewing hematopoietic stem cells. **Proceedings of the National Academy of Sciences USA** 96:3120-3125. PMC15905
- Morrison, S.J., S.E. Perez, Z. Qiao, J.M. Verdi, C. Hicks, G. Weinmaster, and D.J. Anderson. 2000. Transient Notch activation causes an irreversible switch from neurogenesis to gliogenesis by neural crest stem cells. Cell, 101:499-510. PMID 10850492
- Morrison, S.J., M. Csete, A.K. Groves, W. Melega, B. Wold, and D.J. Anderson. 2000. Culture in reduced levels of oxygen promotes clonogenic sympathoadrenal differentiation by isolated neural crest stem cells. **Journal of Neuroscience**, 20:7370-7376. PMID 11007895
- 15. White, P.M., <u>S.J. Morrison</u>, K. Orimoto, C.J. Kubu, J.M. Verdi, and D.J. Anderson. 2001. Neural crest stem cells undergo cell-intrinsic developmental changes in sensitivity to instructive differentiation signals. **Neuron** 29: 57-71. PMID 11182081
- 16. Reya, T\*, <u>S.J. Morrison</u>\*, M.F. Clarke, and I.L. Weissman. 2001. Stem cells, cancer, and cancer stem cells. **Nature** 414:105-111. \* These authors contributed equally.
- 17. Morrison, S.J., D. Qian, L. Jerabek, B. Thiel, I. Park, P.S. Ford, M.J. Kiel, N.J. Schork, I.L. Weissman, and M.F. Clark. 2002. A genetic determinant that specifically regulates the frequency of hematopoietic stem cells. **Journal of Immunology** 168:635-642. PMID 11777956
- Kubu, C., K. Orimoto, <u>S.J. Morrison</u>, G. Weinmaster, D.J. Anderson, and J.M. Verdi. 2002. Developmental changes in Notch 1 and Numb expression mediated by local cell – cell interactions underlie progressively increasing Delta sensitivity in neural crest stem cells. **Developmental Biology** 244:199-214. PMID 11900468
- 19. Bixby, S., G.M. Kruger, J.T. Mosher, N. Joseph, and <u>S.J. Morrison</u>. 2002. Cell-intrinsic differences between neural stem cells from different regions of the peripheral nervous system regulate the generation of neural diversity. **Neuron** 35:643-656. PMID 12194865
- 20. Kruger, G.M., J. Mosher, S. Bixby, N. Joseph, T. Iwashita, and <u>S.J. Morrison</u>. 2002. Neural crest stem cells persist in the adult gut but undergo perinatal changes in self-renewal potential, neuronal subtype potential, and responsiveness to lineage determination factors. **Neuron** 35:657-669. PMC2728576
- 21. Kruger, G.M. and <u>S.J. Morrison</u>. 2002. Brain repair by endogenous progenitors. **Cell** 110:399-402. PMID 12202029
- 22. Al-Hajj, M., M. Wicha, A. Benito-Hernandez, <u>S.J. Morrison</u> and M.F. Clarke. 2003. Prospective identification of tumorigenic breast cancer cells. **Proceedings of the National Academy of Sciences USA** 100:3983-3988. PMC153034
- 23. Park, I-K, Q. Dalong, M. Kiel, M.W. Becker, M. Pihalja, I.L. Weissman, <u>S.J. Morrison</u>, and M.F. Clarke. 2003. Bmi-1 is required for maintenance of adult self-renewing haematopoietic stem cells. **Nature** 423:302-305. PMID 12714971

- 24. Iwashita, T., G.M. Kruger, R. Pardal, M.J. Kiel, and <u>S.J. Morrison</u>. 2003. Hirschsprung disease is linked to defects in neural crest stem cell function. **Science** 301:972-976. PMC2614078
- 25. Molofsky, A.V., R. Pardal, T. Iwashita, I.K. Park, M.F. Clarke, and <u>S.J. Morrison</u>. 2003. *Bmi-1* dependence distinguishes neural stem cell self-renewal from progenitor proliferation. **Nature** 425:962-967. PMC2614897
- 26. Alvarez-Dolado, M., R. Pardal, J.M. Garcia-Verdugo, J.R. Fike, H.O. Lee, K. Pfeffer, C. Lois, S.J. Morrison, and A. Alvarez-Buylla. 2003. Fusion of bone-marrow-derived cells with Purkinje neurons, cardiomyocytes and hepatocytes. **Nature** 425:968-973. PMID 14555960
- 27. Pardal, R., M.F. Clarke, and <u>S.J. Morrison</u>. 2003. Applying the principles of stem cell biology to cancer. **Nature Reviews Cancer** 3:895-902. PMID 14737120
- Kruger G.M., J. T. Mosher, Y.H. Tsai, K.J. Yeager, T. Iwashita, C. E. Gariepy, and <u>S.J. Morrison</u>. 2003. Temporally distinct requirements for endothelin receptor B in the generation and migration of gut neural crest stem cells. **Neuron** 40:917-929. PMID 14659091
- 29. Park, I.K., <u>S.J. Morrison</u>, and M.F. Clarke. 2004. Bmi1, stem cells, and senescence regulation. **Journal of Clinical Investigation** 113:175-179. PMC311443
- 30. Oravecz-Wilson, K.I., M.J. Kiel, L. Li, D.S. Rao, D. Saint-dic, P.D. Kumar, M.M. Provot, S.V. Bradley, K.D. Hankenson, V.N. Reddy, A.P. Lieberman, <u>S.J. Morrison</u>, and T.S. Ross. 2004. Huntingtin interacting protein 1 mutations lead to abnormal hematopoiesis, spinal defects and cataracts. **Human Molecular Genetics** 13:851-867. PMID 14998932
- 31. Joseph, N.M., Y. Mukoyama, J.T. Mosher, M. Jaegle, S.A. Crone, E.L. Dormand, K.F. Lee, D. Meijer, D.J. Anderson, and <u>S.J. Morrison</u>. 2004. Neural crest stem cells undergo multilineage differentiation in developing peripheral nerves to generate endoneurial fibroblasts in addition to Schwann cells. **Development** 131: 5599-5612. PMC2638001
- 32. Kiel, M.J., T. Iwashita, O.H. Yilmaz, and <u>S.J. Morrison</u>. 2005. Spatial differences in hematopoiesis but not in stem cells indicate a lack of regional patterning in definitive hematopoietic stem cells. **Developmental Biology** 283: 29-39. PMID 15913595
- 33. Molofsky, A.V., S. He, M. Bydon, <u>S.J. Morrison</u> and R. Pardal. 2005. Bmi-1 promotes neural stem cell self-renewal and neural development but not mouse growth and survival by repressing the p16<sup>lnk4a</sup> and p19<sup>Arf</sup> senescence pathways. **Genes and Development** 19:1432-1437. PMC1151659
- 34. Kiel, M.J., O.H. Yilmaz, T. Iwashita, C. Terhorst, and <u>S.J. Morrison</u>. 2005. SLAM family receptors distinguish hematopoietic stem and progenitor cells and reveal endothelial niches for stem cells. **Cell** 121: 1109-1121. PMID 15989959
- 35. Kim, I., O.H. Yilmaz, and <u>S.J. Morrison</u>. 2005. CD144 (VE-cadherin) is transiently expressed by fetal liver stem cells. **Blood** 106: 903-905. PMC1895147

- 36. Joseph, N.M. and <u>S.J. Morrison</u>. 2005. Toward an understanding of the physiological function of mammalian stem cells. **Developmental Cell** 9:173-183. PMID 16054025
- 37. Yilmaz, O.H., M.J. Kiel, and <u>S.J. Morrison</u>. 2006. SLAM family markers are conserved among hematopoietic stem cells from old and reconstituted mice and markedly increase stem cell purity. **Blood** 107: 924-930. PMC1895895
- 38. Kim, I., S. He, O.H. Yilmaz, M.J. Kiel, and <u>S.J. Morrison</u>. 2006. Enhanced purification of fetal liver hematopoietic stem cells using SLAM family receptors. **Blood** 108:737-744. PMC1895480
- 39. Yilmaz, O.H., R. Valdez, B. Theisen, W. Guo, D. Ferguson, H. Wu and <u>S.J. Morrison</u>. 2006. Pten dependence distinguishes haematopoietic stem cells from leukaemia-initating cells. **Nature** 441: 475-482. PMID 16598206
- 40. Morrison, S.J. and J. Kimble. 2006. Asymmetric and symmetric stem-cell divisions in development and cancer. **Nature** 441: 1068-1074. PMID 16810241
- 41. Molofsky, A.V., S.G. Slutsky, N.M. Joseph, S. He, R. Pardal, J. Krishnamurthy, N. Sharpless and <u>S.J. Morrison</u>. 2006. Increasing p16 *Ink4a* expression decreases forebrain progenitor function and neurogenesis during ageing. **Nature** 443: 448-452. PMC2586960
- 42. Mosher, J.T., K.J. Yeager, G.M. Kruger, N.M. Joseph, M.E. Hutchin, A.A. Dlugosz and <u>S. J. Morrison.</u> 2007. Intrinsic differences among spatially distinct neural crest stem cells in terms of migratory properties, fate determination, and ability to colonize the enteric nervous system. **Developmental Biology** 303: 1-15. PMC1910607
- 43. Taylor, M.K., K.J. Yeager and <u>S.J. Morrison</u>. 2007. Physiological Notch signaling promotes gliogenesis in the peripheral and central nervous systems. **Development** 134: 2435-2447. PMC2653864
- 44. Kim, I., T.L. Saunders and <u>S.J. Morrison</u>. 2007. Sox17 dependence distinguishes the transcriptional regulation of fetal from adult hematopoietic stem cells. **Cell** 130: 470-483. PMC2577201
- 45. Kiel M.J., G.L. Radice and <u>S.J. Morrison</u>. 2007. Lack of evidence that hematopoietic stem cells depend on N-cadherin-mediated adhesion to osteoblasts for their maintenance. **Cell Stem Cell** 1: 204-217. PMID 18371351
- 46. Kiel M.J., S. He, R. Ashkenazi, S.N. Gentry, M. Teta, J.A. Kushner, T. L. Jackson and <u>S.J. Morrison</u>. 2007. Hematopoietic stem cells do not asymmetrically segregate chromosomes or retain bromodeoxyuridine. **Nature** 449: 238-242. PMC2633872
- 47. Zhang, Y., S. N. Zolov, C.Y. Chow, S.G. Slutsky, S.C. Richardson, R.C. Piper, B. Yang, J.J. Nau, R.J. Westrick, <u>S.J. Morrison</u>, M.H. Meisler, and L.S. Loss of Vac14, a regulator of the signaling lipid phosphatidylinositol 3,5-bisphosphate, results in neurodegeneration in mice. **Proceedings of the National Academy of Sciences USA** 104:17518-17523. PMC2077288
- 48. Joseph, N.M., J.T. Mosher, J. Buchstaller, P. Snider, P.E. McKeever, M. Lim, S. J. Conway,

- L.F. Parada, Y. Zhu, and <u>S. J. Morrison</u>. 2008. The loss of Nf1 transiently promotes self-renewal but not tumorigenesis by neural crest stem cells. **Cancer Cell** 13: 129-140. PMC2566828
- 49. Morrison, S.J. and A. Spradling. 2008. Stem Cells and Niches: Mechanisms that promote stem cell maintenance throughout life. **Cell** 132: 598-611. PMC4505728
- 50. Kiel, M.J. and <u>S.J. Morrison</u>. 2008. Uncertainty in the niches that maintain haematopoietic stem cells. **Nature Reviews Immunology** 8: 290-301. PMID 18323850
- 51. Kiel M.J., O.H. Yilmaz and <u>S.J. Morrison</u>. 2008. CD150- cells are transiently reconstituting multipotent progenitors with little or no stem cell activity. **Blood** 111: 4413-4. PMC2293285
- 52. Nishino, J., I. Kim, K. Chada and <u>S.J. Morrison</u>. 2008. Hmga2 promotes neural stem cell self-renewal in young, but not old, mice by reducing p16 lnk4a and p19*Arf* expression. **Cell** 135: 227-239. PMC2582221
- 53. Levi B.P., O.H. Yilmaz, G. Duester, and <u>S.J. Morrison</u>. 2008. Aldehyde dehydrogenase 1a1 is dispensable for stem cell function in the mouse hematopoietic and nervous systems. **Blood** 113: 1670-1680. PMC2647681
- 54. Quintana, E., M. Shackleton, M. Sabel, D.Fullen, T.M. Johnson, and <u>S.J. Morrison</u>. 2008. Efficient tumor formation by single human melanoma cells. **Nature** 456:593-598. PMC2597380
- 55. Kiel M.J., M. Acar, G.L. Radice and <u>S.J.Morrison</u>. 2008. Hematopoietic stem cells do not depend on N-cadherin to regulate their maintenance. **Cell Stem Cell** 4:170-179. PMC2681089
- 56. Shackleton, M., E. Quintana, E. Fearon and <u>S.J. Morrison</u>. 2009. Heterogeneity in cancer: cancer stem cells versus clonal evolution. **Cell** 138: 822-829. PMID 19737509
- 57. He, S., D. Nakada and <u>S. J. Morrison</u>. 2009. Mechanisms of stem cell self-renewal. **Annual Review of Cell and Developmental Biology** 25: 16.1-16.30. PMID 19575646
- 58. Oravecz-Wilson, K. I., S.T. Philips, Ö.H. Yilmaz, H.M. Ames, L. Li, B.D. Crawford, A.M. Gauvin, P.C. Lucas, K. Sitwala, J.R. Downing, <u>S. J. Morrison</u>, T.S. Ross. 2009. Persistence of leukemia-Initiating cells in a conditional knockin model of an Imatinib-responsive myeloproliferative disorder. **Cancer Cell** 16:137-148. PMC2763369
- 59. Song, J., M.J. Kiel, Z. Wang, J. Wang, R.S. Taichman, <u>S. J. Morrison</u> and P. H. Krebsbach. 2009. An *in vivo* model to study and manipulate the hematopoietic stem cell niche. **Blood** 115: 2592-2600. PMC2852363
- 60. Mosher, J.T., T.J. Pemberton, K. Harter, C. Wang, E.O. Buzbas, P. Dvorak, C. Simón, S.J. Morrison\*, N.A. Rosenberg. 2009. Lack of Population Diversity in Human Embryonic Stem Cell Lines. New England Journal of Medicine 362:183-185 \* corresponding author. PMID 20018958
- 61. Irion, S., R.L. Clarke, H. Luche, I. Kim, <u>S.J. Morrison</u>, H.J. Fehling and G.M. Keller. 2010. Temporal specification of blood progenitors from mouse embryonic stem cells and

- induced pluripotent stem cells. **Development** 137: 2829-39. PMC2938916
- 62. Chuikov, S., B.P. Levi, M.L. Smith and <u>S.J. Morrison</u>. 2010. Prdm16 promotes stem cell maintenance in multiple tissues, partly by regulating oxidative stress. **Nature Cell Biology** 12: 999-1006. PMC2948585
- 63. Liu, F., J.Y. Lee, H. Wei, O. Tanabe, J.D. Engel, <u>S.J. Morrison</u> and J.L. Guan. 2010. FIP200 is cell-autonomously required for the maintenance of fetal hematopoietic stem cells. **Blood** 116: 4806-14. PMC3321744
- 64. Lee, J.Y., D. Nakada, O.H. Yilmaz, Z. Tothova, N.M. Joseph, M.S. Lim, D.G. Gilliland and <u>S.J. Morrison</u>. 2010. mTOR activation induces tumor suppressors that inhibit leukemogenesis and deplete hematopoietic stem cells after *Pten* deletion. **Cell Stem Cell** 7: 593-605. PMC2995996
- 65. Nishino, J., T.L. Saunders, K. Sagane and <u>S.J. Morrison</u>. 2010. Lgi4 promotes the proliferation and differentiation of glial lineage cells throughout the developing peripheral nervous system. **Journal of Neuroscience** 30: 15228-40. PMC3059102
- 66. Quintana, E., M. Shackleton, D.R. Fullen, M.S. Sabel, T.M. Johnson and <u>S.J. Morrison</u>. 2010. Phenotypic heterogeneity among tumorigenic melanoma cells from patients that is reversible and not hierarchally organized. **Cancer Cell** 18: 510-523. PMC3031091
- 67. Nakada, D., T.L. Saunders and <u>S.J. Morrison</u>. 2010. Lkb1 is required to regulate quiescence, energy metabolism, and mitosis in haematopoietic stem cells. **Nature** 468: 653-658. PMC3059717
- 68. Larochelle, A., M.Savona, M.Wiggins, S. Anderson, K.Keyvanfar, <u>S.J. Morrison</u> and C. Dunbar. 2011. Human and rhesus macaque haematopoictic stem cells cannot be purified based only upon SLAM family markers. **Blood** 117:1550-1554. PMC3318774
- 69. Onafuwa-Nuga, A.A., C.C.Carter, L.A. McNamara, M. Shackleton, J.Riddell, D. Bixby, M.R. Savona, S. Cinti, <u>S.J. Morrison</u> and K.L. Collins. 2011. Hematopoietic stem and progenitor cells serve as long-term reservoirs of CXCR4-tropic HIV strains and are a source of persistent viremia in patients on HAART. **Cell Host and Microbe** 9:223-234.
- 70. White, R.M., J. Cech, C.J. Burke, M. Tomlinson, J. Mosher, C. Kaufman, B. Rahl, C.Y. Lin, S. Ratanasirintrawoot, F. Chen, H. Long, M. Kramer, S. Datta, D. Neuberg, S. Granter, R, Young, S.J. Morrison, G. Wheeler, and L.I. Zon. 2011. DHODH modulates transcriptional elongation in the neural crest and melanoma. **Nature** 471:518-522. PMC3759979
- 71. Nakada, D., B.P. Levi, and <u>S.J. Morrison</u>. 2011. Integrating physiological regulation with stem cell and tissue homeostasis. **Neuron** 70:703-18. PMC4521627
- 72. He, S., I. Kim, M.S. Lim, and <u>S.J. Morrison</u>. 2011. Sox17 expression confers self-renewal potential and fetal stem cell characteristics upon adult hematopoietic progenitors. **Genes & Development** 25:1613-1627. PMC3182027
- 73. Joseph, N.M., S. He, E. Quintana, Y-G. Kim, G. Núñez, and <u>S.J. Morrison</u>. 2011. Enteric glia are multipotent in culture but primarily form glia in the adult rodent gut. **Journal of Clinical Investigation** 121:3398-3411. PMC3163971

- 74. Buchstaller, J., P.E. McKeever, and <u>S.J. Morrison</u>. 2012. Tumorigenic cells are common in mouse MPNSTs but their frequency depends upon tumor genotype and assay conditions. **Cancer Cell** 21:240-52. PMC3285409
- 75. Magee, J.A., E. Piskounova and <u>S.J. Morrison</u>. 2012. Cancer stem cells: impact, heterogeneity, and uncertainty. **Cancer Cell** 21:283-96. PMC4504432
- 76. Ding, L., T.L. Saunders, G. Enikolopov, and <u>S.J. Morrison</u>. 2012. Endothelial and perivascular cells maintain hematopoietic stem cells. **Nature** 481:457-462. PMC3270376
- 77. Magee, J.A., T. Ikenoue, D. Nakada, J.Y. Lee, K.-L. Guan, and <u>S.J. Morrison</u>. 2012. Temporal changes in PTEN and mTORC2 regulation of hematopoietic stem cell self-renewal and leukemia suppression. **Cell Stem Cell** 11:415–428. PMC3447536
- 78. Quintana, E., E. Piskounova, M. Shackleton, D. Weinberg, U. Eskiocak, D.R. Fullen, T.M., and <u>S.J. Morrison</u>. 2012. Human melanoma metastasis in NSG mice correlates with clinical outcome in patients. **Science Translational Medicine** 4,159ra149. PMC4501487
- 79. Yang, H., S. Lee, S. Lee, K. Kim, Y. Yang, J.H. Kim, R.H. Adams, J.M. Wells, <u>S.J. Morrison</u>, G.Y. Koh, and I. Kim. 2013. Sox17 promotes tumor angiogenesis and destabilizes tumor vessels in mice. **Journal of Clinical Investigation** 123:418–431. PMC3533291
- 80. Signer, RA and <u>S.J. Morrison</u>. 2013. Mechanisms that regulate stem cell aging and life span. **Cell Stem Cell** 12:152-65. PMC3641677
- 81. Ding, L. and <u>S.J. Morrison</u>. 2013. Haematopoietic stem cells and early lymphoid progenitors occupy distinct bone marrow niches. **Nature** 495:231-235. PMC3600153
- 82. Suzuki, T., D. Bridges, D. Nakada, G. Skiniotis, <u>S.J. Morrison</u>, J. Lin, A. Saltiel, and K. Inoki. 2013. Inhibition of AMPK catabolic action by GSK3. **Molecular Cell** 50:1-13. PMC3654099
- 83. Oguro, H., L. Ding, and <u>S.J. Morrison</u>. 2013. SLAM family markers resolve functionally distinct subpopulations of hematopoietic stem cells and multipotent progenitors. **Cell Stem Cell** 13:102-116. PMC3736853
- 84. Nishino, J., K. Sunjung, Y. Zhu, H. Zhu, and <u>S.J. Morrison</u>. 2013. A network of heterochronic genes including Imp1 regulates temporal changes in stem cell properties. **eLIFE** 10.7554/eLife00924. PMC3817382
- 85. Meacham, C.E., and <u>S.J. Morrison</u>. 2013. Tumor heterogeneity and cancer cell plasticity. **Nature** 501:328-337. PMC4521623
- 86. Li, Q., N. Bohin, T. Wen, V. Ng, J. Magee, S.C. Chen, K. Shannon, and <u>S.J. Morrison</u>. 2013. Oncogenic Nras has bimodal effects on stem cells that sustainably increase competitiveness. **Nature** 504:143-147. PMC4128640
- 87. Morrison, S.J., and D.T. Scadden. 2014. The bone marrow niche for haematopoietic stem cells. **Nature** 505:327-334. PMC4514480

- 88. Nakada, D., H. Oguro, B. Levi, N. Ryan, A. Kitano, Y. Saitoh, M. Takeichi, G. Wendt, and <u>S.J. Morrison</u>. 2014. Oestrogen increases haematopoietic stem-cell self-renewal in females and during pregnancy. **Nature** 505:555-558. PMC4015622
- 89. Signer, R.A.J., J.A. Magee, A. Salic, <u>S.J. Morrison</u>. 2014. Haematopoietic stem cells require a highly regulate protein synthesis rate. **Nature** 509:49-54. PMC4015626
- Mich, J.K., R.A.J. Signer, D. Nakada, A. Pineda, R.J. Burgess, T.Y. Vue, J.E. Johnson, <u>S.J. Morrison</u>. 2014. Prospective identification of functionally distinct stem cells and neurosphere-initiating cells in adult mouse forebrain. **eLIFE** 10.7554/eLife.02669. PMC4038845
- 91. Burgess, R. J., M. Agathocleous, <u>S.J. Morrison</u>. 2014. Metabolic regulation of stem cell function. **Journal of Internal Medicine** 276: 12-24. PMC4119467
- 92. Zhou, B.O., R. Yue, M. M. Murphy, J.G. Peyer, <u>S.J. Morrison</u>. 2014. Leptin-receptor-expressing mesenchymal stromal cells represent the main source of bone formed by adult bone marrow. **Cell Stem Cell** 15:154-168. PMC4127103
- 93. Buszczak, M., R.A.J. Signer, <u>S.J. Morrison</u>. 2014. Cellular differences in protein synthesis regulate tissue homeostasis. **Cell** 159:242-251. PMC4222182
- 94. Burberry, A., M.Y. Zeng, L. Ding, I. Wicks, N. Inohara, <u>S.J. Morrison</u>, G. Nunez. 2014. Infection mobilizes hematopoietic stem cells through cooperative NOD-like receptor and toll-like receptor signaling. **Cell Host & Microbe** 15:779-791. PMC4085166
- 95. Zhou, B., L. Ding, <u>S.J. Morrison</u>. 2015. Hematopoietic stem and progenitor cells regulate the regeneration of their niche by secreting Angiopoietin-1. **eLIFE** 10.7554/eLife.05521. PMC4411515
- 96. Pitt, L. A., A. Tikhonova, H. Hu, T. Trimarchi, B. King, Y. Gong, M. Sanchez-Martin, A. Tsirigos, D.R. Littman, A. Ferrando, <u>S.J. Morrison</u>, D.R. Fooksman, I. Aifantis, S.R. Schwab. 2015. CXCL12-producing vascular endothelial niches control acute T cell leukemia maintenance. **Cancer Cell** 27:755-68. PMC4461838
- 97. Bednar, F., H. K. Schofield, M. A. Collins, W. Yan, Y. Zhang, N. Shyam, J. Eberle, L. L. Almada, K. Olive, N. Bardeesy, M. E. Fernandez-Zapico, D. Nakada, D. M. Simeone, <u>S. J. Morrison</u>, M. Pasca di Magliano. 2015. Bmi1 is required for the initiation of pancreatic cancer through an Ink4a-independent mechanism. **Carcinogenesis** 36:730-38. PMC 4566095
- 98. Acar, M., K.S. Kocherlakota, M.M. Murphy, J.G. Peyer, H. Oguro, C.N. Inra, C.J. Jaiyeola, Z. Zhao, K. Luby-Phelps and <u>S.J. Morrison</u>. 2015. Deep imaging of bone marrow shows non-dividing stem cells are mainly perisinusoidal. **Nature** 526:126-130. PMID26416744
- 99. Piskounova, E., M. Agathocleous, Z. Hu, S. Mann, Z. Zhao, A.M. Leitch, T.M. Johnson, R.J. DeBerardinis and <u>S.J. Morrison</u>. 2015. Reversible metabolic changes in human melanoma cells enable distant metastasis. **Nature** 527:186-191. PMC 4644103

- Inra, C., B.O. Zhou, M. Acar, M.M. Murphy, Z. Zhao and <u>S.J. Morrison</u>. 2015. A perisinusoidal niche for extramedullary hematopoiesis in the spleen. **Nature** 527:466-471. PMID26570997
- 101. Wu, L., L.H. Nguyen, K. Zhou, T. Yvanka de Soysa, L. Li, J.B. Miller, J. Tian, J. Locker, S. Zhang, G. Shinoda, M.T. Seligson, L.R. Zeitels, A. Acharya, S.C. Wang, J.T. Mendell, X. He, J. Nishino, <u>S.J. Morrison</u>, D.J. Siegwart, G.Q. Daley, N. Shyh-Chang and H. Zhu. 2015. Precise let-7 expression levels balance organ regeneration against tumor suppression. eLIFE 10.7554/eLife.09431. PMID26445246
- 102. Lin, H., H. Ouyang, J. Zhu, S. Huang, Z. Liu, S. Chen, G. Cao, G. Li, R.A.J. Signer, Y. Xu, C. Chung, Y. Zhang, D. Lin, S. Patel, F. Wu, H. Cai, J. Hou, C. Wen, M. Jafari, X. Liu, L. Luo, J. Zhu, A. Qiu, R. Hou, B. Chen, J. Chen, D. Granet, C. Heichel, F. Shang, X. Li, M. Krawczyk, D. Skowronska-Krawczyk, Y. Wang, W. Shi, D. Chen, Z. Zhong, S. Zhong, L. Zhang, S. Chen, S.J. Morrison, R.L. Maas, and K. Zhang. 2016. Lens regeneration using endogenous stem cells with gain of visual function. Nature 531:323-328. PMID26958831
- 103. Yue, R., B.O. Zhou, I.S. Shimada, Z. Zhao and <u>S.J. Morrison</u>. 2016. Leptin receptor promotes adipogenesis and reduces osteogenesis by regulating mesenchymal stromal cells in adult bone marrow. **Cell Stem Cell** 18:782-796. PMC4127103
- 104. Eskiocak, U., V. Ramesh, Z. Zhao, S. Yuan, J. Gill, M. Wang, T. Vandergriff, M. Shackleton, E. Quintana, T. Johnson, R. DeBerardinis and <u>S.J. Morrison</u>. 2016. Synergistic effects of ion transporter and MAP kinase pathway inhibitors in melanoma. **Nature Communications** 7:13080. PMID27681157
- 105. Signer, R., L. Qi, D. Thompson, A.A. Sigova, Z.P. Fan, G.N. DeMartino, R.A. Young, N. Sonenberg and <u>S.J. Morrison</u>. 2016. The rate of protein synthesis in hematopoietic stem cells is limited partly by 4E-BPs. **Genes & Development** 15:1698-703. PMID27492367
- 106. Yue, R., B.O. Zhou and <u>S.J. Morrison</u>. 2016. Clec11a/Osteolectin is an osteogenic growth factor that promotes the maintenance of the adult skeleton. **eLIFE** 5:e18782. PMID 27976999
- Mgbemena, V.E., R.A.J. Signer, R. Wijayatunge, T. Laxson, <u>S.J. Morrison</u>, and T.S. Ross.
   2017. Distinct Brca1 Mutations Differentially Reduce Hematopoietic Stem Cell Function.
   Cell Reports 18:947-960. PMC4394526
- Frankel, A.E., U. Eskiocak, J.G. Gill, S. Yuan, V. Ramesh, T.W. Froehlich, C. Ahn and <u>S.J. Morrison</u>. 2017. Digoxin plus trametinib therapy achieves disease control in most braf-wild type metastatic melanoma patients. **Neoplasia** 19:255-260. PMID28278423
- 109. Chung-Ping, L., R.C. Booker, <u>S.J. Morrison</u>, and L.Q. Le. 2017. Identification of hair shaft progenitors that create a niche for hair pigmentation. **Genes & Development** 31:1-14. PMID28465357
- 110. Crane, G.M., E. Jeffery, and <u>S.J. Morrison</u>. 2017. Adult haematopoietic stem cell niches. **Nature Reviews Immunology**. 17:573-590. PMID 28604734

- 111. Zhou, B.O., H. Yu, R. Yue, Z. Zhao, J. Rios, O. Naveiras, and <u>S.J. Morrison</u>. 2017. Bone marrow adipocytes promote the regeneration of stem cells and hematopoiesis by secreting SCF. **Nature Cell Biology** 19: 891-903 PMID: 28714970
- 112. Shimada, I.S., M. Acar, R.J. Burgess, Z. Zhao, <u>S.J. Morrison</u>. 2017. Prdm16 is required for the maintenance of neural stem cells in the postnatal forebrain and their differentiation into ependymal cells. **Genes & Development** 31: 1134-1146. PMID 28698301.
- 113. Oguro, H., J.G. McDonald, Z. Zhao, M. Umentani, P.W. Shaul and <u>S.J. Morrison</u>. 2017. 27-hydroxycholesterol induces hematopoietic stem cell mobilization and extramedullary hematopoiesis during pregnancy. **Journal of Clinical Investigation** 127:3392-3401.
- 114. Sebastian, N.T., T.D. Zaikos, V. Terry, F. Taschuk, L.A. McNamara, A. Onafuwa-Nuga, R. Yucha, R.A.J. Signer, J. Riddell IV, D. Bixby, N. Markowitz, <u>S.J. Morrison</u>, K.L. Collins. 2017. CD4 is expressed on a heterogeneous subset of hematopoietic progenitors, which persistently harbor CXCR4 and CCR5-tropic HIV proviral genomes in vivo. **PLOS Pathogens** 13:e1006509
- 115. Agathocleous M., C.E. Meacham, R.J. Burgess, E. Piskounova, Z. Zhao, G.M. Crane, B.L. Cowin, E. Bruner, M.M. Murphy, W. Chen, G.J. Spangrude, Z. Hu, R.J. DeBerardinis, <u>S.J. Morrison</u>. 2017. Ascorbate regulates haematopoietic stem cell function and suppresses leukaemogenesis. **Nature** 549: 476-481. PMID28825709

#### Non-Peer Reviewed Publications

- 1. <u>Morrison, S.J.</u> and I.L. Weissman. 1995. Heterogeneity of hematopoietic stem cells: Implications for clinical applications. **Proceedings of the Association of American Physicians** 107:187-194.
- 2. Morrison, S.J., N. Uchida, and I.L. Weissman. 1995. The Biology of Hematopoietic Stem Cells. **Annual Reviews in Cell and Developmental Biology** 11:35-71.
- 3. Morrison, S.J. and I.L. Weissman. 1996. More or less hematopoietic stem cells: Response. **Nature Medicine** 2:1281-1283 (letter to the editor).
- 4. Morrison, S.J., D.E. Wright, S. Cheshier, and I.L. Weissman. 1997. Hematopoietic stem cells: challenges to expectations. **Current Opinion in Immunology** 9:216-221.
- 5. Aguila, H.L., K. Akashi, J. Domen, K.L. Gandy, E. Lagasse, R.E. Mebius, <u>S.J. Morrison</u>, J.Shizuru, S. Strober, N. Uchida, D.E. Wright, and I.L. Weissman. 1997. From stem cells to lymphocytes: biology and transplantation. **Immunological Reviews** 157:13-40.
- 6. Morrison, S.J. 2000. The last shall not be first: The ordered generation of progeny from stem cells. **Neuron** 28:1-3.
- 7. Morrison, S.J. 2001. Stem cell potential: Can anything make anything? **Current Biology** 11:R7-R9.
- 8. <u>Morrison, S.J.</u> 2001. Neuronal differentiation: Proneural genes inhibit gliogenesis. **Current Biology** 11:R349-R351.

- 9. Morrison, S.J. 2001. "To begin at the beginning" (Book review). "Stem Cell Biology" ed: D.R. Marshak, R.L. Gardner, and D. Gottlieb. **Nature** 412:380.
- 10. Morrison, S.J. 2001. Neuronal potential and lineage determination by neural stem cells. **Current Opinion in Cell Biology.** 13:666-672.
- 11. Morrison, S.J. 2002. Pten-uating neural growth. **Nature Medicine** 8:16-18.
- 12. Morrison, S.J. and S.H. Orkin. 2002. Stem-cell competition. Nature 418:25-27.
- 13. Mosher, J.T. and <u>S.J. Morrison.</u> 2004. Crossing the boundaries of sensory neurogenesis. **Nature Neuroscience** 7: 900-902.
- 14. Molofsky, A.V., R. Pardal, and <u>S.J. Morrison</u>. 2004. Diverse mechanisms regulate stem cell self-renewal. **Current Opinion in Cell Biology** 16: 700-707.
- 15. Goldstein, L, and <u>S.J. Morrison</u>. 2004. Cell differentiation. **Current Opinion in Cell Biology** 16:1-2
- 16. Pardal, R., A.V. Molofsky, S. He, and <u>S.J. Morrison</u>. 2005. Stem cell self-renewal, aging, and cancer cell proliferation are coordinately regulated by common networks that balance proto-oncogenes and tumor suppressors. **Cold Spring Harbor Symposia on Quantitative Biology** 70:177-185.
- 17. Kiel, M., and <u>S.J. Morrison</u>. 2006. Maintaining hematopoietic stem cells in the vascular niche. **Immunity** 25:862-864.
- 18. Barry, L. and <u>S.J. Morrison</u>. 2008. "State Stem Cell Policies Deserve National Attention: A Closer Look at Michigan's Restrictive Laws". **www.ScienceProgress.org**
- 19. Levi B.P. and <u>S.J. Morrison</u>. 2008. Stem cells use distinct self-renewal programs at different ages. **Cold Spring Harbor Symposia on Quantitative Biology** 73: 539-553.
- 20. Morrison, S.J. 2014. Time to do something about reproducibility. eLife10.7554/eLife.03981
- 21. Gill, J.G., E. Piskounova, and <u>S.J. Morrison</u>. 2016. Cancer, Oxidative Stress, and Metastasis. **Cold Spring Harbor Symposia on Quantitative Biology** 81: TBD

#### Chapters In Books

1. Morrison, S.J. 2000. Purification of Mouse Fetal Liver Hematopoietic Stem Cells. In: In Living Color: Protocols in Flow Cytometry and Cell Sorting, Rochelle Diamond and Susan DeMaggio (eds.). Springer Verlag Berlin Heidelberg, pp. 585-591.

- 2. <u>Morrison, S.J.</u> 2001. Purification of mouse hematopoietic stem cells at sequential stages of maturation. In: **Hematopoietic Stem Cell Protocols**, Christopher A. Klug and Craig, T. Jordan (eds.). Humana Press, pp. 15-28.
- 3. Morrison, S.J. 2002. Stem cells of the nervous system. In: **Mouse Development**, Janet Rossant and Patrick Tam (eds.). Academic Press pp. 235-248.
- 4. Morrison, S.J. 2008. Cancer Stem Cells. In: **The Molecular Basis of Cancer**, John Mendelsohn, Peter M. Howley, Mark A. Israel, Joe W. Gray, and Craig B. Thompson (eds.). Elsevier, Saunders, pp.141-154.