Committee on Energy and Commerce
U.S. House of Representatives
Witness Disclosure Requirement - "Truth in Testimony"
Required by House Rule XI, Clause 2(g)(5)

1. **Your Name:**	Lawrence S.B. Goldstein		
2. **Your Title:**	Distinguished Professor of Cellular and Molecular Medicine		
3. **The Entity(ies) You are Representing:**	International Society for Stem Cell Research ~~American Society for Cell Biology~~		
4. **Are you testifying on behalf of the Federal, or a State or local government entity?**		Yes	No XXXX

5. **Please list any Federal grants or contracts, or contracts or payments originating with a foreign government, that you or the entity(ies) you represent have received on or after January 1, 2013. Only grants, contracts, or payments related to the subject matter of the hearing must be listed.**

please see attached list

6. **Please attach your curriculum vitae to your completed disclosure form.**

please see attached short and long form biosketches

Signatur [redacted] **Date:** 2/29/16

ACADEMIC BIOGRAPHY AND BIBLIOGRAPHY INSTRUCTIONS

Biography

Please complete all shaded areas in Section I, Personal Data. Information requested in Section I, Previous Applicable Employment and Education, and in Section II may be entered on the Biography or may be submitted as an attachment. If attaching information, please clearly indicate the section number and list information in the order in which it is requested on the Biography. After the initial appointment file is submitted, appointees need only update information in Section I as necessary to reflect changes. However, Section II must be updated prior to every academic review. Appointees may maintain the subsections of Section II in their own format and may add or remove information in this section at their discretion. Indicate "none" or "not applicable" when appropriate. All information should be presented in chronological order.

Bibliography

Append as Section III a bibliographic list of your publications and creative works. Bibliography information should be listed in three sections: A. Primary Published or Creative Work, B. Other Work, and C. Work in Progress. The citations in these three sections should be in a format consistent with the professional discipline, and be acceptable to the Division or School of the appointee. Citations should be numbered and listed in chronological order, with a line drawn between material that has appeared in previous bibliographies and new material not previously listed. Citations may be organized into subsections by category of publication. If there are no subsections, there should be a reasonable descriptor for each entry (journal article, conference paper, invited paper, etc.) to permit reviewers to understand the work. The descriptor may be placed at the end of the citation.

A. Primary Published or Creative Work. This section should include reviewed work that appears in the open literature and can be reasonably expected to be found in libraries outside UCSD, or an appropriately documented listing of creative artistic shows or performances. This section may include items that are "in press" (i.e., accepted for publication in final form) or formally "accepted" (i.e., publisher's binding acceptance of entire corpus has been received). Such items should clearly indicate "in press" or "accepted" somewhere in the citation. This section should not include abstracts of papers or conference proceedings, unless the department can forward documentation that the work has equivalent stature or is refereed to a standard equivalent to professional journals.

B. Other Work. This section should include other published or performed material which the candidate may wish to list to demonstrate scholarly activity. Such material might include patents, non-reviewed works, abstracts, conference proceedings, book reviews, encyclopedia entries, etc. Materials associated with items in this section need not be forwarded with the file. Work in this category is listed to indicate professional activity and will not normally be evaluated for quality or impact. If a candidate feels a work in this category is particularly important, he or she may discuss it in a letter to be included in the file, and the department may comment on it as a basis for advancement.

C. Work In Progress. This section is optional and should include only work for which there is actual material which will be submitted with the file for review. This section is intended primarily for disciplines in which completion of scholarly work normally occurs over a lengthy period of time, and where progress on a project is considered crucial for assessing the candidate's accomplishments. Examples are chapters of a major book or a major work of art. This section may also be important for certain actions (e.g. crossover merit, appraisal of Assistant Professor). For other cases, use of this Work in Progress section is discouraged. When an item is moved from section C, to either section A or B, it should be annotated accordingly (e.g. "from Work in Progress"). This annotation may be hand written. Work may also be removed from section C if the work has been abandoned and is no longer "in progress" provided that it has been listed in this section for two consecutive review cycles. Although a line will be used to differentiate new items added, the list of works and the numbering scheme may be altered at each review.

PRIVACY NOTICE

The State of California Information Practices Act of 1977 (effective July 1, 1978) requires the University to provide the following information to individuals who are asked to supply information about themselves. The principal reason for requesting this information is for the purposes of academic personnel administration and University public relations. The Academic Vice Chancellors are responsible for maintaining this information, which is authorized by University policy. For academic personnel administrative purposes, furnishing all information requested is mandatory and failure to provide it may result in denial of the action for which this information is being provided. Individuals have the right to review their own academic records in accordance with UCSD Policy and Procedure Manual 230-11. Inquiries related to this policy may be directed to the Academic Personnel Office at (858) 534-0068. Information on education, honors, awards, and/or publications have been declared releasable by the courts and, therefore, will be released to the public, upon request.

NONDISCRIMINATION AND AFFIRMATIVE ACTION POLICY STATEMENT

The University of California prohibits discrimination against or harassment of any person employed by or seeking employment with the University on the basis of race, color, national origin, religion, sex, physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or status as a covered veteran (special disabled veteran, Vietnam era veteran, or any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized).

The University of California is an affirmative action/equal opportunity employer. The University undertakes affirmative action to assure equal employment opportunity for minorities and women, for persons with disabilities, and for special disabled veterans, Vietnam era veterans, and any other veterans who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized.

University policy is intended to be consistent with the provisions of applicable State and Federal laws. Inquiries regarding the University's equal employment opportunity policies may be directed to: Jon Welch, Director, Academic Affirmative Action, (858) 534-3623.

UCSD ACADEMIC BIOGRAPHY

Section I

Personal Data

Name: Last, First, Middle Goldstein, Lawrence S.B.
Department Cellular and Molecular Medicine Title(s) Distinguished Professor

Home Address
Street [redacted] Phone: [redacted]
City, State, Zip [redacted]
E-mail address: [redacted]

Business Address
Street [redacted] Phone: [redacted]
City, State, Zip [redacted] Mail Code [redacted]

Country of Citizenship: U.S.A.

Are you a citizen or permanent resident of the U.S.? Yes x No
If no, what is your current Visa status?
Date this status began: Date this status expires:

Person to be contacted in case of emergency:
Name [redacted]
Street [redacted] Phone: [redacted]
City, State, Zip [redacted]

Family members or domestic partners employed by the University:
Name [redacted] Relationship [redacted] Department [redacted]

Previous Applicable Employment

Please show a full account of your time from the date of your first academic (or otherwise relevant) employment up to the present, including any periods when you may not have been employed. Indicate part–time appointments. Show salary or approximate annual earnings in all cases. Please include all previous University of California employment. You may provide supplementary information if necessary.

Months and years of employment	Institution, firm or organization of employment	Location	Rank, title, or position	Approximate annual salary
09/83 - 07/84	Harvard University and Massachusetts Institute of Technology	Cambridge, Massachusetts, United States	Research Associate	
07/84 – 07/88	Harvard University Department of Cell and Developmental Biology	Cambridge, Massachusetts, United States	Assistant Professor	
07/88 – 07/90	Harvard University Department of Cell and Developmental Biology	Cambridge, Massachusetts, United States	John L. Loeb Associate Professor of the Natural Sciences	
07/90 – 11/93	Harvard University Department of Cell and Developmental Biology	Cambridge, Massachusetts, United States	Professor	

11/93 – 08/12	Howard Hughes Medical Institute	La Jolla, California, United States	Investigator
10/93 - 06/99	University of California, San Diego, School of Medicine, Department of Pharmacology, Division of Cellular & Molecular Medicine	La Jolla, California, United States	Professor
07/99 – 06/10	University of California, San Diego, School of Medicine, Department of Cellular & Molecular Medicine	La Jolla, California, United States	Professor
09/06 – present	University of California, San Diego, UCSD Stem Cell Program	La Jolla, California, United States	Director
07/10 – present	University of California, San Diego, School of Medicine, Department of Cellular & Molecular Medicine	La Jolla, California, United States	Distinguished Professor
07/11 – present	University of California, San Diego, School of Medicine, Department of Neurosciences	La Jolla, California, United States	Distinguished Professor
09/12 – present	Sanford Consortium for Regenerative Medicine	La Jolla, California, United States	Scientific Director
11/13 – present	Sanford Stem Cell Clinical Center	La Jolla, California, United States	Director

Education

School, college, university, or hospital (internship, residency, or fellowship)	Dates of attendance	Location	Major subject or field	Degrees or certificates	Date received
University of California, San Diego	1974 – 1976	La Jolla, California, United States	Biology/Genetics	B.A.	1976
University of Washington	1976 – 1980	Seattle, Washington, United States	Genetics	Ph.D.	1980
University of Colorado	09/80 – 09/83	Boulder, Colorado, United States	Cell Biology	Postdoctoral Fellow	

Please indicate areas of sub-specialization or board certification, if any. Also include a list of special licenses or permits and the dates received.

N/A

Section II

Professional Data

Provide a list of your activities, with dates of award or service, in each of the following five categories.

(a) University Service (Including Academic Senate, Departmental, College, University-wide).

1983 – 1993	Thesis Committees, Harvard University
1984 – 1989	Coordinator, Departmental Graduate Laboratory Rotation Program, Harvard University
1984 – 1989	Departmental Graduate Committee, Harvard University
1989 – 1990	Departmental Junior Faculty Search Committee, Harvard University
1991 – 1992	Chair, Departmental Junior Faculty Search Committee, Harvard University
1991 – 1993	Departmental Graduate Committee, Harvard University
1992 – 1993	Chair, Harvard Yard Childcare Center, Harvard University
1993	APSF Childcare Scholarship Committee, Harvard University
1993	Work & Family Advisory Committee, Harvard University
1994 – 1996	Biomedical Sciences Minor Proposition Committees, UCSD
1994 – 1997	Parent Advisory Board, UCSD Early Childhood Education Center, UCSD
1994 – 1997	Member, Health and Safety Coordinating Council, UCSD
1994 – 1997	Organizer, Division of Cellular & Molecular Medicine In House Seminar Series, UCSD
1994 – 1999	Biomedical Sciences Standing, Promotion, and Advisory Committee, UCSD
1995 – 1997	Chair, Parent Advisory Board, UCSD Early Childhood Education Center, UCSD
1995 – 1997	Organizer, San Diego Area Cell Biology Meetings
1995 – 2002	Co-PI and member of Executive Committee, NCI Cancer Training Grant, UCSD
1996	Vice Chancellor Academic Affairs Search Committee, UCSD
1996 – 1997	Immunology Search Committee, SOM
1996 – 1997	Human Genetics Search Committee, SOM
1996 – 1998	Member, Steering Committee of Burroughs Welcome Training Program in Physical and Computational Biosciences (LJIS)
1997 – 1998	UCSD School of Medicine Strategic Planning Committee (co-chair of Research Task Force)
1996 – 1999	Biomedical Sciences Core Committee, UCSD

1997 – 2003	Program Director, Genetics Training Program
1998	Neurogenetics Search Committee, SOM
1999	Co-Organizer, Palade Symposium, UCSD
2000	Task Force on UCSD School of Medicine Space Policy
2000	Search Committee for Director of Veterinary Services
2000 – 2001	LICR Faculty Search Committee
2001	Chair, Gene Therapy Program Review Committee
2002	2002 Department of Neuroscience Review Committee
2002 – 2003	Life Sciences Council
2003	Chair, Department of Cellular and Molecular Medicine Self-Study Review
2003-present	Genetics Training Program Steering Committee
2004-2006	UCSD Stem Cell Oversight Committee
2004-2006	La Jolla Stem Cell Consortium Steering Committee
2005-2012	Program Director, UCSD Stem Cell Training Program
2006	Visiting Review Committee for Department of Biology at Tata Institute for Research, Mumbai, India
2006-2008	UCSD Scientific Representative to the San Diego Consortium for Regenerative Medicine
2006-2012	Selection Committee, CIRM UCSD Stem Cell Research and Training Grant
2006-present	Director, UCSD Stem Cell Program
2007-present	Co-Chair, UCSD Stem Cell Oversight Working Group
2007-present	Co-Chair, UCSD Stem Cell Academic Working Group
2008-present	Chair, Scientific Steering Committee and UCSD Scientific Representative, Sanford Consortium for Regenerative Medicine
2011-2012	Co-Chair, UCSD Health Sciences Faculty Development Committee
2012-present	Advisory Committee, CIRM UCSD Stem Cell Research and Training Grant
2013-present	Vice Chancellor of Advancement Search Committee

Thesis Committees: **Student:**	**Year Received/Will Receive Ph.D.:**
Acab, Allan	2015
Alaynick, William	2006
Amin, Neal	2015
Arnold, Eveline	2012
Barsoum, Mark	2005
Benthuysen, Jacqueline	2015 anticipated
Bhargave, Vipul	2013
Bhutani, Kunal	2015
Blackburn, Christine	1998
Blanchard, Joel	2015 anticipated
Bonokowsky, Joshua	1998
Borevitz, Justin	2001
Boyer, Leah	2013
Brafman, David	2009
Burger, Brian Timothy	2008
Clelland, Claire	2009
Conway, Anne	2014
Coufal, Nicole	2008
Crews, Leslie	2010
D'Amour, Kevin A.	2002
Dolan, Will	2005
Dutil, Erica	1999
Gallagher, Kimberly	2002
Goff, Daniel	2012
Gore, Athurva	2013
Greenhall, Jennifer Anne	2009
Gremski, Kristina	2006
Hester, Kelly	2005
Hollis, Edmund	2008
Huggins, Ian	2015 anticipated
Kaushal, Dhruv	2003
Kerr, Rex	2002
Kim, Jinah	2006
Kim, Yumi	2009
Lewallen, Kathryn	2013 anticipated
Lewellyn, Lindsay	2009
Louie, Carrie	2010
Lovci, Michael	2014
Maggart, Keith	2002
Martin, Stuart	1998
Matthews, Emily	2008
McDonald, Marin	2012
McIntosh, Bryan	2007
Miller, Steve	2009
Ming, Guo-li	2002
Monen, Joost W.	2008
Murphy, Terence D.	1998
O'Brien, Robert	2010
Ozer, Rachel	2001
Potter, Michael	1998
Putkey, Frances	2002
Reeves, Nick L.	2006

Ruby, Katherine	2011
Ruchhoeft, Maureen	1998
Sato, Trey Kyle	2001
Shaner, Nathan C.	2006
Shyn, Stanley	2003
Silk, Alain D.	2008
Soltero, Stephanie	2009
Sotak, Bethany	2012
Stoyas, Colleen	2017 anticipated
Tagawa, Akiko	2002
Truelove, Robin	2005
Veraski, Alexey	2000
Vinckier, Nicholas	2014 anticipated
Voog, Justin	2009
Waggoner, Laura	1999
Wang, Meiyan	Not Available
Ward, Jacqueline	2015 anticipated
Weaver, Beth	2003
Weir, Barbara	2002
Weissmiller, April	2013 anticipated
Wilbert, Melissa	2014
Willhoite, Andrew	2004
Ye, Zhengyi	2004
Yi, Ming	2003
Yingling, Jessica	2006

Minor Proposition Committees:

Student:	**Year Received/Will Receive Ph.D.:**
Acab, Allan	2015
Audhya, Anjon	2002
Corleto, Jose	2013 anticipated
Dries, Daniel R.	2001
Floyd, Jennifer	1999
Gold, David	2002
Lewallen, Kathryn	2013 anticipated
Lovci, Michael	2014
Martinez, Fernando	2015
Nussbacher, Julia	2015 anticipated
Pak, Winnie	2001
Stoyas, Colleen	2015 anticipated
Ward, Jacqueline	2015 anticipated
Zak, Beverly	Not Available

(b) **<u>Memberships</u>** (Scholarly societies, professional boards, civic organizations, etc.).

Professional Societies

1976 – present	Genetics Society of America
1980 – present	American Society for Cell Biology
2000 – present	Society for Neuroscience
2004 – present	International Society for Stem Cell Research

2008 – present	American Academy of Arts and Sciences

Advisory and Editorial Boards

1985	Ad hoc member, Nucleic Acids and Protein Synthesis Advisory Committee, American Cancer Society
1988	Ad hoc member, Nucleic Acids and Protein Synthesis Advisory Committee, American Cancer Society
1990	Ad hoc member, Cell Biology Study Section, NIH
1991	Ad hoc member, Molecular Cytology Study Section, NIH
1991 – 2003	Editorial Board, Journal of Cell Biology
1995	Ad hoc member, Developmental Biology Advisory Committee, American Cancer Society
1995	Ad hoc member, Molecular Cytology Study Section, NIH
1996 – 1998	ASCB delegate to FASEB Consensus Conference on Biomedical Funding
1996 – 1997	Chair, Sandler Lecturer Selection Committee
1996 – present	Member, Public Policy Committee, ASCB
1997	Ad hoc member, Molecular Cytology Study Section, NIH
1997	Member, NIH-NCRR Strategic Planning Forum
1997	Chair of NIH Subcommittee, FASEB Consensus Conference on Biomedical Funding
1997 – 2000	FASEB Board of Directors (ASCB Representative)
1998	Chair, FASEB Conference on NIH funding
1998 – 1999	President, National Drosophila Board
1998 – 2004	Editorial Board, Molecular Biology of the Cell
1998 – present	Associate Editor, Annual Review of Cell and Developmental Biology
1998 – present	Member of Scientific Advisory Board, Cytokinetics, Inc. South San Francisco
1999	NIH Model Organisms Workshop
1999	Ad hoc member, Cell Biology Study Section, NIH
2000	Ad hoc member, Molecular Cytology Study Section, NIH
2000 – 2003	Vice-Chair, Public Policy Committee, ASCB
2000 – 2006	Secretary, ASCB
2003	Parvin Foundation Workshop on Huntington’s Disease

2003	Ad hoc member, Cell Development and Function 2 Study Section, NIH
2003	Department of Molecular and Cellular Biology Review Committee, University of Arizona
2003	NIH Stem Cell Working Group on Supporting Technologies/Tools in Basic Research
2003	Member, NIGMS human embryonic stem cell exploratory centers Special Emphasis Panel
2003	AAAS Meeting on the Regulation of Cloning
2003-2004	Co-Chair, Scientific Advisory Committee to Proposition 71 Ballot Initiative in California
2003-2007	Advisory Board, DFG Research Center for Molecular Physiology of the Brain, Gottingen Germany
2003-present	Scientific Advisory Board, Genetics Policy Institute
2004	Member, NICHD Human Embryonic Stem Cell PO1 Special Emphasis Panel
2004	Co-Organizer of Inaugural Broadcast of the Science Network. Stem Cells: Science, Ethics and Politics at the Crossroads
2004-2007	Chair, ASCB Public Policy Committee
2004-2008	Government affairs and policy committee, International Society for Stem Cell Research (Chair 2004-2006)
2005	Chair, NIGMS Human Embryonic Stem Cell Exploratory Centers Special Emphasis Panel
2005	Co-organizer, Nature Medicine Days of Molecular Medicine 2005 - "Stem Cell Biology and Human Disease"
2005-2007	National Innovation Initiative of the Council on Competitiveness
2006	Co-Organizer of Stem Cell Meeting on the Mesa
2006-2012	Board of Directors, International Society for Stem Cell Research
2008	Maryland Stem Cell Research Fund Exploratory Grant Review Committee
2009	National Institute of Aging (NIA) Working Group on The Role of the Cytoskeleton in Cellular Aging
2009-present	Ethics and Public Policy Committee of International Society for Stem Cell Research
2011-present	Legislative Education Initiative of International Society for Stem Cell Research
2012-present	Chair, American Society for Cell Biology Task Force on Stem Cell Technology
2012-present	Editorial Board, Stem Cell Reports

2013-present	Planning Committee, The Institute of Medicine and the National Academy of Sciences in Conjunction with the International Society for Stem Cell Research Workshop on Unproven Stem Cell Treatments
Present	Planning Committee, Stem Cell Meeting on the Mesa X
Present	Allen Institute for Cell Science; Scientific Advisory Board
2015	NIGMS Advisory Council; Chair of ASCB Stem Cell Task Force
2015	NYSTEM Scientific Oversight Committee

(c) Honors and Awards (Include the dates they were received).

1980 – 1983	NIH Postdoctoral Fellowship
1888 – 1990	Loeb Chair in Natural Sciences, Harvard University
1990 – 1995	American Cancer Society Faculty Research Award
1993	Sixth Laurence Sandler Memorial Lecturer
1997	CAP CURE Research Award
1998	UCSD School of Medicine “Distinguished Faculty Lecturer”
1998-1999	President, National Drosophila Board
2000 – 2006	Secretary, American Society for Cell Biology
2001 – 2005	Ellison Medical Foundation Senior Scholar Award in Aging Research
2002	Keynote speaker, Leffler Symposium, Harvard Medical School
2003	Keynote speaker, Graduate Research Education and Technology Symposium, University of Oklahoma Health Sciences Center
2005	Keynote speaker, The Philippine Nurses Association of San Diego and the UCSD General Clinical Research Center “Understanding the Debate about Human Stem Cells and Cloning”
2005	Keynote speaker, Washington State Technology Alliance “Understanding the Debate about Human Stem Cells and Cloning” Leavenworth, Washington
2005	Keynote speaker, Molecular Mechanisms of Neurodegeneration “Linking kinesin-dependent transport pathways to signaling and disease” Milan, Italy
2005	Keynote speaker, University of Washington Pathology Retreat “Linking stem cells and molecular motors to signaling and neurodegenerative disease” Leavenworth, Washington
2006	Keynote speaker, CEO Summit, University of Washington. “Defining the elements that

	enhance science and technology in San Diego"
2008	Election to the American Academy of Arts and Sciences
2008	Keynote speaker, UCLA Neuroscience Doctoral Program 24th Annual Retreat
2009	Keynote speaker, 29th Annual Vincent du Vigneaud Symposium
2009	Keynote speaker, UCSD Genetics Training Program Retreat
2009	Named as one of the UC San Diego top 100 influential alumni
2009	2009 ASCB Public Service Award
2009	Keynote speaker, 4th Annual Stem Cell Meeting on the Mesa Event at Salk, La Jolla, CA
2010	Keynote speaker, Science & Technology Forum VIII
2010	Keynote speaker, 2010 Glaucoma Management Beyond Intraocular Pressure
2013	Keynote speaker, Advanced Topics in Genomics and Cell Biology 2013 UNICAMP, São Paulo, Brazil
2013	Keynote speaker, University of Vermont Research Day, Burlington, VT
2014	UCSD Distinguished Alumni Award: 2014
2014	Keynote speaker, Postdoctoral Appreciation Luncheon, San Diego
2015	Keynote speaker, Japan Forum, San Diego
2015	Keynote speaker, IRACDA Conference and Breakout session, San Diego
2015	ARCS: Achievement Rewards for College Scientists, "Scientist of the Year" 2015-16.

(d) Contracts and Grants Please provide the following information for current contract and grants:

Title	Agency	Amount of award	Date and period of contract/grant	Role
Elucidating pathways from hereditary Alzheimer's mutations to pathological tau phenotypes	California Institute for Regenerative Medicine (CIRM)	$250,000 (Average Annual Direct Cost)	04/01/14 - 03/31/17	P.I.
Identifying drugs for AD with human neurons made from hIPSC	CIRM	$451,333 (Average Annual Direct Cost)	10/01/12 - 09/30/15	P.I.
Probing SORL1 risk factors with human pluripotent stem cell technology	NIA/NIH	$125,000 (Average Annual Direct Cost)	04/01/14 - 03/31/19	Co P.I.
Elucidating PSP genotype-phenotype relationships using human isogenic iPSCs.	CurePSP	$50,000 (Average Annual Direct Cost)	07/01/14 - 06/30/16	Co P.I.

Elucidating AD genotype-phenotype relationships using genetics of human IPS cells.	NIA/NIH	$250,000 (Average Annual Direct Cost)	08/01/14 - 6/30/19	P.I.
Alpha Stem Cell clinic for the development of regenerative therapies.	CIRM	$1,809,895 (Annual Direct Cost)	10/01/14 - 09/30/19	Co P.I.
Lab-on-a-chip flow cytometer using color-space-time (CoST) coding method.	NIGMS/NIH	$38,710 (sub contract)	07/01/16 - 08/30/17	Co P.I.
Collaboration on preclinical autism cellular assays, biosignatures, and network analyses (Copacabana).	NIMH/NIH	$239,379 (Annual Direct Cost-Project1)	09/01/15 – 06/30/20	Project Leader
Mouse and Human Models for Investigating Influences of Tau on Progression of Alzheimer's Disease Following Traumatic Neuronal Injury	DOD	$250,000 (Annual Direct Costs)	09/01/15 – 08/31/18	Co P.I.

(e) **External Professional Activities** (Examples include, but are not limited to, presentation of papers and lectures, technical service to organizations and agencies, acting as a reviewer of journal or book manuscripts or contract and grant proposals, or professional committee service).

Invited Talks at Scientific Meetings

1986	American Society for Cell Biology Meeting on the Molecular Biology of the Cytoskeleton at Airlie, VA. "Molecular genetic analysis of a 205K MAP in Drosophila melanogaster."
1987	Boulder Winter Symposium on the Genetics and Molecular Biology of Mitosis in Boulder, CO. "Molecular and genetic analysis of microtubule function in Drosophila."
1988	Meeting on Microtubules and Motors at Stowe, Vermont. "Molecular genetics of microtubule proteins in Drosophila."
1989	American Society for Cell Biology Meeting on Chromosome Structure and Segregation at Airlie, VA. "Molecular genetics of Drosophila kinesin."
1989	American Society for Cell Biology National Meeting: Structural Domains of Fibrous MAPs Subgroup at Houston, TX. "Sequence and binding domains of the Drosophila 205K MAP."
1989	American Society for Cell Biology National Meeting: Molecular Genetics of the Cytoskeleton Minisymposium at Houston, TX. "Molecular genetics of Drosophila spectrin."
1989	American Society for Cell Biology National Meeting: Microtubules and MAPs Minisymposium at Houston, Texas. "Molecular genetics of the Drosophila 205K MAP."

1990	UCLA-ICN Winter Symposium on Cytoskeleton and Cell Regulation at Steamboat Springs, Colorado: "Molecular genetics of cytoskeletal proteins in Drosophila."
1990	Yale Symposium on Ordering the Membrane-Cytoskeleton Trilayer at New Haven, CT: "Molecular genetic analysis of Drosophila kinesin."
1990	Gordon Conference on Motile and Contractile Systems in New Hampshire: "Molecular genetics of drosophila kinesin."
1990	Gordon Conference on Muscle Contraction in New Hampshire: "Molecular genetics of Drosophila kinesin."
1990	American Society for Cell Biology National Meeting: Symposium on Cytoplasmic Motors in Cell Function and Morphogenesis at San Diego, California: "Molecular genetics of the kinesin superfamily in Drosophila."
1991	FEBS Winter School Meeting on Structural and Motile Proteins of the Nucleus and Cytoplasm at Schladming, Austria: "Molecular genetics of the kinesin superfamily in Drosophila."
1991	National Drosophila Meetings at Chicago, Illinois: "Molecular genetics of the kinesin superfamily."
1991	Gordon Conference on Biological Regulatory Mechanisms in New Hampshire: "Molecular genetics of the kinesin superfamily in Drosophila."
1991	Indiana Molecular Biology Symposium VI in Bloomington, Indiana: Proteins as Machines. "Molecular genetics of the kinesin superfamily in Drosophila."
1992	Max-Planck Society Scientific Advisory Meeting at Schloss Ringberg, Germany: "Molecular genetics of the kinesin motors."
1992	Genetics Society of America Plenary Speaker in Minneapolis, Minnesota: "Molecular genetics of microtubule motor diversity in Drosophila."
1992	Gordon Research Conference on Meiosis in New Hampshire: "Molecular genetics of the Drosophila ncd protein."
1992	Gordon Research Conference on Cell Motility in New Hampshire: "Molecular genetics of the kinesin superfamily." (Also session organizer)
1992	Taniguchi Symposium on the Neuronal Cytoskeleton in Kyoto, Japan: "Molecular genetics of kinesin motors."
1993	Gordon Research Conference on Biological Structure and Gene Expression in San Miniato, Italy: "Molecular genetics of the kinesin superfamily."
1993	Gordon Research Conference on Molecular Membrane Biology in New Hampshire: "Molecular genetics of kinesin motors."
1993	Gordon Research Conference on Chromosome Dynamics in New Hampshire: "Kinesin motors in cell division in Drosophila."
1993	P & S Biomedical Sciences Symposium: Structure and Motion in the Cell: "Molecular

	genetics of the kinesin superfamily.”
1994	Protein Society Meeting in San Diego, California: "Structural features of kinesin microtubule motors.”
1994	Forefronts in Nephrology in Kakegawa, Japan: “Molecular and genetic analyses of the kinesin superfamily in Drosophila.”
1994	Molecular Motors: Structure, Mechanics, and Energy Transduction at Airlie, VA: “Structural features involved in force generation in the kinesin superfamily.”
1995	Keystone Symposium on Molecular Motors/Functions of the Cytoskeleton in Cell Growth, Organization and Differentiation (joint session) at Taos, NM: "Principles of diversity among kinesin motors.”
1995	ASBMB Symposium on Molecular Motors at San Francisco, CA: "Structural features of force generation in the kinesin superfamily.”
1997	CaPCURE Retreat on Prostate Cancer Therapy and Treatment at Lake Tahoe, CA: "Molecular motors as a novel class of chemotherapy targets."
1997	Biomedical Engineering Society symposium on Molecular Bioengineering at San Diego, CA: "Design principles and functional strategies of kinesin motors.” (session organizer also)
1998	University of Colorado Graduate Student Symposium on "The molecular mechanisms of cellular motility." at Boulder CO.
1998	Gordon Research Conference on Cell Motility in New Hampshire: "Molecular genetic analysis of mouse kinesin functions.”
1998	International Congress of Genetics, Beijing, China: "Molecular genetic analysis of kinesin functions.”
1998	COE International Conference on Molecular Mechanisms of Intracellular Transport: “The roles of kinesin and dynein superfamily proteins” at Kamakura, Japan.
1999	Gordon Research Conference on Molecular and Cellular Biology in New Hampshire: "Molecular genetic analysis of kinesin functions.”
1999	ASCB/EMBO Joint Conference on Membrane Trafficking and the Cytoskeleton: an Integrated View in Santa Maria Imbaro, Italy: "Molecular genetic analysis of kinesin functions.”
2000	Keystone Conference on The Dynamics of the Cytoskeleton in Keystone, CO: “Genetic analysis of kinesin pathways and regulation in flies and mice.”
2000	Les Treilles Conference on Molecular Motors. Les Treilles, France.
2000	Banff Conference on the Biophysics and Biochemistry of Molecular Motors: “Kinesin molecular motors: Transport pathways, receptors, and human disease.” Banff, Canada
2000	COE International Conference on Frontiers in Molecular Motors Research: From Gene, Structure, Dynamics to Functions: “Kinesin molecular motors: Transport pathways, receptors, and human disease.” Osaka, Japan.

2000	National Academy of Sciences Colloquium on Molecular Kinesis in Cellular Function and Plasticity. “Kinesin molecular motors: Transport pathways, receptors, and human disease.” Irvine, CA.
2001	Cell Biology Symposium of the MDC on Protein Transport and Stability: “Kinesin molecular motors: Transport pathways, receptors, and human disease.” Germany
2001	French-American Colloquium on the Cytoskeleton and Human Disease: “Kinesin molecular motors: Transport pathways, receptors, and human disease.” Marseilles, France.
2001	Society of General Physiologists Symposium on Molecular Motors: “Kinesin molecular motors: Transport pathways, receptors, and human disease.” Woods Hole, MA.
2001	College Student Lecture, ASCB Meeting: “Molecular motors in neurodegenerative disease and neuronal signaling.” Washington, D.C.
2001	Co-chair, ASCB Minisymposium, Molecular Machines, Washington, D.C.
2001	Co-chair, ASCB Minisymposium, Intracellular Cargo Transport and Vesicle Trafficking, Washington, D.C.
2002	British Society for Cell Biology: “Kinesin-dependent neuronal transport pathways: Links to signaling and human disease.” York, England.
2002	Gordon Research Conference: “Linking Kinesin-Dependent Transport Pathways to Signaling and Disease.” Newport, RI.
2002	55th Harden Research Conference on Dynamics of Membrane Traffic: “Kinesin-based transport pathways in signaling and disease.” Ambleside, UK.
2002	Alzheimer’s Disease Meeting: “Linking kinesin-dependent transport pathways to signaling and disease.” Hamburg, Germany.
2002	Motors and Motility in Development: “Linking kinesin-dependent transport pathways to signaling and disease.” Minneapolis, MN.
2002	The Robert Packard Center for ALS Research Symposium: “Non-cell autonomous toxicity of ALS-linked SOD1 mutants.” Baltimore, MD.
2002	Leffler Symposium, Harvard Medical School: “Linking kinesin-dependent transport pathways to signaling and disease.” Boston, MA.
2003	Winter Conference on Brain Research: “Linking kinesin-dependent transport pathways to signaling and disease.” Snowbird, Utah.
2003	Salk Institute/Adler Foundation Symposium on Alzheimer's Disease: “Linking molecular motors to signaling and disease.” La Jolla, CA.
2003	ARVO meeting, Conditional Gene Targeting Course: “Using conditional mutagenesis in the mouse to analyze kinesin functions in the retina.” Fort Lauderdale, FL.
2003	Learning at from the Synapse: “Linking kinesin-dependent transport pathways to signaling and disease.” Hamburg-Blankenese, Germany.

2003	Motile and Contractile Systems Gordon Conference: “Linking kinesin-dependent transport pathways to signaling and disease.” Colby-Sawyer College, NH.
2003	Fidelity Foundation Meeting on Enabling Technologies for Alzheimer's Disease Research: “Axonal Transport and Alzheimer’s Disease.” Bar Harbor, ME.
2003	The Cytoskeleton in Health and Disease: “Linking kinesin-dependent transport pathways to signaling and disease.” Northwestern University Basic Science Colloquium, Chicago, IL.
2003	Society for Neuroscience Symposium on Synaptic Dysfunction and Alzheimer's Disease: New Insights into Old Disease: “APP in kinesin-mediated axonal transport.” New Orleans, LA.
2003	CHI Symposium-Taking the Lead: California Advances in Stem Cell Research: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.
2003	National Conference of State Legislatures Annual Meeting-State Legislatures and Stem Cell Research: “Understanding the Debate about Human Stem Cells and Cloning.” San Francisco, CA.
2003	ABA / AMA / AAAS Conference on Genetics and the Law-The Human Cloning Controversy and the Law: “Understanding the Debate about Human Stem Cells and Cloning.” Chapel Hill, NC.
2003	Neuron First Annual Meeting on the Cell Biology of the Neuron: “Linking molecular motors to signaling and neurodegenerative disease” New Orleans, LA.
2004	ISN/APSN Joint meeting symposium, "Motors, cytoskeleton, and neurodegeneration": “Linking kinesin-dependent transport pathways to signaling and disease.” Hong Kong.
2004	The Robert Packard Center for ALS Research Symposium: “Non-cell autonomous toxicity of ALS-linked SOD1 mutants.” Baltimore, MD.
2004	Forward Genomics in the Post-Genomics Era; “Linking kinesin-dependent transport pathways to signaling and disease.” Tucson, AZ.
2004	MBL Neurobiology Course: “Kinesins in signaling and disease.” Woods Hole, MA.
2004	International Conference on Alzheimer’s Disease and Related Disorders: “Axonal transport and Alzheimer’s Disease.” Philadelphia, PA.
2004	Fidelity Foundation Meeting on Enabling Technologies for Alzheimer's Disease Research: “Axonal transport and Alzheimer’s Disease.” Bar Harbor, ME.
2004	HD 2004: Changes, Advances and Good News (CAG)n: “Axonal transport in Huntington’s Disease.” Boston, MA.
2004	The Robert Packard Center for ALS Research Symposium: “Identifying the cell type responsible for SOD1 mediated ALS.” Baltimore, MD.
2005	American Society for Biochemistry and Molecular Biology Symposium: “Linking kinesin-dependent transport pathways to signaling and disease.” San Diego, CA.

2005	Biophysics Society Symposium: “Linking kinesin-dependent transport pathways to signaling and disease.” Long Beach, CA.
2005	American Association of Anatomists Symposium: “Linking kinesin-dependent transport pathways to signaling and disease.” San Diego, CA.
2005	Cambridge Centre for Brain Repair Spring School: “Linking kinesin-dependent transport pathways to signaling and disease.” Cambridge, England.
2005	Molecular Mechanisms of Neurodegeneration Keynote Symposium: “Linking kinesin-dependent transport pathways to signaling and disease” Milan, Italy.
2005	Molecular Cell Dynamics-from cytoskeleton to development: “Linking kinesin-dependent transport pathways to signaling and disease.” Muenster, Germany.
2005	Nobel Symposium 131-Controlled Nanoscale Motion in Biological and Artificial Systems: “Cargo flux within the neuron: theoretical treatment of a biological process.” Bäckaskog Slott, Sweden.
2005	Frontiers in Human Embryonic Stem Cells Advanced Training Course: “HESC research for Alzheimer’s Disease and Lou Gehrig’s Disease.” Stanford, CA.
2005	Gordon Research Conference on CAG triplet repeat disorders: “Linking kinesin-dependent transport pathways to signaling and disease” Mount Holyoke College, MA.
2005	Fidelity Foundation Meeting on Enabling Technologies for Alzheimer's Disease Research: “Axonal transport and Alzheimer’s Disease.” Bar Harbor, ME.
2005	IEEE Computational Systems Bioinformatics Conference: “Bioinformatics challenges and opportunities in stem cell biology.” Stanford, CA.
2005	Ellison Medical Foundation Biology of Aging Colloquium: “Linking kinesin-dependent transport pathways to signaling and disease” Woods Hole, MA.
2005	Route 28 Summit in Neurobiology: “Identifying the cell type responsible for SOD1 mediated ALS.” Semiahmoo, WA.
2005	University of Washington Pathology Retreat Keynote Lecture: “Linking stem cells and molecular motors to signaling and neurodegenerative disease.” Leavenworth, WA.
2005	IBC’s Stem Cell Research Challenges, “Using stem cells to Understand Alzheimer’s Disease”. La Jolla, CA.
2005	Stem Cells and Axonal Regeneration: Strategies for the Treatment of ALS: “Identifying the cell type responsible for SOD1 mediated ALS.” Banbury Center, Cold Spring Harbor Laboratory, Long Island, NY.
2005	The Robert Packard Center for ALS Research Symposium: “Identifying the cell type responsible for SOD1 mediated ALS.” Baltimore, MD.
2006	Translational Oncology Symposium, Moores Cancer Center. “Using stem cell technology to fight cancer and Alzheimer’s Disease.” UCSD.
2006	Cell Biology and Drug Discovery: “From bench to bedside. Developing drugs for cancer, heart failure, and Alzheimer’s Disease using molecular motors and stem cells.” National

	Centre for Biological Sciences Bangalore, India.
2006	CSUPERB Symposium-"Biotechnology: The Brain and the Future" Neuronal Development and Alzheimers. “Linking kinesin-dependent transport pathways to signaling and disease.”
2006	AAAS Annual Meeting in St. Louis: “Using stem cells to tackle neurodegenerative disease.” St. Louis, MO.
2006	Neurone Workshop on Dysfunction of axons and synapses in neurodegeneration. “Linking kinesin-dependent transport pathways and stem cells to signaling and disease.” Cambridge, England.
2006	Stem Cells and Regenerative Medicine Symposium in Barcelona: “Linking kinesin-dependent transport pathways and stem cells to signaling and disease.”
2006	Interdisciplinary Colloquium on The Biology of Human Aging Brown University: “Linking kinesin-dependent transport pathways and stem cells to signaling and disease.”
2006	Gordon Research Conference on Molecular Cell Biology: “Linking kinesin-dependent transport pathways to signaling and disease.”
2006	International Conference on Alzheimer’s Disease: “Linking kinesin-dependent transport pathways to signaling and disease.” Madrid, Spain.
2006	Meeting on Neurodegenerative Diseases: Molecular Mechanisms in a Functional Genomics Framework. “Linking kinesin-dependent transport pathways and stem cells to signaling and disease”. Berlin, Germany.
2006	A Symposium in honor of J.R. Mcintosh: “Linking kinesin-dependent transport pathways and stem cells to signaling and disease.” Boulder, CO.
2007	Keystone Symposium on Molecular Mechanisms of Neurodegeneration: “Axonal transport and neurodegeneration in AD.” Taos, NM.
2007	Adler/Salk Symposium on Axonal/Dendritic Transport in Health and Disease: "Axonal transport and neurodegenerative disease".
2007	Brain Research Centre Research Day: "Axonal transport and neurodegenerative disease". UBC, Vancouver, BC, Canada.
2007	GTCbio's joint Stem Cell R&T/Apoptosis in Drug Discovery meeting: “Linking stem cells and molecular motors to signaling and neurodegenerative disease.”
2007	Third Annual Meeting of American Academy of Nanomedicine (AANM): “Linking stem cells and molecular motors to signaling and neurodegenerative disease.” San Diego, CA.
2007	GME 2007. Genomes, Medicine, and the Environment Conference: “Stem cell genomic approaches to Human Disease.”
2007	University of Utah Neuroscience Symposium: "Probing the role of transport in neurodegeneration and neuroprotection” Snowbird, UT.
2007	ALS Association Social Evening at SFN: "Experimental therapeutics based on non-cell autonomy in ALS?" San Diego, CA.

2007	The Preuss Foundation Seminar on "Stem Cell Biology": "Modeling disease with human embryonic stem cells." La Jolla, CA.
2007	GTCBIO 3rd Modern Drug Discovery and Development Summit. Therapeutic Strategies against Neurodegenerative Conditions: “Possible uses of human embryonic stem cells as drug discovery tools”. San Francisco, CA.
2008	International Society for Cardiovascular Translational Research Symposium: “Ethics of cellular therapy”. San Diego, CA.
2008	International Symposium on Intracellular Trafficking and Transport in Goettingen, Germany: "Elucidating mechanisms of vesicle movement and human neurodegenerative diseases."
2008	Gordon Conference on Molecular Cell Biology in New Hampshire: “Vesicle transport and Alzheimer's disease - a non-amyloid neurodegenerative process?”
2008	RIKEN meeting in Tokyo on Developmental Foundations of Brain Function and Dysfunction: “Elucidating mechanisms of vesicle movement and human neurodegenerative diseases.”
2008	Genome Dynamics in Neuroscience Conference at Asilomar, Genome Dynamics and Instability in the Aging Brain: “Elucidating mechanisms of vesicle movement and human neurodegenerative diseases.”
2008	International Society for Ocular Cell Biology in San Diego: “Human embryonic stem cells and disease models.”
2008	UCLA Neuroscience Doctoral Program, 24th Annual Retreat: “Elucidating mechanisms of vesicle movement and human neurodegenerative diseases.”
2008	Molecular and Cellular Mechanisms of Axon Degeneration 2nd International Workshop at Woods Hole: “Elucidating mechanisms of vesicle movement and human neurodegenerative diseases.”
2008	San Diego Stem Cells on the Mesa: “Alzheimer’s Disease.”
2008	American Society for Cell Biology in San Francisco: “Impacts of stem cell research on cell biology working group.”
2009	CNIO Cancer Conference: "Stem Cells and Cancer", Madrid, Spain: “Elucidating mechanisms of human neurodegenerative diseases using stem cells.”
2009	29th Annual Vincent du Vigneaud Symposium: “Probing the roles of vesicle movement in Alzheimer's Disease by bringing stem cells to the fight.”
2009	Ara Parseghian Medical Research Foundation: “Using human embryonic stem cells to develop therapeutics for Niemann Pick Type C.”
2009	II Esteve International Symposium on Alzheimer's Disease. Barcelona, Spain.
2009	World Stem Cells and Regenerative Medicine Asia 2009, Singapore.
2009	BOCHUM, Germany Section Days Meeting: "Probing the roles of vesicle movement in

	Alzheimer's disease by bringing stem cells to the fight."
2009	4th Annual Stem Cell Meeting on the Mesa Event at Salk. Keynote. La Jolla, CA.
2010	Sino-American Biotechnology and Pharmaceutical Professional Association.
2010	Science & Technology Forum VIII Keynote Speaker: "Elucidating mechanisms of human neurodegenerative diseases through the use of human embryonic stem cells."
2010	2010 Glaucoma Management Beyond Intraocular Pressure Keynote Lecture: "Potential for stem cells in neurodegenerative disease and glaucoma."
2010	CIRM 2010 Bridges Trainee Meeting: "Going the extra mile with stem cells."
2010	Cell Therapy Summit 2010-Designing Regenerative Medicine Innovations with Translation in Mind: "Strategies for moving concepts 'from bench to bedside'."
2010	2010 AAAS Annual Meeting: "The future of stem cell research." San Diego, CA.
2011	2011 Drosophila Research Conference: "Genetic analysis of vesicle movement."
2011	2011 The 2nd Cold Spring Harbor Laboratory (CSHL) Meeting on Stem Cell Biology: Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
2011	2nd Annual Stem Cell Research Symposium Texans for Stem Cell Research: "Difficult but hopeful: Translating stem cell therapies from lab to clinic." Austin, TX.
2012	IPSEN Symposium "Programmed Cells: From Basic Neuroscience to Therapy" Meeting: "Using stem cells to understand and treat Alzheimer's disease." Paris, France.
2012	Cold Spring Harbor Meeting, Molecular Pathways in Organ Development & Disease: "Using pluripotent stem cells to probe mechanisms of Alzheimer's disease." Cold Spring Harbor Laboratory, Cold Spring Harbor, NY.
2012	San Diego Chinese American Science and Engineering Association (SDCASEA) and UCSD Institute of Engineering in Medicine (IEM): Third Annual Biomedical Engineering Conference, Frontiers in Neural Science and Engineering and Neural Disorders: "Probing Alzheimer's disease mechanisms with human pluripotent stem cells." San Diego, CA.
2012	2012 Vallee Foundation Symposium, "Molecular Machines and Genetic Approaches to Medicine": "Using human stem cells to probe the role of transport and sorting in Alzheimer's disease." Reykjavik, Iceland.
2012	Inaugural KY Cha Symposium in Stem Cell Technology and Regenerative Medicine at the Annual Meeting of ASRM: "Challenges and opportunities for stem cell based therapies."
2012	34th Annual Symposium of the Sanford-Burnham Medical Research Institute (Frontiers in Stem Cell Biology for Drug Discovery): "Using stem cells to understand and treat neurodegenerative disease."
2013	11th International Conference on Alzheimer's and Parkinson's Diseases (AD/PD 2013): "Human IPS cell modeling and probing of AD mechanisms." Florence, Italy.
2013	2013 AAN Annual Meeting, Controversies in Neuroscience Plenary Session: "Do

	currently applied stem cell treatments have any validity in the treatment of neurologic disorders?"
2013	STEMCONN 2013. "Using stem cells to understand and treat neurodegenerative diseases." New Haven, CT.
2013	IOM workshop 2013-Accelerating Therapeutic Development for Nervous System Disorders towards First-in-Human Trials: A Workshop: "iPSCs." Washington, D.C.
2013	Advanced Topics in Genomics and Cell Biology 2013 UNICAMP, Keynote Lecture: "Probing genomic contributions to Alzheimer's disease with human stem cells." São Paulo, Brazil.
2013	2013 ISSCR Meeting: “Using induced pluripotent stem cells to understand Alzheimer's disease.” Boston, MA.
2013	2013 NPC/APMRF Meeting: "Implications of disrupted autophagy on cholesterol trafficking, neuronal survival and strategies for drug development in NPC1." Notre Dame, IN.
2013	5th Conference on Advances in Molecular Mechanisms Underlying Neurological Disorders: "Probing sporadic and familial Alzheimer's disease using induced pluripotent stem cells." University of Bath, UK.
2013	2013 9th Annual Stem Cell Symposium at UCLA, Stem Cells Pathways to the Clinic: "Using stem cell derived human neurons to probe mechanisms of Alzheimer's disease." Los Angeles, CA.
2013	Ciberned, Madrid Spain, “Probing mechanisms of neurodegenerative disease with pluripotent stem cell technology.”
2014	2014 Muscle and Molecular Motors Gordon Conference, Mount Snow, VT, “Stem Cells, Motors and Trafficking in AD.”
2014	Duke University, Graduate Program, “Evaluating AD phenotypes in patient-derived hIPSC.”
2014	World Congress on NeuroTherapeutics (DDDN): Dilemmas, Debates, Discussions, Basel, Switzerland 2014, “The future is not yet here.”
2014	2014 BIO International Convention, “Genomic Technologies and Biomaterials for understanding disease.” San Diego, CA
2014	SLAS, SCRM, “Using pluripotent stem cells to find drugs for AD.”
2014	CBRC Caucus, “Embryonic stem cell research: Advances and potential.” Washington, DC.
2015	AD/PD 2015, Mechanisms, Clinical Strategies and Promising Treatment of Neurodegenerative Diseases, “Using induced pluripotent stem cells to probe mechanisms of AD.” Nice, France
2015	1st Kyoto University-UCSD Joint Symposium, “Using induced pluripotent stem cells to probe mechanisms of AD.” Kyoto, Japan

2015	Sanford Research Type I Diabetes Conference, “Our stem cell future: What’s next?” Sioux Falls, South Dakota

Public Lectures and Government Testimony

1999	Testimony on Stem Cells to Senate Labor HHS Appropriations Subcommittee.
1999	AAMC annual meeting in Washington, D.C.: "Benefits and Perils of Public Funding of Controversial Research.”
2000	Testimony on Stem Cells and Senate bill S2015 to Senate labor HHS Appropriations Subcommittee.
2000	Guest Faculty Member, American Hospital Association Health Care Systems Leadership Retreat – Advances in Scientific Discovery and their Possible Impact on Health Care Delivery
2000	Testimony on Therapeutic Benefits of Stem Cell and Human Cloning Technology to California Advisory Committee on Human Cloning.
2001	Testimony on the FY2002 NIH Appropriation to House Labor-HHS Appropriations Subcommittee.
2001	Guest panelist, Springboard: The Stem Cell Show, PBS.
2001	Lecture to El Cajon Lion’s Club: “Understanding the Human Stem Cell Debate.”
2001	Lecture to San Diego Community College Continuing Education: “Understanding the Human Stem Cell Debate.”
2001	Lecture to El Cajon Rotary Club: “Understanding the Human Stem Cell Debate.”
2001	Yom Kippur panel discussion/lecture at Temple Emanu-el: “Understanding the Human Stem Cell Debate.”
2001	Lecture to Biocom/San Diego: “Understanding the Human Stem Cell Debate.”
2001	UCI Meeting on The Business of Biotechnology for Academics: “Lessons Learned from the Founding of Cytokinetics.” Irvine, CA.
2002	CSUPERB Biotechnology Symposium: "The Stem Cell Debate: Science, Politics or Ethics and Who Will Set the Pace for the Future?” Pomona, CA.
2002	Annual Meeting of American College of Obstetrics and Gynecology, Guest Panelist: “Stem Cells, Embryonic Research and Cloning: Brave New World or March of Folly?” Los Angeles, CA.
2002	CALBIO Summit 2002, Guest Panelist: “Human Cloning Research and Applications.” San Diego, CA.
2002	Lecture to Alpine Women’s Club: “Understanding the Human Stem Cell and Cloning Debate.”
2002	Lecture to Planned Parenthood Board of San Diego: “Understanding the Human Stem

	Cell and Cloning Debate."
2002	Lecture to Elderhelp: "Understanding the Human Stem Cell and Cloning Debate."
2002	Lecture on Stem Cells and Cloning to California State Select Committee on Genetics, Genetic Technologies, and Public Policy.
2002	Lecture at Mission Hills Congregational Church: "Understanding the Human Stem Cell and Cloning Debate."
2002	Lecture to UCSD Emeriti Association: "Understanding the Human Stem Cell and Cloning Debate."
2002	Lecture in Stein Institute Public lecture Series: "The Stem cell Debate: What it's All About."
2002	Member of Disability Week Panel at UCSD Discussing: "Stem Cell Research: Where Science Meets Politics and Ethics."
2002	Lecture to Planned Parenthood of San Diego and Riverside President's Circle: "Understanding the Human Stem Cell and Cloning Debate."
2002	Lecture to California Biosafety Officers: "Understanding the Human Stem Cell and Cloning Debate."
2002	Lecture to Bay Area Chapter of the International Society of Pharmaceutical Engineers: "Understanding the Human Stem Cell and Cloning Debate."
2002	Opposing Viewpoints Series, Live Radio for television: "Is Cloning Ethical?"
2002	Testimony on Human Cloning and Stem Cell Research to California State Senate Health and Human Services Committee.
2002	Testimony on Human Cloning and Stem Cell Research to California State Assembly Select Committee on Biotechnology.
2003	BIO2003 Bioethics: "Understanding the Debate about Human Stem Cells and Cloning." Washington, D.C.
2003	Congressional Staff Briefing with BIO. Washington, D.C.
2003	Senate Staff Briefing on Stem Cells and Cloning. Washington, D.C.
2003	Arizona Parkinson's Disease Association Forum on Stem Cells in Parkinson's Disease: "Understanding the Debate about Human Stem Cells and Cloning." Tucson, AZ.
2003	UCSD Department of Medicine Post Graduate CME Course-Topics and Advances in Internal Medicine: "Possible Avenues and Debates about Human Stem Cells to the Clinic" San Diego, CA.
2003	UCSD Foundation Board of Trustees: "UCSD and the Future of Science." (with Science Fiction Author, David Brin) San Diego, CA.
2003	University of Oklahoma-Health Sciences Center Graduate Research Education and Technology (GREAT) Keynote Speaker: "Understanding the Debate about Human Stem

	Cells and Cloning." Oklahoma City, OK.
2003	Testimony to California Senate Health and Human Services Committee on SB778 (GO bonds for biomedical and stem cell research and facilities), SB322 (State oversight of stem cell research), and SB771 (Informed consent and creation of an embryo registry). Sacramento, CA.
2003	Cancer Leadership Council: "Understanding the Debate about Human Stem Cells and Cloning." Washington, D.C.
2003	Encinitas Kiwanis Club: "Understanding the Debate about Human Stem Cells and Cloning." Encinitas, CA.
2003	The National Coalition for Cancer Research "Cancer 101" Congressional Staff Briefing: "Understanding the Debate about Human Stem Cells and Cloning." Washington, D.C.
2003	San Diego State University Bioethics Course: "Understanding the Debate about Human Stem Cells and Cloning." San Diego, CA.
2003	Sherman Oaks Hospital CME: "Understanding the Debate about Human Stem Cells and Cloning" Sherman Oaks, CA.
2004	Testimony to California Senate Health and Human Services Committee on Administration's proposed repeal of SB 322 (development of stem cell guidelines). Sacramento, CA.
2004	Commonwealth club (KQED): Proposition 71 Panel .San Francisco, CA.
2004	Harvard Divinity School Alumni Day Symposium: "The Science of Stem Cell Research." Cambridge, MA.
2004	University of San Diego-University of the Third Age (U3A): "Understanding the Debate about Human Stem Cells and Cloning." San Diego, CA.
2004	BIOPHEX2004-DNA Keynote Panel: "Understanding the Debate about Human Stem Cells and Cloning." San Francisco, CA.
2004	City of Hope Fall Forum "Election 2004: What you need to know about Proposition 71, the Stem Cell Initiative": "Understanding the Debate about Human Stem Cells and Cloning." Duarte, CA.
2004	UCSD Foundation Board: "Understanding the Debate about Human Stem Cells and Cloning." San Diego, CA.
2004	Temple Adat Shalom: "Understanding the Debate about Human Stem Cells and Cloning." Rancho Bernardo, CA.
2004	The UCI Interdisciplinary Center for the Scientific Study of Ethics and Morality-Stem Cells: Science, Ethics, and Politics in Dialogue: "The Politics of Stem Cell Research-The View from California" Irvine, CA.
2004	United Nations Science Conference-Human Cloning Issues in all its aspects: "Understanding the Debate about Human Stem Cells and Cloning." New York, NY.

2004	The Science TV Network-"Stem Cells: Science, Ethics and Politics at the Crossroads": “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2004	Willie L. Brown Jr. Institute on Politics and Public Service-Stem Cell Research Symposium: “Understanding the Debate about Human Stem Cells and Cloning.” San Francisco, CA.
2004	James A. Baker III Institute for Public Policy-“Stem Cells: Saving Lives or Crossing Lines”: “Understanding the Debate about Human Stem Cells and Cloning.” Houston, TX.
2004	SPAR (Science Policy Analysis Roundtable)/UCSD Graduate Student Association Proposition 71 Panel: “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2004	Stanford University Bioethics Course: “Understanding the Debate about Human Stem Cells and Cloning.” Palo Alto, CA.
2004	UCSD Emeriti Association: “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2004	University of Washington Forum on Science Ethics and Policy (FOSEP): “Understanding the Debate about Human Stem Cells and Cloning.” Seattle, WA.
2004	Planned Parenthood of San Diego: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.
2004	The Institute of Continued Learning at UCSD: “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2004	San Diego OASIS: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.
2004	UCSD Development Staff: “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2004	Testimony to California Senate Health and Human Services Committee on Proposition 71. San Diego, CA.
2004	Invitrogen Annual Innovation Awards Banquet: “Understanding the Debate about Human Stem Cells and Cloning.” La Costa, CA.
2004	UCSD School of Medicine Alumni National Board: “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2005	The Philippine Nurses Association of San Diego and the UCSD General Clinical Research Center Keynote Speaker: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.
2005	Washington State Technology Alliance/Seattle Mayor's office/Greater Seattle Chamber of Commerce Leadership Study Mission: “The California Stem Cell Initiative: Science, Politics, Ethics and Hollywood.” La Jolla, CA.
2005	CALBIO 2005 Conference-Stem Cell Research and Prop 71: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.

2005	BIOCOM - CONNECT Technology Innovation Forum: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.
2005	California Association for Nurse Practioners Annual Conference: “Understanding the Debate about Human Stem Cells and Cloning.” Monterey, CA.
2005	North America Taiwanese Professors Association Southern California Chapter (NATPA-SCAL) Winter Retreat: “Stem Cell Initiative.” San Diego, CA.
2005	UC Day UCSD Alumni Association: “Understanding the Debate about Human Stem Cells and Cloning.” Sacramento, CA.
2005	Warren College Parents Weekend: "Where is Stem Cell Research Taking Us?” La Jolla, CA.
2005	UCSD Resource Management & Planning Full Staff Meeting: “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2005	Mission Valley Rotary Club: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.
2005	UCSD Eleanor Roosevelt College Freshmen Honors Seminar: “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2005	Congressional Biomedical Research Caucus: “A Scientist's Perspective on Proposition 71 in California.” Washington, D.C.
2005	Congressional Staff Briefing: “Understanding the Debate about Human Stem Cells and Cloning.”
2005	Lawyers Club of San Diego: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.
2005	UCSD Preventive Medicine Residency: “Updates and Overview of Stem Cell Research.” La Jolla, CA.
2005	America’s Health Insurance Plans (AHIP) “Breakthroughs in Medical Science: Stem Cell Research, Implications, and Ethics”: “Understanding the Debate about Human Stem Cells and Cloning.” Las Vegas, NV.
2005	Latin American Science Journalists Workshop: “Understanding the Debate about Human Stem Cells and Cloning” La Jolla, CA.
2005	Annual Meeting of German scholars: “Understanding the Debate about Human Stem Cells and Cloning.” La Jolla, CA.
2005	Testimony to United States Senate Special Committee on Aging Regarding "Exploring the Promise of Embryonic Stem Cell Research." (by videoconference from La Jolla) Washington, D.C.
2005	UCSD School of Medicine Alumni CME: “Understanding the Debate about Human Stem Cells and Cloning.” San Diego, CA.
2005	Congressional Staff Briefing on Chimeras and Cell Fusion. Washington, D.C.

2005	California Science Center-Science Matters: Promise and Pitfalls of Stem Cell Research: “Understanding the Debate about Human Stem Cells and Cloning.” Los Angeles, CA.
2005	Washington State Technology Alliance Keynote Lecture: “Understanding the Debate about Human Stem Cells and Cloning.” Leavenworth, WA.
2005	Foothills United Methodist Church Stem Cell Forum: “Understanding the Debate about Human Stem Cells and Cloning.”
2005	Planned Parenthood Friends: “Understanding the Debate about Human Stem Cells and Cloning.”
2005	UCDS Frontiers of Science for Community College Students “Understanding the Debate about Human Stem Cells and Cloning.”
2005	Advisory Panel to American Cancer Society Board of Directors “Understanding the Debate about Human Stem Cells and Cloning.”
2005	St. James Episcopal Church: “Understanding the Debate about Human Stem Cells and Cloning.”
2006	UCSD Board of Overseers: “Understanding the Debate about Human Stem Cells and Cloning.”
2006	California Association for Nurse Practitioner's 29th Annual Conference: “Understanding the Debate about Human Stem Cells and Cloning.”
2006	Association for Women in Science: “Understanding the Debate about Human Stem Cells and Cloning.”
2006	Carmel Valley Middle School Career Day Presentation on Stem Cells and Medical Research.
2006	UCSD Near You: “Stem Cells and the Therapies of the Future.” New York, NY.
2006	Planned Parenthood, Neighbor-to-Neighbor presentation on Stem Cells and Medical Research, Encinitas, CA.
2006	UVA School of Medicine's Medical Center Hour: “The Science of Stem Cells.”
2006	LabAutomation2006. “Understanding Stem Cells and Cloning.” Palm Springs, CA.
2006	The New Medicine: The Ethics and Policy of Regenerative and Replacement Therapy: “Stem Cells and Cloning.” Charlottesville, VA.
2006	Whitehead Institute Press Seminar: “Stem Cells and Cloning.”
2006	University City United Church “The Scientific Bases of Stem Cells and Cloning.”
2006	Pro-Cures Stem Cell Policy & Advocacy Summit at Stanford: “Stem Cell Approaches to Development of New Medical Therapies.”
2006	Ismaili Health Professionals Association (IHPA), Symposium in Dallas "The 21st Century Professional and Civil Society": "Stem Cell Research and its Implications for Society."

2006	CEO Summit, University of Washington. Keynote speaker. “Defining the Elements that Enhance Science and Technology in San Diego.”
2006	UCSD Near You: “Stem Cells and the Therapies of the Future.” Boston, MA.
2007	Australian American Leadership Dialogue. “Stem Cells in San Diego.”
2007	American Council on Germany and UCSD meeting on Biotech to Biofuels: “How New Technologies are Changing Transatlantic Relations” “The Future of the Pharmaceutical Industry: Who Pays for Innovation?”
2007	Lecture to UCSD Alumni about The Stem Cell Initiative. Menlo Park, CA.
2007	UCSD Town and Gown: “Stem Cell Science: What's in It for Us?”
2007	San Diego Stem Cell Ethics Conference: Milestones for Clinical Trials. “How Can We Accelerate the Development of Stem Cell Derived Therapies?”
2007	UCSD HR Department All Staff Meeting: “Understanding Stem Cells and Cloning.”
2007	UCSD Near You and the UCSD Alumni Association Meeting. Stem Cell Research: An Open Conversation.
2007	BIO2007 Panel on Current Affairs in U.S. Stem Cell Research.
2007	UCSD Planned Giving Executive Committee: “Understanding Stem Cells and Cloning.”
2007	UCSD Faculty Ambassador Event at Moores Cancer Center: “Finding Cancer’s Achilles’ Heel.”
2007	Testimony to The National Academies' Human Embryonic Stem Cell Research Advisory Committee: “Upcoming issues with clinical trials.” (by videoconference)
2007	The Stem Cell Summit: “How Can We Accelerate the Development of Stem Cell Derived Therapies?” Boston, MA.
2007	UCSD Alzheimer’s Disease Research Center Open House: “Using Human Stem Cell Technology to Understand Mechanisms of Alzheimer’s Disease.”
2008	Congressional Briefing: “New Methods of Making Human Pluripotent Stem Cells.”
2008	UCSD Biomedical Ethics: “New Methods of Making Human Pluripotent Stem Cells.”
2008	San Diego Wednesday Club: “Stem Cells and the Future of Medicine.”
2008	Osher Institute Distinguished Lecture on Stem Cell Research.
2008	University of San Diego Ethics at the Frontiers of Science: “New Methods of Making Human Pluripotent Stem Cells.”
2008	Hofstra University Meeting on Embryonic Stem Cells, Clones and Genes: Science, Law, Politics and Values. Panel: Human Embryonic Stem Cell Research: Science, Achievements and Potential; Synergy with Human Cloning and Genetic Engineering. "Pluripotent Stem Cells: the Old, the New, and the Fanciful." Long Island, NY.

2008	San Diego Chapter of the Fulbright Association. The Stem Cell Challenge: Opportunities for California and the Wider World.
2008	Coronado Rotary Club: “Stem Cells and the Future of Medicine.”
2008	UCSD Health Sciences Advisory Board: “Stem Cells and the Future of Medicine.”
2008	San Diego Alzheimer’s Disease Research Center Conference: “Using Stem Cells in the Fight against Alzheimer’s Disease.”
2008	UCSD Cosmos: “Using Stem Cells in the Fight against Alzheimer’s Disease.”
2008	UCSD Faculty Ambassador Event: “Stem Cells and Brain Disease: The Straight Story.”
2008	California Institute for Regenerative Medicine Press Seminar: “Using Stem Cells in the Fight against Neurodegenerative Disease.”
2008	Regional Institute of Medicine Meeting, Ann Arbor, MI: “Scientific and Medical Challenges and Opportunities for Human Embryonic Stem Cell Research.”
2008	UCSD Environmental Health and Safety Meeting: “Stem Cells and the Future of Medicine.”
2008	The National Academy of Sciences: Science and Entertainment Exchange Inaugural Meeting: “Stem Cells and the Future of Medicine in The Frontiers of Genomics.”
2008	National Academies Human Embryonic Stem Cell Research Advisory Committee: “Symposium on Translation of Stem Cells into Clinical Stem Cell Therapeutics and Advisory Committee Meeting: Ethical concerns of stem cell therapeutics for Parkinson’s Disease.”
2009	United States House of Representatives Briefing for Freshman Members: “Scientific Trends in Stem Cell Research.”
2009	San Diego Science Festival Nifty Fifty Assembly at Olympian High School: “Stem Cells and the Future of Medicine.”
2009	Bat Harim Hadassah: “Stem Cells and the Future of Medicine.”
2009	Parkinson's Disease Association of San Diego Symposium, Parkinson's Care Giving: A Day in the Life: Update on the Sanford Consortium for Regenerative Medicine.
2009	Bionet Conference 2009: “Challenges and Controversies in Stem Cell Therapies.”
2009	Annual Multiple Sclerosis (MS) Symposium: “Stem Cells for MS and other Neurological Diseases.”
2009	Preventive Medicine at the Interface of Emergency Medicine and Public Health: “Stem Cells and the Future of Medicine.”
2009	Association of Health Care Journalists: “Stem Cells and the Future of Medicine.”
2009	San Diego Stem Cell Science Education Symposium at UCSD: “Cells as Small Businesses.”

2009	UCSD External Relations All Staff Meeting: “Stem Cells and the Future of Medicine.”
2009	Law and Innovation in Bioscience Conference at The University of Texas Law School: “The Embryonic Stem Cell Controversy.”
2009	UCSD Chancellor’s Associates: “A New Era in Stem Cell Research.”
2009	Del Mar Rotary Club: “Stem Cells and the Future of Medicine.” Del Mar, CA.
2010	Hadassah: “Stem Cells and the Future of Medicine.”
2010	Multiple Sclerosis Society: “Stem Cells and the Future of Medicine.” Dana Point, CA.
2010	UCSD Town and Gown: “Stem Cells and the Future of Medicine.” La Jolla, CA.
2010	Canyon Crest Academy (High school classroom visit and talk): “Stem Cells and the Future of Medicine.”
2010	Ocean Shores High School (Class room visit and talk): “Stem Cells and the Future of Medicine.”
2010	UCSD Alumni Board: “Stem Cells and the Future of Medicine.”
2011	Congressional Briefing of Representatives Dold and Dent and Staff: “Stem Cells and the Future of Medicine.”
2012	Santa Margherita High School: “Stem Cells and the Future of Medicine.”
2012	La Jolla Rotary Club: “Stem Cells and the Future of Medicine.” La Jolla, CA.
2012	Achievement Rewards for College Scientists: “Stem Cells and the Future of Medicine.”
2012	TEDX, San Diego: “Stem Cells and the Future of Medicine.” San Diego, CA.
2012	Rancho Bernardo Rotary Club: “Stem Cells and the Future of Medicine.” Rancho Bernardo, CA.
2012	Coronado Club: “Stem Cells and the Future of Medicine.” Coronado, CA.
2012	Rancho Santa Fe Rotary Club: “Stem Cells and the Future of Medicine.” Rancho Santa Fe, CA.
2013	Oceanside Rotary Club: “Stem Cells and the Future of Medicine.” Oceanside, CA.
2013	Del Mar Foundation: “Stem Cells and the Future of Medicine.” Del Mar, CA.
2013	California Healthcare Institute: "The Promise of Stem Cell Research, Advancing Our Future."
2013	Carlsbad Rotary Club: “Stem Cells and the Future of Medicine.” Carlsbad, CA.
2013	Stem Cell Meeting on the Mesa: Panel II: Clinical Trials at the Sanford Stem Cell Clinical Center: Chair
2014	The Future of Care: “The future of stem cell therapies.” San Diego, CA.

2015	NIA/AD Summit: “Session I: Interdisciplinary Research to understand the heterogeneity and multifactorial etiology of AD.” Chair
2015	Town and Gown May 2015: “Realizing the future of stem cell medicine: An update on the Sanford Stem Cell Clinical Center.” San Diego, CA.
2015	Pint of Science 2015: “Fighting AD with stem cells.” La Jolla, CA.

Other Professional Activities:

Co-founder, Cytokinetics, Inc. South San Francisco

Various interviews for print and broadcast media on stem cells and cloning, including The Commonwealth Club, These Days with Tom Fudge, Full Focus with Gloria Penner, ABC, CNN, Al Jazeera, The Charlie Rose Show, Science Friday, 60 Minutes, and others.

Editorial Boards:

Annual Review of Cell and Developmental Biology, Associate Editor

(f) Most Significant Contributions to Promoting Diversity (Examples include, but are not limited to, developing strategies for the educational or professional advancement of students in underrepresented groups, contributions that promote equitable access and diversity in education, and in activities such as recruitment, retention, and mentoring.)

Active recruitment and mentoring of under-represented students in my lab group.

(g) Other Activities Those that do not fit into categories (a) – (e) above (including community service).

N/A

(h) Student Instructional Activities

Course load information is reported separately in faculty review files. Please list here all students mentored outside of the structured classroom setting. Please list by category (e.g., undergraduate research students, masters or doctoral candidates, postdoctoral or medical fellows, interns, residents) and indicate your role (e.g., thesis adviser, research adviser) for each student. For graduate students, indicate the year of their degree when appropriate.

Current Graduate Students	**Research / Thesis Adviser**	**Year to Receive Ph.D.**
Lauren Fong	01/11 – present	Anticipated
Vanessa Langness	07/13 - present	Anticipated
Sol Reyna	04/10 – present	2015
Grace Woodruff	07/10 – present	2015

Past Graduate Students	**Research / Thesis Adviser**	**Year Received Ph.D.**
Aaron Bowman	03/96 – 04/00	2000
Richard Brusch	07/02 – 12/04	Did Not Complete
Tom Bunch	1989 – 1992	1992

Robert Coyne	1982 – 1989	1989
Margaret deCuevas	1986 – 1993	1993
James Frazier	1997 – 1999	Did Not Complete
Marjan Haghnia	09/98 – 05/03	2003
Mason Israel	07/06 – 03/11	2011
Rhiannon Killian	07/05 – 06/11	2011
Sonia Kim	09/12 – 07/13	M.S. 2013
Anne Kuller	1994 – 1996	Did Not Complete
Joe Marszalek	1995 – 1999	1999
Heather McDonald	1988 – 1991	1991
Emily Davis Niederst	07/05 – 08/11	2011
Patricia Pesavento	1986 – 1993	1993
Amena Rahman	1986 – 1990	1997
Gerald Reis	01/02 – 06/08	2008
Elizabeth Rodrigues	09/04 – 08/10	2010
Jessica Rusert	10/06 – 06/12	2012
Louis Sintasath	03/03 – 07/06	Did Not Complete
Gorazd Stokin	03/99 – 06/03	2003
Lukasz Szpankowski	09/06 – 06/11	2011
Carla Tucker	1992 – 1996	1996
Chun-Hong Xia	09/95 – 12/00	2000
Joy Yang	1984 – 1990	1990

Current Postdoctoral Fellows	**Research Adviser**	**Year Received Ph.D.**
Angels Almenar, Ph.D.	08/00 – present	1991
Nidhi Goyal, M.D.	07/12 – present	M.D. 2008
M. Paulina Ordonez, M.D.	03/07 – present	M.D. 2003
John Steele IV, Ph.D.	02/14 - present	Ph.D. 2011
Tamara Taketani, M.D.	07/11 – present	M.D. 2006
Rik van der Kant, Ph.D.	10/13 – present	Ph.D. 2013
Chao-Shun Yang, Ph.D.	12/14- present	Ph.D. 2014
Jessica Young, Ph.D.	10/09 – present	2009

Past Postdoctoral Fellows	**Research Adviser**	**Year Received Ph.D.**
Kristi Bache	01/06 – 6/09	2005
Nelson Barton, Ph.D.	11/90 – 06/96	1990
Aaron Bowman, Ph.D.	05/00 – 06/00	2000
Tom Bunch, Ph.D.	1992 – 1993	1991
Valeria Cavalli, Ph.D.	01/01 – 9/06	2002
Robert Coyne, Ph.D.	1989 – 1993	1989
Brian Dalby, Ph.D.	10/92 – 08/97	1992
Margaret deCuevas, Ph.D.	12/93 – 04/94	1993

Jason Duncan, Ph.D.	09/02 – 08/08	2002
Sandra Encalada, Ph.D.	12/03 – 06/11	2003
Tomas Falzone, Ph.D.	05/02 – 04/09	2002
Irmgard Orminger-Finger, Ph.D.	1987 – 1991	1987
Michael Garcia, Ph.D., joint with Don Cleveland	08/99 – 07/05	1999
Ann Gauger, Ph.D.	01/90 – 05/93	1990
Joe Gindhart, Ph.D.	07/93 – 07/97	1993
Shermali Gunawardena, Ph.D.	1999 – 12/07	1999
Brian Guzik, Ph.D.	08/01 – 09/05	2001
David Hanlon, Ph.D.	09/93 – 10/96	1988
Lu-Shium Her, Ph.D.	09/01 – 7/09	2001
Mason Israel, Ph.D.	04/11– 12/11	2011
Adeela Kamal, Ph.D.	10/98 – 08/01	1998
Dimitrije Krstic, Ph.D.	10/13 – 03/14	2009
John Lee, Ph.D.	1992 – 07/96	1989
Li Liu, Ph.D.	08/11 – 04/12	2011
Joe Marszalek, Ph.D.	07/99 – 05/00	1999
Heiner Matthies, Ph.D.	06/92 – 04/97	1992
Heather McDonald, Ph.D.	1991 – 1992	1991
Emily Davis Niederst, Ph.D.	08/11– 12/11	2011
Sinéad O'Connell, Ph.D.	08/00 – 07/01	2000
Andrea Pereira, Ph.D.	08/88 – 08/94	1986
Patricia Pesavento, Ph.D.	09/93 – 12/93	1993
Alastair Philp, Ph.D.	01/97 – 02/00	1995
Amena Rahman, Ph.D.	10/97 – 09/98	1997
Krishanu Ray, Ph.D.	09/95 – 06/98	1995
Elizabeth Rodrigues, Ph.D.	11/10 – 06/11	2010
Jessica Rusert, Ph.D.	11/12 – 01/13	2012
Roman Sakowicz, Ph.D.	07/94 – 08/98	1993
Kristina Schimmelpfeng, Ph.D.	12/00 – 6/08	2000
Jagesh Shah, Ph.D., joint with Don Cleveland	09/99 – 02/05	1999
Sameer Shah, Ph.D.	08/02 – 07/06	2002
Gad Shiff, Ph.D.	1998 – 04/00	1992
Hernando Sosa, Ph.D.	1997 – 05/00	1993
Russel Stewart, Ph.D.	10/89 – 12/92	1989
Gorazd Stokin, M.D., Ph.D	07/03 – 09/04	2004
Lukasz Szpankowski, Ph.D.	07/11 – 07/12	2011
Carole Weaver, Ph.D.	03/05 – 06/10	2003

Chun-Hong Xia, Ph.D.	01/01 – 11/01	2000
Joy Yang, Ph.D.	1990 – 1991	1990
Zhaohuai Yang, Ph.D.	10/93 – 12/00	1993
Shauna Yuan, M.D.	02/05 – 12/11	M.D. 1999

I have provided the information contained in the Biography/Bibliography packet or have reviewed it for accuracy.

[redacted]

08/14/2015

Date

Section III - Bibliography

Section A:
1. Original Publications:

1. Lindsley, D. E., Goldstein, L. S. B., and L. Sandler. Male sterility in maternal effect mutants. Dros. Inf. Serv. 55: 84-85, 1980.

2. Goldstein, L. S. B. Mechanisms of chromosome orientation revealed by two meiotic mutants in Drosophila melanogaster. Chromosoma 78: 79-111, 1980.

3. Goldstein, L. S. B. Kinetochore structure and its role in chromosome orientation during the first meiotic division in Drosophila melanogaster. Cell 25: 591-602, 1981.

4. Goldstein, L. S. B., Hardy, R. W., and D. L. Lindsley. Structural genes on the Y chromosome of Drosophila melanogaster. Proc. Natl. Acad. Sci. USA 79: 7405-7409, 1982.

5. Goldstein, L. S. B., Laymon, R. A., and J. R. McIntosh. A microtubule-associated protein in Drosophila melanogaster: Identification, characterization, and isolation of coding sequences. J. Cell Biol. 102: 2076-2087, 1986.

6. Dubreiul, R. Byers,T., Branton,D., Goldstein, L.S.B., and D.P. Kiehart. Drosophila spectrin. I. Characterization of the purified protein. J. Cell Biol. 105: 2095-2102, 1987.

7. Byers, T., Dubreiul, R., Branton, D., Kiehart, D.P., and L.S.B. Goldstein. Drosophila spectrin II. Conserved features are revealed by analysis of cDNA clones and fusion proteins. J. Cell Biol. 105: 2103-2110, 1987.

8. Bunch, T., Grinblat, Y. and L.S.B. Goldstein. Characterization and use of the Drosophila metallothionein promoter in cultured Drosophila melanogaster cells. Nucleic Acids Research 16: 1043-1061, 1988.

9. Yang, J., Saxton, W., and L.S.B. Goldstein. Isolation and characterization of the gene encoding the heavy chain of Drosophila kinesin. Proc. Natl. Acad. Sci. USA. 85: 1864-1868, 1988.

10. Kiehart, D.P., Lutz, M.S., Chan, D., Ketchum, A.S., Laymon, R.A., Nguyen, B., and L.S.B. Goldstein. Identification of the gene for fly non-muscle myosin heavy chain: Drosophila myosin heavy chains are encoded by a gene family. EMBO J. 8: 913-922, 1989.

11. Yang, J.T., Laymon, R.A., and L.S.B. Goldstein. A three domain structure of kinesin heavy chain revealed by DNA sequence and microtubule-binding analyses. Cell 56: 879-889, 1989.

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14. Dubreuil, R., Byers, T.J., Sillman, A.L., Bar-Zvi, D., Goldstein, L.S.B., and D. Branton. The complete sequence of Drosophila alpha-spectrin: Conservation of structural domains between vertebrate spectrins and alpha-actinin. J. Cell Biol. 109: 2197-2205, 1989.

15. Bunch, T.A. and L.S.B. Goldstein. The conditional inhibition of gene expression in cultured Drosophila cells by antisense RNA. Nucleic Acids Research 17: 9761-9782, 1989.

16. McDonald, H.B. and L.S.B. Goldstein. Identification and characterization of a gene encoding a kinesin-like protein in Drosophila. Cell 61: 991-1000, 1990.

17. Yang, J.T., Saxton, W.M., Stewart, R.J., Raff, E.C., and L.S.B. Goldstein. The head of kinesin is sufficient for force generation and motility in vitro. Science 249: 42-47, 1990.

18. Irminger-Finger, I., Laymon, R. A., and L.S.B. Goldstein. Analysis of the primary sequence and microtubule-binding region of the Drosophila 205K MAP. J. Cell Biol. 111: 2563-2572, 1990.

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20. Block, S.M., Goldstein, L.S.B., and B.J. Schnapp. Bead movement by single kinesin molecules studied with optical tweezers. Nature 348: 348-352, 1990.

21. McDonald, H.B., Stewart, R.J., and L.S.B. Goldstein. The kinesin-like ncd protein of Drosophila is a minus-end directed microtubule motor. Cell 63: 1159-1165, 1990.

22. Saxton, W.M., Hicks, J., Goldstein, L.S.B., and E.C. Raff. The kinesin heavy chain is essential for viability and neuromuscular functions in Drosophila but mutants show no defects in mitosis. Cell 64: 1093-1102, 1991.

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Section B
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3. Goldstein, L.S.B. Medicare cure: biomedical research? (op-ed piece). The San Diego Union-Tribune. December 11, 1998.

4. Goldstein, L.S.B. Providing hope through stem cell research. (op-ed piece). The San Diego Union-Tribune. May 25, 1999.

5. Goldstein, L.S.B., and T.D. Pollard. Championing biomedical research. (op-ed piece). The San Diego Union-Tribune. Jan. 19, 2000.

6. Berg, P., and L.S.B. Goldstein. Why federal support of stem cell research is necessary. (op-ed piece). The San Diego Union-Tribune. Sept. 21, 2000.

7. Goldstein, L.S.B. Where science, ethics, and policy meet: the stem cell debate, For: Balancing benefits, ethical values. (op-ed piece). The San Diego Union-Tribune. July 6, 2001.

8. Goldstein, L.S.B. Stem cell research-A convergence of science, politics, and ethics. (invited editorial). The San Diego Union-Tribune. August 19, 2001.

9. Goldstein, L.S.B. Understanding cloning. (op-ed piece). The San Diego Union-Tribune. October 30, 2002.

10. Colamarino, S., and L.S.B. Goldstein. Fighting for life-saving research. (op-ed piece). The San Diego Union-Tribune. June 2, 2004.

11. Goldstein, L.S.B. California must support stem cell research. Ventura County Star October 24, 2004 and North County Times October 27, 2004.

12. P. Berg, Daley, G.Q., and L.S.B. Goldstein. Stem Cell 'Alternatives' Fog the Debate. Washington Post. Tuesday, July 19, 2005; A21.

13. Friedlander, M., Gage, F.H., Goldstein, L.S.B., and E. Snyder. Build it. Benefits will come. (op-ed piece) The San Diego Union-Tribune. June 22, 2007.

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14. Goldstein, L.S.B. (2013). Unproven stem cell treatment cause for alarm. The San Diego Union-Tribune. May 15, 2013.

2. General Audience Science Book

1. Goldstein L.S.B., and M. Schneider. Stem Cells For Dummies. Wiley Publishing. 2010.

3. Issued Patents

#6,645,748; #7,276,331; #7,009,043: Plus end-directed microtubule motor required for chromosome congression. K.W. Wood, R. Sakowicz, L.S.B. Goldstein, D.W. Cleveland.

#6,815,169; #6,723,840: Identification and expression of a novel kinesin motor protein. R. Sakowicz and L.S.B. Goldstein.

#6,207,403; #6,777,200: Kinesin motor modulators derived from the marine sponge Adocia. L.S.B. Goldstein, D.J. Faulkner, R. Sakowicz, M.S. Berdelis, C.L. Blackburn, C. Hopmann.

#6,764,830: Thermomyces lanuginosus kinesin motor protein and methods of screening for modulators of kinesin proteins. R. Sakowicz and L.S.B. Goldstein.

#6,673,332: Assays for inhibitors of neuronal transport of Alzheimer's amyloid precursor protein. L.S.B. Goldstein, G. Stokin, A. Kamal.

I have provided the information contained in the Biography/Bibliography packet or have reviewed it for accuracy.

[redacted]

Signature

9-4-13

Date

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: Goldstein, Lawrence S. B.

eRA COMMONS USER NAME (credential, e.g., agency login): [redacted]

POSITION TITLE: Distinguished Professor of Cellular & Molecular Medicine and Neurosciences/Director/ Scientific Director

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	Completion Date MM/YYYY	FIELD OF STUDY
University of California, San Diego	B.A.	06/1976	Biology/Genetics
University of Washington, Seattle	Ph.D.	09/1980	Genetics
University of Colorado, Boulder	Postdoc	09/1983	Cell Biology

A. Personal Statement

My primary goal is to understand the molecular and neuronal defects in Alzheimer's Disease and Niemann Pick Type C disease. Our lab studies induced pluripotent stem cell lines that contain known mutations that cause hereditary Alzheimer's disease, genomes that contribute to sporadic Alzheimer's disease, embryonic stem cell lines in which expression of the gene that causes Niemann Pick Type C disease is reduced as in true human disease, and induced pluripotent stem cell lines carrying Niemann Pick Type C mutations. This latter disease is of interest because it directly ties cholesterol trafficking and transport to what appears to be a pediatric form of Alzheimer type dementia. We are also using these cell lines and neurons from animal models to probe basic mechanisms of vesicle movement and sorting in neurons, and how such mechanisms inter-relate with disease development. Finally, we are probing how genetic variation predisposes to different neuronal and liver phenotypes and disease by developing pluripotent stem cell lines carrying genomes of people who developed sporadic Alzheimer's disease or in one case carry susceptibility elements (from Craig Venter whose diploid genome is completely sequenced and which is known to harbor Alzheimer susceptibility variants). To study these problems, we have developed new quantitative methods for generating and purifying neurons made from human embryonic stem cells and induced pluripotent stem cells, as well as methods for evaluating a range of normal and disease phenotypes in these cells.

My teaching interests are primarily focused on graduate, postdoctoral, and physician-scientist education in the lab. I have also done some formal medical student teaching since coming to UCSD, for which I have received highly enthusiastic comments from medical students. My graduate students and postdocs over the years have been very successful both in my lab and upon leaving my lab and secured independent faculty positions at major research institutions including Harvard Medical School, University of Chicago, Johns Hopkins University, University of Utah, University of Maryland, Albert Einstein College of Medicine, UCSD, and equivalent institutions in other nations around the world. Recently I have become interested in the training of physician-scientists and have in the past several years trained two young physician-scientists both of whom have recently achieved independent faculty status. I have also been involved in the development of several new training programs for graduate students, postdocs, and physician scientists in and around UCSD.

B. Positions and Honors

Positions and Employment

1974-1976 Undergraduate Researcher, with D.L. Lindsley, Dept. of Biology, UCSD.
1976-1980 Graduate Researcher, with L.M. Sandler, Dept. of Genetics, UW, Seattle.
1980-1983 Postdoctoral Fellow, with J.R. McIntosh, Dept. of MCD Biology, UC, Boulder.

1983-1984	Research Associate, MIT and Harvard University.
1984-1988	Assistant Professor of Cellular and Developmental Biology, Harvard University.
1988-1990	John L. Loeb Associate Professor of the Natural Sciences, Dept. of Cellular and Developmental Biology, Harvard University.
1990-1993	Professor of Cellular and Developmental Biology, Harvard University.
1993-2000	Professor of Pharmacology, UCSD.
1993-2012	Investigator, Howard Hughes Medical Institute, UCSD.
1999-2010	Professor of Cellular and Molecular Medicine, UCSD.
2006-present	Director, UCSD Stem Cell Program.
2010-present	Distinguished Professor of Cellular and Molecular Medicine, UCSD.
2011-present	Distinguished Professor of Neurosciences, UCSD.
2012-present	Scientific Director, Sanford Consortium for Regenerative Medicine.
2013-present	Director, Sanford Stem Cell Clinical Center.

Selected Honors, Awards, and Professional Service

NIH postdoctoral fellowship (1980-1983); Nucleic Acids and Protein Synthesis Advisory Committee, ACS (1985, 1988, 1990); Loeb Chair in the Natural Sciences, Harvard University (1988-1990); Cell Biology Study Section, NIH (1990, 1999); American Cancer Society Faculty Research Award (1990-1995); Molecular Cytology Study Section, NIH (1995, 1997, 2000); Editorial Board, JCB (1991-) Sixth Laurence Sandler Memorial Lecturer (1993); Developmental Biology Advisory Committee, ACS (1995); ASCB Public Policy Committee (1996–); Vice-Chair 2000-2003; Chair (2004-2007); FASEB Consensus Conference on Biomedical Funding (1996-1998); Chair NIH subcommittee (1997); NIH-NCRR Strategic Planning Forum (1997); Chair, Sandler Lecturer Committee (1996-1997); FASEB Board of Directors (1997-1999); President, National Drosophila Board (1998-1999); Chair, FASEB Conference on NIH funding (1998); Editorial Board, Molecular Biology of the Cell (1998-2005); Associate Editor, Annual Review of Cell and Developmental Biology (1998-); Secretary, ASCB (2000-2005); Ellison Medical Foundation Senior Scholar Award in Aging Research (2001-2005); ISSCR Gov. Affairs, Policy Committee (2004-; Chair 2004-2006), Board of Directors, ISSCR (2006-2012); Fellow, American Academy of Arts and Sciences (2008); UCSD Top 50 Influential Alumni (2009); ASCB Public Service Award (2009); Alumni Distinguished Leadership Award-UCSD (2014); ARCS Scientist of the Year (2015).

C. Contributions to Science

A major guiding theme in my scientific research has been to understand mechanisms of movement inside different types of cells including neurons and to understand how movement pathways contribute to different types of disease. In pursuit of these goals, my major scientific contributions can be characterized as follows:

1. My lab was the first to determine the overall molecular structures of kinesin motor proteins, including the discovery that the conserved motor domain could be harnessed to move along microtubules in different directions.

a) Yang, J. T., R. A. Laymon and L. S. Goldstein (1989). "A three-domain structure of kinesin heavy chain revealed by DNA sequence and microtubule binding analyses." Cell **56**(5): 879-889.

b) Scholey, J. M., J. Heuser, J. T. Yang and L. S. Goldstein (1989). "Identification of globular mechanochemical heads of kinesin." Nature **338**(6213): 355-357.

c) Yang, J. T., W. M. Saxton, R. J. Stewart, E. C. Raff and L. S. Goldstein (1990). "Evidence that the head of kinesin is sufficient for force generation and motility in vitro." Science **249**(4964): 42-47.

d) McDonald, H. B., R. J. Stewart and L. S. Goldstein (1990). "The kinesin-like ncd protein of Drosophila is a minus end-directed microtubule motor." Cell **63**(6): 1159-1165.

2. My lab has identified and characterized a diverse superfamily of kinesin motor proteins that carry out different functions in ciliated cells, axonal transport, and cell division. From that discovery, we were the first to investigate chemical inhibitors of this superfamily, which has paved the way to novel chemotherapeutic agents**.**

a) McDonald, H. B. and L. S. Goldstein (1990). "Identification and characterization of a gene encoding a kinesin-like protein in Drosophila." Cell **61**(6): 991-1000.

b) Afshar, K., N. R. Barton, R. S. Hawley and L. S. Goldstein (1995). "DNA binding and meiotic chromosomal localization of the Drosophila nod kinesin-like protein." Cell **81**(1): 129-138.

c) Sakowicz, R., M. S. Berdelis, K. Ray, C. L. Blackburn, C. Hopmann, D. J. Faulkner and L. S. Goldstein (1998). "A marine natural product inhibitor of kinesin motors." Science **280**(5361): 292-295.

d) Marszalek, J. R., X. Liu, E. A. Roberts, D. Chui, J. D. Marth, D. S. Williams and L. S. Goldstein (2000). "Genetic evidence for selective transport of opsin and arrestin by kinesin-II in mammalian photoreceptors." Cell **102**(2): 175-187.

3. To understand what roles axonal transport defects play in models of different types of neurodegenerative disease including Alzheimer's disease (AD) and Huntington's disease (HD), we have established a direct relationship between kinesin motors and amyloid precursor protein (APP) transport.

a) Bowman, A. B., A. Kamal, B. W. Ritchings, A. V. Philp, M. McGrail, J. G. Gindhart and L. S. Goldstein (2000). "Kinesin-dependent axonal transport is mediated by the sunday driver (SYD) protein." Cell **103**(4): 583-594.

b) Kamal, A., A. Almenar-Queralt, J. F. LeBlanc, E. A. Roberts and L. S. Goldstein (2001). "Kinesin-mediated axonal transport of a membrane compartment containing beta-secretase and presenilin-1 requires APP." Nature **414**(6864): 643-648.

c) Stokin, G. B., C. Lillo, T. L. Falzone, R. G. Brusch, E. Rockenstein, S. L. Mount, R. Raman, P. Davies, E. Masliah, D. S. Williams and L. S. Goldstein (2005). "Axonopathy and transport deficits early in the pathogenesis of Alzheimer's disease." Science **307**(5713): 1282-1288.

d) Encalada, S. E., L. Szpankowski, C. H. Xia and L. S. Goldstein (2011). "Stable kinesin and dynein assemblies drive the axonal transport of mammalian prion protein vesicles." Cell **144**(4): 551-565.

4. From analyses of animal models of amyotrophic lateral sclerosis (ALS), we have discovered that motor neuron death is not self-autonomous and other cells, such as astrocytes play a major role in motor neuron death.

a) Clement, A. M., M. D. Nguyen, E. A. Roberts, M. L. Garcia, S. Boillee, M. Rule, A. P. McMahon, W. Doucette, D. Siwek, R. J. Ferrante, R. H. Brown, Jr., J. P. Julien, L. S. Goldstein and D. W. Cleveland (2003). "Wild-type nonneuronal cells extend survival of SOD1 mutant motor neurons in ALS mice." Science **302**(5642): 113-117.

b) Yamanaka, K., S. Boillee, E. A. Roberts, M. L. Garcia, M. McAlonis-Downes, O. R. Mikse, D. W. Cleveland and L. S. Goldstein (2008). "Mutant SOD1 in cell types other than motor neurons and oligodendrocytes accelerates onset of disease in ALS mice." Proc Natl Acad Sci U S A **105**(21): 7594-7599.

5. Representing my lab's most recent work, we move from animal models to the use of stem cell models of disease. With these models, we have discovered a direct link between a proteolytic intermediate of amyloid precursor protein (APP) and generation of pathogenic tau phosphorylation in hereditary Alzheimer's disease models (FAD), as well as using site directed mutagenesis to determine that presenilin-1 (PS1) mutations are not simple null mutations or simple loss of function mutations.

a) Gore, A., Z. Li, H. L. Fung, J. E. Young, S. Agarwal, J. Antosiewicz-Bourget, I. Canto, A. Giorgetti, M. A. Israel, E. Kiskinis, J. H. Lee, Y. H. Loh, P. D. Manos, N. Montserrat, A. D. Panopoulos, S. Ruiz, M. L. Wilbert, J. Yu, E. F. Kirkness, J. C. Izpisua Belmonte, D. J. Rossi, J. A. Thomson, K. Eggan, G. Q. Daley, L. S. Goldstein and K. Zhang (2011). "Somatic coding mutations in human induced pluripotent stem cells." Nature **471**(7336): 63-67.

b) Israel, M. A., S. H. Yuan, C. Bardy, S. M. Reyna, Y. Mu, C. Herrera, M. P. Hefferan, S. Van Gorp, K. L. Nazor, F. S. Boscolo, C. T. Carson, L. C. Laurent, M. Marsala, F. H. Gage, A. M. Remes, E. H. Koo and L. S. Goldstein (2012). "Probing sporadic and familial Alzheimer's disease using induced pluripotent stem cells." Nature **482**(7384): 216-220.

c) Woodruff, G., J. E. Young, F. J. Martinez, F. Buen, A. Gore, J. Kinaga, Z. Li, S. H. Yuan, K. Zhang and L. S. Goldstein (2013). "The presenilin-1 DeltaE9 mutation results in reduced gamma-secretase activity, but not total loss of PS1 function, in isogenic human stem cells." Cell Rep **5**(4): 974-985.

d) Young, J. E., J. Boulanger-Weill, D. A. Williams, G. Woodruff, F. Buen, A. C. Revilla, C. Herrera, M. A. Israel, S. H. Yuan, S. D. Edland and L. S. Goldstein (2015). "Elucidating molecular phenotypes caused by the SORL1 Alzheimer's disease genetic risk factor using human induced pluripotent stem cells." Cell Stem Cell **16**(4): 373-385.

A complete list of my publications can be found here: http://www.ncbi.nlm.nih.gov/pubmed/?term=goldstein+ls

D. Research Support

Ongoing Research Support

RR5-07011, Goldstein 04/01/14 - 03/31/17
CIRM Basic Biology Award V Role: PI
Elucidating pathways from hereditary Alzheimer mutations to pathological tau phenotypes.
Aim 1) Elucidate key molecular players and pathways that lead from a familial APP duplication that causes early onset hereditary Alzheimer's Disease to validated phenotypes of abnormal phosphorylation and conformation of tau protein. Aim 2) Test the proposal that competition for kinesin- 1 motor proteins or co-factors/regulators is an important step in the development of tau misbehavior. Aim 3) Test the influence of astrocytes on phenotype relative to pathways established in aims 1 and 2.

2P50AG005131-31 (Galasko) 04/01/2014 - 03/31/2019
NIH/NIA Role: Project Leader
Probing SORL1 risk factors with human induced pluripotent stem cell technology.
Our specific aims are: 1) to test the hypothesis that the reduced BDNF induction response of purified human neurons with SORL1 risk variant haplotypes enhances SORL1-dependent downstream biochemical SAD phenotypes, and 2) to test the hypothesis that the genetic status of patients at the SORL1 locus has a significant influence on clinical phenotypic markers measured in CSF or by post-mortem pathology.

CurePSP 527-14 (Steele) 07/01/2014 - 06/30/2016
Foundation for PSP I CBD and Related Brain Diseases Role: Co-PI
Elucidating PSP genotype-phenotype relationships using human isogenic iPSCs.
The overall goal of this application is to investigate the mechanism(s) linking tau dysfunction to neurodegeneration associated specifically with the rs242557 risk allele in a highly controlled genetic environment using an in vitro human model system.

1RF1AG048083-01 (Goldstein) 08/15/2014 - 06/30/2019
NIH/NIA Role: PI
Elucidating AD genotype-phenotype relationships using genetics of human IPS cells.
We propose three specific aims: 1) Test the hypothesis that APP, PS1, and α-secretase mutations trigger the same early events in human neurons and astrocytes leading to downstream biochemical pathology typical of AD. 2) Test the hypothesis that genes identified as risk factors in GWAS studies generate AD phenotypes and altered endocytosis, trafficking, or transport when over or underexpressed. 3) Test the hypothesis that common genetic variants identified in GWAS studies act by altering gene expression in neurons or astrocytes.
Role: PI

AC1-07764 (Jamieson) 10/01/2014 - 9/30/2019
CIRM Alpha Clinic Award Role: Co-Investigator
Alpha Stem Cell clinic for the development of regenerative therapies.
Our proposed Alpha Clinic will build the human and institutional infrastructure to enable seamless translation of pre-clinical investigations to leading edge stem cell therapy trials to accelerate the therapeutic potential of stem cell research.
Role: Co-Investigator

2R44GM112442-03 (Morachis) 07/01/2016 - 08/30/2017
NIH/NIGMS Role: Consortium PI
Lab-on-a-chip flow cytometer using color-space-time (CoST) coding method.
The goal of this project is to develop and test a new design of fluorescence activated cell sorter. The role of the Goldstein lab is to do comparisons of the behavior of cells post sorting with conventional instrumentation compared to the new design. Specifically we will sort neurons on both platforms and compare viability, general phenotype, and induction of damage response genes by each instrument.
Role: Consortium PI

1U19MH107367-01 (Yeo) 09/01/2015 - 06/30/2020
NIH/NIMH Role: Project Leader
Collaboration on preclinical autism cellular assays, biosignatures, and network analyses (Copacabana).
Our specific aims are: 1) to develop precision high-throughput approaches for enhanced genome engineering in hIPSCs, 2) to develop scalable methods for quality control of engineered hIPSC lines and workflows for replication, transparency and robustness, and 3) to create panels of quality controlled cellular models of ASD and cell-type specific reporters.

Completed Support – last 3 years

TR3-05577, Goldstein 10/01/12 - 09/30/15
CIRM Early Translational III Research Award Role: PI
Identifying drugs for Alzheimer's Disease with human neurons made from human IPS cells.
We propose to generate a feasible development candidate for Alzheimer's Disease (AD). Because no effective AD treatment is available or imminent, we propose to discover novel candidates by screening purified human neurons made from human IPS cells (hIPSC) from familial AD patients

R21 NS076869, Goldstein 05/01/12 - 04/30/14
NIH-NINDS Role: PI
Testing cell autonomy of AD phenotypes using human IPS cells.
We aim: 1) to test the hypothesis that some or all defects observed in purified neurons containing either a familial Alzheimer's Disease (FAD) APP duplication or a genome from an individual with sporadic Alzheimer's Disease (SAD) called SAD2 are cell-autonomous, and 2) to test the hypothesis that astrocytes carrying different ApoE alleles enhance or suppress AD phenotypes in purified neurons.

DR1-01471-1, Goldstein 10/01/12 - 09/30/14
CIRM DT/ET Conversion Award Role: PI
Stem cell-derived astrocyte precursor transplants in amyotrophic lateral sclerosis.
Our goal is to evaluate potential stem-cell derived neural stem cells and astrocyte precursor cells as a potential cellular therapy for the treatment of amyotrophic lateral sclerosis (ALS).

TR3-05628, Tuszynski 11/01/12 - 10/31/15
CIRM Early Translational III Research Award Role: Co-PI
Functional neural relay formation by human neural stem cell grafting in spinal cord injury.
This project will optimize methods for transplantation of Embryonic Stem Cells (ESCs) into sites of rodent SCI to serve as neural relays. After optimization, we will begin adapting the methods to the non-human primate. At the same time we will develop scalable production methods to support human clinical trials.

APMRF (Goldstein) 07/01/2014 - 06/30/2015
Ara Parseghian Medical Research Foundation Role: Co-PI
Rational drug discovery using patient-derived human-induced pluripotent stem cell models of Niemann-Pick type C1.
Our primary goal is to take advantage of our unique and refined approach of targeted drug screening in pure Niemann-Pick type C1 (NPC1) human neurons to significantly increase the likelihood of identifying and advancing a lead candidate through preclinical assessment and clinical development for the treatment of NPC1.

APMRF, Goldstein 07/01/13 - 06/30/14
Ara Parseghian Medical Research Foundation Role: PI
Identifying drugs for Niemann-Pick type C1 using neurons from induced pluripotent stem cells.
Our primary goal is to develop a feasible therapeutic candidate for Niemann-Pick type C1 (NPC1) based on insights obtained from our work in NPC1 human stem cell derived neurons.

RT2-01927, Goldstein 04/01/11 - 03/31/14
CIRM Tools and Technologies Awards II Role: PI
Developing a method for rapid identification of high-quality disease specific hIPSC lines.

LIST OF FEDERAL GRANTS FOR DR. LAWRENCE S.B. GOLDSTEIN

5P50AG005131-32 (Galasko) 04/01/2014 - 03/31/2019
NIH/NIA $125,000 average annual direct (sub only)
Probing SORL1 risk factors with human induced pluripotent stem cell technology.
Our specific aims are: 1) to test the hypothesis that the reduced BDNF induction response of purified human neurons with SORL1 risk variant haplotypes enhances SORL1-dependent downstream biochemical SAD phenotypes, and 2) to test the hypothesis that the genetic status of patients at the SORL1 locus has a significant influence on clinical phenotypic markers measured in CSF or by post-mortem pathology.
Role: Project Leader

1RF1AG048083-01 (Goldstein) 08/15/2014 - 06/30/2019
NIH/NIA $250,000 annual direct
Elucidating AD genotype-phenotype relationships using genetics of human IPS cells.
We propose three specific aims: 1) Test the hypothesis that APP, PS1, and α-secretase mutations trigger the same early events in human neurons and astrocytes leading to downstream biochemical pathology typical of AD. 2) Test the hypothesis that genes identified as risk factors in GWAS studies generate AD phenotypes and altered endocytosis, trafficking, or transport when over or underexpressed. 3) Test the hypothesis that common genetic variants identified in GWAS studies act by altering gene expression in neurons or astrocytes.
Role: PI

2R44GM112442-03 (Morachis) 07/01/2016 - 06/30/2017
NIH/NIGMS $38,710 annual direct (sub only)
Lab-on-a-chip flow cytometer using color-space-time (CoST) coding method
The goal of this project is to develop and test a new design of fluorescence activated cell sorter. The role of the Goldstein lab is to do comparisons of the behavior of cells post sorting with conventional instrumentation compared to the new design. Specifically we will sort neurons on both platforms and compare viability, general phenotype, and induction of damage response genes by each instrument.
Role: Consortium PI

1U19MH107367-01 (Yeo) 09/21/2015 - 06/30/2020
NIH/NIMH $220,000 average annual direct (project 1)
Collaboration on preclinical autism cellular assays, biosignatures, and network analyses (Copacabana)
Our specific aims are: 1) to develop precision high-throughput approaches for enhanced genome engineering in hIPSCs, 2) to develop scalable methods for quality control of engineered hIPSC lines and workflows for replication, transparency and robustness, and 3) to create panels of quality controlled cellular models of ASD and cell-type specific reporters.
Role: Project Leader

AZ140064 (Shah) 09/01/2015 – 08/31/2018
CDMRP/USAMRMC under negotiation
Mouse and Human Models for Investigating Influences of Tau on Progression of Alzheimer's disease Following Traumatic Neuronal Injury
The goal of these studies is to determine possible mechanisms for development of AD following earlier TBI events. To address this issue, we will use animal models of TBI and *in vitro* models of neuronal damage using hIPSC-derived neurons.
Role: Co-PI