

# CURRICULUM VITAE

## Mark Alan Sussman

### PERSONAL INFORMATION

Business address: SDSU Heart Institute  
San Diego State University  
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San Diego, CA 92130

Home telephone: (858) 259-4454

Place of birth: Burbank, California

Date of birth: November 14, 1959

### EDUCATION

1977-1981 University of California, Davis, CA 95616  
B.S. Biological Sciences

1981-1983 California State Univ., Northridge, CA 91330  
M.S. Biology (emphasis in Microbiology)

1983-1989 University of So. Calif. Los Angeles, CA 90033  
Ph.D. Microbiology

### ACADEMIC APPOINTMENTS

2008-present Distinguished Professor of Biology with tenure  
California State University, San Diego

2003-present Professor with tenure, Department of Biology  
California State University, San Diego

2001-2003 Associate Professor with tenure, Molecular Cardiovascular Biology  
The Children's Hospital and Research Foundation  
University of Cincinnati College of Medicine - Affiliated

1995-2001 Assistant Professor, Molecular Cardiovascular Biology  
The Children's Hospital and Research Foundation  
University of Cincinnati College of Medicine - Affiliated

1993-1995 Assistant Professor of Research Department of Biochemistry and  
Molecular Biology University of Southern California

1991-1993 Research Fellow  
Institute for Genetic Medicine, University of Southern California

1988-1991 Research Fellow  
Department of Molecular Biology, The Scripps Research Institute

1983-1988 Graduate Assistant  
Department of Microbiology, University of Southern California

1982-1983 Laboratory Instructor  
Department of Biology, California State University

## **OTHER PROFESSIONAL APPOINTMENTS**

2003 – present	Member, SDSU Heart Institute, San Diego State University
2007 - present	Visiting Scholar Appointment, University of California, San Diego
2012 – present	Adjunct Professor, Mount Sinai Hospital Medical Center, New York, NY
2012 – present	Director, Integrated Regenerative Research Institute, San Diego State University

## **MAJOR ADMINISTRATIVE RESPONSIBILITIES**

2005-2011	Member, Institutional Animal Care and Use Committee San Diego State University
2004-2007	Member, Joint Doctoral Program Admissions Committee San Diego State University
2003-2005	Search Committee, Biology Department Faculty Recruitment, San Diego State University
2003-2005	Chair, Vivarium Users Committee

## **MAJOR COMMITTEE ASSIGNMENTS**

1998-2000	Institutional Research Computing Committee member, Children's Hospital Research Foundation
2000-2001	Website Advisory Panel, Children's Hospital Research Foundation
1998-2001	Member, Molecular Signaling 5a Study Section, Southeastern Affiliates American Heart Association.
2000-2001	Ad hoc reviewer, Experimental Cardiovascular Sciences (ECS) study section, NIH
2000-2001	Ad hoc reviewer, Veterans Administration MERIT award section
2000-2004	Member, Molecular Signaling II Study Group, National American Heart Association
2001-2002	Ad hoc reviewer, Cardiovascular B (CVB) study section, NIH
2001	Ad hoc reviewer, RFA study section from National Institute on Deafness and Other Communication Disorders
2001-2005	Member, Research Committee, Ohio Valley Affiliate of American Heart Association
2002-2004	Ad hoc reviewer, AIDS and related research study section, NIH
2003	Reviewer, Special emphasis panel Cardiovasc. Study Sect., NIH
2003-2008	Abstract review, American Heart Association Scientific Sessions
2004-2007	Member, American Heart Association, Western Affiliates, Molecular Signaling Study Section
2004-2008	Member, Cardiac Contractility, Hypertrophy, and Failure Study section, National Heart Lung Blood Institutes, NIH
2005	Reviewer, Specialized Centers for Cell Based Therapy (SCCT) Committee, NHLBI

2005-2007	Leadership Committee, Council on Basic Cardiovascular Sciences, American Heart Association
2005-2008	Member and Chair, Marcus Young Investigator Awards Selection Committee, American Heart Association
2006-2009	Chair, American Heart Association: Melvin L. Marcus Young Investigator Awards Competition
2006	Chair, Special Emphasis Panel for Bioengineering Research Study Section, NIH
2006	Reviewer, Special Emphasis Panel for Vascular Cell and Molecular Biology (VCMB) Study Section
2006-2008	Chair, Cardiac Contractility, Hypertrophy, and Failure Study section, National Heart Lung Blood Institutes, NIH
2007	Program Chair, 4 <sup>th</sup> Annual Symposium of the American Heart Association Council on Basic Cardiovascular Sciences, "Cardiovascular Repair and Regeneration: Structural and Molecular Approaches in the Cellular Era"
2007	Member, Editorial Board, Journal of Molecular and Cellular Cardiology
2007	Peer Reviewer, Philip Morris External Research Program 2008-
2010	Vice-Chair, American Heart Association Basic Cardiovascular Science Research Council
2009-2015	Councilor, International Society for Heart Research – North American Section.
2010-2012	Chair, American Heart Association Basic Cardiovascular Science Research Council
2010-2012	Nominations Committee, American Heart Association Basic Science Research Council
2010-2012	Fall Program Cardiovascular Scientific Sessions Program Committee, American Heart Association
2011-2014	Reviewer, Special Emphasis Panel for Program Projects review (2), NIH-NHLBI
2011-present	Reviewer, NIH-NRSA Fellowship (F10, F31, F32, etc...) study sections (March, June, and November cycles)
2011-2014	Scientific Advisory Council Committee Nominating Subcommittee, American Heart Association National
2013	Reviewer, Jewish Heritage Fund for Excellence in Research
2013	Member, SDSU Vivarium Program Review, responsible for Administration evaluation
2014	Chair, NIH Special Emphasis Panel Committee Review, Improvement of Animal Models for Stem Cell-Based Regenerative Medicine, IAR

## EDUCATIONAL LEADERSHIP / ORGANIZATION

1999	Session Chair, American Heart Association: Cell Signaling in Hypertrophy III: regulation at multiple levels.
1999	Session Chair, Japanese Circulation Society: Gene expression in cardiovascular disease.
2001	American Heart Association: Heart failure: hormones and neurohormones.
2005	Session Chair, American Heart Association: Akt kinase: new insights change the old paradigm
2005	Session Chair, American Heart Association: Molecular basis of cardiac hypertrophy
2005	Session Chair, Microscopy and Microanalysis: Identification and characterization of stem cells
2006	Session Chair, American Heart Association: How to Recognize a Cardiac Stem Cell
2006	Session Chair, American Heart Association: Molecular Mechanisms of Postnatal Growth
2006	Session Chair, American Heart Association: Stem Cell Signaling in the Myocardium
2006	Session Chair, FASEB: Cardiac Stem Cells: revolutionizing myocardial biology and regenerating the heart
2007	Discussion leader, NHLBI workshop on Modeling Mitochondrial Dysfunction in Cardiovascular Disease
2007	Program Chair, 4 <sup>th</sup> Annual Symposium of the American Heart Association Council on Basic Cardiovascular Sciences, "Cardiovascular Repair and Regeneration: Structural and Molecular Approaches in the Cellular Era"
2008	Session Chair, American Heart Association: Estrogen: Can we reconcile animal studies with the WHI?
2008	Session Chair, American Heart Association: Control of stem cell fate: above and beyond transcription factors.
2008	Session Chair, International Society for Heart Failure Research: Recent advances in Stem Cell Biology
2008	Chair, International Society for Heart Failure Research: Jay Cohn New Investigator Award: Basic Science
2007 – 2009	Vice Chair, Basic Science Council, American Heart Association National Organization
2010-2012	Chair, Basic Science Council, American Heart Association National Organization
2013	Session Chair, American Heart Association BCVS summer meeting: Targets for Heart Therapy
2013	Session Chair, American Heart Association Scientific Sessions, George E. Brown Memorial Lecture and Adult Stem Cells: Cardiac Homeostasis and Repair
2012-2014	Chair, Nominating Committee, Basic Science Council, American

	Heart Association National Organization
2014	Session Chair, International Society for Heart Research
2014	Session Chair, BCVS meeting, American Heart Association

## PROFESSIONAL SOCIETIES

1978	Sigma Alpha Mu Fraternity, Davis Chapter, founder
1982	Sigma Xi Scientific Research Society, associate member
1994	Basic Science Council, American Heart Association, member
1994	American Society for Cell Biology, member
1997	Microscopy Society of America, member
1998	American Society for Biochemistry and Molecular Biology member
2000	International Society for Heart Research, member
2003	American Society for Pharmacology and Experimental Therapeutics member

## EDITORIAL BOARDS

2002 – 2007; 2014 -	American Journal of Physiology: Heart and Circulatory Physiology
2003 – 2008; 2013 -	Journal of Biological Chemistry
2004 - present	Journal of Molecular and Cellular Cardiology
2005 - present	Regenerative Medicine
2005 - present	Circulation Research, Consulting editor since 2009
2008 - present	Basic Research in Cardiology
2013 - present	PLoS One

Referee for Science, Nature, Nature Medicine, Circulation Research, Circulation, Cardiovascular Research, Journal of Cellular and Molecular Cardiology, Journal of Biological Chemistry, Journal of Cell Biology, American Journal of Physiology, Biophysical Journal, Biochemical and Biophysical Abstracts, American Journal of Respiratory and Critical Care, Canadian Journal of Pharmacology, Developmental Dynamics, Cell Motility and the Cytoskeleton, Current Biology, European Journal of Pharmacology, Journal of the American College of Cardiology, European Heart Journal and many more.

## AWARDS AND HONORS

1983	Sigma Xi Award for student research
1984	Student Research Fellowship in Oncology
1990-1991	Neuromuscular Disease Fellowship Muscular Dystrophy Association
1993	Finalist, Louis N. Katz Young Investigator Award, American Heart Association
1993-1994	Advanced Research Fellowship American Heart Association, Greater Los Angeles Affiliate
1994	Second Prize, Laverna Titus Young Investigator Award American Heart Association, Greater Los Angeles Affiliate
1995	Initial Investigator Award and Grant in Aid Award American Heart Association, Greater Los Angeles Affiliate

1996	Grant in Aid Award, Ohio American Heart Association
1996	Scientist Development Grant, National American Heart Association
1997	Institutional Research Award, American Cancer Society
1997	Cardiovascular Center Research Award, University of Cincinnati
2000	Established Investigator, National American Heart Association
2001	Eli Lilly Centre for Women's Health Award
2006	Recipient of Presidential Lecture award, International Society for Heart Research, Toronto, Canada
2007	Top 25 Influential Faculty Award, San Diego State University
2007	Stephen and Mary Krop Honorary Lectureship in Pharmacology, Georgetown University
2008	Distinguished Professor of Biology, San Diego State University, Albert W. Johnson Lecturer
2008	E.R. Smith Lectureship in Cardiovascular Research, University of Calgary
2009	Orkand Lecture, Marine Desert Molecular Biological Laboratory, Bar Harbor, Maine
2010	Fellow of the American Heart Association
2011	Keynote speaker, Perry Halushka Student Research Day, Medical University of South Carolina, Charleston SC
2011	Keynote speaker, "Stem Cells in Regenerative Medicine" Presidential Symposium, Cardiac Signaling Center, Medical University of South Carolina, Charleston SC
2012	Keynote speaker, International Society for Heart Research, Banff, Canada
2012	Mayoral proclamation in recognition of Frontiers in Cardiovascular Regeneration Symposium
2013	Fellow, International Society for Heart Research

## RESEARCH AND TEACHING CONTRIBUTIONS

Pioneering studies relating Akt/PKB and gender have demonstrated myocardial differences between the sexes in Akt/ PKB nuclear accumulation that stem from estrogenic stimuli. This finding was the genesis of a pivotal contribution to survival signaling networks in heart: targeting of Akt/PKB to the cardiomyocyte nucleus affords cardioprotection without deleterious hypertrophic consequences. Fusing our ongoing studies of cardioprotection together with my background in cytoskeletal biology, we have expanded studies of nuclear Akt/PKB biology to include novel associations with LIM domain proteins that shuttle through the nucleus. Our current Akt/PKB-related research involves the surprising effects of nuclear Akt/PKB signaling for cardiomyocytes including anti-hyper-trophic signaling, induced downstream mediators of cell survival including Pim-1 kinase, and the potentiation of survival and regenerative capacity for cardiac stem cells.

**Cell Biology** - organization and regulation of cytoskeletal structures, signal transduction pathways regulating structure and survival. Studied using conventional and confocal fluorescence microscopy (using computer-based image analysis), monoclonal antibody production and purification, primary cell culture, *in situ* hybridization, viral production, microinjection, real-time calcium imaging.

**Molecular Biology** - gene cloning and adenoviral-mediated overexpression in sense (+) and antisense (-) orientations. Methods include transfection, polymerase chain reaction; Southern and Northern blot analysis,

cDNA library screening, bacterial and adenoviral-based expression vectors, plasmid purification, restriction enzyme analysis.

**Biochemistry** - protein purification and characterization, fast pressure liquid chromatography (FPLC), gel electrophoresis, western blot analysis, protein-protein interaction (by solid phase blot binding and non-denaturing gel electrophoresis).

**Transgenesis** - design and characterize transgenic mouse models of cardiomyopathy.

## **PATENTS ISSUED**

2013 “Compositions and methods for kinase-mediated cytoprotection and enhanced cellular engraftment persistence.” US Patent Application No. 13/319,512. Filed 11/8/2011.

## **FUNDED RESEARCH PROJECTS**

2008-2018	NHLBI, PI, MERIT award “Stem cell signaling in the pathologically challenged myocardium”
2011-2015	NIH, NHLBI, R01 “Antagonism of myocardial aging and senescence with Pim-1 kinase”
2001-2016	NIH, NHLBI, PI, R01 “Regulation of signal transduction to treat heart failure” (formerly titled “Akt activation to treat heart failure”)
2012-2016	NIH, NHLBI, PI, R01 “Molecular Engineering of Damaged Myocardium To Enhance Regeneration And Repair
2013-2017	NIH, NHLBI, R01 “Beta-adrenergic signaling: double edged sword of myocardial repair”
2013-2017	NIH, NHLBI, R01 “Cardioprotection by optimizing mTOR activity”
2013-2018	NIH, NHLBI, P01 “Restoring Myocardial Healing”
2014-2019	NIH, NHLBI, R01 “Enhanced Myocardial Repair with CardioClusters and CardioChimeras”
2014-2019	Foundation Leducq – Transatlantic Networks of Excellence in Cardiovascular Research “Cellular and Molecular Targets to Promote Therapeutic Cardiac Regeneration”

## **PENDING PROPOSALS**

2016-2020	NIH, NCI, U54 SDSU/UCSD Comprehensive Cancer Center Partnership for the Advancement of Health Equity (CPACHE) program
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## **FUNDED RESEARCH PROJECTS (COMPLETED)**

1997-2002	NIH-NHLBI, PI, R29 “Neonatal response to myofilament degeneration”
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1998-2000	AHA-Grant in Aid, PI, “Establishing a transgenic mouse model for chronic and progressive dilated cardiomyopathy”
2001-2005	NIH-NHLBI, PI, “Akt activation as treatment for dilated cardiomyopathy”
2001-2002	Eli Lilly and Company, Centre for Women’s Health Research Award, PI, “Estrogenic activation of Akt protein kinase in the heart”
2001-2003	NIH-NHLBI, PI, “Cytoskeletal adhesion in cardiac remodeling”
2003-2009	NIH-NIA, PI: Project 4, Core C “Potentiating stem cells to retard cardiac aging”
2009-2011	NIH, NHLBI, PI, Challenge grant Engineering cardiac progenitor cells to enhance myocardial regeneration”
2010-2012	NIH, NHLBI, PI, R21 “Nucleolar disruption in response to cardiomyopathic stress and injury”
2010-2012	NIH, NHLBI, PI, R21 “Inducible Notch improves progenitor cell repair of the damaged heart”
2010-2012	NIH, NHLBI, PI, R21 “Control of cardiac growth by Calcium-dependent phosphorylation of histones”
2011-2013	NIH, NHLBI, PI, R13 “Symposium: AHA Council on Basic Cardiovascular Sciences”
2006-2012	NIH, NHLBI, PI, Program Director PPG “Protecting myocardium by enhancing mitochondrial integrity”

## TRAINEES

1998-2003	David Plank, MD,PhD, University of Cincinnati, practicing physician
2000-2003	Jaime Melendez, Postdoctoral Fellow, now Faculty University of Santiago, Chili
2002-2005	Yasuyuki Tsujita, Postdoctoral fellow, now Shiga Hospital, Japan
2003-2005	Takahiro Kato, Postdoctoral Fellow, now Director of Cardiology, Edogawa Hospital, Japan
2004-2005	Yan Chen, Graduate Student, Awarded MS, now working in Bio-Tech Industry
2004-2005	Jonathan Otsuji, Graduate Student, Awarded MS, now working in Bio-Tech Industry
2005-2007	John Muraski, Rees – Stealy fellowship awardee, awarded PhD in 2007, now Regional Manager, California at North American Science Associates, Inc.
2005-2007	Jenna Fransioli, Graduate Student, awarded MS, now a veterinarian (DVM) working in California
2004-2007	Greg Emmanuel, Graduate Student, awarded MS, completed MD, now in clinical practice
2005 - 2012	Travis Cottage, ARCS Scholar, AHA predoctoral fellowship awardee, Rees – Stealy fellowship awardee, Graduate Student,



awarded MS in 2008, PhD completed in 2012, now research scientist at Optimum Therapeutics

2005 - 2008 Marta Rubio Ph.D., postdoctoral fellow, now at Life Technologies

2006 - 2008 Walter Woo, Graduate student, awarded MS, now in Biotech industry

2007 - 2009 Gwynne Andaya, Graduate student, awarded MS, now working for Calbiochem Corporation

2006 - 2010 Kimberlee Fischer, ARCS Scholar, Graduate Student, PhD completed 2010, now at Regulus Pharmaceuticals

2006 - 2011 Brandi Bailey, Rees – Stealy fellowship awardee, Graduate student, PhD completed in 2011, now in biotech industry

2007 - 2010 Matt Mason, Graduate Student, completed MS in 2010, now technical support at Allergan in Irvine, CA

2008 - 2010 Zhaokang Cheng, postdoctoral fellow, now research associate faculty at University of North Carolina

2008 - 2011 Daniele Avitabile, PhD, postdoctoral fellow, returned to faculty position at Universita di Roma Sapienza, Rome Italy

2009 - 2012 Balaji Sundaraman, Graduate student, MS completed 2012, now research lab technician at UCSD

2009 - 2013 Haruhiro Toko, Uehara fellow, AHA postdoctoral fellow in residence completed 2013, now research faculty scientist at Tokyo University

2009 - 2013 Mohsin Khan, AHA postdoctoral fellow in residence completed 2013, now research track faculty at Temple University, Philadelphia PA

2009 - 2013 Mirko Voelkers, DFG fellow, postdoctoral fellow, now research assistant professor at University of Heidelberg, Germany with joint appointment as research assistant professor at SDSU

2009 - 2013 Mathias Konstandin, DFG fellow, postdoctoral fellow, now research assistant professor at University of Heidelberg, Germany

2009 - 2013 Sadia Mohsin, postdoctoral fellow, now research track faculty at Temple University, Philadelphia PA

2009 - 2013 Michael McGregor, Graduate Student, awarded MS degree 2013 2010 - 2013 Brett Collins, Graduate Student, awarded MS degree 2013, now technician at Ron Evans lab, Salk Institute, La Jolla CA

2005 - 2010 Natalie Gude, Graduate Student, AHA predoctoral fellowship awardee, PhD completed 2010, now research assistant professor, San Diego State University Biology Department

2008 - 2014 Shabana Din, Graduate student, MS completed 2010, PhD completed in Sussman lab 2014, AHA predoctoral fellowship awardee, now research fellow at University of Heidelberg, Germany

2010 - 2013 Sailay Siddiqi, Medical Student Trainee, returned for graduate thesis work in 2010, MD / PhD awarded in 2014 in Utrecht NL

2011 – 2014 Nirmala Hariharan, postdoctoral fellow in residence, AHA postdoctoral fellowship awardee, now Assistant Professor at University of California Davis

2012 - 2014 Kaitlen Samse, Graduate Student, awarded MS degree 2014, now technician in Srivastava laboratory, Gladstone Institute UCSF

2012 - Megan Monsanto, Graduate Student, awarded MS in 2014, now pursuing PhD

- 2008 - Pearl Quijada, Graduate student, NIH minority supplement awardee, ARCS scholar, Rees – Stealy awardee, AHA predoctoral fellowship awardee, MS completed 2010, pursuing PhD in Sussman lab
- 2006 - Roberto Alvarez, Graduate Student, NIH minority supplement awardee, MS completed 2010, pursuing PhD in Sussman lab
- 2013 - Nathalie Nguyen, postdoctoral fellow in residence
- 2014 - Maryam Moshref, Graduate student, pursuing MS, accepted into PhD program at University of California Davis
- 2014 - Kathleen Broughton, postdoctoral fellow in residence
- 2014 - Veronica Sacchi, postdoctoral fellow in residence
- 2014 - Farid El-Sayed, postdoctoral fellow in residence
- 2014 - Alexandra Casillas, Graduate Student, pursuing PhD
- 2015 - Jessica Wang, Graduate Student, pursuing PhD
- 2015 - Dieter Kubli, postdoctoral fellow in residence
- 2015 - Sarmistha Sinha Choudhury, pursuing MS
- 2015 - Kelli Ilves, Graduate student, pursuing MS

## **SELECTED INVITED PRESENTATIONS**

- 1) 12th International Symposium On Stem Cell Therapy and Cardiovascular Innovations, Madrid Spain 2015: Cardiac Stem Cells: Dealing With Their Existential Crisis
- 2) Ponce School of Medicine, Ponce Puerto Rico 2015: Cardiac Stem Cells: Dealing With Their Existential Crisis
- 3) University of Miami 2015: Myocardial regeneration: Uncommon Sense for Common Problems
- 4) Columbia University, NY 2014: Myocardial regeneration: Uncommon Sense for Common Problems
- 5) American Heart Association, 82<sup>st</sup> Scientific Sessions 2014: How to Market Yourself and Your Science (Early Career Investigator Lecture)
- 6) American Heart Association, 82<sup>st</sup> Scientific Sessions 2014: Novel Cell approaches to Myocardial Regeneration
- 7) American Heart Association, 82<sup>st</sup> Scientific Sessions 2014: Cardiac Stem Cells and Aging (Fondation Leducq session)
- 8) Lillehei Heart Institute, University of MN 2014: Myocardial regeneration: Uncommon Sense for Common Problems
- 9) Heart Failure Society of America, Las Vegas NV 2014: Chair, Session on Excellence in Basic Science: Translational Targets Move to the Clinic
- 10) British Society for Cardiovascular Research, University of Reading, England 2014: Myocardial Regeneration: Uncommon Sense for Common Problems (Bernard and Joan Marshall Distinguished Investigator Lecture)
- 11) ICAN Institute, Hôpital Pitié-Salpêtrière, Paris France 2014: Myocardial Regeneration: Uncommon Sense for Common Problems
- 12) American Heart Association Basic Science Council Research Conference, Las Vegas NV 2014: Myocardial Regeneration: Uncommon Sense for Common Problems
- 13) Society for Heart and Vascular Metabolism Keynote, Tromso Norway 2014: Myocardial Regeneration: Uncommon Sense for Common Problems
- 14) The Meeting Point at Adult Roundabout Symposium and Department of Cardiology, Utrecht, Netherlands 2014: Myocardial Regeneration: Uncommon Sense for Common Problems
- 15) School of Basic Medical Sciences, The Fourth Military Medical University, Xi'an, China: 2014: Myocardial Regeneration: Uncommon Sense for Common Problems
- 16) Mini-Symposium on Cell Death, Stem Cell and Heart Failure, Shanghai, China 2014: Myocardial

- Regeneration: Uncommon Sense for Common Problems
- 17) Jikei Symposium for Frontier in Cardiovascular Regulation and Regeneration, Tokyo, Japan 2014: Myocardial Regeneration: Uncommon Sense for Common Problems
  - 18) International Society for Heart Research North American Society Meeting, Miami FL 2014: Myocardial Regeneration: Uncommon Sense for Common Problems
  - 19) Medical University of South Carolina, Halushka Student Research Symposium Keynote, Charleston SC 2014: Myocardial Regeneration: Uncommon Sense for Common Problems
  - 20) Foundation Leducq Transatlantic Network Consortium inaugural meeting, New York NY 2014: Adult Cardiac Stem Cells: You Can't Turn Back the Clock, but You Can Wind It Up Again
  - 21) Texas Health Science Center, Houston TX 2014 - Adult Cardiac Stem Cells: You Can't Turn Back the Clock, but You Can Wind It Up Again
  - 22) University of Cincinnati, Department of Pathology, Cincinnati OH 2014 - Adult Cardiac Stem Cells: You Can't Turn Back the Clock, but You Can Wind It Up Again
  - 23) Temple University, Philadelphia PA 2014 - Adult Cardiac Stem Cells: You Can't Turn Back the Clock, but You Can Wind It Up Again
  - 24) American Heart Association, 81<sup>st</sup> Scientific Sessions 2013 - Cardiac Stem Cell and Myocyte Aging in a Cardiovascular Seminar entitled Cardiac Aging and DNA Damage
  - 25) American Heart Association, 81<sup>st</sup> Scientific Sessions 2013 - Mammalian Heart Renewal by Preexisting Cardiomyocytes in a Cardiovascular Seminar entitled Cardiomyocyte Renewal
  - 26) International Society for Heart Research 2013: Adult Cardiac Stem Cells: You Can't Turn Back the Clock, but You Can Wind It Up Again
  - 27) Japanese International Society for Heart Research Specialty Section 2013: Restoring Healing to the Aged Heart
  - 28) University of Hawaii 2013: By the Time You've Made It, You've Had it: Restoring Healing to the Aged Heart
  - 29) L'Institut de Cardiologie de Montreal 2013: By the Time You've Made It, You've Had it: Restoring Healing to the Aged Heart
  - 30) Brigham and Womens Hospital, Harvard Medical School, Boston MA 2012: Pim-p my heart.
  - 31) American Heart Association, 80th Scientific Sessions, Session 2012 – Genetic and Epigenetic Reprogramming in Cardiac Development and Diseases session: Engineering to Make Cardiac Stem Cells for Heart Failure.
  - 32) American Heart Association, 80th Scientific Sessions, Session 2012 – Aging and Stem Cell Therapy session: Bench to Bed: Engineered Stem Cells for Heart Failure Therapy.
  - 33) University of California Los Angeles, Systems Biology of Heart Failure Symposium 2012: By the Time You've Made It, You've Had it: Restoring Healing to the Aged Heart
  - 34) Academy of Cardiovascular Research Excellence, Chinese American Heart Association 2012: By the Time You've Made It, You've Had it: Restoring Healing to the Aged Heart
  - 35) University of Kentucky, Cardiovascular Seminar Series 2012: By the Time You've Made It, You've Had it: Restoring Healing to the Aged Heart
  - 36) University Medical Dental School New Jersey, Department of Cell Biology and Molecular Medicine, 2012: By the Time You've Made It, You've Had it: Restoring Healing to the Aged Heart
  - 37) Cardiac Regulatory Mechanisms, Gordon Conference, Colby Sawyer College, NH 2012: Nucleostemin: not just for regeneration
  - 38) International Society for Heart Research North American Society Meeting, Banff, Canada 2012 (Keynote): By the Time You've Made It, You've Had it: Restoring Healing to the Aged Heart
  - 39) Mount Sinai School of Medicine, New York, New York 2012: By the Time You've Made It, You've Had it: Restoring Healing to the Aged Heart
  - 40) Texas A&M University 2012 (Keynote, Grad Student Symposium): Supercharging stem cell-mediated regeneration.
  - 41) University of Texas Southwestern 2012: Supercharging stem cell-mediated regeneration.
  - 42) University of Iowa, Iowa City 2012: Supercharging stem cell-mediated regeneration.
  - 43) Brigham and Womens Hospital, Harvard Medical School, Boston MA 2011: Telomeres: by the time

- you've made it, they've had it, but Pim-1 can fix it!
- 44) Beth Israel Deaconess Medical Center, Harvard Medical School, Boston MA 2011: Supercharging stem cell-mediated regeneration.
  - 45) Loyola University, Chicago IL 2011: Supercharging stem cell-mediated regeneration.
  - 46) Medical University of South Carolina, Halushka Student Research Symposium Keynote, Charleston SC 2011: From Sarcomeres to Signaling to Stem cells: Making Old Hearts Young Again
  - 47) Medical University of South Carolina, Frontiers in Cardiovascular Regeneration International Symposium, Charleston SC 2011: Is there a right stem cell to treat heart failure?
  - 48) Heart Failure Society of America, Boston, MA 2011: Is there a right stem cell to treat heart failure?
  - 49) American Heart Association Basic Science Council Research Conference 2011: Supercharging stem cell-mediated regeneration.
  - 50) University of Washington, Seattle WA 2011: Supercharging stem cell-mediated regeneration.
  - 51) International Society for Heart Research, Philadelphia PA 2011: Supercharging stem cell-mediated regeneration.
  - 52) Albert Einstein College of Medicine, Bronx, NY 2011: Supercharging stem cell-mediated regeneration.
  - 53) Indiana University, Riley Heart Center, Indianapolis IN 2011: Supercharging stem cell-mediated regeneration.
  - 54) University of California, San Diego. 13<sup>th</sup> La Jolla International Cardiovascular Conference 2011: Supercharging stem cell-mediated regeneration.
  - 55) University of California, San Diego. Cardiology Grand Rounds 2010: Supercharging stem cell-mediated regeneration.
  - 56) American Heart Association, 79th Scientific Sessions, Session - Enhancing Stem Cell Therapy 2010: Supercharging stem cell-mediated regeneration.
  - 57) Heart Failure Society of America, San Diego, CA 2010: Supercharging stem cell-mediated regeneration.
  - 58) American Heart Association Basic Science Council Research Conference 2010: Supercharging stem cell-mediated regeneration.
  - 59) University of Cincinnati, Department of Pathology 2010: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 60) University of Texas A&M 2010: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 61) American Society for Bone Marrow Transplantation, Orlando FL 2010: Kinases that alter stem cell activity in the heart.
  - 62) Cardiac Muscle Society, San Francisco, CA 2010: From Sarcomeres to Signaling to Stem cells: Making Old Hearts Young Again
  - 63) Washington University, St. Louis MO 2010: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 64) Indo US Bilateral Workshop: Redox Signaling in Degenerative Diseases, Heritage Village, Manesar, Gurgaon, India 2009: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 65) University of Minnesota, Minneapolis MN: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 66) Boston Scientific, St. Paul, MN: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 67) American Heart Association, 78th Scientific Sessions, Myocardial Homeostasis and Regeneration 2009: Myocardial Stem Cells in Postnatal Development.
  - 68) IRCSS Policlinico San Donato, Laboratorio di Cardiologia Molecolare, Milan Italy 2009: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 69) Centro de Cardiologico Monzino, Milan Italy 2009: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 70) Heart Failure Society of America Meeting Boston 2009: Pim-1 kinase revealed: a new chapter in myocardial regenerative and survival signaling.
  - 71) Maine Desert Molecular Biological Laboratory, Bar Harbor, Maine. Orkand Lecture: Stem Cells: scientific

- progress and future directions.
- 72) IX World Congress of the Society for Adaptive Medicine, Taipei Taiwan 2009: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 73) Cardiovascular Biology and Heart Failure Symposium, Nanjing China 2009: Pim-1 kinase revealed: a new chapter in myocardial survival signaling.
  - 74) American Heart Association Basic Science Council Research Conference 2009: Kinases that alter stem cell activity in the heart.
  - 75) Society for Research Administrators International meeting 2009: Stem Cells: scientific progress and future directions.
  - 76) International Society for Heart Research 2009: Pim-1 kinase revealed: a new chapter in myocardial survival signaling.
  - 77) University of Chicago, IL 2009: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 78) Northwestern University, Chicago IL 2009: Pim-1 kinase revealed: a new chapter in myocardial survival signaling.
  - 79) Thomas Jefferson University 2009: Pim-1 kinase revealed: a new chapter in myocardial survival signaling.
  - 80) Boston University 2009: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 81) Cedars Sinai Medical Center, Los Angeles CA 2009: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 82) University of California, Los Angeles 2009: Pim-1 kinase revealed: a new chapter in myocardial survival signaling.
  - 83) University of Louisville, KY 2009: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 84) University of Miami, FL 2008: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 85) American Heart Association, 77th Scientific Sessions, Early Career and FIT Program 2008: Grant Writing 101.
  - 86) American Heart Association, 77th Scientific Sessions, Cell Therapy: How does it work? 2008: Myocardial regeneration and myocyte survival.
  - 87) University of Washington, Pullman WA: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 88) Stems of the Heart 2008, Boston MA: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 89) American Heart Association Basic Science Council Research Conference 2008: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
  - 90) Cardiac Regulatory Mechanisms Gordon Conference 2008. Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 91) Istituto Dermopatico dell'Immacolata, Rome, Italy. Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 92) University of Massachusetts, Worcester MA. Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 93) Stem Cell Meeting, Cardiocentro Ticino, Lugano, Switzerland 2008: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 94) International Society of Heart Research, Cincinnati 2008: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 95) Medical University of South Carolina 2008: Cardiac Stem Cells: engineered to enhance myocardial regeneration.
  - 96) Kyoto Prefectural University, Kyoto Japan 2008: Engineering stem cells to enhance myocardial regeneration.
  - 97) Osaka University, Osaka, Japan 2008: Engineering stem cells to enhance myocardial regeneration.
  - 98) Keio University, Tokyo, Japan 2008: Engineering stem cells to enhance myocardial regeneration.
  - 99) Japanese Circulation Society Meeting, Fukuoka 2008: Engineering stem cells to enhance myocardial regeneration.
  - 100) Cardiovascular Cell and Gene Therapy Conference III. 2008. Mount Sinai Hospital, New York, NY.
  - 101) Albert W. Johnson University Distinguished Lectureship 2008, San Diego State University: Stem Cells: scientific progress and future directions.

- 102) University of Rochester 2008: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 103) Stanford University 2008: Engineering stem cells to enhance myocardial regeneration.
- 104) University of North Carolina 2008: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 105) Georgetown University, Krop Honorary Lecture 2007: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 106) American Heart Association, 76th Scientific Sessions 2007: Engineering stem cells to enhance myocardial regeneration.
- 107) American Heart Association, 76th Scientific Sessions 2007, International plenary session opening speaker: Survival signaling in the pathologically challenged myocardium.
- 108) University of California Symposium honoring Larry Kedes and the Institute for Genetic Medicine (2007): Engineering stem cells to enhance myocardial regeneration.
- 109) University of California Los Angeles Cardiovascular Research Symposium 2007 (Keynote): Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 110) Heart Failure Society of America Meeting Washington DC 2007: Engineering stem cells to enhance myocardial regeneration.
- 111) State University of New York, Downstate Brooklyn 2007: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 112) American Heart Association Basic Science Council Research Conference 2007: Stem cell signaling in the myocardium: shibboleths of development.
- 113) Centro de Cardiologico Monzino, Milan Italy 2007: Engineering stem cells to enhance myocardial regeneration.
- 114) New York Medical College, Valhalla NY 2007: Stem cell signaling in the myocardium: shibboleths of development.
- 115) Cornell University NY 2007: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 116) University of Manitoba, Winnipeg Canada 2007: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 117) Emory University, Atlanta GA 2007: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 118) Ohio State University 2007: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 119) Cincinnati Children's Hospital Medical Center 2007: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 120) University of Washington 2007: Stem cell signaling in the myocardium: shibboleths of development.
- 121) University of Alabama 2006: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 122) American Heart Association, 76th Scientific Sessions 2006: Stem cell markers in the pathologically challenged myocardium.
- 123) Heart Failure Society of America 2006: Regenerating myocytes after MI: roles of Akt and IGF.
- 124) International Chinese Cardiovascular Conference 2006 – "Cellular and Gene Treatment of Cardiovascular Diseases"
- 125) New York Medical College 2006: Pim-1 kinase: the missing link in Akt-mediated cardioprotection.
- 126) International Society for Heart Research 2006: "Akt and Me: Our Nuclear Relationship" Presidential Lecture (Honorary, inaugural).
- 127) Federation of American Societies for Experimental Biology 2006: Genetic engineering of stem cells with Akt kinase.
- 128) American Heart Association, 75th Scientific Sessions 2005: Akt / PKB protein kinase and Plato's Cave: looking into the light.
- 129) Microscopy and Microanalysis 2005: Identification and tracking of cardiac stem cells.
- 130) American Heart Association Basic Science Council Research Conference 2005: Cardio"Akt"ive Effects: a nucleus of paracrine factors, survival signals, and stem cells.
- 131) Boston Biomedical Research Institute 2005: Cardio"Akt"ive Effects: a nucleus of paracrine factors, survival signals, and stem cells.
- 132) Beth Israel Deaconess Medical Center, Harvard Medical School: Cardio"Akt"ive Effects: a nucleus of paracrine factors, survival signals, and stem cells.
- 133) San Diego Cell Biology Meeting 2005: Cardio"Akt"ive Effects: a nucleus of paracrine factors, survival

- signals, and stem cells.
- 134) San Diego State University, 2005: Stem Cells: Current progress and future perspectives.
  - 135) University of California, San Diego 2005 (Bioengineering): Over"Akt"ing in the nucleus: a healthier heart?
  - 136) American Heart Association, 74th Scientific Sessions 2004: Trafficking of stem cells through damaged myocardium.
  - 137) University of California, San Diego 2004 (Pharmacology): Over"Akt"ing in the nucleus: a healthier heart?
  - 138) University of California, Los Angeles 2004: Over"Akt"ing in the nucleus: a healthier heart?
  - 139) 12<sup>th</sup> International Conference on Second Messengers and Phosphoproteins. Cardiomyocyte apoptosis triggered by RAFTK/pyk2 is antagonized by paxillin.
  - 140) Microscopy and Microanalysis 2003: Impaired intracellular calcium dynamics in live cardiomyocytes revealed by rapid line scan confocal microscopy.
  - 141) Gordon Research Conference 2004: Over"Akt"ing in the nucleus: a healthier heart?
  - 142) Cardiovascular Cell and Gene Therapy Conference II. 2004. Mass. General Hospital, Boston MA.
  - 143) Medical University of South Carolina, Charleston 2004: Current and future outlook for stem cell research and applications.
  - 144) NCEMB-Comstech (CPC) International Symposium & Training Workshop on stem cells. 2003. Lahore, Pakistan
  - 145) American Heart Association, 73rd Scientific Sessions 2003: Cardiomyocyte apoptosis triggered by RAFTK/pyk2 is antagonized by paxillin-mediated interference with src kinase.
  - 146) Ohio State University 2003: Over"Akt"ing in the nucleus: a healthier heart?
  - 147) San Diego State University 2003: Over"Akt"ing in the nucleus: a healthier heart?
  - 148) Beth Israel Hospital, Harvard Medical School 2003: Over"Akt"ing in the nucleus: a healthier heart?
  - 149) Massachusetts General Hospital, Boston 2003: Over"Akt"ing in the nucleus: a healthier heart?
  - 150) Medical University of South Carolina, Charleston 2003: Dilated cardiomyopathy at the molecular level: building paradigms in transgenic mice.
  - 151) University of South Carolina Medical School, Columbia 2003: Calcineurin chasers: GSK and Akt as regulators of cardiac hypertrophy and survival.
  - 152) Kyoto Prefectural University 2002: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
  - 153) International Symposium on Heart Failure 2002: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
  - 154) Japanese Heart Failure Society 2002: Calcineurin chasers: GSK and Akt as regulators of cardiac hypertrophy and survival.
  - 155) Gordon Research Conference 2002: Sex Akts: myocardial Akt kinase activation, gender, and susceptibility to cardiovascular disease
  - 156) University of California, Irvine 2002: Dilated cardiomyopathy at the molecular level: building paradigms in transgenic mice.
  - 157) San Diego State University 2002: Dilated cardiomyopathy at the molecular level: building paradigms in transgenic mice.
  - 158) Imperial College, London, England, 2001: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
  - 159) European Science Workshop Foundation, Cardiovascular Genomics Research Conference 2001: Cytoskeletal regulation in cardiac remodeling and failure.
  - 160) American Heart Association, 73rd Scientific Sessions 2001: Myocardial Akt activation and gender: increased nuclear activity in females versus males.
  - 161) AALAS 52<sup>nd</sup> annual meeting, 2001: Molecular signaling and cardioprotection induced by genistein in mouse models of heart failure.
  - 162) University of Louisville, 2001: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
  - 163) University of South Carolina, 2001: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.

- 164) University of Cincinnati / Procter and Gamble Pharmaceuticals First Joint Scientific Colloquium 2001: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
- 165) Cardiovascular Research Institute, Loyola University Medical Center 2001: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
- 166) Eli Lilly Corporation 2001: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
- 167) American Heart Association, 72nd Scientific Sessions 2000: Activation of the PYK2 / FAK / Paxillin pathway in dilated cardiomyopathy.
- 168) L'Institut de Cardiologie de Montreal 2000: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
- 169) Queens University, Canada, 2000: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
- 170) Gordon Research Conference 2000: Altered calcium dynamics are comparable between murine and human heart failure.
- 171) New York Medical College 2000: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
- 172) Columbia University 2000: Dilated cardiomyopathy under the microscope: building paradigms in transgenic mice.
- 173) American Heart Association, 72nd Scientific Sessions 1999: Activation of rac1 signaling leads to either severe dilation or hypertrophy in juvenile transgenic mice.
- 174) San Diego State University 1999: Dilated cardiomyopathy at the molecular level: building paradigms in transgenic mice.
- 175) Cleveland Clinic 1999: Cardiomyopathy unmasked: a hypertrophic defect revealed by calcineurin expression in asymptomatic tropomodulin overexpressing transgenic (TOT) mice.
- 176) Cleveland Clinic 1999: Dilated cardiomyopathy at the molecular level: building paradigms in transgenic mice.
- 177) Japanese Circulation Society 1999: Dilated cardiomyopathy at the molecular level: building paradigms in transgenic mice.
- 178) Federation of American Societies for Experimental Biology 1999: From genesis to degeneration: cardiac myofibril responses to growth and disease.
- 179) University of Iowa, Department of Cell Biology 1998: Lethal cardiomyopathy in juvenile mice caused by tropomodulin overexpression.
- 180) University of Cincinnati, Department of Cardiology 1998: From genesis to degeneration: cardiac myofibril responses to growth and disease
- 181) American Heart Association, 70th Scientific Sessions 1997: Lethal cardiomyopathy in juvenile mice caused by tropomodulin overexpression.
- 182) L'Institut de Cardiologie de Montreal 1997: Myofibril degeneration leads to dilated cardiomyopathy in juvenile transgenic mice which overexpress tropomodulin.
- 183) University of South Carolina 1996: Lethal cardiomyopathy in juvenile mice caused by tropomodulin overexpression.
- 184) DB Symposium, TCHRF 1996: Cardiomyopathy, cardiomyocytes and confocal microscopy: characterization of a new transgenic mouse line.
- 185) Microscopy Society of America 1996: Analysis of myofibrillar organization and degeneration by fluorescence confocal microscopy.
- 186) Gordon Research Conference 1996: Regulation of tropomodulin expression is critical for maintenance of myofibrillar organization: abnormal stoichiometry disrupts sarcomeric structure.
- 187) Weinstein Cardiovascular Research Conference 1996: Regulation of tropomodulin expression is critical for maintenance of myofibrillar organization: abnormal stoichiometry disrupts sarcomeric structure.
- 188) Laverna Titus Young Investigators Forum, American Heart Association 1995: Regulation of tropomodulin expression is critical for maintenance of myofibrillar organization: abnormal stoichiometry disrupts sarcomeric structure.
- 189) University of Pittsburgh, Department of Cardiology, 1995: Regulation of tropomodulin expression is



- critical for maintenance of myofibrillar organization: abnormal stoichiometry disrupts sarcomeric structure.
- 190) The Children's Hospital and Research Foundation, Division of Molecular Cardiology, 1994: Regulation of tropomodulin expression is critical for maintenance of myofibrillar organization: abnormal stoichiometry disrupts sarcomeric structure.
  - 191) American Heart Association 67th Scientific Sessions, 1994: Regulation of tropomodulin expression is critical for maintenance of myofibrillar organization.
  - 192) California State University, Los Angeles and USC Department of Cell and Neurobiology, 1994: A tropomodulin for every actin filament: the cytoskeletal relationship for a terminally differentiated lifestyle.
  - 193) Gordon Research Conference 1994 on Cardiac Regulatory Mechanisms: Regulation of tropomodulin expression is critical for maintenance of myofibrillar organization.
  - 194) Laverna Titus Young Investigators Forum, American Heart Association 1994: Molecular analysis of myofibrillar degeneration.
  - 195) American Heart Association 66th Scientific Sessions, 1993: Expression of tropomodulin in rat cardiocyte cells: localization of protein precedes mRNA organization during myofibrillar development.
  - 196) Cold Spring Harbor Laboratory, 1993: Developmental expression of tropomodulin parallels cerebellar organization.
  - 197) National Institutes of Health, 1991: Tropomodulin: An isotype specific tropomyosin binding protein.
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