

CURRICULUM VITAE

ROBERTO BOLLI, M.D.

Dr. Bolli graduated from the University of Perugia (Italy) in 1976. He completed a research Fellowship at the NHLBI (1978-80) and a clinical Fellowship in Cardiology at Baylor College of Medicine (1981-83). In 1983, he joined the Faculty at Baylor College of Medicine, where he rose to the rank of Professor with tenure. In 1994, he became Chief of the Division of Cardiovascular Medicine at the University of Louisville. He is also Director of the Institute of Molecular Cardiology, Scientific Director of the Cardiovascular Innovation Institute, Executive Vice Chairman of the Department of Medicine, a Distinguished University Scholar, and the Jewish Hospital Distinguished Chair in Cardiology. Twice at two different institutions (Baylor and University of Louisville), Dr. Bolli developed a leading research program starting from zero.

Major awards:

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| ➤ <b>Physician Scientist Award</b> , American College of Chest Physicians (1987)              | ➤ <b>Award of Meritorious Achievement</b> of the AHA (2010)  |
| ➤ <b>Pharmacia-Chiron Young Investigator Award</b> (1988)                                     | ➤ <b>Walter B. Cannon Award</b> , Am Physiol Society (2011)  |
| ➤ <b>NIH MERIT Award</b> (2001-2010)  | ➤ <b>Carl J. Wiggers Award</b> , Am Physiol Society (2011)   |
| ➤ <b>Basic Research Prize</b> , Am Heart Assoc (AHA) (2001)                                   | ➤ <b>Rocovich Gold Medal for Excellence in Science</b> , Edward Via College of Osteopathic Medicine (2012) |
| ➤ <b>Research Achievement Award</b> , International Society for Heart Research (ISHR) (2004)  | ➤ <b>Medal of Merit</b> of the IACS (2013)   |
| ➤ <b>Ken Bowman Research Award</b> , Univ. of Manitoba 2004)                                  | ➤ <b>Research Achievement Award</b> of the AHA (2013)  |
| ➤ <b>Louis and Artur Lucian Award</b> , McGill University (2004)                              | ➤ <b>Peter Harris Distinguished Scientist Award</b> of the ISHR (2015)                                     |
| ➤ <b>Howard Morgan Award</b> , International Academy of Cardiovascular Sciences (IACS) (2005) | ➤ <b>American Society for Clinical Investigation Association of American Physicians</b>                    |
| ➤ <b>Distinguished Achievement Award</b> of the AHA (2006)                                    | ➤ Foreign Fellow, <b>Academy of Sciences of the Royal Society of Canada</b>                                |
| ➤ <b>Distinguished Scientist Award</b> of the AHA (2008)                                      |  |
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Dr. Bolli has delivered 299 lectures, including:

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| ➤ Five plenary lectures and two State-of-the-Art Lectures at AHA Sessions    | ➤ <b>Michel Mirowski Lecture</b> (2006)                       |
| ➤ Landmark Lecture at the ISHR World Congress (2001)                         | ➤ <b>George E. Brown Memorial Lecture</b> of the AHA (2007)   |
| ➤ <b>Keith Reimer Distinguished Lecture</b> of the ISHR (2002)               | ➤ <b>James T. Willerson Lecture</b> (2008)                    |
| ➤ <b>Robert Berne Distinguished Lecture</b> of the Am Physiol Society (2005) | ➤ <b>Laurence H. Green Memorial Lecture</b> (2010)            |
|  | ➤ <b>Distinguished Scientist Lecture</b> of the AHA (2011)    |
|  | ➤ <b>Mikamo Lecture</b> , Japanese Circulation Society (2013) |
|  | ➤ <b>Michael J. Sole Lecture</b> (2013)                       |
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**NIH activities:** Member of the CVB Study Section, NHLBI Program Project Review Committee, and NHLBI Advisory Council. **AHA activities:** Chair of: Pathophysiology Review Committee, Council on Basic Cardiovascular Sciences, Distinguished Scientist Selection Committee, and Council Operations Committee; member of numerous committees; member of the Board of Directors. **International Society for Heart Research:** Secretary General, Treasurer, and President. **Editorial activities:** Dr. Bolli has served as Associate Editor of the *Journal of Molecular and Cellular Cardiology*, and is presently Guest Editor of *Circulation* and Editor-in-Chief of *Circulation Research*.

Dr. Bolli is PI in several NIH grants, including a U24 grant (CAESAR Consortium), a P01 grant, and a UM1 grant (CCTRN). He has published 375 papers including 250 original articles. Among the original articles, 37 have appeared in *Circulation Research*, 12 in *PNAS*, 7 in *JCI*, and 29 in *Circulation*. Thirty-five of his papers have been cited more than 100 times, 16 more than 200 times, and 14 more than 300 times; total number of citations, 28,999; **Hirsch factor, 94.**

Dr. Bolli's research has focused on the mechanisms responsible for myocardial ischemia/reperfusion injury and on the development of cardioprotective strategies. His earlier work established a fundamental role of reactive oxygen species in the pathogenesis of **myocardial "stunning"**, a concept that is now accepted as a proven hypothesis. Subsequently, he identified the signal transduction pathways and the cardioprotective genes responsible for the late phase of **myocardial "preconditioning"**, thereby elucidating the molecular basis of this adaptation of the heart to stress. His discovery that the cardioprotection afforded by preconditioning is mediated by two proteins commonly thought to be detrimental (inducible NO synthase and cyclooxygenase-2) has impelled a reassessment of current paradigms regarding these enzymes and has paved the way for developing novel pharmacologic or genetic therapeutic strategies in patients with coronary artery disease. He is currently investigating the use of **cell therapy** to repair infarcted myocardium. He led SCIPRO (**S**tem **C**ell **I**nfusion in **P**atients with **I**schemic **C**ardi**O**myopathy), the first study ever of cardiac stem cells in patients, and is currently leading a Clinical Center of the NIH-funded network, CCTRN.

**Birthplace** Perugia, Italy

**Birthdate** March 9, 1952

**Citizenship** American

**Marital Status** Married to Amelia A. Bolli  
Children: Roberto A., Jr. (May 7, 1999)  
Robi A.R., III (April 28, 2004)

**Office Address** ACB, Third Floor  
550 South Jackson Street  
Louisville, Kentucky 40292

Heart and Lung Institute  
201 Abraham Flexner Way, Ste. 1001  
Louisville, KY 40202

**Home Address** 3450 Woodside Road  
Louisville, KY 40222

**Telephone** (502) 852-1837  
**FAX** (502) 852-6474  
**E-mail** rbolli@louisville.edu

**Education**

1965-1970 Undergraduate Education: Ginnasio-Liceo Classico "A. Mariotti," Perugia, Italy  
Degree: B.A., 1970

1970-1976 Medical School: University of Perugia, Perugia, Italy  
Degree: M.D. (Magna Cum Laude), 1976

**Postgraduate Training**

1978-1980 Research Fellow, Cardiology Branch, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, MD (Supervisor: Stephen E. Epstein, M.D.)

1981-1983 Clinical Fellow, Cardiology Section, Department of Internal Medicine, Baylor College of Medicine, Houston, TX

**Academic Appointments**

1983-1984 Instructor of Medicine, Baylor College of Medicine, Houston, TX

1984-1989 Assistant Professor of Medicine, Baylor College of Medicine, Houston, TX

1989-1994 Associate Professor of Medicine, Baylor College of Medicine, Houston, TX

1994 Professor of Medicine, Baylor College of Medicine, Houston, TX

1994- Professor of Medicine, University of Louisville, Louisville, KY

1995- Professor of Physiology and Biophysics, University of Louisville, Louisville, KY

1995- Distinguished University Scholar, University of Louisville, Louisville, KY

1998- Jewish Hospital Heart and Lung Institute Distinguished Chair in Cardiology

2009- Adjunct Professor of Medicine, Johns Hopkins University School of Medicine

**Administrative Responsibilities**

1983-1994 Director, Experimental Research Laboratory, The Methodist Hospital, Houston, TX

1985-1986 Co-Director, Coronary Care Unit, Veterans Administration Medical Center, Houston, TX

1986-1990 Director, Coronary Care Unit, Veterans Administration Medical Center, Houston, TX

1991-1994 Co-Director, Coronary Care Unit, Veterans Administration Medical Center, Houston, TX

1986-1990 Chairman, Coronary Care Unit Committee, VA Medical Center, Houston, TX

1994- Chief, Division of Cardiology, University of Louisville, Louisville, KY

1994-2013 Board of Directors of University Medical Associates, University of Louisville, Louisville, KY

1994-2005 Board of Directors of the Jewish Hospital Heart and Lung Institute, Louisville, KY

1995-1998 Research Advisory Council, University of Louisville, Louisville, KY

2002- Director, Institute of Molecular Cardiology, University of Louisville, Louisville, KY

2005-2010 Vice Chairman for Research, Department of Medicine, University of Louisville, Louisville, KY

2010- Executive Vice Chairman, Department of Medicine, University of Louisville, Louisville, KY

2013- Scientific Director, Cardiovascular Innovation Institute, University of Louisville and Jewish Hospital,

Louisville, KY

### Hospital Affiliations

1995- Active Staff at the Jewish Hospital, University Hospital, and Norton Hospital, Louisville, KY

### Examinations

1977 Educational Commission for Foreign Medical Graduates (ECFMG) Examination (Score: 84)  
(No. 288-714-9)  
1977 Visa Qualifying Examination (VQE)  
1978-1979 Course "Statistical Methods in Medical Research" by the Foundation for Advanced Education in the  
Sciences at the National Institutes of Health (Final grade: A)  
1983 Federation Licensing Examination (FLEX)

### Licensure

1976 Italy (University of Perugia Medical Board, Certificate No. 330905)  
1984 State of Texas, Certificate No. G6060 (2/26/84)  
1994 State of Kentucky, Certificate No. 31035 (12/28/94)

### Certification

1986 Diplomate in Internal Medicine  
American Board of Internal Medicine - 9/10/86 (Certificate No. 111841)  
1987 Diplomate in Cardiovascular Disease  
American Board of Internal Medicine - 11/11/87 (Certificate No. 111841)

### Honors and Awards

1976 Magna Cum Laude, University of Perugia, Perugia, Italy  
1978-1980 N.I.H. Fogarty Fellowship, September 1978 - December 1980  
1987-1989 Physician Scientist Award of the American College of Chest Physicians  
1988 Young Investigator Award "for outstanding work in the field of oxygen free-radical mechanisms in  
ischemia/reperfusion injury." Organized by the Departments of Physiology and Biochemistry, College  
of Medicine, University of South Alabama; sponsored by the Pharmacia-Chiron Partnership;  
presented at the National Meeting on Free Radicals in Biology and Medicine: Ischemia/Reperfusion  
Injury, Point Clear, AL, March, 1988  
1990 Keynote speaker at The Oxford International Symposium on "Myocardial Preservation into the 21st  
Century," Oxford, England, August, 1990  
1991 American Society for Clinical Investigation  
1993 Ranked within top 0.3%, NIH R01 HL43151-04 grant application  
1994 Ranked within top 2.1%, NIH R01 HL55757 grant application  
1997 Pfizer Visiting Professor, Division of Cardiology and Weinberg Cardiovascular Research Institute,  
Northwestern University Medical School, March 26-28, 1997  
1998-2000 Chairman, Clinical and Integrative Cardiovascular Physiology/Pathophysiology I National Peer Review  
Committee of the AHA  
1998 Organizer and Chairman of the Scientific Conference of the Council on Circulation of the AHA "Vascular  
and Myocardial Aspects of Ischemic Heart Disease", Lake Tahoe, NV, February 22-25, 1998  
1998 Speaker, Plenary Session on "Clinical Applications of Myocardial Preconditioning", 71st Scientific  
Sessions of the AHA, Dallas, TX, November 9, 1998  
1998 Ranked within top 0.9%, NIH R01 HL-43151-09 grant application  
1999 Association of American Physicians  
1999 Association of University Cardiologists  
2000 State-of-the-Art Lecturer, Featured Research Session on "Role of Nitric Oxide in Myocardial Ischemia",  
73<sup>rd</sup> Scientific Sessions of the AHA, New Orleans, LA, November 13, 2000  
2000 Ranked within top 0.2%, NIH R01 HL-55757-06 grant application  
2000 Organizer and Chairman of the XXII Annual Sessions of the American Section of the ISHR, Louisville, KY,  
June 14-18, 2000  
2001 NIH MERIT Award, 2001-2010  
2001 Basic Research Prize of the American Heart Association  
2001 Fellow of the International Society for Heart Research  
2001 Fellow of the American Heart Association (Council on Basic Cardiovascular Sciences)  
2001 Landmark Lecture, XVII World Congress of the ISHR, Winnipeg, Canada, July 8, 2001  
2001 Ranked within top 2.4%, NIH R01 HL68088 grant application

- 2002 Fellow of the Cardiovascular Section of the American Physiological Society
- 2002 Keith Reimer Distinguished Lecture of the International Society for Heart Research
- 2002 Landmark Lecture, XXIV Annual Sessions of the North American Section of the ISHR, Madison, WI, July 27, 2002
- 2002 Ranked within top 0.6%, NIH R01 HL-70897 grant application
- 2002 Speaker, Special Session on "New Approaches to Myocardial Ischemia", 75<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 18, 2002
- 2002 Chairman, Distinguished Scientist Task Force for the Scientific Councils of the AHA
- 2003 Chairman, Reynolds Foundation and AHA Peer Review Committee for the Cardiovascular Clinical Research Center Grants
- 2003-2005 Chairman, Distinguished Scientist Selection Committee of the AHA
- 2003-2006 Chairman, Council on Basic Cardiovascular Sciences of the AHA
- 2003 Chairman, NHLBI Working Group on the Translation of Therapies for Protecting the Heart from Ischemia
- 2003 Keynote Lecture, XXV Annual Sessions of the North American Section of the ISHR, Mystic, CT, June 28, 2003
- 2003-2007 Member, NHLBI Advisory Council
- 2003 Speaker, Special Session on "New Approaches to Protection of Ischemic Myocardium", 76<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 10, 2003
- 2004 Research Achievement Award of the International Society for Heart Research
- 2004 President's Award for Outstanding Scholarship, Research, and Creative Activity, University of Louisville
- 2004 Ken Bowman Research Award of the Institute of Cardiovascular Sciences, University of Manitoba
- 2004 Louis and Artur Lucian Award for Research in Circulatory Diseases, McGill University
- 2005 Robert Berne Distinguished Lecture of the American Physiological Society
- 2005 Howard Morgan Award for Distinguished Achievements in Cardiovascular Research, International Academy of Cardiovascular Sciences
- 2005- Member, Louis and Artur Lucian Award Selection Committee
- 2005 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, October 21-22, 2005
- 2005 Speaker, Plenary Session "Translational Science 2005: AHA/ESC: Stem Cell Therapy for Cardiac Regeneration", 78<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November 16, 2005
- 2006-2008 Member, Board of Directors of the American Heart Association
- 2006 MOSAIC (Multicultural Opportunities for Success and Achievement In Our Community) Award from the Jewish Family & Vocational Service, May 11, 2006
- 2006 Foreign Fellow of the Academy of Sciences of the Royal Society of Canada
- 2006 Co-organizer and Co-chair, Third Annual Symposium of the Council on Basic Cardiovascular Sciences of the AHA, Keystone, CO, July 31-August 3, 2006
- 2006 Distinguished Achievement Award of the American Heart Association
- 2006 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, September 29-30, 2006
- 2006 Michel Mirowski Lecture in Cardiology, Johns Hopkins University
- 2007 Kentucky Institute of Medicine
- 2007 Alpha Omega Alpha Honor Medical Society, University of Louisville
- 2007-2010 President, International Society for Heart Research
- 2007 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, October 25-27, 2007
- 2007 George E. Brown Memorial Lecture of the American Heart Association
- 2007 Presentation selected for Best of Sessions 2007, 80<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, 2007
- 2008 Distinguished Scientist Award of the American Heart Association
- 2008 University of Louisville Favorite Faculty Award
- 2008 Score of 1.10 (corresponding to 0.2% of applications), NIH R24 HL-94373 grant application
- 2008 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, October 2-5, 2008
- 2008 James T. Willerson Lecture, University of Texas at Houston, Houston, TX, October 21, 2008
- 2008 Lecturer, Gill Heart Institute Cardiovascular Research Day, Lexington, KY, October 24, 2008
- 2009 Linton H. Bishop Distinguished Lecture, Emory University, Atlanta, GA, May 19, 2009
- 2009 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, September 24-27, 2009
- 2010 Borun Lecture, UCLA, Los Angeles, CA, January 15, 2010

- 2010 Southern Society for Clinical Investigation  
2010 Award of Meritorious Achievement of the American Heart Association  
2010 Recognized by *Business First* as a Partner in Health Care (designation for health care leaders in the Louisville community)  
2010 Laurence H. Green Memorial Lecture, Brigham & Women's Hospital, Harvard University School of Medicine, Boston, MA, October 1, 2010  
2011 Walter B. Cannon Award of the American Physiological Society  
2011 Carl J. Wiggers Award of the Cardiovascular Section of the American Physiological Society  
2011 Overall score of 10 and score of 10 in each component Project in NIH grant application 2P01 HL78825-6 (the highest possible scores for a Program Project Grant)  
2011 Distinguished Faculty Award for Research, University of Louisville  
2011 Distinguished Scientist Lecture of the American Heart Association  
2011 Results of the SCIPIO Trial featured on more than 300 media outlets worldwide, including NBC News, ABC News, CBS News, CNN, BBC, LA Times, Time Magazine, The Economist, The Telegraph, The New Scientist, WebMD, and ANSA  
2011 Author of the most cited paper in the *Journal of Molecular and Cellular Cardiology* in the 2006-11 period: (Jones SP, Bolli R.) The ubiquitous role of nitric oxide in cardioprotection. *J Mol Cell Cardiol* 40:16-23, 2006  
2012 Recognized by *Business First* as a Partner in Health Care (designation for health care leaders in the Louisville community)  
2012 Rocovich Gold Medal for Excellence in Science, Edward Via College of Osteopathic Medicine, Blacksburg, VA, April 6, 2012  
2012 68<sup>th</sup> Samuel David Gross Lecture, Phi Delta Epsilon International Medical Fraternity, Louisville, KY, April 11, 2012  
2012 Finalist, Sixth Annual Medistar Awards, May 22, 2012  
2013 Recognized by *Business First* as a Partner in Health Care (designation for health care leaders in the Louisville community)  
2013 Recognized by *Business First* as Innovator of the Year  
2013 Mikamo Lecture of the Japanese Circulation Society  
2013 R.L.J. van Ruyen Award, University of Utrecht, Utrecht, The Netherlands  
2013 Medal of Merit, International Academy of Cardiovascular Sciences (this is the highest honor conferred by the Academy)  
2013 Research Achievement Award of the American Heart Association  
2013 Michael J. Sole Lecture, University Health Network/Mount Sinai Hospital, University of Toronto, Toronto, Ontario, September 4, 2013  
2014 Healthcare Innovation Medistar Award from IGE Media (publisher of *Medical News* and *Medical News for You*)  
2014 John Foerster Distinguished Lecture, Winnipeg, Manitoba, September 6, 2014  
2014 Excellence in Research Award, Jewish Hospital and St. Mary's Foundation, Louisville, KY, October 18, 2014  
2015 Peter Harris Distinguished Scientist Award of the International Society for Heart Research

#### Special Recognitions

- 1995- Distinguished University Scholar, University of Louisville, Louisville, KY

#### Endowments

- 1998- Distinguished Chair in Cardiology, Jewish Hospital Heart and Lung Institute

#### Named Visiting Professorships

- 1992 British Heart Foundation Visiting Professor, Department of Cardiovascular Research, The Rayne Institute, St. Thomas' Hospital, London, U.K., October, 1992  
1994 John Walker Moore Visiting Professor, University of Louisville, Louisville, KY, October, 1994  
1997 Pfizer Visiting Professor, Division of Cardiology and Weinberg Cardiovascular Research Institute, Northwestern University Medical School, March 26-28, 1997  
2006 Michel Mirowski Visiting Professor, Division of Cardiology, Johns Hopkins University, October 23, 2006  
2008 James T. Willerson Visiting Professor, University of Texas at Houston, October 21, 2008  
2010 Laurence H. Green Memorial Lecture, Brigham & Women's Hospital, Harvard University School of Medicine, October 1, 2010.  
2010 Borun Lecture, University of California Las Angeles (UCLA), Los Angeles, CA, January 15, 2010

- 2013 Michael J. Sole Lecture, University Health Network/Mount Sinai Hospital, University of Toronto, Toronto, Ontario, September 4, 2013
- 2014 John Foerster Distinguished Lecture, Winnipeg, Manitoba, September 6, 2014

**Office Positions in Scientific Organizations**

**American Heart Association**

- 1992-1996 Executive Committee of the Council on Circulation
- 1993-1997 Budget Committee of the Council on Circulation
- 1993-1997 Marcus Selection Committee of the Council on Circulation
- 1996-1997 Long Range Planning Committee of the Council on Circulation
- 1998 Nominating Committee for the Cardiovascular Research Prize of the Council on Circulation 1998 Co-Chairman of the Scientific Conference of the Council on Circulation "Vascular and Myocardial Aspects of Ischemic Heart Disease", Lake Tahoe, NV, February 22-25, 1998
- 1998-2000 National Research Committee
- 1998-2000 Chairman, Clinical and Integrative Cardiovascular Physiology/Pathophysiology I National Peer Review Committee
- 1998-2000 Executive Committee of the Council on Circulation
- 1999-2008 Nominating Committee of the Council on Basic Cardiovascular Sciences
- 2000-2003 Program Committee of the Council on Basic Cardiovascular Sciences
- 2000-2002 Communications Committee and Co-Manager of the Web Site, Council on Basic Cardiovascular Sciences
- 2001-2002 AHA Science Classification Task Force
- 2001-2003 Vice Chairman, Council on Basic Cardiovascular Sciences
- 2002 Member Benefits Task Force
- 2002 Chairman, Distinguished Scientist Task Force for the Scientific Councils of the AHA
- 2002-2003 Strategically Focused Research Task Force
- 2002-2005 Committee on Scientific Sessions Program (at-large member)
- 2002-2005 Chairman, Distinguished Scientist Selection Committee
- 2003 Chairman, Reynolds Foundation and AHA Peer Review Committee for the Cardiovascular Clinical Research Center Grants
- 2003-2008 Science Advisory and Coordinating Committee
- 2003-2006 Chairman, Council on Basic Cardiovascular Sciences
- 2003 Advertising Agency Selection Committee
- 2004-2006 Chairman, Council Operations Committee
- 2004-2006 Advocacy Coordinating Committee
- 2004-2006 Strategic Planning Task Force
- 2005-2006 International Mentoring Task Force
- 2005-2006 Future of Scientific Sessions Task Force
- 2006 AHA Fellow Task Force
- 2006-2008 Board of Directors
- 2006 Chair, Working Group on Biomedical Research Environment, AHA Research Strategic Planning Retreat, June 19-20, 2006
- 2006-2007 Research Strategic Planning Task Force
- 2008-2010 Nominating and Awards Committee
- 2009- Editor-in-Chief, *Circulation Research*
- 2012 Nominating and Awards Committee
- 2012- Writing Group for Statement on Use of Stem Cells
- 2012- Stem Cell Subgroup of the Research Committee
- 2012-2013 Emerging Science Series Committee

**International Society for Heart Research**

- 1994-1998 Council Member, ISHR - American Section
- 1995 Selection Committee for the Award for Young Investigators, ISHR-American Section
- 1997 Selection Committee for the Pharmacia and Upjohn Award for Young Investigators, ISHR-American Section
- 1998 Selection Committee for the Richard Bing Award
- 1998-2004 Secretary General of the ISHR
- 2000 Chairman, XXII Annual Sessions of the ISHR - American Section, Louisville, KY, June 14-18, 2000
- 2001-2004 Treasurer of the ISHR

Curriculum Vitae  
Roberto Bolli, M.D.

2004-2007 President-Elect of the ISHR  
 2007-2010 President of the ISHR  
 2006-2009 Leader, Focus Group on Cell Therapy, North American Section of the ISHR  
 2013 Member, Richard Bing Award Selection Committee  
 2013 Member, Outstanding Investigator Award and Peter Harris Award Selection Committee

**International Academy of Cardiovascular Sciences**

2014- President-Elect

**American Physiological Society**

2004-2007 Industry-Foundations Liaison Committee of the Cardiovascular Section of the American Physiological Society

**Other**

1998- Institutional Representative of the ASCI for the University of Louisville

**Associate Editor/Editor**

1999-2009 Associate Editor, *Circulation Research*  
 1999-2007 Associate Editor, *Journal of Molecular and Cellular Cardiology*  
 2004-2007 Guest Editor, *Circulation*  
 2008 Senior Guest Editor, *Circulation* (January-December)  
 2008-2010 Associate Editor, AHA Learning Library  
 2009- Guest Editor, *Circulation*  
 2009- Editor-in-Chief, *Circulation Research*

**Editorial Boards**

1992-1999 *Circulation Research*  
 1991-1998 *American Journal of Physiology: Heart and Circulatory Physiology*  
 2006- *American Journal of Physiology: Heart and Circulatory Physiology*  
 1999-2001 *American Journal of Physiology*, Member of the Board of Medical Editors  
 1991-1993 *Circulation*  
 2001-2004 *Circulation*  
 1987-1991 *Journal of the American College of Cardiology*  
 1989-1999 *Journal of Molecular and Cellular Cardiology*  
 1992-1996 *Cardiovascular Research*  
 1994- *Basic Research in Cardiology*  
 1992- *Cardiovascular Drugs and Therapy*  
 1991-1996 *American Heart Journal*  
 1995-2011 *Experimental and Clinical Cardiology*  
 1995- *Dialogues in Cardiovascular Medicine*  
 1998- *Heart News and Views*  
 2001-2005 *Journal of Thoracic and Cardiovascular Anesthesia*  
 2001- *Korean Journal of Cardiovascular Diseases*  
 2002- *Coronary Artery Disease*  
 2003- *Journal of Cardiovascular Medicine*  
 2004- *Heart Lung and Circulation*  
 2006- *Minerva Cardioangiologica*  
 2008- *Texas Heart Institute Journal*  
 2009- *Circulation Journal* (Member of the International Advisory Board)  
 2013- *Journal of Cellular and Molecular Medicine*

**Reviewer for**

*American Heart Journal*  
*American Journal of Cardiology*  
*American Journal of Physiology*  
*Cardiovascular Drugs & Therapy*  
*Circulation*  
*Circulation Research*  
*Coronary Artery Disease*  
*Free Radical Research Communications*  
*Journal of the American College of Cardiology*

*Journal of Cardiovascular Pharmacology*  
*Journal of Clinical Investigation*  
*Journal of Molecular and Cellular Cardiology*  
*Journal of Pharmacology and Experimental Therapeutics*  
*Journal of Thoracic and Cardiovascular Anesthesia*  
*Life Sciences*  
*New England Journal of Medicine*  
*Science*

### **Review Panels**

#### **National Institutes of Health**

1990-1992 Ad Hoc Member, Cardiovascular & Renal Study Section  
1992-1996 Regular Member, Cardiovascular & Renal Study Section  
1998 Cardiovascular Sciences Special Emphasis Panel, April, 1998  
1999 Special Emphasis Panel to Review SCOR in Ischemic Heart Disease Grant Applications, June, 1999  
2000 Ad Hoc Member, Cardiovascular Study Section (CVA)  
2000-2003 NHLBI Program Project Review Committee HLBP  
2007-2012 Protocol Review Committee, NHLBI Cardiovascular Cell Therapy Research Network (CCTRN)  
2008 Ad Hoc Member, Myocardial Ischemia and Metabolism (MIM) Study Section  
2012 Special Emphasis Panel to Review P01 Applications  
2012 Member, Special Review Committee for P01 HL085577-06, May 10, 2012

#### **American Heart Association**

1998-2000 Chairman, Clinical and Integrative Cardiovascular Physiology/Pathophysiology I National Peer Review Committee  
1988-1994 Central Research Review Committee of the AHA Texas Affiliate  
1993-1997 Marcus Selection Committee of the Council on Circulation  
1999 Reynolds Foundation and AHA Peer Review Committee for the Cardiovascular Clinical Research Program  
1991- Abstract Grader for the 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, and 2010 Scientific Sessions of the AHA  
2003 Chairman, Reynolds Foundation and AHA Peer Review Committee for the Cardiovascular Clinical Research Center Grants

#### **Other**

1990- Ad Hoc Reviewer, VA Merit Review grant applications  
1990 Abstract Grader for the Scientific Sessions of the ACC  
1991 Abstract Grader for the Scientific Sessions of the ACC  
1995-1999 Scientific Review Committee, Jewish Hospital Foundation, Louisville, KY  
2005 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, October 21-22, 2005  
2006 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, September 28-October 1, 2006  
2007 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, October 25-27, 2007  
2008 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, October 2-5, 2008  
2009 Faculty, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, September 25-26, 2009

#### **Advisory Activities for the NIH**

1995 Special Emphasis Panel (SEP), January, 1995  
1996 Special Emphasis Panel (SEP) on Integrative Research, April, 1996  
2001 Member, Cardiovascular Sciences Study Section Boundaries Team, October 31 – November 2, 2001  
2003 Member, SPARK II Conference, January 20, 2003  
2003 Chairman, NHLBI Working Group on the Translation of Therapies for Protecting the Heart from Ischemia  
2003-2007 Member, NHLBI Advisory Council  
2006 NHLBI Working Group on Regenerative Medicine

**Curriculum Vitae**  
**Roberto Bolli, M.D.**

- 2012- Chair, Publications and Presentations Committee of the Cardiovascular Cell Therapy Research Network (CCTRN) of the NHLBI  
 2014 Member, NHLBI Think Tank on Research Needs for Cell Therapy in Areas of Heart, Lung and Blood.

**Steering Committees**

- 2000-2003 EXPEDITION Trial  
 2012- CCTRN (Cardiovascular Cell Therapy Research Network)

**Professional Societies**

- American Society for Clinical Investigation, 1991
- Association of American Physicians, 1999
- American College of Cardiology, Fellow, 1987
- Association of University Cardiologists, 1999
- Council on Clinical Cardiology of the AHA, Fellow, 1985
- Council on Circulation of the AHA, Fellow
- Council on Basic Cardiovascular Sciences of the AHA, Fellow
- International Society for Heart Research, 1984
- American College of Physicians, Fellow, 1988
- American Physiological Society
- American Federation for Clinical Research
- The Oxygen Society
- International Academy of Cardiovascular Sciences, Fellow, 1997
- Academy of Sciences of the Royal Society of Canada, Foreign Fellow, 2006
- Kentucky Institute of Medicine, 2007

**Committees, University of Louisville**

- 1995-1999 Research Advisory Council  
 1998 UMA Financial Committee  
 1998 Chairman, Department of Medicine Faculty Evaluation Committee  
 1998 Anesthesiology Chair Search Committee  
 2002-2003 Cardiac Pathologist Search Committee  
 2005 Search Committee for the Chief of the Division of Internal Medicine  
 2007 Search Committee for the Chair of Cardiothoracic Surgery  
 2008 Search Committee for the Chair of Medicine  
 2009-2010 Faculty Compensation Committee  
 2009-2013 Pension Committee  
 2010 Search Committee for the Chief of Oncology  
 2010-2011 Search Committee for the Executive Vice President for Research  
 2011-2012 Search Committee for the Senior Associate Dean for Clinical Research  
 2012 Department of Medicine Strategic Planning Committee

**Thesis Committees**

- 1997-2001 Qin Zhang, M.D.  
 1998-2002 Zarema Balafanova  
 2009- Mohammad Hossein Kadbi  
 2012- Matthew Keith, M.D.

**Major Research Interests**

- Protection of Ischemic Myocardium
- Mechanisms of Ischemia and Reperfusion Injury
- Role of Oxygen-Derived Free Radicals in Ischemia and Reperfusion
- Postischemic Myocardial Dysfunction ("Stunned Myocardium")
- Ischemic Preconditioning
- Gene Therapy
- Stem/Progenitor Cells
- Cell Therapy for Cardiac Repair After Infarction

**Clinical Responsibilities**

Attending in the Coronary Care Unit and Cardiology Consult Service

**Patents**

1. *Subpopulations of bone marrow-derived adherent stem cells and methods of use thereof.* U.S. Patent Number 8,431,162; issued April 30, 2013.
2. *Transplantation of very small embryonic-like (VSEL) stem cells for cardiac repair following myocardial infarction.* U.S. Provisional Patent Application Serial Number 61/000,954; filed October 30, 2007.
3. *Cardiac myocyte morphogenic compositions and methods of use therefor.* U.S. Provisional Patent Application Serial Number 61/031,481; filed February 26, 2008.
4. *Cardiac progenitor cells and methods of use therefor.* U.S. Patent Application Serial Number PCT/US2014/067395; filed November 25, 2014.

**Research Support**

**(i) NON-INDUSTRY GRANTS**

**(Total direct costs of grants in which Dr. Bolli is/was Principal Investigator: \$62,489,392)**

**(a) Grants in which Dr. Bolli is/was Principal Investigator or Co-Principal Investigator**

**(i) Active**

1. Title: U24 Grant "Consortium for PreclinicAI AssEssment of CARdioprotective Therapies"  
(CAESAR)  
Agency: NIH  
Role: Principal Investigator  
Dates: 2009-2013  
Cost: Annual direct cost \$1,811,780; total direct cost \$7,829,629  
Grant #: U24 HL-94373 (score: 1.10 [0.2 percentile])
2. Title: P01 Grant "Protection of Ischemic Myocardium"  
Agency: NIH  
Role: Principal Investigator  
Dates: 2011-2016  
Cost: Annual direct cost \$1,717,752; total direct cost \$8,588,760  
Grant #: P01 HL-78825-06 (overall score: 10; score of each component Project: 10)
3. Title: "Center for Excellence in Diabetes and Obesity Research"  
Agency: NIH  
Role: Co-Principal Investigator  
Dates: 2013-2018  
Cost: Annual direct cost \$1,500,000; total direct cost \$7,500,000  
Grant #: 2 P20 GM103492
4. Title: Regional Clinical Center for the NHLBI Cardiovascular Cell Therapy Research Network (CCTRN)  
Agency: NIH  
Role: Principal Investigator  
Dates: 2012-2019  
Cost: Annual direct cost \$390,000; total direct cost \$3,289,000  
Grant #: 1 UM1 HL-113530

**(ii) Completed**

1. Title: "Role of Oxygen Free Radicals in Postischemic Dysfunction"  
Agency: American Heart Association, Texas Affiliate  
Role: Principal Investigator (no Co-investigators)  
Dates: 1985-1989  
Cost: Total direct cost \$110,000  
Grant #: Three grants: Nos. 85G/225, 87R/171, and 88R/171

2. Title: Physician Scientist Award  
Agency: American College of Chest Physicians  
Role: Principal Investigator (no Co-investigators)  
Dates: 1987-1989  
Cost: Total direct cost \$70,000
3. Title: "Role of Oxygen Radicals in Postischemic Dysfunction"  
Agency: NIH  
Role: Principal Investigator  
Dates: 1989-1992  
Cost: Total direct cost \$563,000  
Grant #: R01 HL-43151 01-03
4. Title: "Role of Oxygen Radicals in Postischemic Dysfunction"  
Agency: NIH  
Role: Principal Investigator  
Dates: 1993-1997  
Cost: Annual direct cost \$188,021; total direct cost \$1,220,880  
Grant #: R01 HL-43151 04-08 (percentile score: 0.3)
5. Title: "Oxygen Radicals and Cardiac Adaptations to Ischemia"  
Agency: NIH  
Role: Principal Investigator  
Dates: 1994-1999  
Cost: Annual direct cost \$229,677; total direct cost \$1,250,846  
Grant #: R01 HL-55757 (percentile score: 2.1)
6. Title: "Oxygen Radicals and Cardiac Adaptations to Ischemia"  
Agency: NIH  
Role: Principal Investigator  
Dates: 2000-2004  
Cost: Annual direct cost \$286,445; total direct cost \$1,578,500  
Grant #: MERIT Award R37 HL-55757-06 (percentile score: 0.2)
7. Title: "SCOR in Heart Failure"  
Agency: NIH  
Role: Principal Investigator in project "Pathogenesis and Response to Therapy of Clinical and Experimental Acute Cardiac Failure Secondary to Postischemic Dysfunction"  
Dates: 1990-1994  
Cost: Annual direct cost \$115,425; total direct cost \$589,000  
Grant #: P50 HL-42267
8. Title: "Role of Oxygen Radicals in Postischemic Dysfunction"  
Agency: NIH  
Role: Principal Investigator  
Dates: 1998-2003  
Cost: Annual direct cost \$244,631; total direct cost \$1,336,476  
Grant #: R01 HL-43151 09-13 (percentile score: 0.9)
9. Title: "Community Health Promotions Programs"  
Agency: CDC  
Role: Principal Investigator  
Dates: 2004-2006  
Cost: Total direct cost \$1,247,665  
Grant #: H75/CCH424252
10. Title: "Molecular Basis of Preconditioning"  
Agency: NIH  
Role: Principal Investigator  
Dates: 2001-2006

- Cost: Annual direct cost \$287,890; total direct cost \$1,641,001  
Grant #: R01 HL-68088-01 (percentile score: 2.4)
11. Title: "Mechanisms of Cardioprotection"  
Agency: NIH  
Role: Principal Investigator  
Dates: 2003-2008  
Cost: Annual direct cost \$359,127; total direct cost \$1,989,958  
Grant #: R01 HL-70897-01 (percentile score: 0.6)
12. Title: "Hematopoietic Stem Cell Therapy for Myocardial Regeneration"  
Agency: NIH  
Role: Principal Investigator  
Dates: 2004-2008  
Cost: Annual direct cost \$316,101; total direct cost \$1,357,617  
Grant #: 1 R01 HL076794-01
13. Title: P01 Grant "Protection of Ischemic Myocardium"  
Agency: NIH  
Role: Principal Investigator  
Dates: 2005-2010 (no cost extension)  
Cost: Annual direct cost \$1,656,251; total direct cost \$8,790,181  
Grant #: P01 HL-78825 (score: 143)
14. Title: "Oxygen Radicals and Cardiac Adaptations to Ischemia"  
Agency: NIH  
Role: Principal Investigator  
Dates: 2005-2010 (no cost extension)  
Cost: Annual direct cost \$363,550; total direct cost \$1,940,008  
Grant #: MERIT Award R37 HL-55757-06 (percentile score: 0.2)
15. Title: "Center for Excellence in Diabetes and Obesity Research"  
Agency: NIH  
Role: Co-Principal Investigator  
Dates: 2008-2013  
Cost: Annual direct cost \$1,500,000; total direct cost \$11,596,871  
Grant #: 1 P20 RR024489

**(b) Grants in which Dr. Bolli is/was Co-investigator**

**(i) Completed**

1. Title: "AHA/Bugher Foundation Center for Molecular Biology in the Cardiovascular System"  
Agency: American Heart Association  
Role: Co-investigator (Program Director: Robert Roberts, M.D.)  
Dates: 1986-1994  
Cost: Annual direct cost \$185,185; total direct cost \$1,125,000  
Grant #: AHA 86-2216
2. Title: "Effect of Adenosine on Myocardial Stunning"  
Agency: Veterans Affairs Research Advisory Group Program  
Role: Co-investigator (PI: Mohamed O. Jeroudi, M.D.)  
Dates: 1992-1994  
Cost: Annual direct cost \$52,328; total direct cost \$95,000
3. Title: "Gene Therapy with Superoxide Dismutase for Coronary Restenosis"  
Agency: Jewish Hospital Foundation  
Role: Co-investigator (PI: Brent A. French, Ph.D.)  
Dates: 1996-1998  
Cost: Annual direct cost \$25,000; total direct cost \$50,000

4. Title: "Gene Therapy with Nitric Oxide Synthase for Coronary Restenosis"  
Agency: American Heart Association, KY Affiliate  
Role: Co-investigator (PI: Brent French, Ph.D.)  
Dates: 1996-1998  
Cost: Annual direct cost \$20,000; total direct cost \$40,000
5. Title: "Myocardial Preconditioning with Adenosine During Percutaneous Transluminal Coronary Angioplasty (PTCA)"  
  
Agency: Alliant Community Trust Fund  
Role: Co-investigator (PI: Massoud Leesar, M.D.)  
Dates: 1996-1998  
Cost: Annual direct cost \$21,704; total direct cost \$43,409
6. Title: "Effects of Adenosine on Ischemic Preconditioning and Myocardial Protection during Percutaneous Transluminal Coronary Angioplasty (PTCA)"  
  
Agency: Jewish Hospital Foundation  
Role: Co-investigator (PI: Massoud Leesar, M.D.)  
Dates: 1996-1998  
Cost: Annual direct cost \$24,910; total direct cost \$49,820
7. Title: "Myocardial Preconditioning with Adenosine During PTCA"  
Agency: American Heart Association, KY Affiliate  
Role: Co-investigator (PI: Massoud Leesar, M.D.)  
Dates: 1996-1998  
Cost: Annual direct cost \$18,905; total direct cost \$37,810
8. Title: "Antioxidant Gene Therapy for Myocardial Stunning and Infarction"  
Agency: AHA National Established Investigator Award  
Role: Co-investigator (PI: Brent French, Ph.D.)  
Dates: 1997-2000  
Cost: Annual direct cost \$100,000; total direct cost \$300,000
9. Title: "Role of A<sub>3</sub> Adenosine Receptors in the Ischemic Myocardium"  
Agency: American Heart Association  
Role: Co-investigator (PI: John A. Auchampach, Ph.D.)  
Dates: 1997-2000  
Cost: Annual direct cost \$65,000; total direct cost \$260,000  
Grant #: 9630083N
10. Title: "Early and Late Preconditioning: Role of K<sub>ATP</sub> Channels"  
Agency: Jewish Hospital Foundation  
Role: Co-Investigator (PI: John A. Auchampach, Ph.D.)  
Dates: 1997-1999  
Cost: Annual direct cost \$25,000; total direct cost \$50,000
11. Title: "Influence of Antioxidant Vitamin E and Interaction with Calcium Antagonist on Exercised-Induced Myocardial Stunning"  
Agency: American Heart Association, KY Affiliate  
Role: Co-investigator (PI: Marcus F. Stoddard, M.D.)  
Dates: 1997-1999  
Cost: Annual direct cost \$22,000; total direct cost \$44,000
12. Title: "Mechanism(s) of Exercise Induced Myocardial Stunning in Patients with Coronary Artery Disease"  
Agency: Jewish Hospital Foundation  
Role: Co-investigator (PI: Marcus F. Stoddard, M.D.)  
Dates: 1997-1999  
Cost: Annual direct cost \$22,000; total direct cost \$44,000

13. Title: "Ischemic Preconditioning and PKC Activation of Mitogen-Activated Protein Kinases (MAPKs)"  
Agency: American Heart Association  
Role: Co-investigator (PI: Peipei Ping, Ph.D.)  
Dates: 1998-2000  
Cost: Annual direct cost \$55,000; total direct cost \$165,000  
Grant #: 992324
14. Title: "Gene Therapy for Myocardial Stunning and Infarction"  
Agency: NIH  
Role: Co-investigator (PI: Brent French, Ph.D.)  
Dates: 1997-2001  
Cost: Annual direct cost \$132,250; total direct cost \$529,000  
Grant #: R01 HL-58582
15. Title: "Molecular Regulation of the Human nNOS Gene: Implication for Hypoxic/Ischemic Brain Injury"  
Agency: Jewish Hospital Foundation  
Role: Co-Investigator (PI: Yang Wang, M.D., Ph.D.)  
Dates: 2000-2002  
Cost: Annual direct cost \$25,000; total direct cost \$50,000
16. Title: "The Role of ROS in Late Preconditioning against Myocardial Infarction in Conscious Rabbits"  
Agency: AHA, Ohio Valley Affiliate  
Role: Co-Investigator (PI: Xian Liang Tang, M.D.)  
Dates: 1999-2001  
Cost: Annual direct cost \$35,000; total direct cost \$70,000  
Grant #: 9951533V
17. Title: "Signaling Mechanism of Ischemic Preconditioning"  
Agency: Jewish Hospital Foundation  
Role: Co-Investigator (PI: Yu-Ting Xuan, Ph.D.)  
Dates: 2001-2003  
Cost: Annual direct cost \$25,000; total direct cost \$50,000
18. Title: "A<sub>3</sub> Receptors: Cardioprotective Mechanisms and Overexpression"  
Agency: NIH  
Role: Co-Investigator (PI: John Auchampach, Ph.D.)  
Dates: 1998-2003  
Cost: Annual direct cost \$87,544; total direct cost \$463,153  
Grant #: R01 HL-60051
19. Title: "Cardioprotective Effects of Ethanol"  
Agency: NIH  
Role: Co-Investigator (PI: Aruni Bhatnagar, Ph.D.)  
Dates: 2001-2004  
Cost: Annual direct cost \$100,000; total direct cost \$300,000  
Grant #: R21 AA13299-01
20. Title: "Role of the JAK-STAT1 Signaling Pathway in Late Phase of Ischemic Preconditioning"  
Agency: AHA  
Role: Co-Investigator (PI: Yu-Ting Xuan, Ph.D.)  
Dates: 2001-2003  
Cost: Annual direct cost \$65,000; total direct cost \$195,000  
Grant #: 0150074N
21. Title: "The Role of TNF-alpha in Late Preconditioning against Myocardial Infarction"  
Agency: AHA  
Role: Co-Investigator (PI: Buddhadeb Dawn, M.D.)

- Dates: 2001-2004  
Cost: Annual direct cost \$59,091; total direct cost \$236,364  
Grant #: 0130146N
22. Title: "The Cyclooxygenase-2 (COX-2) Pathway: Biological roles and Molecular Regulation in Late Preconditioning"
- Agency: AHA  
Role: Co-Investigator (PI: Yang Wang, M.D., Ph.D.)  
Dates: 2001-2004  
Cost: Annual direct cost \$59,091; total direct cost \$236,364  
Grant #: 0130414N
23. Title: "Role of the JAK-STAT Pathway in Ischemic Preconditioning"  
Agency: NIH  
Role: Co-Investigator (PI: Yu-Ting Xuan, Ph.D.)  
Dates: 2001-2005  
Cost: Annual direct cost \$175,000; total direct cost \$650,000  
Grant #: HL65660
24. Title: "Adaptations to Ischemia/Reperfusion Injury in the Aging Heart"  
Agency: AHA, Ohio Valley Affiliate  
Role: Co-Investigator (PI: Yiru Guo, M.D.)  
Dates: 2002-2004  
Cost: Annual direct cost \$44,000; total direct cost \$88,000  
Grant #: 0265087B
25. Title: "The role of IL-6 in Late Preconditioning"  
Agency: NIH  
Role: Co-Investigator (PI: Buddhadeb Dawn, M.D.)  
Dates: 2002-2006  
Cost: Annual direct cost \$225,000; total direct cost \$900,000  
Grant #: R01 HL-72410
26. Title: "Alpha-1 Adrenoceptor Subtype Signaling in Preconditioning"  
Agency: NIH  
Role: Co-Investigator (PI: Gregg Rokosh, Ph.D.)  
Dates: 2003-2007  
Cost: Annual direct cost \$225,000; total direct cost \$900,000  
Grant #: HL071896-01A1
27. Title: "Late Preconditioning in Hypercholesterolemia"  
Agency: NIH  
Role: Co-Investigator (PI: Xian-Liang Tang, Ph.D.)  
Dates: 2003-2007  
Cost: Annual direct cost \$175,000; total direct cost \$700,000  
Grant #: HL74351
28. Title: "Cardiovascular Toxicity of Environmental Aldehydes"  
Agency: NIH - PPG  
Role: Co-Investigator (PI: Aruni Bhatnagar, Ph.D.)  
Dates: 2003-2008  
Cost: Annual direct cost \$1,075,488; total direct cost \$5,812,529  
Grant #: P01 ES011860

(ii) **INDUSTRY GRANTS**

**(Total direct costs of grants in which Dr. Bolli is/was Principal Investigator: \$2,118,830)**

1. Title: "Effect of azapropazone on infarct size and recovery of function in the conscious dog"  
Agency: DuPont DeNemours, Inc.

- Role: Principal Investigator  
Dates: 1988-1989  
Cost: Total direct cost \$90,000
2. Title: "Effect of PEG-SOD on myocardial stunning"  
Agency: Sterling Drug, Inc.  
Role: Principal Investigator  
Dates: 1989-1990  
Cost: Total direct cost \$66,000
3. Title: "Effect of human recombinant SOD on myocardial infarct size"  
Agency: Pharmacia-Chiron Partnership  
Role: Principal Investigator  
Dates: 1986-1987  
Cost: Total direct cost \$16,400
4. Title: "The effects of preoclusion administration of human superoxide dismutase on recovery of stunned myocardium in open-chest dogs"  
Agency: Pharmacia-Chiron Partnership  
Role: Principal Investigator  
Dates: 1988-1989  
Cost: Total direct cost \$10,000
5. Title: "Effect of U-74006F on free radical production in the canine model of myocardial stunning"  
Agency: The Upjohn Company  
Role: Principal Investigator  
Dates: 1991  
Cost: Total direct cost \$19,200
6. Title: "Effect of MDL 74,405 on myocardial stunning and free radical generation after brief ischemia"  
Agency: Marion Merrell Dow, Inc.  
Role: Principal Investigator  
Dates: 1992-1993  
Cost: Total direct cost \$60,800
7. Title: "Effect of nisoldipine on free radical generation in the stunned myocardium"  
Agency: Miles, Inc.  
Role: Principal Investigator  
Dates: 1993-1994  
Cost: Total direct cost \$74,000
8. Title: "The long-term safety evaluation of isradipine in the treatment of chronic stable angina"  
Agency: Glaxo, Inc.  
Role: Principal Investigator  
Dates: 1991  
Cost: Total direct cost \$29,000
9. Title: "Effect of EGb 761 in an experimental model of acute myocardial ischemia reperfusion"  
Agency: IPSEN  
Role: Principal Investigator  
Dates: 1994-1995  
Cost: Total direct cost \$23,400
10. Title: "A double-blind, placebo-controlled, multicenter trial of the safety and efficacy of adenosine additive to cardioplegic solutions for prevention of post-ischemic myocardial dysfunction after coronary artery bypass surgery (CABG) in patients with depressed ventricular function"

- Agency: Medco Research, Inc.  
Role: Principal Investigator  
Dates: 1995-1998  
Cost: Total direct cost \$220,000
11. Title: "A phase II, randomized, open-label, multicenter, international, angiographic trial of the efficacy of TNK-tPA compared with accelerated Activase® Alteplase rt-PA in acute myocardial infarction (TIMI 10B)"
- Agency: Genentech  
Role: Principal Investigator  
Dates: 1996 - 1997  
Cost: Total direct cost \$43,000
12. Title: "The effectiveness and safety of subcutaneous enoxaparin compared to intravenous unfractionated heparin for patients presenting with unstable angina or non-Q wave MI: an international, double blind, randomized, parallel group, multicenter study (TIMI 11)"
- Agency: Rhone-Poulenc Rorer Pharmaceutical, Inc.  
Role: Co-investigator (PI: Massoud Leesar, M.D.)  
Dates: 1996-1997  
Cost: Total direct cost \$69,000
13. Title: "A randomized trial of the effects of balloon angioplasty combined with local urokinase infusion with the dispatch catheter versus "conventional therapy" on clinical and angiographic outcome in patients undergoing percutaneous revascularization of thrombus-containing stenosis (DUET)"
- Agency: The Cleveland Clinic Foundation/Abbot Labs  
Role: Co-investigator (PI: Massoud Leesar, M.D.)  
Dates: 1995-1996  
Cost: Total direct cost \$20,000
14. Title: "A randomized open-label trial of adenosine as an adjunct to streptokinase or rt-PA in the treatment of acute myocardial infarction (AMISTAD)"
- Agency: Duke University Medical Center (Medco Research, Inc.)  
Role: Co-investigator (PI: Massoud Leesar, M.D.)  
Dates: 1996-1997  
Cost: Total direct cost \$27,000
15. Title: "Protocol No: HOE642A/3001: The GUARDIAN Trial: A double-blind, placebo-controlled multinational trial to investigate all-cause mortality and myocardial infarction in patients at risk of myocardial necrosis due to acute coronary syndrome related to the disease process or to an interventional cardiac procedure"
- Agency: Hoechst Marion Roussel  
Role: Principal Investigator  
Dates: 1997-1998  
Cost: Total direct cost \$445,885
16. Title: "A comparison of efficacy and safety of mibefradil with verapamil in patients with mild to moderate hypertension (INNOVEX)"
- Agency: Hoffman LaRoche  
Role: Principal Investigator  
Dates: 1997  
Cost: Total direct cost \$31,000
17. Title: "A phase 2 safety and efficacy study of HU 23F2G in patients with acute MI treated with direct PTCA (HALT MI)"
- Agency: ICOS Corporation  
Role: Principal Investigator  
Dates: 1998

- Cost: Total direct cost \$71,900
18. Title: "A randomized double-blind, placebo-controlled multicenter trial to evaluate the efficacy and safety of adenosine as an adjunct to reperfusion therapy in the treatment of acute anterolateral myocardial infarction (AMISTAD II)"
- Agency: Clintrials Research  
Role: Principal Investigator  
Dates: 1999-2000  
Cost: Total direct cost \$50,000
19. Title: "A phase II, randomized, double-blind, placebo-controlled, multicenter, angiographic trial of the safety and efficacy of rhuMAb CD18 in acute myocardial infarction" (LIMIT MI)
- Agency: Genentech  
Role: Principal Investigator  
Dates: 1999-2000  
Cost: Total direct cost \$11,200
20. Title: "Pharmacokinetics and safety of HOE 642 (Cariporide) administered intravenously to subjects undergoing high-risk coronary artery bypass grafting. A placebo-controlled, randomized, double-blind, sequential groups study"
- Agency: Aventis  
Role: Principal Investigator  
Dates: 2000  
Cost: Total direct cost \$227,500
21. Title: "A double-blind, placebo-controlled, multinational trial to investigate the effect of IV treatment with the NA<sup>+</sup>/H<sup>+</sup> exchange inhibitor cariporide (HOE642) on all-cause mortality and non-fatal myocardial infarction in patients at risk of myocardial necrosis during and after coronary artery bypass graft (CABG) surgery (EXPEDITION)"
- Agency: Aventis  
Role: Principal Investigator  
Dates: 2001  
Cost: Total direct cost \$87,237
22. Title: "A phase III randomized, parallel, double-blind, multi-center, placebo-controlled study of the effect of pexelizumab on all-cause mortality and myocardial infarction in patients undergoing coronary artery bypass graft (CABG) surgery with cardiopulmonary bypass"
- Agency: Alexion Pharmaceuticals, Inc.  
Role: Principal Investigator  
Dates: 2002  
Cost: Total direct cost \$200,810
23. Title: "A Multicenter, randomized, double-blind, parallel-group, placebo- controlled study of 2 mg/kg bolus plus 24-hour 0.05 mg/kg/hr infusion Pexelizumab in patients undergoing coronary artery bypass grafting with cardiopulmonary bypass (PRIMO II)"
- Agency: Alexion Pharmaceuticals & Proctor and Gamble Pharmaceuticals  
Role: Principal Investigator  
Dates: 2004-present  
Cost: Total direct cost \$38,241
24. Title: "Multinational, multicenter, double-blind, randomized study evaluating the efficacy and safety of fondaparinux vs. enoxaparin in the acute treatment of unstable angina/non ST-segment elevation MI acute coronary syndromes (OASIS 5)"
- Agency: Sanofi-Synthelabo  
Role: Principal Investigator

- Dates: 2003-present  
Cost: Total direct cost \$6,750
25. Title: "A multicenter, double-blind, randomized study to establish the clinical benefit and safety of vytorin (ezetimibe/simvastin tablet) vs. simvastin monotherapy in high-risk subjects presenting with acute coronary syndrome (Improved Reduction of Outcomes: Vytorin Efficacy International Trial – IMPROVE-IT)"
- Agency: Schering-Plough Research Institute  
Role: Principal Investigator  
Dates: 2012-present  
Cost: Total direct cost \$67,276
26. Title: "A prospective, randomized, double-blinded, active-control and unblinded standard of care (SOC) controlled study to determine the efficacy and safety of targeted intramyocardial delivery of G-CSF mobilized autologous CD34+ cells for the improvement in total exercise time during standardized exercise testing in subjects with refractory angina pectoris and chronic myocardial ischemia (CMI)"
- Agency: Baxter Healthcare Corporation/PPD Development, LLC  
Role: Co-Principal Investigator  
Dates: 11/2012-2/2017  
Cost: Total direct cost \$446,269

(iii) TRAINING GRANTS

1. Title: MRC Fellowship  
Agency: Medical Research Council of Canada  
Role: Mentor for Michael Hill, Ph.D.  
Dates: 1998-2001  
Cost: Total direct cost: \$66,000
2. Title: Research Fellowship  
Agency: Heart and Stroke Foundation of Canada  
Role: Mentor for Michael Hill, Ph.D.  
Dates: 1998-2000  
Cost: Total direct cost: \$66,000  
(declined due to overlap with the MRC Fellowship)
3. Title: Research Fellowship  
Agency: American Heart Association, KY Affiliate  
Role: Mentor for Yiru Guo, M.D.  
Dates: 1998-1999  
Cost: Total direct cost: \$20,000  
Grant #: KY-9804557
4. Title: Research Fellowship  
Agency: American Heart Association, Ohio Valley Affiliate  
Role: Mentor for Yiru Guo, M.D.  
Dates: 1999-2000  
Costs: Total Direct Cost: \$30,000  
Grant#: 9920595V
5. Title: Research Fellowship  
Agency: American Heart Association, Ohio Valley Affiliate  
Role: Mentor for Qianhong Li, M.D., Ph.D.  
Dates: 2000-2001  
Cost: Total direct cost: \$60,000  
Grant #: 9920589V
6. Title: Research Fellowship  
Agency: American Heart Association, Ohio Valley Affiliate  
Role: Mentor for Ken Shinmura, M.D., Ph.D.

- Dates: 2000-2001  
Cost: Total direct cost: \$35,000  
Grant #: 9920593V
7. Title: Research Fellowship  
Agency: American Heart Association, Ohio Valley Affiliate  
Role: Mentor for Adam Stein, M.D.  
Dates: 2003-2005  
Cost: Total direct cost: \$72,540  
Grant #: 0325372B
8. Title: Fellow-to-Faculty Transition Award  
Agency: American Heart Association, National Award  
Role: Mentor for Adam Stein, M.D.  
Dates: 2005-2010  
Costs: \$600,000  
Grant#: 0575035N

Publications

**Hirsch Factor (2/9/15): 94**

**Total number of citations: 28,999 (2/9/15)**

**Total of 375 papers published or in press (not including abstracts, case reports, letters)**

(\*Articles cited more than 100 times are marked with an asterisk.)

Bibliometric Analysis (updated 6/18/14)

**Analysis of Citations**

Articles Cited				
100-199 times	200-299 times	300-399 times	400-699 times	> 700 times
35	16	7	6	1
Articles Cited 100 – 199 times		Original report 19, 25, 26, 28, 34, 41, 65, 71, 72, 74, 78, 83, 84, 89, 92, 93, 94, 95, 98, 99, 107, 111, 120, 129, 163, 167, 171, 178, Review 11, 15, 21, 27, 30, 32, 38		
Articles Cited 200 – 299 times		Original Report 35, 40, 51, 58, 85, 90, 100, 104, 106, 115, 137, 148, Review 10,13,19,		
Articles Cited 300 – 399 times		Original Report 20, 45, 88, 130 Review 5, 26		
Articles Cited 400 – 699 times		Original Report 39, 46, 183, 191 Review 14, 22, 25		
Articles Cited > 700 times		Review 9		

**Analysis of Journals** (original reports only)

JCI	PNAS	Circ Res	Circulation	Am J Physiol
7	12	36	29	42
Analysis of Authorship				
(original reports only)				
First Author	Second Author	Last Author	First, Second or Last Author	
29 (12.5%)	18 (8%)	119 (50%)	166 (70%)	

Publications (i) ORIGINAL REPORTS

1. **Bolli R**, Goldstein RE, Davenport N, Epstein SE. Influence of sulfinpyrazone and naproxen on infarct size in the dog. *Am J Cardiol* 47:841-847, 1981.

1983

2. Sheehan FH, Goldstein RE, **Bolli R**, Epstein SE. The effects of nitroglycerin-methoxamine combination on infarct size in conscious dogs. *Am Heart J* 105:37-43, 1983.
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- \*A328 Wybieralska E, Elmore B, Goichberg P, Sanada F, Kim J, Ogorek B, Loughran J, Birks E, McCants K, Flaherty M, Rota M, Anversa P, Leri A, **Bolli R**, Kajstura J. Clonogenic human cardiac stem cells with long telomeres can be isolated from minute endomyocardial biopsies. *Circulation* 2013;128(suppl 22):A15091. Published online November 19, 2013.

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- \*A329 **Bolli R**, Zhu Y, Wang O, Guo Y, Rokosh G, Stein A, Dawn B, Xuan Y. STAT1 transcription factor is required for the delayed protection against cardiomyocyte apoptosis by ischemic preconditioning. *Circulation* 2013;128(suppl 22):A12113. Published online November 19, 2013.

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- \*A330 **Bolli R**, Zhu Y, Wang O, Guo Y, Rokosh G, Stein A, Dawn B, Xuan Y. STAT1 signaling is critical for the infarct-sparing effects of late ischemic preconditioning. *Circulation* 2013;128(suppl 22):A12143. Published online November 19, 2013.

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- \*A331 Al-Maqtari T, Vajravelu B, Mokhtar A, Cao P, Bhatnagar A, Hong K, **Bolli R**. Transcription factor-induced activation of cardiac gene expression in c-kit+ cardiac stem cells. *Circulation* 2013;128(suppl 22):A14174. Published online November 19, 2013.

Available at: [http://circ.ahajournals.org/cgi/content/meeting\\_abstract/128/22\\_MeetingAbstracts/A14174](http://circ.ahajournals.org/cgi/content/meeting_abstract/128/22_MeetingAbstracts/A14174)

- \*A332 Li Q, Tang X, Ou Q, Chen N, Hunt G, Stowers H, Rokosh G, **Bolli R**. Retention of differentiated cardiac stem cells 1-year after intracoronary cell delivery in rats with acute myocardial infarction. *Circulation* 2013;128(suppl 22):A14851. Published online November 19, 2013.

Available at: [http://circ.ahajournals.org/cgi/content/meeting\\_abstract/128/22\\_MeetingAbstracts/A14851](http://circ.ahajournals.org/cgi/content/meeting_abstract/128/22_MeetingAbstracts/A14851)

- \*A333 Guo Y, Book M, Du J, Wu W, Zhu X, Li Q, Bhatnagar A, **Bolli R**. The effect of early phase of ischemic preconditioning on the leptin resistant diabetic heart. *Circulation* 2013;128(suppl 22):A14958. Published online November 19, 2013.

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- \*A334 Cummins T, Li Q, Guo Y, Du J, Book M, Zhu X, Wu W, Salabei J, Habertzettl P, Jones S, **Bolli R**, Bhatnagar A, Hill B. Diabetes promotes a Warburg-like metabolic phenotype in cardiac stem cells. *Circulation* 2013;128(suppl 22):A17898. Published online November 19, 2013.

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- \*A335. Cogle C, Wise E, Meacham A, Traverse J, Henry T, Perin E, Willerson J, **Bolli R**, Cooke J, Anwaruddin S, Bhatnagar A, Hansen M, Grant M, Lai D, Moye L, Ebert R, Olson R, Resende M, Sayre S, Schulman I, Smith D, Zierold C, Pepine C, Taylor D. Variable and decreased clonogenic activity of autologous bone marrow in cell

therapy patients with ischemic heart disease, and CD34 as a biomarker for clinical outcomes: Results from the Cardiovascular Cell Therapy Research Network (CCTRN). *Circulation* 2013;128(suppl 22):A17746. Published online November 19, 2013.

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#### 2014

- \*A336. Obal D, Brittan K, Book M, Bhatnagar A, Guo Y, **Bolli R**, Rokosh DG. Cardiomyocyte specific conditional overexpression of stromal cell derived factor 1 facilitates cardiac regeneration after permanent coronary artery ligation in mice. (Submitted)
- \*A337. Jones SP, Steenbergen C, Lefer DJ, Tang XL, Kukreja RC, Li Q, Kong M, Bhushan S, Stowers HL, Kondo K, Hunt GH, Goodchild TT, Orr A, Chang C, Ockaili R, Salloum FN, Guo Y, **Bolli R**. Establishment and validation of a pre-clinical, multi-center, multi-species consortium for the assessment of infarct size-reducing agents: CAESAR (C Consortium for the preclinical assessment of cARdioprotective therapies). (In Press)
- \*A338. Lefer DJ, Jones SP, Steenbergen C, Kukreja RC, Guo Y, Tang XL, Li Q, Ockali R, Salloum FN, Kong M, Polhemus D, Bhushan S, Goodchild TT, Chang C, Book M, Du J, **Bolli R**. Sodium nitrite fails to limit myocardial infarct size: Results from the CAESAR cardioprotection consortium. (In Press)
- \*A339. Kukreja RC, Tang XL, Lefer DJ, Charles Steenbergen C, Jones SP, Guo Y, Li Q, Kong M, Ockaili R, Salloum FN, Polhemus D, Bhushan S, Goodchild TT, Chang C, **Bolli R**. Sildenafil therapy at reperfusion fails to reduce infarct size following ischemia: results from the CAESAR cardioprotection consortium. (In Press)
- \*A340. Loomba RS, Gupta N, Aggarwal S, Ismail I, Agarwal A, Chugh AR, Arora RR, **Bolli R**. Short term outcomes after use of bone marrow transplantation for management of heart failure: A meta-analysis. *Circulation* 130:A15567, 2014.
- \*A341. Tang XL, Rokosh G, SanganalMath SK, Shirk G, Hunt GN, Stowers H, Dawn B, **Bolli R**. Dose-dependent effects of intracoronary cardiac stem cells in rats with acute myocardial infarction. (Accepted at ACC 2015)
- \*A342. Li Q, Chen N, Luo L, Ou Q, Xie W, Hunt GN, Tang XL, Rokosh DG, **Bolli R**. Administration of c-Kit+ cardiac stem cells (CSCs) results in increased proliferation and cardiac content of CSCs 1 year later. *Circulation* 130:A15555, 2014.
- \*A343. Keith MCL, Elmore JB, Tang XL, Tokita Y, Amraotkar A, Ghafghazi S, Hong KU, Vajravelu BN, Wysoczynski M, Moore IV JB, Hunt G, **Bolli R**. Does the stop-flow technique improve cardiac retention of intracoronarily delivered cells? A study of cardiac retention c-kit+ human cardiac stem cells (HCSCs) after intracoronary infusion in a porcine model of chronic ischemic cardiomyopathy. *Circulation* 130:A15763, 2014.
- \*A344. Salabei JK, Lorkiewicz PK, Holden CR, Harbeson MA, Li Q, **Bolli R**, Bhatnagar A, Hill BG. Glutamine regulates cardiac stem cell metabolism and competency. *Circulation* 130:A15567, 2014.

#### Original Presentations at National Meetings

Presentations of the above-listed abstracts at National Meetings of the American College of Cardiology, American Heart Association, Federation of American Societies for Experimental Biology, American Federation for Clinical Research, and International Society for Heart Research.

#### Scientific Conferences Organized

- Organizer and Chairman of the Scientific Conference of the Council on Circulation of the AHA "Vascular and Myocardial Aspects of Ischemic Heart Disease", Lake Tahoe, NV, February 22-25, 1998.
- Organizer and Chairman of the XXII Annual Sessions of the American Section of the ISHR, Louisville, KY, June 14-18, 2000.
- Co-organizer of the NIH Workshop on Post-Resuscitative and Initial Utility in Life Saving Efforts (PULSE), Leesburg, VA, June 29-30, 2000.
- Scientific Program Advisory Committee for the XVI World Congress of the ISHR, May 1998.
- International Corporate Sponsorship Committee for the XVI World Congress of the ISHR, May 1998.
- Scientific Program Committee for the Second International Conference on the Pathophysiology of Stunning, Hibernation and Preconditioning, October 1998.

- International Advisory Board for the XVII World Congress of the ISHR, July 2001.
- Organizing Committee, Scientific Conference of the AHA "Molecular, Integrative, and Clinical Approaches to Myocardial Ischemia", Seattle, WA, August 9-11, 2001.
- Program Committee, Scientific Conference of the AHA "Advances in the Molecular and Cellular Mechanisms of Heart Failure", Snowbird, UT, August 21-25, 2002.
- Committee on Scientific Sessions Program (at-large member), 2002-2005
- Scientific Advisory Committee for the XXV Annual Sessions of the North American Section of the ISHR, Mystic, CT, June 28 - July 1, 2003.
- Organizer and Chairman of the NHLBI Workshop on Translation of Therapies for Protecting the Heart from Ischemia, Bethesda, MD, June 23-24, 2003.
- Program Committee, Scientific Conference of the AHA "Molecular Mechanisms of Growth, Death, and Regeneration in the Myocardium", Snowbird, UT, August 13-17, 2003.
- Scientific Program Advisory Committee for the XVIII World Congress of the ISHR, August 2004.
- Scientific Program Advisory Committee for the XIX World Congress of the ISHR, June 2007.
- Co-organizer and Co-chair, Third Annual Symposium of the Council on Basic Cardiovascular Sciences of the AHA, Keystone, CO, July 31-August 3, 2006.
- Co-organizer and Co-director, Cardiovascular Revascularization Therapy 2007, Washington, D.C., March 6-8, 2007.
- Co-organizer and Co-director, Cardiovascular Revascularization Therapy 2008, Washington, D.C., February 11-13, 2008.
- Scientific Advisory Committee for the XXX Annual Sessions of the North American Section of the ISHR, Cincinnati, OH, June 17-20, 2008.
- Scientific Program Advisory Committee for the XX World Congress of the ISHR, May 2010.

### **Scientific Sessions Organized**

#### Sessions Organized: **American Heart Association**

1. Participant in the organization of the 1991, 1992, 1993, 1994, 1996, 1997, 1998, 1999, 2000, and 2001 AHA meetings (representative of the Circulation Council to the Committee on Scientific Sessions Program).
2. Postgraduate Seminar on "Stunned and Hibernating Myocardium: Pathogenesis, Pathophysiology, and Clinical Significance," 67th Scientific Sessions of the AHA, Dallas, TX, November, 1994.
3. Cardiovascular Seminar on "The Second Window (Late Phase) of Ischemic Preconditioning," 68th Scientific Sessions of the AHA, Anaheim, CA, November, 1995.
4. Cardiovascular Seminar on "Myocardial Stunning: Recent Advances", 69th Scientific Sessions of the AHA, New Orleans, LA, November 10, 1996.
5. Cardiovascular Seminar on "Ischemic Preconditioning: Early and Late Mechanisms", 70th Scientific Sessions of the AHA, Orlando, FL, November 10, 1997.
6. Team leader for abstract selection and session organization (total of 14 sessions on myocardial ischemia) for the 72<sup>nd</sup> Scientific Sessions Program of the AHA, 1999.
7. Team leader for abstract selection and session organization (total of 15 sessions on myocardial ischemia) for the 73<sup>rd</sup> Scientific Sessions Program of the AHA, 2000.
8. Team leader for abstract selection and session organization (total of 11 sessions on myocardial ischemia) for the 74<sup>th</sup> Scientific Sessions Program of the AHA, 2001.
9. Team leader for abstract selection and session organization for the 75<sup>th</sup> Scientific Sessions Program of the AHA, 2002 (declined).
10. Team leader for abstract selection and session organization for the 76<sup>th</sup> Scientific Sessions Program of the AHA, 2003.
11. Team leader for abstract selection and session organization for the 77<sup>th</sup> Scientific Sessions Program of the AHA, 2004.

12. Team leader for abstract selection and session organization for the 78<sup>th</sup> Scientific Sessions Program of the AHA, 2005.
13. Team leader for abstract selection and session organization for the 79<sup>th</sup> Scientific Sessions Program of the AHA, 2006.
14. Team leader for abstract selection and session organization for the 80<sup>th</sup> Scientific Sessions Program of the AHA, 2007.
15. Team leader for abstract selection and session organization for the 81<sup>st</sup> Scientific Sessions Program of the AHA, 2008.

Sessions Organized: **International Society for Heart Research**

1. Symposium on "The Stunned Myocardium." XIII Annual Sessions of the American Section of the ISHR, Ann Arbor, MI, May, 1989.
2. Symposium on "Response of the Heart to Ischemic Stress: Myocardial Stunning." XIV Annual Sessions of the American Section of the ISHR, Burlington, VT, June, 1992.
3. Symposium on "Myocardial Stunning," XVII Annual Sessions of the North American Section of the ISHR, Orange Beach, AL, May, 1995.
4. Symposium on "The Late Phase (Second Window) of Ischemic Preconditioning," XVIII Annual Sessions of the American Section of the ISHR, Chicago, IL, June, 1996.
5. Symposium on "Ischemic Preconditioning", XIX Annual Sessions of the American Section of the ISHR, Vancouver, B.C., July 27, 1997.
6. The University of Louisville and Osaka Symposium on "The Late Phase of Ischemic Preconditioning", XVI World Congress of the ISHR, Ixia, Rhodes, May 29, 1998.
7. Symposium on "The Late Phase (Second Window) of Ischemic Preconditioning", XX Annual Sessions of the American Section of the ISHR, Ann Arbor, MI, August 10, 1998.
8. Symposium on "The Late Phase of Ischemic Preconditioning", XXI Annual Sessions of the American Section of the ISHR, San Diego, CA, June 11, 1999.
9. Symposium on "Emerging Paradigms in Ischemic Biology", XXIV Annual Sessions of the North American Section of the ISHR, Madison, WI, July 27, 2002.

Sessions Organized: **Other**

1. NHLBI Workshop on Myocardial Stunning, Hibernation and Preconditioning, Columbia, MD, July 2-3, 1996.
2. Session on "Preconditioning and Nitric Oxide", Second International Conference on the Pathophysiology of Stunning, Hibernation and Preconditioning, Taormina, Italy, October 15, 1998.
3. Session on "Cardiovascular Research Applications", Life Sciences Without Boundaries Conference, Cincinnati, OH, March 10, 2003.
4. Sessions on "Angiomyogenesis and Cell Therapy", CRT (Cardiovascular Revascularization Therapies) 2008, Washington, D.C., February 12-13, 2008.
5. Sessions on "Angiomyogenesis and Cell Therapy", CRT (Cardiovascular Revascularization Therapies) 2009, Washington, D.C., March 4-6, 2009.

**Scientific Sessions Chaired at National or International Meetings**

Sessions Chaired: **American Heart Association**

1. Scientific Session on "Myocardial Stunning." 64<sup>th</sup> Scientific Sessions of the AHA, Anaheim, CA, November, 1991.
2. Scientific Session on "Myocardial Stunning." 65<sup>th</sup> Scientific Sessions of the AHA, New Orleans, LA, November, 1992.
3. Scientific Session on "Myocardial Stunning and Hibernation." 66<sup>th</sup> Scientific Sessions of the AHA, Atlanta, GA, November, 1993.
4. Scientific Session on "Myocardial Stunning and Hibernation." 67<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November, 1994.

5. Scientific Session on "Stress Proteins and Myocardial Protection." 68th Scientific Sessions of the AHA, Anaheim, CA, November 15, 1995.
6. Cardiovascular Seminar on "The Second Window (Late Phase) of Ischemic Preconditioning," 68th Scientific Sessions of the AHA, Anaheim, CA, November, 1995.
7. Scientific Session on "The Late Phase of Ischemic Preconditioning" (Featured Research), 69th Scientific Sessions of the AHA, New Orleans, LA, November 11, 1996.
8. Scientific Session on "Delayed Myocardial Adaptations to Stress", 70th Scientific Sessions of the AHA, Orlando, FL, November 11, 1997.
9. Scientific Session on "Mechanisms of Cardiomyopathy and Heart Failure", 70th Scientific Sessions of the AHA, Orlando, FL, November 12, 1997.
10. Scientific Session on "Preconditioning - Late Phase", Scientific Conference of the AHA on Vascular and Myocardial Aspects of Ischemic Heart Disease, Lake Tahoe, NV, February 23, 1998.
11. Scientific Session on "Late Phase of Ischemic Preconditioning", 71st Scientific Sessions of the AHA, Dallas, TX, November 11, 1998.
12. Sunday Morning Program on "New Insights into Myocardial Stunning Hibernation, and Preconditioning", 72<sup>nd</sup> Scientific Sessions of the AHA, Atlanta, GA, November 7, 1999.
13. Scientific Session on "Role of Nitric Oxide in Myocardial Ischemia", 72<sup>nd</sup> Scientific Sessions of the AHA, Atlanta, GA, November 8, 1999.
14. Cardiovascular Seminar on "Recent Advances in Preconditioning", 73<sup>rd</sup> Scientific Sessions of the AHA, New Orleans, LA, November 12, 2000.
15. Plenary session on "Molecular Mechanisms of Preconditioning", Scientific Conference of the AHA on Molecular, Integrative, and Clinical Approaches to Myocardial Ischemia, Seattle, WA, August 11, 2001.
16. Scientific Session on "Nitric Oxide and Myocardial Protection", 74<sup>th</sup> Scientific Sessions of the AHA, Anaheim, CA, November 14, 2001.
17. Scientific Session on "Ischemic Causes of Heart Failure", Scientific Conference of the AHA on Advances in the Molecular and Cellular Mechanisms of Heart Failure, Snowbird, UT, August 24, 2002.
18. Scientific Session on "Nitric Oxide Synthase Signal Transduction in Preconditioning", 75<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 18, 2002.
19. Outstanding Early-Career Investigator Award, Scientific Conference of the AHA on Molecular Mechanisms of Growth, Death, and Regeneration in the Myocardium, Snowbird, UT, August 16, 2003.
20. Melvin Marcus Young Investigator Award in Cardiovascular Science, 76<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 11, 2003.
21. Scientific Session on "Regenerative Therapy for the Failing Heart", 76<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 11, 2003.
22. Scientific Session on "New Frontiers in Myocardial Infarction", First Annual Meeting of the AHA Council on Basic Cardiovascular Sciences, Stevenson, WA, July 17, 2004.
23. Scientific Session on "Regenerative Therapies in Ischemic and Failing Myocardium", 77<sup>th</sup> Scientific Sessions of the AHA, New Orleans, LA, November 9, 2004.
24. Scientific Session on "Late-Breaking Developments in Stem Cell Biology and Cardiac Growth Regulation", 77<sup>th</sup> Scientific Sessions of the AHA, New Orleans, LA, November 8, 2004.
25. Scientific Session on "Human Adult Stem Cells and Cardiac Repair", 79<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 13, 2006.
26. Scientific Session on "Cardiac Stem Cells and Myocardial Repair: Preclinical Studies", 79<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 13, 2006.
27. Plenary Session on "Translational Science 2006: Stem Cells and Cardiovascular Diseases", 79<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 15, 2006.

28. Scientific Session on "Experimental and Clinical Application of Stem Cell Repair", Fourth Annual Meeting of the AHA Council on Basic Cardiovascular Sciences, Keystone, CO, August 2, 2007.
29. Scientific Session on "Stem/Progenitor Cells", 80<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 7, 2007.
30. Scientific Session on "Cardiac Regeneration", Fifth Annual Meeting of the AHA Council on Basic Cardiovascular Sciences, Keystone, CO, July 31, 2008.
31. Scientific Session on "Progenitor Cell Therapy for Cardiovascular Disease", 81<sup>st</sup> Scientific Sessions of the AHA, New Orleans, LA, November 11, 2008.
32. Scientific Session on "Myocardial Homeostasis and Regeneration", 82<sup>nd</sup> Scientific Sessions of the AHA, Orlando, FL, November 15, 2009.
33. Scientific Session on "Cellular and Molecular Mechanisms in Heart Failure", 82<sup>nd</sup> Scientific Sessions of the AHA, Orlando, FL, November 16, 2009.
34. Scientific Session on "Cardiac Remodeling and Regeneration", 83<sup>rd</sup> Scientific Sessions of the AHA, Chicago, IL, November 17, 2010.
35. Scientific Session on "Recent Highlights from *Circulation Research*", 84<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 15, 2011.
36. Scientific Session on "Recent Highlights from *Circulation Research*", 85<sup>th</sup> Scientific Sessions of the AHA, Los Angeles, CA, November 6, 2012.
37. Scientific Session on "The Best of Circulation Research", 86<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November 17, 2013.
38. Scientific Session on "Application of Cell-Based Therapies to Treat Cardiac and Peripheral Diseases", 86<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November 18, 2013.

Sessions Chaired: **International Society for Heart Research**

1. Symposium on "The Stunned Myocardium." XIII Congress of the ISHR, Ann Arbor, MI, May, 1989.
2. Scientific Session on "Ischemic Myocardial Damage." Satellite Symposium on New Aspects in the Treatment of Failing Heart, XIV<sup>th</sup> World Congress of ISHR, Sapporo, Japan, May, 1992.
3. Symposium on "Response of the Heart to Ischemic Stress: Myocardial Stunning." XIV Annual Meeting of the American Section of the ISHR, Burlington, VT, June, 1992.
4. Symposium on "Myocardial Stunning." XVII Annual Sessions of the North American Section of the ISHR, Orange Beach, AL, May, 1995.
5. Symposium on "The Late Phase (Second Window) of Ischemic Preconditioning," XVIII Annual Sessions of the North American Section of the ISHR, Chicago, IL, June 11, 1996.
6. Symposium on "Ischemic Preconditioning", XIX Annual Sessions of the American Section of the ISHR, Vancouver, B.C., July 27, 1997.
7. The University of Louisville and Osaka Symposium on "The Late Phase of Ischemic Preconditioning", XVI World Congress of the ISHR, Ixia, Rhodes, May 29, 1998.
8. Symposium on "The Late Phase (Second Window) of Ischemic Preconditioning", XX Annual Sessions of the American Section of the ISHR, Ann Arbor, MI, August 10, 1998.
9. Symposium on "The Late Phase of Ischemic Preconditioning", XXI Annual Sessions of the American Section of the ISHR, San Diego, CA, June 11, 1999.
10. Scientific Session "Cardiovascular Landmark Lectures and ISHR Research Achievement Award", XVII World Congress of the ISHR, Winnipeg, Canada, July 9, 2001.
11. Symposium on "Prevention of Ischemia/Reperfusion Injury by Preconditioning", XXIV Annual Sessions of the North American Section of the ISHR, Madison, WI, July 26, 2002.
12. Symposium on "The Stem Cell Reserve Corps: Ready to Repair the Heart", XVIII World Congress of the ISHR, Brisbane, Australia, August 8, 2004.
13. Symposium on "Regenerative Medicine", XXVIII Annual Sessions of the North American Section of the ISHR, Toronto, ON, June 14, 2006.

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14. Scientific Session "Translating the Regenerative Potential: Focus on Heart Failure", XIX World Congress of the ISHR, Bologna, Italy, June 25, 2007.
15. Symposium on "Cellular Therapy for Heart Disease: From Bench to Bedside", XXX Annual Sessions of the North American Section of the ISHR, Cincinnati, OH, June 18, 2008
16. Symposium on "Use of Stem Cells to Repair Infarcted Myocardium", XX World Congress of the ISHR, Kyoto, Japan, May 15, 2010.
17. Nobel Laureate Lecture "Turning Pages: From Gels to Genes", Lecturer: Dr. Oliver Smithies, XX World Congress of the ISHR, Kyoto, Japan, May 15, 2010.

*Sessions Chaired: **American College of Cardiology***

1. Scientific Session on "Reperfusion Injury: Causes and Consequences." Annual Meeting of the ACC, Anaheim, CA, March, 1989.
2. Scientific Session on "Coronary Artery Disease, Ischemia, and Myocardial Function." Annual Meeting of the ACC, New Orleans, LA, March, 1990.
3. Scientific Session on "Ischemia and Infarction: Diagnostic Methods." Annual Meeting of the ACC, Atlanta, GA, March, 1991.
4. Scientific Session on "Myocardial Infarction: Molecular Responses to Infarction." 45th Scientific Session of the ACC, Orlando, FL, March 26, 1996.
5. Scientific Session on "Aortic Valve Stenosis." Annual Meeting of the Kentucky Chapter of the ACC, Louisville, KY, October 11, 2014.

*Sessions Chaired: **Other***

1. Scientific Session on "Myocardial Ischemia and Reperfusion." FASEB Meeting, Las Vegas, NV, May, 1988.
2. Scientific Session on "Myocardial Ischemia." FASEB Meeting, Atlanta, GA, April, 1991.
3. Symposium on "Stunned Myocardium and Reperfusion Injury." 10th Asian-Pacific Congress of Cardiology, Seoul, Korea, October, 1991.
4. Scientific Session on "Pathophysiology of Reperfusion Injury." Conference on Cellular, Biochemical and Molecular Aspects of Reperfusion Injury sponsored by the New York Academy of Sciences, New York, NY, July, 1993.
5. Scientific Session "From Myocardial Ischemia to Myocardial Cytoprotection." International Symposium on Myocardial Cytoprotection: A Novel Therapeutic Approach for Coronary Artery Disease, Bangkok, Thailand, March, 1994.
6. Scientific Session "Myocardial Cytoprotection: A New Trend in the Management of Ischemic Heart Disease." National Meeting of the Portuguese Society of Cardiology, Lisbon, Portugal, May, 1994.
7. The Second International Satellite Symposium on "Adenosine, Cardioprotection and Its Clinical Application." 68th Scientific Sessions of the AHA, Long Beach, CA, November 11, 1995.
8. Session on "Myocardial Stunning." NHLBI Workshop on Myocardial Stunning, Hibernation and Preconditioning, Columbia, MD, July 2, 1996.
9. Session on "Preconditioning and Nitric Oxide", Second International Conference on the Pathophysiology of Stunning, Hibernation and Preconditioning, Taormina, Italy, October 15, 1998.
10. Chrissy and Anthony O'Reilly Young Investigator Competition, Second International Conference on the Pathophysiology of Stunning, Hibernation and Preconditioning, Taormina, October 16, 1998.
11. Workshop on "Acute Myocardial Rescue", (PULSE), Leesburg, VA, June 29-30, 2000.
12. Featured Research Session "Ischemic Heart Disease – Basic: Protection of Ischemic Myocardium". 67th Annual Scientific Meeting of the Japanese Circulation Society, Fukuoka, Japan, March 29, 2003.
13. Fellows Basic Science Presentations, Northwestern University Feinberg School of Medicine Cardiovascular Young Investigators' Forum, Chicago, IL, October 21, 2005.
14. Featured Research Session "Regeneration Research in Cardiovascular Medicine." 70th Annual Scientific Meeting of the Japanese Circulation Society, Nagoya, Japan, March 25, 2006.

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15. Symposium on "Angiomyogenesis and Cell Therapy". Cardiovascular Revascularization Therapy 2007, Washington, D.C., March 8, 2007.
16. Symposium on "Cells for Myocardial Repair and Collaterogenesis", Cardiovascular Revascularization Therapy 2008, Washington, D.C., February 12, 2008.
17. Symposium on "Angiomyogenesis and Cell Therapy", Cardiovascular Revascularization Therapy 2009, Washington, D.C., March 5, 2009.

**"Meet the Experts" Sessions:**

1. Session on "Stunned and Hibernating Myocardium: Definition and Detection." Annual Meeting of the ACC, Atlanta, GA, March, 1991.
2. Session on "Stunned and Hibernating Myocardium." Annual Meeting of the ACC, Dallas, TX, April, 1992.
3. Session on "Myocardial Ischemia and Reperfusion: Basic Science and Translational Applications". 76<sup>th</sup> Annual Sessions of the AHA, Orlando, FL, November 10, 2003.
4. Session on "Stem Cell". 77<sup>th</sup> Annual Sessions of the AHA, New Orleans, LA, November 9, 2004.

**Invited Lectures:**

***Total of 299 extramural lectures***

Invited Lectures: **American Heart Association**

1. "Postischemic myocardial dysfunction." Scientific Conference of the AHA on Myocardial Ischemia and Reperfusion, Tamarron, CO, August, 1987.
2. "Myocardial stunning: Overview and role of oxygen radicals." Postgraduate Seminar on Stunned and Hibernating Myocardium: Pathogenesis, Pathophysiology, and Clinical Significance, 67<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November, 1994.
3. "Late (second window) preconditioning against myocardial stunning." Cardiovascular Seminar on the Second Window (Late Phase) of Ischemic Preconditioning, 68<sup>th</sup> Scientific Sessions of the AHA, Anaheim, CA, November 13, 1995.
4. "Role of oxyradicals in myocardial stunning". Cardiovascular Seminar on Myocardial Stunning: Recent Advances, 69<sup>th</sup> Scientific Sessions of the AHA, New Orleans, LA, November 10, 1996.
5. "Mechanism of the late phase of ischemic preconditioning". Cardiovascular Seminar on Ischemic Preconditioning: Early and Late Mechanisms, 70<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 10, 1997.
6. "Role of nitric oxide in the late phase of ischemic preconditioning". Scientific Conference of the AHA on Vascular and Myocardial Aspects of Ischemic Heart Disease, Lake Tahoe, NV, February 23, 1998.
7. "Preconditioning for interventional cardiology: Therapeutic implications." Plenary Session on Clinical Applications of Myocardial Preconditioning, 71<sup>st</sup> Scientific Sessions of the AHA, Dallas, TX, November 9, 1998.
8. "PKC mediated ischemic preconditioning." Cardiovascular Seminar on PKC Signaling in CV Development and Disease, 71<sup>st</sup> Scientific Sessions of the AHA, Dallas, TX, November 9, 1998.
9. "Molecular basis of preconditioning." Scientific Conference of the AHA on Molecular, Cellular, and Integrative Physiological Approaches to the Failing Heart, Snowbird, UT, August 21, 1999.
10. "Role of Nitric Oxide in Ischemic Preconditioning." Sunday Morning Program on New Insights into Myocardial Stunning, Hibernation, and Preconditioning, 72<sup>nd</sup> Scientific Sessions of the AHA, Atlanta, GA, November 7, 1999.
11. "The Mouse as a Model of Myocardial Infarction." "How-to-Session" on How to Study CV Function in Mice I, 72<sup>nd</sup> Scientific Sessions of the AHA, Atlanta, GA, November 8, 1999.
12. "NO as Trigger". Cardiovascular Seminar on What's New in Ischemic Preconditioning, 72<sup>nd</sup> Scientific Sessions of the AHA, Atlanta, GA, November 8, 1999.
13. "Role of COX-2 in Preconditioning". Sunday Morning Program on Emerging Paradigms in the Pathophysiology and Treatment of Myocardial Ischemia, 73<sup>rd</sup> Scientific Sessions of the AHA, New Orleans, LA, November 12, 2000.
14. "Exercised-induced Preconditioning". Cardiovascular Seminar on Recent Advances in Preconditioning, 73<sup>rd</sup> Scientific Sessions of the AHA, New Orleans, LA, November 12, 2000.

15. "Role of Nitric Oxide in Myocardial Ischemia: An Overview". State-of-the-Art lecture, Featured Research Session on the Role of Nitric Oxide in Myocardial Ischemia, 73<sup>rd</sup> Scientific Sessions of the AHA, New Orleans, LA, November 13, 2000.
16. "Genetic Basis of Preconditioning". Scientific Conference of the AHA on Molecular, Integrative, and Clinical Approaches to Myocardial Ischemia, Seattle, WA, August 11, 2001.
17. "Genetic Basis of Preconditioning". Sunday Morning Program on New Directions in the Biology of Ischemia, 74<sup>th</sup> Scientific Sessions of the AHA, Anaheim, CA, November 11, 2001.
18. "Clinical Implications of Ischemic Preconditioning". Cardiovascular Seminar on Cardiac ATP-sensitive Potassium Channels in Health and Disease, 74<sup>th</sup> Scientific Sessions of the AHA, Anaheim, CA, November 12, 2001.
19. "New Approaches to Cardioprotection: Use of Gene Therapy to Mimic Preconditioning". Scientific Conference of the AHA on Advances in the Molecular and Cellular Mechanisms of Heart Failure, Snowbird, UT, August 24, 2002.
20. "Gene Therapy for Ischemia". Sunday Morning Program on Emerging Concepts of the Consequences of Ischemia/Reperfusion, 75<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 17, 2002.
21. "Molecular Mechanisms of Myocardial Preconditioning". Special Session on New Approaches to Myocardial Ischemia, 75<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 18, 2002.
22. "Gene Therapy to Protect Ischemic Myocardium". Scientific Conference of the AHA on Molecular Mechanisms of Growth, Death, and Regeneration in the Myocardium: Basic Biology and Insights into Ischemic Heart Disease and Heart Failure, Snowbird, UT, August 15, 2003.
23. "Myocardial Preconditioning". Sunday Morning Program on Role of Hypoxia in Cardiovascular Development, Pathology and Therapeutics, 76<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 9, 2003.
24. "Use of Sodium-Hydrogen Exchange Inhibitors to Protect Ischemic Myocardium in Patients". Special Session in New Approaches to Protection of Ischemic Myocardium, 76<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 10, 2003.
25. "Gene Therapy for Myocardial Ischemia". First Annual Meeting of the AHA Council on Basic Cardiovascular Sciences, Stevenson, WA, July 17, 2004.
26. "Gene Therapy for Myocardial Ischemia". Sunday Morning Program on New Concepts in Ischemic Biology, 77<sup>th</sup> Scientific Sessions of the AHA, New Orleans, LA, November 7, 2004.
27. "Regeneration of Infarcted Myocardium with Bone Marrow and Cardiac Stem Cells". Cardiovascular Seminar on Regenerating Heart Muscle and Vessels: Are Dreams Becoming Reality?, 77<sup>th</sup> Scientific Sessions of the AHA, New Orleans, LA, November 8, 2004.
28. "Myocardial Preconditioning: A Template for Gene Therapy". Second Annual Meeting of the AHA Council on Basic Cardiovascular Sciences, Keystone, CO, July 26, 2005.
29. "Gene Therapy for Chronic Prophylactic Cardioprotection". Sunday Morning Program on Recent Advances in Myocardial Ischemia and Cardioprotection, 78<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November 13, 2005.
30. "Translational Studies of Cardiac Stem Cells for Regeneration in Acute and Chronic Myocardial Infarction". Plenary Session on Translational Science 2005: AHA/ESC: Stem Cell Therapy for Cardiac Regeneration, 78<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November 16, 2005.
31. "Recent Advances in Cardiovascular Research." AHA Kentuckiana Metro Board of Directors Meeting, Louisville, KY, March 15, 2006.
32. "Use of Cardiac Stem Cells for Repair of Infarcted Myocardium". Third Annual Meeting of the AHA Council on Basic Cardiovascular Sciences, Keystone, CO, August 2, 2006.
33. "Stem Cells and the Diseased Heart". Cardiovascular Seminar on Controversies in Myocardial Regeneration, 79<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 12, 2006.
39. "Cell Therapy for Myocardial Repair: Perspective and Use in Experimental and Clinical Models". Fourth Annual Meeting of the AHA Council on Basic Cardiovascular Sciences, Keystone, CO, August 2, 2007.
40. "Reparative Potential of Cardiac Stem Cells". Sunday Morning Program on Myocardial and Vascular Regeneration, 80<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 4, 2007.
41. "Use of Very Small Embryonic-Like (VSEL) Stem Cells and Cardiac Stem Cells for Repair of Infarcted Myocardium". George E. Brown Memorial Lecture, 80<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 5, 2007.

42. "Adult Stem Cells and Myocardial Infarction". Cardiovascular Seminar on Controversies in Myocardial Regeneration, 80<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 5, 2007.
43. "Resident and nonresident stem cells for cardiac repair". Fifth Annual Meeting of the AHA Council on Basic Cardiovascular Sciences, Keystone, CO, July 31, 2008.
44. "The Future of Cardiology: Patient Care and Research". Keynote Address, Early Career and Fellows in Training Program Opening General Session, 81<sup>st</sup> Scientific Sessions of the AHA, New Orleans, LA, November 8, 2008.
45. "Cardioprotective Effects of Short-Term Caloric Restriction are Mediated by Adiponectin via Activation of AMP-Activated Protein Kinase", 81<sup>st</sup> Scientific Sessions of the AHA, New Orleans, LA, November 9, 2008.
46. "Choosing Cells Based on Regenerative Goals: Myocardial Repair", 81<sup>st</sup> Scientific Sessions of the AHA, New Orleans, LA, November 9, 2008.
47. "Gene Therapy for Cardioprotection", 81<sup>st</sup> Scientific Sessions of the AHA, New Orleans, LA, November 9, 2008.
48. "Cardiac progenitor cells in cardiac repair". Basic Cardiovascular Sciences Conference 2009-Molecular Mechanisms of Cardiovascular Disease, Lake Las Vegas, NV, July 23, 2009.
49. "Welcome and the New *Circulation Research*", 82<sup>nd</sup> Scientific Sessions of the AHA, Orlando, FL, November 16, 2009.
50. "Gene Therapy for Cardioprotection". Basic Cardiovascular Sciences Conference 2010 – Technological and Conceptual Advances in Cardiovascular Disease, Rancho Mirage, CA, July 20, 2010.
51. "Careers in Basic Research: Strategies for Success", 83<sup>rd</sup> Scientific Sessions of the AHA, Chicago, IL, November 13, 2010.
50. "Use of Cardiac Stem Cells for the Treatment of Heart Failure: Translation from Bench to the Clinical Setting", 83<sup>rd</sup> Scientific Sessions of the AHA, Chicago, IL, November 15, 2010.
51. "Recent Highlights from *Circulation Research*", 83<sup>rd</sup> Scientific Sessions of the AHA, Chicago, IL, November 15, 2010.
52. "*Circulation Research* Symposium 2010: Epigenetics and Cardiovascular Regulation", 83<sup>rd</sup> Scientific Sessions of the AHA, Chicago, IL, November 16, 2010.
53. "Clinical Trials of Stem Cells". Basic Cardiovascular Sciences Conference 2011 – From Concept to Clinic – Leading Translational Cardiovascular Science, New Orleans, LA, July 20, 2011.
54. "New Devices for Cell Transplantation", 84<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 13, 2011.
55. "Effect of Cardiac Stem Cells in Patients with Ischemic Cardiomyopathy: Interim Results of the SCIPIO Trial", 84<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 14, 2011.
56. "Human Cardiac Progenitor Cell Therapy: Clinical Trial Update", 84<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 15, 2011.
57. "Use of Stem Cells for the Treatment of Ischemic Heart Disease", Distinguished Scientist Lecture at the 84<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 15, 2011.
58. "Recent Highlights from *Circulation Research*", 84<sup>th</sup> Scientific Sessions of the AHA, Orlando, FL, November 15, 2011.
59. "Use of Cardiac Stem Cells in Patients with Ischemic Cardiomyopathy: The SCIPIO Trial". Basic Cardiovascular Sciences Conference 2012 – Frontiers in Cardiovascular Science and Novel Therapy, New Orleans, LA, July 26, 2011.
60. "Cardiomyopathy (SCIPIO): Initial Results of a Randomized Phase 1 Trial". 85<sup>th</sup> Scientific Sessions of the AHA, Los Angeles, CA, November 4, 2012.
61. "Intracoronary Cardiac Stem Cells to Regenerate Infarcted Myocardium". 85<sup>th</sup> Scientific Sessions of the AHA, Los Angeles, CA, November 4, 2012.
62. "Regenerative Medicine". 85<sup>th</sup> Scientific Sessions of the AHA, Los Angeles, CA, November 5, 2012.
63. "Effect of Cardiac Stem Cells in Patients with Ischemic Cardiomyopathy: Interim Results of the SCIPIO Trial Up to 2 Years After Therapy". 85<sup>th</sup> Scientific Sessions of the AHA, Los Angeles, CA, November 6, 2012.
64. "Cardiac Stem Cells in Patients with Ischemic Cardiomyopathy". 85<sup>th</sup> Scientific Sessions of the AHA, Los Angeles, CA, November 6, 2012.
65. "cKit+ Cell Transfer in Ischemic Cardiomyopathy". 86<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November 17, 2013.
66. "Paracrine Activation of Cardiac Stem Cells". 86<sup>th</sup> Scientific Sessions of the AHA, Dallas, TX, November 19, 2013.

67. "Publish or Perish: How to Write a Manuscript for Publication in *Circulation Research*". Basic Cardiovascular Sciences 2014 Conference, Las Vegas, NV, July 16, 2014.
68. "Impact of Non-myocytes on Myocardial Function". Basic Cardiovascular Sciences 2014 Conference, Las Vegas, NV, July 17, 2014.
69. "Choosing a Target Journal". 87<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 15, 2014.
70. "Introduction to the Best of *Circulation Research* Symposium". 87<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 16, 2014.
71. "Clinical Trials with cKit+ Cells". 87<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 16, 2014.
72. "Cell Therapy: Science Fiction or Science Fact". 87<sup>th</sup> Scientific Sessions of the AHA, Chicago, IL, November 17, 2014.

Invited Lectures: **International Society for Heart Research**

1. "Oxygen-derived free radicals and stunned myocardium." Annual Meeting of the American Section of the ISHR, Williamsburg, VA, June, 1988.
2. "The oxy-radical hypothesis of myocardial stunning." Annual Meeting of the European Section of the ISHR, Oxford, U.K., September, 1988.
3. "Stunned myocardium: Overview and the role of oxygen radicals." XIII Congress of the ISHR, Ann Arbor, MI, May, 1989.
4. "Identification of major differences in postischemic myocardial stunning and free radical generation between open-chest and conscious dogs." Satellite Symposium on Preconditioning, Stunning, and Concepts of Cardioprotection, XIV<sup>th</sup> World Congress of ISHR, Sapporo, Japan, May, 1992.
5. "Role of oxygen radicals in postischemic myocardial dysfunction (stunning)." Satellite Symposium on New Aspects in the Treatment of Failing Heart, XIV<sup>th</sup> World Congress of ISHR, Sapporo, Japan, May, 1992.
6. "Role of oxygen radicals in myocardial stunning." XIV Annual Meeting of the American Section of the ISHR, Burlington, VT, June, 1992.
7. "Role of oxygen radicals in stunned myocardium." Symposium on Myocardial Stunning, XVII Annual Sessions of the North American Section of the ISHR, Orange Beach, AL, May, 1995.
8. "The stunned myocardium: Is it the definitive example of reperfusion injury?" Symposium on Landmarks and Controversies Over Injury and Protection During Ischemia and Reperfusion, XV<sup>th</sup> World Congress of the ISHR, Prague, Czech Republic, July 6, 1995.
9. "Late preconditioning against myocardial stunning." Symposium on the Late Phase (Second Window) of Ischemic Preconditioning, XVIII<sup>th</sup> Annual Sessions of the North American Section of the ISHR, Chicago, IL, June 11, 1996.
10. "The role of nitric oxide in late preconditioning". The Universities of Louisville and Osaka Symposium on the Late Phase of Ischemic Preconditioning, XVI World Congress of the ISHR, Ixía, Rhodes, May 29, 1998.
11. "Role of nitric oxide in the late phase of preconditioning". Symposium on The Late Phase (Second Window) of Ischemic Preconditioning, XX Annual Sessions of the American Section of the ISHR, Ann Arbor, MI, August 10, 1998.
12. "Nitric oxide and myocardial preconditioning". Symposium on Ischemic Preconditioning, XXI Annual Sessions of the American Section of the ISHR, San Diego, CA, June 11, 1999.
13. "Murine models of myocardial ischemia". Symposium on The Use of Murine Models in Cardiovascular Research, XXII Annual Sessions of the American Section of the ISHR, Louisville, KY, June 17, 2000.
14. "Molecular basis of preconditioning and potential applications of proteomics in myocardial ischemia". Cardiovascular Landmark Lecture, XVII World Congress of the ISHR, Winnipeg, Canada, July 8, 2001.
15. "Preconditioning: A paradigm shift in the biology of myocardial ischemia". Keith Reimer Distinguished Lecture, XXIV Annual Sessions of the North American Section of the ISHR, Madison, WI, July 26, 2002.
16. "Gene therapy for myocardial ischemia". Landmark Lecture, XXIV Annual Sessions of the North American Section of the ISHR, Madison, WI, July 27, 2002.
17. "Cardioprotection 20 years later: Successes, Failure, Challenges, and Opportunities". Keynote Lecture, XXV Annual Sessions of the North American Section of the ISHR, Mystic, CT, June 28, 2003.

18. "Gene therapy to protect the ischemic myocardium". XXV Annual Sessions of the North American Section of the ISHR, Mystic, CT, June 29, 2003.
19. "Use of gene therapy for cardioprotection". Research Achievement Award lecture, XVIII World Congress of the ISHR, Brisbane, Australia, August 7, 2004.
20. "Use of hematopoietic and cardiac stem cells for regeneration of infarcted myocardium". XVIII World Congress of the ISHR, Brisbane, Australia, August 8, 2004.
21. "Use of bone marrow cells and cardiac stem cells for repair after myocardial infarction". XXVII Annual Sessions of the North American Section of the ISHR, New Orleans, LA, May 14, 2005.
22. "Gene therapy in cardioprotection". XXVII Annual Sessions of the North American Section of the ISHR, New Orleans, LA, May 14, 2005.
23. "Use of cardiac stem cells for regeneration of infarcted myocardium". XXVIII Annual Sessions of the North American Section of the ISHR, Toronto, ON, June 14, 2006.
24. "Myocardial repair by cardiac stem cells". XIX World Congress of the ISHR, Bologna, Italy, June 24, 2007.
25. "Use of cardiac stem cells for repair of myocardial infarction". XXX Annual Sessions of the North American Section of the ISHR, Cincinnati, OH, June 18, 2008.
26. "Effect of aging and hypercholesterolemia on cardioprotection". XX World Congress of the ISHR, Kyoto, Japan, May 14, 2010.
27. "Use of very small embryonic-like (VSEL) stem cells and cardiac stem cells for repair of myocardial infarction". XX World Congress of the ISHR, Kyoto, Japan, May 15, 2010.
28. "Translational and clinical studies of cardiac progenitor cells", XXXIII Annual Sessions of the North American Section of the ISHR, Philadelphia, PA, May 24, 2011.
29. "Cell therapies for the treatment of heart failure". XXXIV Annual Sessions of the North American Section of the ISHR, Miami, FL, May 14, 2014.

Invited Lectures: **National Institutes of Health**

1. "The postischemic myocardial dysfunction." National Heart, Lung, and Blood Institute Symposium on Frontiers in Basic Sciences that Relate to Heart, Lung, and Blood Diseases. Uniformed Services University of the Health Services (USUHS), Bethesda, MD, September, 1986.
2. "Role of oxygen radicals in myocardial stunning." NHLBI Workshop on Myocardial Stunning, Hibernation and Preconditioning, Columbia, MD, July 2, 1996.
3. "Preconditioning and combination therapies" (PULSE), Leesburg, VA, June 29-30, 2000.
4. "Myocardial cardioprotection: Clinical data and opportunities." National Institutes of Health, Bethesda, MD, October 29, 2002.
5. "Overview of ischemia and cardioprotective therapies". NHLBI Workshop on Translation of Therapies for Protecting the Heart from Ischemia, Bethesda, MD, June 23, 2003.
6. "Use of stem cells for repair of infarcted myocardium". NHLBI Symposium on Bridging Basic Science and Cell Therapy for Cardiovascular Disease, Bethesda, MD, October 30, 2008.
7. "CAESAR (Consortium for Preclinical Assessment of CARDioprotective Therapies)". NHLBI Workshop on New Horizons in Cardioprotection, Bethesda, MD, September 21, 2010.
8. "Use of cardiac stem cells for the treatment of ischemic cardiomyopathy: The SCIPIO trial." NHLBI Symposium on Cardiovascular Regenerative Medicine, Bethesda, MD, September 26, 2013.
9. "Cell therapy in the heart." NHLBI Think Tank on Research Needs for Cell Therapy in Areas of Heart, Lung, and Blood, Bethesda, MD, February 10, 2014.

Invited Lectures: **American Physiological Society**

1. "Myocardial preconditioning: A paradigm shift in ischemic biology". Robert M. Berne Distinguished Lecture of the American Physiological Society, XXXV International Congress of Physiological Sciences/Experimental Biology 2005, San Diego, CA, April 2, 2005.

**Curriculum Vitae**  
**Roberto Bolli, M.D.**

2. "Clinical evidence for myocardial preconditioning". Symposium on Novel Insights into Myocardial Preconditioning: From the Clinic to the Proteome, Experimental Biology 2005, San Diego, CA, April 6, 2005.
3. "Use of cardiac stem cells for regeneration of infarcted myocardium". Symposium on Cardiac Stem Cells: Revolutionizing Myocardial Biology and Regenerating the Heart, Experimental Biology 2006, San Francisco, CA, April 2, 2006.
4. Walter B. Cannon Award Lecture of the American Physiological Society, Washington, D.C., April 9, 2011.
5. Carl J. Wiggers Award Lecture of the American Physiological Society, Washington, D.C., April 11, 2011.

Invited Lectures: **American College of Cardiology**

1. "Importance of oxygen free radicals in myocardial ischemia." Fireside Panel, ACC Scientific Sessions, Atlanta, GA, March, 1988.
2. "Reperfusion injury: Its causes, clinical significance, and potential pharmacologic manipulation." Extramural Program of the ACC "New Techniques and Concepts in Cardiology," Washington, D.C., October, 1990.
3. "Ischemic preconditioning: What is it and what are its therapeutic implications?" Extramural Program of the ACC "New Techniques and Concepts in Cardiology", Washington, D.C., October 23, 1997.
4. "Choosing a mentor and a project." Extramural Program of the ACC "How to Become a Cardiovascular Investigator", Bethesda, MD, June 3, 2005.
5. "Careers in basic cardiovascular research." Extramural Program of the ACC "How to Become a Cardiovascular Investigator", Bethesda, MD, December 2, 2005.
6. Discussant, Late Breaking Clinical Trials Session at the Opening Session of the ACC Scientific Sessions, Chicago, IL, March 24, 2012.
7. "Autologous cardiac stem cells for ischemic cardiomyopathy." ACC Scientific Sessions, San Francisco, CA, March 10, 2013.

Invited Lectures: **Domestic Academic Institutions**

1. "Role of cellular proteinases in acute myocardial infarction." University of Maryland, June, 1980.
2. "A new nontraumatic technique for layer-by-layer assessment of regional myocardial function." Cardiology Research Conference, University of Michigan Medical School, September, 1985.
3. "Role of oxygen-derived free radicals in postischemic myocardial dysfunction." Medicine Grand Rounds, University of Michigan Medical School, September, 1985.
4. "Oxygen free radicals as mediators of postischemic myocardial dysfunction." Oklahoma Medical Research Foundation, April, 1986.
5. "Role of oxygen free radicals in ischemia/reperfusion injury." Research Seminar, Texas A & M University, College Station, TX, November, 1986.
6. "The stunned myocardium and the role of oxy-radicals." Cardiology Grand Rounds, Presbyterian-University of Pennsylvania Medical Center, Philadelphia, PA, April, 1987.
7. "Role of oxygen radicals in myocardial stunning." Cardiology Grand Rounds, Presbyterian – University of Pennsylvania Medical Center, Philadelphia, PA, March, 1989.
8. "The stunned myocardium." Cardiology Grand Rounds, University of Virginia, Charlottesville, VA, April, 1989.
9. "Role of oxygen radicals in myocardial stunning." Cardiology Grand Rounds, Medical College of Virginia, Richmond, VA, September, 1990.
10. "Pathogenesis of postischemic myocardial stunning." Cardiology Grand Rounds, Krannert Institute of Cardiology, Indiana University, Indianapolis, IN, July, 1991.
11. "Myocardial stunning." Cardiology Research Conference, University of Minnesota, Minneapolis, MN, February, 1992.
12. "Role of oxygen radicals in myocardial reperfusion injury." Distinguished Scientist Seminar, University of South Alabama, Mobile, AL, September, 1992.
13. "Role of oxygen radicals in myocardial stunning." Cardiovascular Research Seminar, University of Cincinnati, Cincinnati, OH, February, 1993.

14. "Role of oxyradicals in myocardial stunning." Loyola University and Stritch School of Medicine, Chicago, IL, October, 1993.
15. "Postischemic myocardial stunning: Pathogenesis and clinical significance." Duke University Heart Center Distinguished Lecture Series, Durham, NC, May, 1994.
16. "Myocardial reperfusion injury: Pathogenesis, pathophysiology, and clinical significance." John Walker Moore Memorial Lecture, University of Louisville, Louisville, KY, October, 1994.
17. "Hibernating myocardium." Louisville Society of Internists Meeting, Louisville, KY, October, 1994.
18. "Myocardial stunning." Cardiology Grand Rounds, George Washington University, Washington D.C., October 18, 1995.
19. "Mechanisms of myocardial stunning". Research Conference Lecture, Northwestern University Medical School, Chicago, IL, March 27, 1997.
20. "The late phase of ischemic preconditioning". Feinberg Research Seminar, Northwestern University Medical School, Chicago, IL, March 27, 1997.
21. "Myocardial reperfusion injury: Pathogenesis, pathophysiology, and clinical relevance". Cardiology Grand Rounds, Northwestern University Medical School, Chicago, IL, March 28, 1997.
22. "The late phase (second window) of ischemic preconditioning". Cardiology Grand Rounds, University of Iowa College of Medicine, Iowa City, IA, February 3, 1999.
23. "Ischemic preconditioning: Basic and clinical aspects". Cardiovascular Center Distinguished Lecture Series, University of Cincinnati, Cincinnati, OH, February 8, 1999.
24. "Late preconditioning." Distinguished Scientist Seminar, University of South Alabama, Mobile, AL, March 11, 1999.
25. "Nitric oxide and late preconditioning". Research Seminar, Cardiovascular and Pulmonary Research Institute, Allegheny University of the Health Sciences, Pittsburgh, PA, March 15, 1999.
26. "Ischemic preconditioning: Pathogenesis, pathophysiology, and clinical implications." Cardiology Grand Rounds, University of Virginia, Charlottesville, VA, September 14, 1999.
27. "Preconditioning". Cardiology Grand Rounds, Case Western Reserve University, Cleveland, OH, December 14, 2000.
28. "Molecular basis of preconditioning". Heart and Lung Research Institute Seminar, Ohio State University, Columbus, OH, June 27, 2001.
29. "Genetic mechanism of preconditioning". The Memorial Heart Research Foundation Distinguished Lectureship in Cardiovascular Science, Institute for Genetic Medicine, University of Southern California, Los Angeles, CA, February 13, 2002.
30. "Preconditioning: Pathophysiology and clinical implications." Medicine Grand Rounds, University of Medicine & Dentistry of New Jersey, Newark, NJ, November 5, 2002.
31. "Basic and clinical aspects of preconditioning". Visiting Scientist Lecture Series, New York Medical College, February 7, 2003.
32. "Myocardial preconditioning: Molecular basis and clinical implications." Cardiology Grand Rounds, Distinguished Speakers Series, Johns Hopkins University, March 19, 2003.
33. "Preconditioning and cardioprotection in the clinical arena". Research Seminar, Medical College of Virginia, May 19, 2003.
34. "Molecular basis of preconditioning". Cardiology Grand Rounds, Distinguished Speakers Series, Medical College of Virginia, May 20, 2003.
35. "Preconditioning: Molecular basis and clinical implications". Cardiovascular Grand Rounds, Brigham and Women's Hospital, Harvard Medical School, October 2, 2003.
36. "Preconditioning: Basic and clinical aspects". Cardiovascular Grand Rounds, Massachusetts General Hospital, Harvard Medical School, May 18, 2004.
37. "Molecular basis of preconditioning". Cardiology Grand Rounds, Washington Hospital Center, October 6, 2004.
38. "Clinical relevance of preconditioning". Cardiac Cath Conference, Washington Hospital Center, October 6, 2004.
39. "Cardiac preconditioning." Distinguished Lecture Series, Louisiana State University at Shreveport, January 12, 2005.

40. "Novel therapeutic approaches to myocardial ischemia and injury." Physiology Seminar, Medical College of Wisconsin, June 15, 2005.
41. "Cardiac regeneration". Medicine Grand Rounds, University of Arkansas Medical School, January 27, 2006.
42. "New paradigms in cardioprotection". Lillehei Institute Rounds, University of Minnesota, February 27, 2006.
43. "Cardiac protection and regeneration". Department of Medicine, University of Chicago, May 26, 2006.
44. "Use of cardiac stem cells for cardiac repair in acute and chronic myocardial infarction." Center for Human Cell Therapy Symposium on "Mesenchymal Cell Applications: Tissue Engineering & Tissue Repair", Harvard Medical School, September 26, 2006.
45. "Use of stem cells to repair infarcted myocardium." Cardiovascular Grand Rounds, Brigham and Women's Hospital, Harvard Medical School, September 28, 2006.
46. "Cell therapy for myocardial infarction." Medicine Grand Rounds, New York Medical College, Valhalla, NY, September 29, 2006.
47. "Cellular therapy for ischemic heart disease." Michel Mirowski Lecture in Cardiology, Johns Hopkins University, October 23, 2006.
48. "Use of stem cells to repair infarcted myocardium." Cardiovascular Research Seminar, Washington University School of Medicine, December 14, 2006.
49. "Cellular therapy for ischemic heart disease". Cardiology Grand Rounds, Northwestern University, January 19, 2007.
50. "Cellular therapy for ischemic heart disease". Cardiology Grand Rounds, SUNY Downstate Medical Center, March 6, 2007.
51. "Myocardial repair with stem cells". Cardiology Grand Rounds, Virginia Commonwealth University, September 18, 2007.
52. "Cell therapy for repair of infarcted myocardium". San Diego State University, October 4, 2007.
53. "Cell therapy for repair of infarcted myocardium". Cardiology Seminar, Albert Einstein College of Medicine, March 25, 2008.
54. "Use of stem cells for repair of infarcted myocardium". Cardiology Seminar, Gladstone Institute of Cardiovascular Disease, April 7, 2008.
55. "Cell therapy for repair of infarcted myocardium". The James T. Willerson Lecture, University of Texas at Houston, October 21, 2008.
56. "Clinical studies of stem cells for myocardial repair". Cardiology Grand Rounds, Cedars-Sinai Medical Center, February 17, 2009.
57. "Use of cardiac stem cells and very small embryonic-like cells for repair of infarcted myocardium". Frontiers in Heart Research Seminar Series, Cedars-Sinai Medical Center, February 17, 2009.
58. "Repair of infarcted myocardium with stem cells". Linton H. Bishop Distinguished Lecture, Emory University, May 19, 2009.
59. "Use of stem cells to repair infarcted myocardium". Anna and Harry Borun Lecture, University of California, Los Angeles, January 15, 2010.
60. "Use of stem cells for repair of infarcted myocardium". Feinberg Cardiovascular Research Institute Seminar Series, Northwestern University, April 22, 2010.
61. "Cell therapy for ischemic heart disease". Cardiac Grand Rounds, Brigham & Women's Hospital, Harvard University School of Medicine, September 30, 2010.
62. "Use of cardiac progenitor cells for repair of infarcted myocardium". Laurence H. Green Memorial Lecture, Brigham & Women's Hospital, Harvard University School of Medicine, October 1, 2010.
63. "Stem cell therapy for ischemic cardiomyopathy". Cardiovascular Institute Seminar Series, Stanford University School of Medicine, October 6, 2010.
64. "Use of cardiac stem cells for repair of infarcted myocardium". Texas Heart Institute Satellite Symposium, Chicago, IL, November 13, 2010.

65. "Cell-Based therapy for ischemic heart disease". McAllister Heart Institute Seminars at the University of North Carolina, Chapel Hill, NC, December 7, 2010.
66. "Use of stem cells to repair infarcted myocardium". University of Washington School of Medicine, Center for Cardiovascular Biology, Seattle, WA, December 13, 2011.
67. "Effect of cardiac stem cells in patients with ischemic cardiomyopathy: Interim results of the SCIPIO trial". Edward Via College of Osteopathic Medicine, Via Research Recognition Day, Blacksburg, VA, April 6, 2012.
68. "Use of stem cells for the treatment of ischemic cardiomyopathy". Northwestern University School of Medicine, Cardiology Grand Rounds, Chicago, IL, April 16, 2012.
69. "Use of stem cells for the treatment of ischemic cardiomyopathy". University of Connecticut Health Center, Cardiology Grand Rounds, Farmington, CT, May 23, 2012.
70. "Use of Stem Cells for the Treatment of Ischemic Cardiomyopathy: A New Era in Cardiovascular Medicine". University of Texas Health Science Center Houston, Cardiovascular Basic Science Seminar Series, Houston, TX, October 18, 2012.
71. "cKit Stem Cell Therapy of Ischemic Cardiomyopathy". Texas Heart Institute at St. Luke's Episcopal Hospital, Stem Cell Symposium, Los Angeles, CA, November 2, 2012.
72. "Use of Cardiac Stem Cells for the Treatment of Ischemic Cardiomyopathy". San Diego State University, Frontiers in Cardiovascular Regeneration International Symposium, San Diego, CA, November 8, 2012.
73. "Use of Cardiac Stem Cells in Patients with Ischemic Cardiomyopathy: An Update on the SCIPIO Trial". Annual Symposium of the Center for Regenerative Medicine, Brigham and Women's Hospital, Boston, MA, November 30, 2012.
74. "Use of Stem Cells for the Treatment of Ischemic Cardiomyopathy". Cincinnati Children's Health Medical Center, Cincinnati Children's Heart Institute Seminar Series, Cincinnati, OH, January 14, 2013.
75. "Use of Stem Cells for the Treatment of Ischemic Cardiomyopathy". Kansas University Medical Center, Kansas City, KS, February 6, 2013.
76. "Use of Stem Cells in Ischemic Cardiomyopathy". Baylor College of Medicine Cardiology Grand Rounds, Baylor St. Luke's Medical Center, Houston, TX, May 16, 2014.
77. "Cell-based therapy for ischemic cardiomyopathy". Stanford Cardiovascular Institute, Frontiers in Cardiovascular Science Lecture, Stanford, CA, February 3, 2015.

Invited Lectures: Other

1. "Determinants of efficacy of reperfusion." Symposium on Advances in the Pathogenesis and Treatment of Myocardial Ischemia, Hilton Head, SC, October, 1986.
2. "Effect of human SOD on myocardial infarct size." Meeting on Free Radicals in Biology and Medicine: Ischemia/Reperfusion Injury, Point Clear, AL, March, 1988.
3. "Role of oxy-radicals in postischemic myocardial dysfunction." Symposium on New Approaches to an Old Problem: Acute Myocardial Ischemia, FASEB Meeting, Las Vegas, NV, May, 1988.
4. "Reperfusion injury and the effects of calcium antagonists." Symposium on Myocardial Infarction: Rationale for Therapy in 1989, Longboat Key, FL, February, 1989.
5. "Role of oxygen free radicals in myocardial ischemia and reperfusion." Annual Meeting of the National Council on Myocardial Ischemia and Infarction, Palm Beach Gardens, FL, November, 1989.
6. "Role of oxygen radicals in myocardial ischemia and reperfusion." Workshop on Oxygen-Derived Free Radicals, Dallas, TX, November, 1989.
7. Round Table on "Reperfusion injury," Princeton Drug Research Symposium, Princeton, NJ, November, 1989.
8. "Relationship between wall thickening waveforms and myocardial viability." Tutorial at FASEB Meeting, Atlanta, GA, April, 1991.
9. "Reperfusion injury: Is it a myth?" Symposium on Therapeutic Advances in Coronary Care, Tarpon Springs, FL, November, 1991.

10. "Stunned and hibernating myocardium: Pathogenesis, clinical significance, and therapy." Symposium on Cardiovascular Issues of the 90's, Orlando, FL, January, 1992.
11. "Myocardial reperfusion injury: Overview, role of oxygen radicals, and potential therapeutic strategies." Conference on Cellular, Biochemical and Molecular Aspects of Reperfusion Injury sponsored by the New York Academy of Sciences. New York, NY, July, 1993.
12. "Myocardial stunning and protection with adenosine potentiating agents." The First International Satellite Symposium on Adenosine, Cardioprotection and Its Clinical Application, 67th Scientific Sessions of the AHA, Dallas, TX, November, 1994.
13. "Late preconditioning: Is nitric oxide the mediator?" The Fourth International Satellite Symposium on Adenosine, Cardioprotection and Its Clinical Application, 70th Scientific Sessions of the AHA, Orlando, FL, November 9, 1997.
14. "The nitric oxide hypothesis of late preconditioning". 39<sup>th</sup> Annual Meeting of the Association of University Cardiologists, Carmel, CA, January 14, 2000.
15. "Gene therapy to protect the ischemic myocardium". 42<sup>nd</sup> Annual Meeting of the Association of University Cardiologists, Carmel, CA, January 9, 2003. "Cardiac preconditioning: Basic and clinical aspects". Cardiology Grand Rounds, William Beaumont Hospital, Royal Oak, MI, September 8, 2003.
16. "Hypoxic preconditioning in heart". 24<sup>th</sup> Princeton Conference on Cerebrovascular Disease, Baltimore, MD, April 3, 2004.
17. "Why the heart suffers during myocardial ischemia and the search for new solutions". Cardiovascular Symposium on Novel Therapies in the Treatment of Myocardial Ischemia, New York, NY, October 13, 2004.
18. "Environment and Heart Disease". Symposium on Pollutants and Heart Disease, Louisville, KY, October 16, 2004.
19. "Regeneration of infarcted myocardium with cardiac stem cells". Cardiovascular Revascularization Therapy 2005, Washington, D.C., March 29, 2005.
20. "Translational studies of cardiac stem cells for regeneration in acute and chronic myocardial infarction". Second International Conference on Cell Therapy for Cardiovascular Disease, New York Academy of Medicine, New York, NY, January 18, 2006.
21. "Use of cardiac stem cells for repair of infarcted myocardium". Cardiovascular Revascularization Therapy 2006, Washington, D.C., April 5, 2006.
22. "Autologous cardiac progenitor cells". Third International Conference on Cell Therapy for Cardiovascular Disease, New York Academy of Medicine, New York, NY, January 17, 2007.
23. "Use of cardiac stem cells for repair of infarcted myocardium". Cardiovascular Revascularization Therapy 2007, Washington, D.C., March 8, 2007.
24. "Use of stem cells for repair of infarcted myocardium". Donald W. Reynolds Foundation Cardiovascular Research Symposium, Dallas, TX, May 4, 2007.
25. "Adult stem cells in myocardial repair". Cardiovascular Revascularization Therapy 2008, Washington, D.C., February 12, 2008.
26. "Use of very small embryonic-like (VSEL) stem cells and cardiac stem cells for repair of myocardial infarction". Cardiovascular Cell and Gene Therapy Conference IV, New York, NY, April 12, 2008.
27. "Use of stem cells to repair infarcted myocardium". Conference on "Stems of the Heart: Myocardial and Vascular Rebirth", Boston, MA, September 13, 2008.
28. "Stem cells to repair infarcted myocardium". University of Louisville Alumni Reunion, Louisville, KY, September 28, 2008.
29. "Cell therapy for repair of infarcted myocardium". Gill Heart Institute Cardiovascular Research Day, Lexington, KY, October 24, 2008.
30. "Adult progenitor cells to 'repair' infarcted myocardium". Cardiovascular Revascularization Therapy 2009, Washington, D.C., March 5, 2009.
31. "Should bone marrow cell trials be conducted or should a more specific cell population be used?" 13<sup>th</sup> Annual Scientific Meeting of the Heart Failure Society of America, Boston, MA, September 14, 2009.

32. "Use of stem cells for the treatment of ischemic cardiomyopathy: Basic concepts, clinical applications, and future perspectives". Association of University Cardiologists Annual Meeting, Phoenix, AZ, January 6, 2011.
33. "The SCIPIO Trial (Cardiac Progenitor Cells)". 15<sup>th</sup> Annual Scientific Meeting of the Heart Failure Society of America, Boston, MA, September 20, 2011.
34. "Use of cardiac stem cells in patients with ischemic cardiomyopathy: the SCIPIO trial". Annual Symposium of the Center for Regenerative Medicine, Brigham and Women's Hospital, Boston, MA, December 16, 2011.
35. "SCIPIO: Autologous cardiac-derived stem cells for LV dysfunction". The Seventh International Conference on Cell Therapy for Cardiovascular Diseases, New York, NY, January 27, 2012.
36. "Cardiac stem cells in patients with ischemic cardiomyopathy (SCIPIO)". Vascular Biology Working Group, US Chapter Meeting at ACC 2012, Chicago, IL, March 23, 2012.
37. 68<sup>th</sup> Samuel David Gross Lecture, Phi Delta Epsilon International Medical Fraternity, Louisville, KY, April 11, 2012.
38. "Cardiac stem cells for cardiac regenerative therapy". Cardiovascular Regenerative Therapy: From Bench to Bedside, Los Angeles, CA, November 3, 2012.
39. "Cardiomyopathy repair using stem cells and other cell therapies". American Thoracic Society International Conference, Philadelphia, PA, May 20, 2013.
40. "Use of stem cells for the treatment of ischemic cardiomyopathy". Cardiovascular Forum of the International Academy of Cardiovascular Sciences, Louisville, KY, August 16, 2013.
41. "Update from the Cardiovascular Cell Therapy Research Network (CCTRN)". 18<sup>th</sup> Annual Scientific Meeting of the Heart Failure Society of America (HFSA), Las Vegas, NV, September 15, 2014.

Invited Lectures: *International*

1. "The stunned myocardium and the role of oxygen free radicals." Heart Research Lecture Series, The Rayne Institute, St. Thomas' Hospital, London, U.K., June, 1986.
2. "Oxy-radicals and myocardial stunning." Meeting of the International Society on Oxygen Transport to Tissue, Ottawa, Ontario, August, 1988.
3. "Use of spin traps to assess free radical production in ischemic-reperfused myocardium in intact animals." The II International Symposium of Spin Trapping and Aminoxyl Radical Chemistry, Guelph, Ontario, July, 1989.
4. "Role of oxygen radicals in myocardial stunning." Sixth International Workshop on Regional Myocardial Blood Flow and Ischemic Heart Disease, Celle, Federal Republic of Germany, September, 1989.
5. "The stunned myocardium." Research Seminar, Division of Cardiovascular Sciences, St. Boniface General Hospital, University of Manitoba Faculty of Medicine, Winnipeg, Manitoba, October, 1989.
6. "Myocardial stunning and the role of oxygen radicals." Cardiology Grand Rounds, Toronto General Hospital, University of Toronto, Toronto, Ontario, March, 1990.
7. "The postischemic myocardium." Cardiology Conference, St. Michael's Hospital, University of Toronto, Toronto, Ontario, March, 1990.
8. "Reperfusion and recovery: Injury or stunning?" Keynote speaker, The Oxford International Symposium on "Myocardial Preservation into the 21st Century," Oxford, England, August, 1990.
9. "Reperfusion injury." Symposium on Therapeutic Issues in Acute Myocardial Infarction, Toronto, Ontario, May, 1991.
10. "Overview of myocardial stunning." An International Forum on Reperfusion Injury - The Brocket Symposium, Brocket Hall, England, May, 1991.
11. "Pathophysiology of stunned versus hibernating myocardium and pathogenesis of myocardial stunning." Satellite Symposium on Left Ventricular Function in Stunned and Hibernating Myocardium, XIIIth Congress of the European Society of Cardiology, Amsterdam, The Netherlands, August, 1991.
12. "Pathogenesis of stunned myocardium and reperfusion injury: An overview." Symposium on Stunned Myocardium and Reperfusion Injury, 10th Asian-Pacific Congress of Cardiology, Seoul, Korea, October, 1991.
13. "Overview of myocardial stunning." An International Workshop on Ischemic Preconditioning, Myocardial Stunning, and Hibernation. Hanbury Manor, England, October, 1992.

14. "Role of ACE inhibitors in myocardial stunning." Research seminar, The Rayne Institute, St. Thomas' Hospital, London, U.K., October, 1992.
15. "Role of oxygen radicals in myocardial stunning." Heart Research Lecture Series, The Rayne Institute, St. Thomas' Hospital, London, U.K., October, 1992.
16. "Oxidative stress in the pathogenesis of stunned myocardium." The Hatter Institute for Cardiovascular Studies, University College & Middlesex Hospitals, London, U.K., October, 1992.
17. "Oxygen radicals and myocardial reperfusion injury." National Heart & Lung Institute, London, U.K., October, 1992.
18. "Effect of ACE inhibitors on myocardial ischemia/reperfusion injury: An overview." International Symposium on Angiotensin and the Heart, Hamburg, Germany, October, 1992.
19. "Overview of myocardial stunning." International Workshop on Stunned and Hibernating Myocardium, Venice, Italy, November, 1992.
20. "Postischemic myocardial stunning: Pathogenesis, pathophysiology, and clinical relevance." Second International Symposium on Myocardial Ischemia, Korea University, Seoul, Korea, May, 1993.
21. "Myocardial stunning." Cardiology Grand Rounds, Asan University, Seoul, Korea, May, 1993.
22. "Stunning: The clinical view." Satellite Symposium on Ischemic Heart Failure: Hibernation, Stunning, Ischemic Preconditioning, XVth Congress of the European Society of Cardiology, Nice, France, September, 1993.
23. "Mechanism of myocardial stunning." Workshop on Ischemic Left Ventricular Dysfunction, Antwerp, Belgium, November, 1993.
24. "Myocardial reperfusion injury: Pathogenesis, pathophysiology, and clinical relevance." International Symposium on Myocardial Cytoprotection: A Novel Therapeutic Approach for Coronary Artery Disease, Bangkok, Thailand, March, 1994.
25. "Myocardial ischemia: Metabolic disorders leading to cell death." National Meeting of the Portuguese Society of Cardiology, Lisbon, Portugal, May, 1994.
26. "Oxyl radicals and myocardial stunning." Conference on Intrinsic Adaptive Mechanisms during Ischemia and Reperfusion Sponsored by the European Society of Cardiology, Sophia Antipolis, France, October, 1994.
27. "Clinical relevance of myocardial stunning." Conference on Intrinsic Adaptive Mechanisms during Ischemia and Reperfusion, Sponsored by the European Society of Cardiology, Sophia Antipolis, France, October, 1994.
28. "Cellular basis of myocardial hibernation and stunning." Symposium on Myocardial Stunning and Reperfusion Injury, 11th Asian-Pacific Congress of Cardiology, Bali, Indonesia, September, 1995.
29. "Myocardial ischemia, reperfusion injury, and potential therapeutic strategies." Symposium on Recent Advances in Myocardial Revascularization, 11th Asian-Pacific Congress of Cardiology, Bali, Indonesia, September, 1995.
30. "The cellular basis of myocardial stunning and hibernation." Conference on Topics in Cardiology, 1996, organized by the National Heart Association of Malaysia, Langkawi, Malaysia, May 12, 1996.
31. "Myocardial cytoprotection: A novel therapeutic approach for coronary artery disease." Symposium on Shifting Paradigms: From Myocardial Ischemia to Myocardial Cytoprotection, National Meeting of the Philippine Heart Association, Manila, Philippines, May 15, 1996.
32. "Myocardial stress proteins and reversible postischemic dysfunction". Symposium on Role of Stress Proteins in the New Ischemic Syndromes - Biomed 2 Project, XVIIIth Congress of the European Society of Cardiology, Birmingham, U.K., August 27, 1996.
33. "Myocardial reperfusion injury: Pathogenesis and pathophysiology." Cardiovascular Seminar, Institute of Cardiovascular Sciences, St. Boniface General Hospital Research Centre, University of Manitoba, Winnipeg, Manitoba, September 11, 1996.
34. "Pathogenesis and pathophysiology of myocardial stunning, from experimental observations to clinical implications". International Workshop on Advances in the Management of Post Myocardial Infarction Left Ventricular Dysfunction: The Role of Cardiac Ultrasound, Liscia di Vacca, Costa Smeralda, Italy, June 5, 1997.
35. "Preconditioning against myocardial stunning". International Workshop on Advances in the Management of Post Myocardial Infarction Left Ventricular Dysfunction: The Role of Cardiac Ultrasound, Liscia di Vacca, Costa Smeralda, Italy, June 5, 1997.

36. "What is LV stunning and hibernation?" Teleconference on Post-ischaemic Left Ventricular Dysfunction, Liscia di Vacca, Costa Smeralda, Italy, June 6, 1997.
37. Workshop on Myocardial Preconditioning of the Hatter Institute, Cape Town, South Africa, April 6 and 7, 1998.
38. "Role of NO in delayed preconditioning". Second International Conference on the Pathophysiology of Stunning, Hibernation and Preconditioning, Taormina, Italy, October 15, 1998.
39. "Role of nitroglycerin in preconditioning in man". 67<sup>th</sup> Annual Scientific Meeting of the Japanese Circulation Society, Fukuoka, Japan, March 29, 2003.
40. Keynote lecture "Gene therapy for cardioprotection". 67<sup>th</sup> Annual Scientific Meeting of the Japanese Circulation Society, Fukuoka, Japan, March 29, 2003.
41. "Gene therapy for cardiac protection". Third International Conference on Myocardial Ischemia: From Molecular Adaptation to Cellular Repair". Capri, Italy, October 19, 2003.
42. "Regeneration of Infarcted Myocardium with Stem Cells". Third International Conference on Myocardial Ischemia: From Molecular Adaptation to Cellular Repair". Capri, Italy, October 20, 2003.
43. "Cardiac preconditioning: A paradigm shift in ischemic biology". Lucian Award lecture, Royal Victoria Hospital, McGill University, May 18, 2005.
44. "Cardiac preconditioning: A paradigm shift in ischemic biology". Montreal Heart Institute, May 18, 2005.
45. "Cardioprotection and preconditioning in the clinical arena". Cardiology Grand Rounds, Royal Victoria Hospital, McGill University, May 19, 2005.
46. "Use of stem cells in ischemic heart disease". Jewish General Hospital, McGill University, May 20, 2005.
47. Keynote lecture "Human Cardiac Stem Cells." 70<sup>th</sup> Annual Scientific Meeting of the Japanese Circulation Society, Nagoya, Japan, March 25, 2006.
48. Keynote lecture "Use of Cardiac Stem Cells to Repair Infarcted Myocardium." AHA-JCS Joint Symposium, 70<sup>th</sup> Annual Scientific Meeting of the Japanese Circulation Society, Nagoya, Japan, March 25, 2006.
49. "Potential Stem Cell-Based Therapies: A Veritable Revolution." Symposium on the Future of Heart Health, Global Conference on Heart Health & Disease, International Academy of Cardiovascular Society, Winnipeg, Manitoba, October 14, 2006.
50. "Repair and Regeneration of Infarcted Myocardium". Joint Session of the AHA and the German Cardiac Society, 73<sup>rd</sup> Annual Meeting of the German Cardiac Society, Mannheim, Germany, April 13, 2007.
51. Special lecture "Use of Very Small Embryonic-like (VSEL) Stem Cells and Cardiac Stem Cells for Repair of Myocardial Infarction". 73<sup>rd</sup> Annual Scientific Meeting of the Japanese Circulation Society, Osaka, Japan, March 20, 2009.
52. "Cellular Therapy in Ischemic Heart Disease". Keio University, Tokyo, Japan, May 17, 2010.
53. Mikamo Lecture "Use of Stem Cells for the Treatment of Ischemic Cardiomyopathy". 77<sup>th</sup> Annual Scientific Meeting of the Japanese Circulation Society, Yokohama, Japan, March 16, 2013.
54. "Effect of Cardiac Stem Cells in Patients with Ischemic Cardiomyopathy: Interim Results of the SCIPIO Trial". 77<sup>th</sup> Annual Scientific Meeting of the Japanese Circulation Society, Yokohama, Japan, March 16, 2013.
55. "Use of Stem Cells for Heart Disease: A Revolution in Medicine". Studium Generale Lecture, University of Utrecht, Utrecht, The Netherlands, June 10, 2013.
56. "Cardiac Stem Cells for Ischemic Cardiomyopathy: A Translational Approach". Keynote Lecture, Utrecht Stem Cell Conference 2013, Utrecht, The Netherlands, June 11, 2013.
57. "Use of Cardiac Stem Cells for the Treatment of Ischemic Cardiomyopathy". Fundacion Centro Nacional de Investigaciones Cardiovasculares Carlos III, Madrid, Spain, June 17, 2013.
58. "Use of Stem Cells for the Treatment of Ischemic Cardiomyopathy". Michael J. Sole Lecture, University of Toronto, Toronto, Ontario, September 4, 2013.
59. "How to Submit a Manuscript to a High-Quality Journal". Myocardial Ischemia Symposium in Korea 2014. Seoul, Korea, March 6, 2014.
60. "Effect of Cardiac Stem Cells in Patients with Ischemic Cardiomyopathy: Interim Results of the SCIPIO Trial". Myocardial Ischemia Symposium in Korea 2014, Seoul, Korea, March 6, 2014.

61. "Cell Therapy for Ischemic Cardiomyopathy". John Foerster Distinguished Lecture, 2<sup>nd</sup> Cardiovascular Forum for Promoting Centres of Excellence and Young Investigators, Winnipeg, Manitoba, Canada, September 6, 2014.

**Teaching Activities**

**(i) RESIDENT AND CLINICAL FELLOW TRAINING**

Training of Residents and Cardiology Fellows during attending rotations in the Coronary Care Unit at the V.A. Medical Center, Baylor College of Medicine. From 1985 to 1987, for 2-5 months per year; 1987-1994, 2-4 months per year.  
Training of Residents in General Medicine rotations at Baylor College of Medicine. One month per year from 1984 through 1987.

Training of Residents and Cardiology Fellows during attending rotations in the Coronary Care Unit at the University Hospital, University of Louisville. From 1995 to present, 1-2 months per year.

**(ii) LECTURES TO MEDICAL STUDENTS**

1. Introduction to Medical History: "William Harvey and the Discovery of the Circulation of the Blood". University of Louisville School of Medicine, Louisville, KY, March 30, 2009.
2. Introduction to Medical History: "William Harvey and the Discovery of the Circulation of the Blood". University of Louisville School of Medicine, Louisville, KY, February 22, 2010.
3. Introduction to Medical History: "William Harvey and the Discovery of the Circulation of the Blood". University of Louisville School of Medicine, Louisville, KY, April 21, 2011.
4. Bench to Bedside Lectures Introduction to Clinical & Translational Research: "Choosing a Career in Research: A Survival Guide", University of Louisville School of Medicine, Louisville, KY, July 12, 2011.
5. Introduction to Medical History: "William Harvey and the Discovery of the Circulation of the Blood". University of Louisville School of Medicine, Louisville, KY, March 26, 2012.

**(iii) RESEARCH FELLOW TRAINING**

	<b><u>Dates of Training</u></b>	<b><u>Present Position</u></b>
1. Mary Lee Myers, M.D.	07/83 - 06/85	Professor of Surgery, Victoria Hospital, London, Ontario, Canada
2. Wei-Xi Zhu, M.D.	06/84 - 06/86	Cardiologist, Minneapolis, MN
3. Mohamed O. Jeroudi, M.D.	07/86 - 12/87	Cardiologist, Galveston, TX
4. Xiao-Ying Li, M.D.	01/90 - 05/91	Professor in the Department of Cardiology, Chinese PLA General Hospital, Beijing, Peoples Republic of China
5. Jian-Zhong Sun, M.D.	01/91 - 12/94	Professor of Anesthesiology, Jefferson Medical College, Thomas Jefferson University
6. Xian-Liang Tang, M.D.	04/92 - 10/95	Associate Professor of Medicine, University of Louisville
7. Seong-Wook Park, M.D.	09/93 - 09/94	Associate Professor of Medicine, Asan Medical Center, University of Ulsan, Seoul, Korea
8. Anantharam Kalya, M.D.	06/95 - 06/97	Staff, Division of Internal Medicine, University of Louisville
9. Steffi Teschner	09/95 - 09/96	Medical Student, Medizinische Hochschule Hannover, Hannover, Germany
10. Hitoshi Takano, M.D.	10/96 - 09/99	Assistant Faculty, 1 <sup>st</sup> Department of Internal Medicine, Nippon Medical School, Tokyo, Japan
11. Yiru Guo, M.D.	11/96 - 09/00	Associate Professor in the Division of Cardiology, University of Louisville
12. Qianhong Li, M.D., Ph.D.	01/96 - 06/00	Associate Professor in the Division of Cardiology, University of Louisville
13. Supratim Banerjee, M.D.	07/97 - 06/98	Assistant Clinical Professor, UCLA, Kern Medical Center, Bakersfield, California
14. Buddhadeb Dawn, M.D.	08/97 - 06/00	Professor of Medicine; Director, Division of Cardiovascular Diseases; Vice Chair for Research, Department of Medicine, Kansas University Medical Center, Kansas City, Kansas
15. Michael Hill, Ph.D.	07/98 - 10/01	Assistant Professor, Division of Cardiology, Vanderbilt University, Nashville, Tennessee
16. Ken Shinmura, M.D., Ph.D.	07/98 - 08/01	Assistant Professor, Department of Geriatric Medicine, Keio University School of Medicine, Tokyo, Japan
17. Eitaro Kodani, M.D.	04/99 - 02/02	Assistant, Department of Internal Medicine, Nippon

Curriculum Vitae  
Roberto Bolli, M.D.

18.	Adam Stein, M.D.	01/03 - 12/04	Medical School, Tokyo, Japan
19.	Sumit Tiwari, M.D.	12/03 -	Assistant Professor of Medicine, University of Michigan
20.	Ahmed Abdel Latif, M.D.	07/04 - 06/05	Resident, University of Missouri-Columbia
21.	Nikhil Kapoor, M.D.	07/06 - 06/07	Assistant Professor, University of Kentucky
			Interventional Cardiologist, ProHealth Multi-Specialty Network, Long Beach, California
22.	Steven Chamuleau, M.D., Ph.D.	07/06 - 08/07	Assistant Professor, University of Utrecht
23.	Krijn Vrijnsen	09/07 - 10/08	Ph.D. Student, University of Amsterdam
24.	Atul Chugh, M.D.	07/07 - 08/08	Assistant Professor of Medicine, University of Louisville
25.	Umesh Sharma, M.D.	07/10 - 06/11	Assistant Professor of Medicine, State University of New York at Buffalo
26.	John Loughran, M.D.	07/10 - 06/12	Assistant Professor of Medicine, University of Louisville
27.	Brandon Elmore, M.D.	07/11 - 06/13	Fellow in the Division of Cardiology, University of Louisville
28.	Matthew Keith, M.D.	07/12-	Fellow in the Division of Cardiology, University of Louisville
29.	Shahab Ghafghazi, M.D.	07/13-	Fellow in the Division of Cardiology, University of Louisville
30.	Asif R. Pathan, Ph.D.	07/14-	Fellow in the Division of Cardiology, University of Louisville