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Joseph Woo M.D.

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Date of Birth: December 23, 1966

Place of Birth: Columbia, Missouri

Marital Status: Amy L. Woo

Children: Jeffrey B. Woo (1996)
Nicole A. Woo (1999)

Education:

1984-1988	B.S.	Massachusetts Institute of Technology
1988-1992	M.D.	University of Pennsylvania School of Medicine

Postgraduate Training:

1992-1993	Intern in Surgery, University of Pennsylvania
1993-1998	Resident in Surgery, University of Pennsylvania
1995-1997	Post-Doctoral Research Fellow, University of Pennsylvania
1998-1999	Chief Resident in Surgery, University of Pennsylvania
1999-2001	Resident in Cardiothoracic Surgery, University of Pennsylvania
2001	Fellow in Cardiothoracic Surgery, University of Pennsylvania

Additional Education:

2015-2016 Stanford Leadership Academy--Executive Leadership and Management course taught by Stanford Graduate School of Business Faculty, Silicon Valley Executives, and Senior University Leadership on topics including: Finance, Economics, Market and Brand Strategy, Negotiation, Team Dynamics, Crisis Management, Culture, Operations, Change Implementation.

2017 Executive Leadership Program, GE Crotonville Campus

Academic Appointments:

1993-1998 Assistant Instructor in Surgery, University of Pennsylvania
 1998-2002 Instructor in Surgery, University of Pennsylvania
 2002-2009 Assistant Professor of Surgery, University of Pennsylvania
 2009-2013 Associate Professor of Surgery with Tenure, University of Pennsylvania
 2013 Professor of Surgery with Tenure, University of Pennsylvania
 2013 Professor of Physiology, University of Pennsylvania

2014-present Professor of Cardiothoracic Surgery, University Tenure Line, Stanford University
 2014-present Norman E. Shumway Professor in Cardiovascular Surgery
 2014-present Professor, by courtesy, Department of Bioengineering, School of Engineering, Stanford University

University, Medical School, and Hospital Administrative Appointments:

1996-1997 Chair, UPenn Department of Surgery Residents' Executive Committee
 2002-2013 Attending Surgeon, University of Pennsylvania Medical Center
 2002-2013 Attending Surgeon, Pennsylvania Hospital, Philadelphia PA
 2002-2013 Attending Surgeon, Presbyterian Medical Center, Philadelphia PA
 2002-2013 Education Coordinator for General Surgery Residents, Cardiac Surgery Division
 2002-2013 Director, Minimally Invasive and Robotic Cardiac Surgery Program
 2003 Member, Search Committee, Director of Research, Heart Failure and Transplantation, Division of Cardiology, Department of Medicine
 2004 Member, Search Committee, Chief, Division of Plastic Surgery, Department of Surgery
 2005-2009 Education Coordinator for Medical Students, Cardiac Surgery Division
 2006-2010 Associate Surgical Director of Thoracic Transplantation
 2010-2013 Director, Cardiac Transplantation and Mechanical Circulatory Support Program
 2011 Member, Search Committee, Chief, Division of Thoracic Surgery, Department of Surgery
 2012-2013 Member, Clinical Excellence Advisory Group
 2013-2013 Member, Committee on Academic Freedom and Responsibility
 2013 Member, Committee on Appointments and Promotions, School of Medicine
 2013 Member, Bioengineering Graduate Group, School of Engineering and Applied Sciences

2014-present Chair, Department of Cardiothoracic Surgery, Stanford University School of Medicine
 2014-present Associate Director, Stanford Cardiovascular Institute

2014-present	Attending Cardiothoracic Surgeon, Stanford Hospital and Clinics
2014-present	Attending Cardiothoracic Surgeon, Lucille Packard Children's Hospital
2014-present	Member, Executive Committee, Stanford University School of Medicine
2014-present	Member, Perioperative Services Medical Committee
2014-present	Member, Dean's Committee on Safety, Quality, and Value in Healthcare
2014-2015	Member, Search Committee, Stanford Department of Surgery Chair
2014	Member, Committee on Cancer Service Line Reorganization
2015-	Member, Capacity Committee
2017-2018	Co-Chair, Beyond Stanford Area Steering Group, University Long Range Planning Process, Appointed by President Marc Tessier-Lavigne
2018-2019	Member, Purposeful Engagement Beyond Our World Discovery Team, Stanford University
2018-2019	Co-Chair, Search Committee, Chief of Stanford Division of Cardiovascular Medicine
2019-2020	Co-Chair, Search Committee, Chair of Stanford Department of Neurosurgery
2019-2020	Member, Search Committee, Stanford Healthcare Chief Medical Officer
2019-2020	Member, Dean's Financial Advisory Committee
2019-2022	Member, Stanford HealthCare Board of Directors
2020-2021	Member, Search Committee, Director of Stanford Hospital Intensive Care Units
2020-2022	Member, Stanford ValleyCare Board of Directors
2020-	Member, Stanford University Global Engagement and Review Program

Certification:

July 1, 1993	National Board of Medical Examiners, Certificate 423387
Feb. 16, 2000	American Board of Surgery, Certificate 44974
June 30, 2001	UNOS Heart Transplantation and Lung Transplantation credentialing requirements completed.
June 7, 2002	American Board of Thoracic Surgery, Certificate 6743
Dec 11, 2005	Society of Thoracic Surgeons Thoracic Endografting Certification Symposium
2009	American Board of Surgery Maintenance of Certification Examination completed and passed. Recertified 2022, Valid through 2024.
2010	American Board of Thoracic Surgery Maintenance of Certification Examination completed and passed

Licensure:

Pennsylvania MD055054L, active, exp 12/31/2018
 California G128440, active, exp 12/31/2019
 NPI #1043240120
 DEA License # available upon request

Awards and Honors:

- 1991 Alpha Omega Alpha, University of Pennsylvania
- 1992 I. S. Ravdin Prize, Department of Surgery, University of Pennsylvania (Top student in surgery)
- 1995 Penn Pearls Teaching Award, University of Pennsylvania (Teaching excellence, as determined by medical students)
- 1997 Surgical Scholar Award, Department of Surgery, University of Pennsylvania, (Scoring 99th percentile on American Board of Surgery In-Service Exam)
- 1997 William Y. Inouye Teaching Award, Department of Surgery, University of Pennsylvania (Top resident teacher as determined by medical students)
- 1997 Pennsylvania Association of Thoracic Surgery Resident Prize First Place
- 1997 American Heart Association Vivien Thomas Young Investigator Award Winner
- 1999 Leonard J. Perloff Chief Resident Teaching Award, Department of Surgery, University of Pennsylvania (as determined by fellow residents)
- 2003 Philadelphia Business Journal 40 under Forty Award Winner
- 2003 Philadelphia Magazine 21 Up and Coming Leaders of Philadelphia Award Winner
- 2005 Philadelphia Inquirer 10 Philadelphia Medical Researchers to Watch for 2005
- 2005 American Society for Clinical Investigation Travel Scholarship
- 2006 Asian Society for Cardiovascular Surgery Travel Grant for Young Cardiovascular Surgeons
- 2009 Penn Medicine Class of 2012 Teaching Award
- 2009 Top Doctors of Philadelphia Region, Philadelphia Magazine
- 2010 Top Doctors of Philadelphia Region, Philadelphia Magazine
- 2011 Top Doctors of Philadelphia Region, Philadelphia Magazine
- 2012 Top Doctors of Philadelphia Region, Philadelphia Magazine
- 2012 Luigi Mastroianni Clinical Innovator Award, University of Pennsylvania
“recognizes Penn Medicine physicians who have made significant contributions toward the invention and development of new techniques, approaches, procedures or devices that change medical practice and are of major benefit to patient care.”
- 2013 Top Doctors of Philadelphia Region, Philadelphia Magazine
- 2013 Surgical Mentorship Teaching Award, Department of Surgery, University of Pennsylvania
- 2015 Top Doctors of Bay Area, San Francisco Magazine
- 2016 Top Doctors of Bay Area, San Francisco Magazine
- 2017 Top Doctors of Bay Area, San Francisco Magazine
- 2018 Top Doctors of Bay Area, San Francisco Magazine
- 2018 Clinical Research Forum, USA Top Ten Clinical Research Award Recipient
- 2019 Chinese Hospital 45th Annual Award Recipient
- 2019 American Heart Association Surgery Mentoring Award

2019	Top Doctors of Bay Area, San Francisco Magazine
2020	Top Doctors of Bay Area, San Francisco Magazine
2021	Top Doctors of Bay Area, San Francisco Magazine
2021	Julius A. Mackie MD Lecturer, University of Pennsylvania Department of Surgery Distinguished Graduate
2021	American Heart Association Clinical Research Prize

Fellowship in Professional Societies:

2004	F.A.C.S.
2004	F.A.C.C.
2006	F.A.H.A.

Membership in Professional Societies:

2002-present	Society of Thoracic Surgeons
2002-present	American Heart Association, Council for Cardiothoracic and Vascular Surgery
2002-present	International Society for Minimally Invasive Cardiac Surgery
2002-present	International Society for Heart & Lung Transplantation
2002-present	International Society for Heart Research
2002-present	Association for Academic Surgery
2003-present	College of Physicians of Philadelphia
2003-present	Pennsylvania Association for Thoracic Surgery
2003-present	World Society of Cardiothoracic Surgeons
2004-present	American College of Surgeons, Fellow
2004-present	American College of Cardiology, Fellow
2005-present	Asian Society for Cardiovascular Surgery
2005-present	Society of University Surgeons
2007-present	American Association for Thoracic Surgery
2009-present	AATS Cardiac Surgery Biology Club
2010-present	Society of Clinical Surgery
2014-present	Bay Area Society of Thoracic Surgeons
2014-present	Western Thoracic Surgical Society
2016-present	American Surgical Association

National Committee/Leadership Positions in Professional Societies:

American Association for Thoracic Surgery

2007-present	Member, Scientific Affairs and Government Relations Committee
2010	Michael E. DeBakey AATS Research Fellowship Reviewer

2010-2014 Member, Research Scholarship Committee, American Association for Thoracic Surgery

2010-present Editorial Board Member, *Journal of Thoracic and Cardiovascular Surgery*

2011 Co-Director, American Association for Thoracic Surgery/NIH Grant Workshop

2012-2014 Co-Chair, Research Scholarship Committee, American Association for Thoracic Surgery

2013 Co-Director, American Association for Thoracic Surgery/NIH Grant Workshop

2013 Top Ten Reviewers (#1), *Journal of Thoracic and Cardiovascular Surgery*

2014-2015 Member, Investigator Review Committee, AATS Graham Foundation

2014-2016 Co-Chair, AATS Emerging Technologies Program Committee

2015 Co-Director, American Association for Thoracic Surgery/NIH Grant Workshop

2015-2018 Member, AATS Graham Foundation Advisory Council

2015-present Associate Editor, *Journal of Thoracic and Cardiovascular Surgery*

2016-2019 Program Chair, AATS Cardiac Surgery Biology Club

2017 Co-Director, American Association for Thoracic Surgery/NIH Grant Workshop

2017-2018 Member, AATS Foundation Branding Group

2017-2019 AATS Foundation Advisory Council

2018-2019 Member, STS Workforce on Annual Meeting (Tech-Con Task Force), AATS Representative

2018-2019 Member, AATS 2019 Annual Meeting Program Planning Committee, and Section Leader

2018-2021 Chair, Scientific Affairs and Government Relations Committee

2019 Co-Director, AATS/NIH 2019 Grant Writing Workshop

2019-2020 Member, AATS Online Committee

2019-2020 Co-Chair, AATS 2020 Annual Meeting Adult Cardiac Program Planning Committee

2019-2022 President, AATS Cardiac Surgery Biology Club

2019-2023 Director, AATS Board

2020 Co-Chair, AATS Revenue Task Force

2020-2021 Co-Chair, AATS 2021 Annual Meeting Adult Cardiac Program Planning Committee

2021-2024 AATS Representative to STS Workforce on Health Policy, Reform, and Advocacy

2021-2024 Co-Chair, AATS Quality Gateway Cardiac Quality Committee

2021 Member, AATS CEO Search Committee

2021 Member, AATS JTCVS Editor Search Committee

2021 Member, 2022-2024 Strategic Plan Taskforce

2022 Member, AATS Committee Review Taskforce

2022-2023 Secretary Elect, AATS Foundation

2023- Secretary, AATS Foundation

American Heart Association

2004-present	Member, Leadership Committee, Council on Cardiovascular Surgery and Anesthesia, American Heart Association
2006-2007	Member, Scientific Sessions Program Committee, Council on Cardiovascular Surgery and Anesthesia, American Heart Association
2007-2009	Vice-Chair, Scientific Sessions Program Committee, Council on Cardiovascular Surgery and Anesthesia, American Heart Association
2008	American Heart Association Grant Reviewer, Radiology, Imaging, and Surgery Study Section
2009	American Heart Association Grant Reviewer, Radiology, Imaging, and Surgery Study Section
2010	Co-Chair, American Heart Association Grant Review, Surgery Study Section
2010-2012	Chair, Scientific Sessions Program Committee, Council on Cardiovascular Surgery and Anesthesia, American Heart Association
2010-2012	Liason, Leadership Committee, Council on Functional Genomics and Translational Biology, American Heart Association
2010-2013	Guest Editor, <i>Circulation</i>
2011	Co-Chair, American Heart Association Grant Review, Surgery Study Section
2011-2013	Chair, American Heart Association Grant Review, Surgery Study Section
2011-2013	Vice-Chair, Leadership Committee, Council on Cardiovascular Surgery and Anesthesia, American Heart Association
2012-2014	Member, Scientific Publishing Committee, American Heart Association
2013-2014	Member, Manuscript Oversight Committee, American Heart Association
2013-2014	Member, Science Advisory and Coordinating Committee Nominating Subcommittee, American Heart Association
2013-2015	Member, Science Advisory and Coordinating Committee, American Heart Association
2013-2015	Chair, Leadership Committee, Council on Cardiovascular Surgery and Anesthesia, American Heart Association. In 2014, the American Heart Association awarded CVSA the Top Medium-Sized Council of the AHA. CVSA was also the second highest rated council across the entire AHA.
2015	American Heart Association Precision Cardiovascular Medicine Thought Leader National Summit, Washington D.C.
2015-2017	Chair, Nominating Committee, Council on Cardiovascular Surgery and Anesthesia, American Heart Association
2016-2018	Member, AHA Council Operations Committee
2014-2016	Member, American Heart Association Silicon Valley Board of Directors
2016-2018	President, American Heart Association Silicon Valley Board of Directors
2017-2022	AATS Liason, AHA CVSA Leadership Council
2020-2022	Scientific Publishing Committee Member
2021-2022	Scientific Publishing Committee Liason to Circulation Genomics and Precision Medicine
2020-2022	Joint Committee Liason, ACC/AHA Guidelines on Aortic Diseases
2018-2024	Member, Joint ACC/AHA Task Force on Clinical Practice Guidelines

Other Societies and Institutions

2007-2013	Member, Research Committee, Thoracic Surgery Foundation for Research and Education
2009-2011	Member, Program Committee, American College of Cardiology Annual Scientific Session
2011	Member, Society of Thoracic Surgeons Workforce for Research Development Taskforce on Grant Procurement
2011-2012	Member, Publications Committee, Association for Academic Surgery
2012	Member, Program Committee, International Society for Minimally Invasive Cardiothoracic Surgery
2012-2013	Chair, Publications Committee, Society of University Surgeons
2016-2019	Member, Membership Committee, Western Thoracic Surgical Association
2019-2022	Councilor, Western Thoracic Surgical Association
2021-2022	Member, Cardiac Consultant Subcommittee, American Board of Thoracic Surgery
2021	Ad hoc Member, Professorial Appointment Committee, Harvard Medical School

Reviewer/Editorial Activities:

2002-present	Reviewer, <i>Annals of Thoracic Surgery</i>
2003-present	Reviewer, <i>Journal of Thoracic and Cardiovascular Surgery</i>
2004-present	Reviewer, <i>Circulation</i>
2004-present	Reviewer, <i>Journal of Molecular Histology</i>
2004-present	Reviewer, <i>European Heart Journal</i>
2004	Guest Editor, <i>Seminars in Thoracic and Cardiovascular Surgery</i>
2005-present	Reviewer, <i>Laboratory Investigation</i>
2005-present	Reviewer, <i>Regulatory Peptides</i>
2005-present	Reviewer, <i>Experimental Biology and Medicine</i>
2006-present	Reviewer, <i>Cardiovascular Research</i>
2006-present	Reviewer, <i>Cytokine</i>
2006-present	Reviewer, <i>Journal of Molecular and Cellular Cardiology</i>
2007-present	Abstract Grader, American Heart Association
2007-present	Reviewer, <i>Journal of Clinical Investigation</i>
2007	Guest Editor, <i>Seminars in Thoracic and Cardiovascular Surgery</i>
2009-present	Reviewer, <i>European Journal of Cardiothoracic Surgery</i>
2009-present	Reviewer, <i>Circulation Research</i>
2009-present	International Associate Editor, <i>Circulation Journal (Japanese Circulation Society)</i>
2010-2013	Guest Editor, <i>Circulation (American Heart Association)</i>
2010-present	Editorial Board Member, <i>Journal of Thoracic and Cardiovascular Surgery</i>

2011	Top Ten Reviewers, <i>Journal of Thoracic and Cardiovascular Surgery</i>
2012-present	Editorial Board Member, <i>Journal of Cardiac Surgery</i>
2012	Top Ten Reviewers (#2), <i>Journal of Thoracic and Cardiovascular Surgery</i>
2013-present	Editorial Board Member, <i>Seminars in Cardiovascular Anesthesia</i>
2013	Top Ten Reviewers (#1), <i>Journal of Thoracic and Cardiovascular Surgery</i>
2014-2015	Section Editor, <i>Journal of the American College of Cardiology</i>
2016-2018	Member, Editorial Board, <i>Circulation</i>
2015-present	Associate Editor, <i>Journal of Thoracic and Cardiovascular Surgery</i>
2019-present	Reviewer, <i>New England Journal of Medicine</i>

Ph.D. Thesis Advisor:

2019	Amanda Steele, PhD, BioEngineering, Stanford University
2020	Lyndsay Stapleton, PhD Candidate, BioEngineering, Stanford University
2021	Annabel Imbrie-Moore, PhD Candidate, Mechanical Engineering, Stanford University
2022	Matthew Park, PhD Candidate, Mechanical Engineering, Stanford University
2023	Yuanjia Zhu, PhD Candidate, BioEngineering, Stanford University
2024	Pearly Pandya, PhD Candidate, Mechanical Engineering, Stanford University

Ph.D. Thesis Examiner:

2008	Yishay Orr, Ph.D. Candidate, University of New South Wales, Sydney, Australia, “Circulating Neutrophil Activation and Recruitment During the Systemic Inflammatory Response to Cardiac Surgery with Extracorporeal Circulation.”
2013	Ritiku Chaturvedi, Ph.D. Candidate, University of Pennsylvania, “Bioengineered Endothelial Cell Cords Guide Organogenic 3-Dimensional Self Assembly.”
2014	Michael Byrom, Ph.D. Candidate, University of Sydney, “Development of Novel Bioengineered Vascular Bypass Conduit”
2018	Vikanth Dhurandhar, Ph.D. Candidate, University of Sydney, “Surgical Outcomes Following Complex and High Risk Cardiac Surgery in Australia and New Zealand.”
2019	Hamid Hajian, Ph.D. Candidate, University of Sydney, “Improving Biocompatibility of Synthetic Vascular Grafts with PF8, a Fibrillin-1 Fragment.”

- 2020 Ahmed Aly Ph.D. Candidate University of Pennsylvania “4D LVMV Model Risk Stratification for Surgical Planning for Ischemic Mitral Regurgitation”
- 2021 Alexa Wronoski PhD Candidate, Stanford University, Modeling Cardiovascular Risks and Diseases Using Human Induced Pluripotent Stem Cells and Tissue Engineering

NIH Committees/Study Section:

- 2004 NIH Hemostasis and Thrombosis Study Section Invited Guest Reviewer
- 2006 NHLBI Image-Guided Intervention Working Group
- 2008-2009 NHLBI CTSN Moderate Mitral Regurgitation Trial Protocol Development Committee Member
- 2008-2009 NHLBI CTSN Severe Mitral Regurgitation Trial Protocol Development Committee Member
- June 2011 NIH CSR Myocardial Ischemia and Metabolism (MIM) Study Section Ad Hoc Reviewer
- 2011-2013 NHLBI CTSN LVAD Stem Cell Trial Operational Committee Member
- Feb 2012 NIH CSR Myocardial Ischemia and Metabolism (MIM) Study Section Ad Hoc Reviewer
- May 2012 NIH Special Emphasis Panel ZRG1 CVRS-M-03 Cardiovascular Development, Stem Cell, and Myocardial Regeneration Invited Reviewer
- Oct 2012 NIH CSR Myocardial Ischemia and Metabolism (MIM) Study Section Ad Hoc Reviewer
- 2013- NHLBI CTSN Biologic Therapies Protocol Development Committee Co-Chair
- 2013-2017 NIH CSR Myocardial Ischemia and Metabolism (MIM) Study Section Member
- Feb 2020 NIH Special Emphasis Panel ZRG1 SBIB-D, Invited Reviewer
- July 2020 NIH Special Emphasis Panel ZRG1 SBIB-D, Invited Reviewer
- July 2020 NIH COVID-19 Emergency Awards ZAI1 Mail-in Reviewer
- July 2022 NIH Special Emphasis Panel ZRG1 SBIB-D, Invited Reviewer
- March 2023 NIH Special Emphasis Panel ZRG1 ISB-D, Invited Reviewer

Non-NIH Grant Reviewer/Study Sections:

- 2008-present Thoracic Surgery Foundation for Research and Education Grant Reviewer
- 2008 American Heart Association Grant Reviewer, Radiology, Imaging, and Surgery Study Section
- 2009 American Heart Association Grant Reviewer, Radiology, Imaging, and Surgery Study Section
- 2010 Co-Chair, American Heart Association Grant Review, Surgery Study Section
- 2010 Michael E. DeBakey AATS Research Fellowship Reviewer
- 2011 Co-Chair, American Heart Association Grant Review, Surgery Study Section

June 2011 VA Merit Grant Cardiovascular Study Section Reviewer
 2011-2013 Chair, American Heart Association Grant Review, Surgery Study Section
 2012-2014 Co-Chair, Research Scholarship Committee, American Association for Thoracic Surgery
 2013-2019 Member, Scientific Advisory Board, Leducq Foundation

Principal Investigator of Grants:

2021-2026 NIH 1R01HL152155 “Biomechanical Optimization of Cardiac Valve Repair Operations, Reviewed Oct 7, 2019, Percentile Score 10.0, Total \$3,484,757)

2008-2024 NIH 1R01HL089315 “Angiogenic Bioengineered Systems to Optimize Post-Infarction Myocardial Recovery” (Second funding cycle graded on June 3, 2013 received a Percentile Score 1.0, Third funding cycle reviewed on June 10, 2019 received a Percentile Score 3.0, Total >\$7,000,000)

2017-2022 NIH U01HL088942 Cardiothoracic Surgery Network, Multicenter, Prospective-Randomized, Evaluation of the Benefit of Concurrent Tricuspid Valve Repair During Mitral Surgery.

2015-2019 NIH U01HL088942 Cardiothoracic Surgery Network, Multicenter, Prospective-Randomized, Placebo-Controlled, Double-Blinded Phase 2 Translational Clinical Trial of Mesenchymal Precursor Cell Implantation During LVAD, National PI.

2018-2019 Coulter Translational Grant “Adhesion Prevention with Shear-Thinning Polymeric Hydrogels” Co-PI with Eric Appel, Ph.D., Dept of Materials Science and Engineering. (Total \$100,000)

2016-2019 Stanford University Bio-X Interdisciplinary Initiatives Grant “Injectable Hydrogels for the Controlled Delivery of Cells, Oxygen, and Nutrients to the Myocardium for the Treatment of Heart Failure” Co-PI with Eric Appel, Ph.D., Dept of Materials Science and Engineering. (Total \$200,000)

2018-2024 Edwards Lifesciences, Annular Reduction for Transcatheter Treatment of Insufficient Mitral Valve (ACTIVE): A Prospective, Multicenter, Randomized, Controlled Pivotal Trial to Assess Transcatheter Mitral Valve Repair with Edwards Cardioband System and Guideline Directed Medical Therapy(GDMT) Compared to GDMT Alone in Patients with Functional Mitral Regurgitation and Heart Failure.

2017-2023 Neochord, Randomized Trial of the NeoChord DS1000 System vs Open Surgical Repair.

- 2015-2019 Heartware Inc. “A Prospective, Single-Arm, Multi-Center Clinical Study in Collaboration with the InterAgency Registry for Mechanically Assisted Circulatory Support (INTERMACS) to Evaluate the Thoracotomy Implant Technique of the Heartware HVAD System in Patients with Advanced Heart Failure.
- 2013-2019 Edwards Life Sciences, “Multi-CenTer Experience with the Rapid Deployment EDWARDS INTUITY Valve System FOR Aortic Valve Replacement (TRANSFORM Trial)” (Total \$750,000)
- 2010-2014 Miltenyi Biotec, “CD133⁺ Stem Cell Implantation in Patients Undergoing CABG” (Total \$180,000)
- 2012-2013 NIH NHLBI 5U01HL088957 Network for Cardiothoracic Surgical Investigations in Cardiovascular Medicine. Woo=PI for Sub-Project: “Mesenchymal Stem Cell Administration During Left Ventricular Assist Device Implantation: Implications for Adjunctive Ventricular Recovery Therapy.”
- 2004-2009 NIH NHLBI/Thoracic Surgery Foundation for Research and Education jointly sponsored Mentored Clinical Scientist Development Award, 1K08HL072812, “Angiogenesis and Cardiac Growth as Heart Failure Therapy.” (Total \$1,037,310)
- 2006-2008 American Heart Association Beginning Grant-in-Aid, 0665441U, “Endogenous Myocardial Revascularization and Repair via Endothelial Progenitor Cell Chemokinesis.” (Total \$100,000)
- 2007-2008 Theregen Inc., “Phase I Open Label Pilot Study to Evaluate Safety and Efficacy and Tolerability of Anginera (cell sheet of angiogenic growth factor secreting dermal fibroblasts) for Adults with Left Ventricular Dysfunction and Reversible Myocardial Ischemia undergoing CABG Surgery.” (Total \$41,696)
- 2005-2008 Cardiogenesis Corp., “Molecular and Cellular Characterization of Neovascularogenesis in Transmyocardial Revascularization.” (Total \$531,249)
- 2003-2009 Myocor Inc., “Randomized Evaluation of a Surgical Treatment for Off-Pump REpair of the Mitral Valve (RESTORE-MV)” (Total \$65,020)
- 2004-2006 American Heart Association Beginning Grant-in-Aid, 0465519U, “Targeted Endothelial Progenitor Cell Chemokinesis as Vasculogenic Therapy for Ischemic Cardiomyopathy.” (Total \$100,000)

- 2005-2006 Clinical Therapeutics Inc., “A Randomized, Double-Blind, Placebo-Controlled, Parallel-Group, Multicenter, Proof of Concept Clinical Study of CTI-1(Ethyl Pyruvate) in Patients Undergoing Major Cardiac Surgery with Cardiopulmonary Bypass (CTI-1-C04-201 Phase II).” (Total \$50,000)
- 2002-2003 Intuitive Surgical Inc., “Totally Endoscopic Coronary Artery Bypass Grafting with the da Vinci Robotic System.” (Total \$17,500)
- 2002-2003 Thomas B. McCabe and Jeanette Laws McCabe Fund Fellowship, “Angiogenic Strategies for the Treatment of Heart Failure.” (Total \$60,000)

Research Sponsor for Fellowship and Career Development Grants (Awarded):

- 2019-2021 Sponsor for Pearly Pandya, American Heart Association Predoctoral Fellowship
- 2019-2021 Sponsor for Yuanjia Zhu, MD, American College of Surgeons Postdoctoral Fellowship “Bioengineered Autologous Cytokine-Eluting Arterialized Conduits Using Tri-Layered Cell Sheet Technology” (Total \$60,000)
- 2019-2021 Sponsor for Yuanjia Zhu, MD, Thoracic Surgery Foundation “Bioengineered Autologous Cytokine-Eluting Arterialized Conduits Using Tri-Layered Cell Sheet Technology” (Total \$60,000) Awarded and declined for above award.
- 2018-2020 Sponsor for Hanjay Wang, MD, American Heart Association Postdoctoral Fellowship 18POST33990223 “Identifying the Mechanism and Therapeutic Potential of Collateral Artery Formation in the Ischemic Heart” (Total \$110,500)
- 2017-2020 Sponsor for Lyndsay Stapleton, American Heart Association Predoctoral Fellowship 18PRE34020135, “Self-Assembling, Shear-Thinning Polymer-Nanoparticle Hydrogels for Post-Operative Thoracic Adhesions” (Total \$53,700)
- 2017-2018 Sponsor for Yasuhiro Shudo, MD, International Society for Heart and Lung Transplantation O. H. Frazier Award in Mechanical Circulatory Support Translational Research. “Nanotechnological Approach to Evaluate Myocardial Reverse Remodelling Following HeartWare VAD Implantation” (Total \$65,000)
- 2016-2018 Sponsor for Michael Paulsen, MD, American Heart Association Postdoctoral Fellowship 17POST33410497 “A Novel Photon-Powered Cardiac Energetics System to Rescue Myocardium from Ischemia” (Total \$102,550)

- 2016-2018 Sponsor for Masashi Kawamura, MD, American Heart Association Postdoctoral Fellowship 16POST30810004 “A Spatially Superimposed SMC–EPC Bi-Layer Cell Sheet for Microvascular Restoration in Diabetic Cardiomyopathy” (Total \$102,550)
- 2016 Sponsor for Amanda Steele, PhD candidate, Stanford CVI Grant, “A Pilot Study for an Engineered HGF Fragment for the Treatment of Myocardial Infarction in a Preclinical Ovine Model.” (Total \$25,000)
- 2015-2017 Sponsor for Andrew Goldstone, MD, American Heart Association Postdoctoral Fellowship #14POST20380744 “Delineating Mechanisms of Post-infarction Angiogenesis through Genetic Manipulation of Stem Cell Chemokine SDF1-alpha (Total \$94,000)
- 2015-2017 Sponsor for Andrew Goldstone, MD, American College of Surgeons Resident Research Scholarship “Elucidating Mechanistic Pathways of Endogenous SDF-EPC-Mediated Post-infarction Myocardial Revascularization via Genetic Manipulation.” (Total \$60,000) (declined because of above AHA Award)
- 2015-2016 Sponsor for Christopher Jensen BS, Howard Hughes Medical Institute Medical Research Fellow "Evaluation of a novel Bioengineered Shear-Thinning Hydrogel for Intramyocardial Delivery of Neuregulin-1B to Reverse Post-Infarction Cardiac Remodeling" (Total \$41,000)
- 2015-2016 Sponsor for Masashi Kawamura, M.D., “Application of the Omentum in Cardiac Tissue Engineering” Sumitomo Life Welfare and Cultural Foundation, (Total \$30,000)
- 2014-2015 Sponsor for Yasuhiro Shudo, M.D., Uehara Foundation “Three-Dimensional Scaffold-Free Tissue Construct as Regenerative Therapy” (Total \$50,000)
- 2013-2015 Sponsor for Pavan Atluri, M.D., American Heart Association National Scientist Development Grant “Composite Tissue Engineered Matrix for Enhanced Stem Cell Therapy of Ischemic Cardiomyopathy” (Total \$377,000)
- 2012-2014 Sponsor for Pavan Atluri, M.D., American Association for Thoracic Surgery David C. Sabiston Research Award “Angiogenic Tissue Engineering for Ischemic Cardiomyopathy” (Total \$160,000)
- 2012-2014 Sponsor for John MacArthur, M.D., American Heart Association Postdoctoral Research Fellowship Award “SDF 1-alpha Pre-conditioning of an Endothelial Progenitor Cell Construct; Effects on Angiogenesis and Ventricular Function (Total \$95,000)

- 2012-2014 Sponsor for Yasuhiro Shudo, M.D., American Heart Association Postdoctoral Research Fellowship Award “Therapeutic Effects of EPC Cell-Sheet Technique Through Angiogenesis Growth Related Self-renewal Mechanism for Ischemic Cardiomyopathy” (Total \$98,000)
- 2012-2014 Sponsor for John MacArthur, M.D., Institute for Translational Medicine and Therapeutics, University of Pennsylvania, Fellowship for pursuing Masters in Translational Research (Total \$80,104)
- 2011-2012 Sponsor for Daniel Spiegelstein, M.D., International Society for Heart and Lung Transplantation Branislav Radovancevic Memorial Fellowship Award “Multi-Modality Approach of Right Ventricular Management with Left Ventricular Assist Device Implantation” (Total \$75,000)
- 2010-2011 Sponsor for William Hiesinger, M.D., Thoracic Surgery Foundation for Research and Education Research Fellowship “Myocardial Angiogenic Tissue Engineering via Ex-Vivo Modified Stem Cell Matrix” (Total \$40,000)
- 2007-2009 Sponsor for John Frederick, M.D., American College of Surgeons Resident Research Scholarship “Endogenous Revascularization for Ischemic Cardiomyopathy” (Total \$60,000)
- 2007-2008 Sponsor for J. Raymond Fitzpatrick M.D., International Society for Heart and Lung Transplantation Research Fellowship “Cyclin A2 Mediated Cardiomyocyte Regeneration Therapy for Heart Failure” (Total \$40,000)
- 2005-2007 Research Sponsor for Pavan Atluri M.D., NIH/NHLBI Ruth L. Kirschstein National Research Service Award 1 F32 HL079769 “EPC Mediated Neovascularization in Ischemic Myocardium” (Total \$100,000)

Co-Investigator of Grants (selected):

- 2022-2027 NIH NHLBI U01HL163303 “Peri-operative Factors That Drive Cell-Free Hemoglobin-Mediated Primary Graft Dysfunction.” PI=Lorraine Ware, Vanderbilt U. Woo=Co-Investigator (pending, received fundable score Feb 2022)
- 2022-2027 NIH R01 HL163202 “4D Multimodal Image-Based Modeling for Bicuspid Aortic Valve Repair Surgery” PI=Alison Pouch, University of Pennsylvania, Woo=Co-Investigator

- 2021-2025 California Institute of Regenerative Medicine CLIN2-12735 “A Phase 1 Pilot Study of Human Embryonic Stem Cell-Derived Cardiomyocytes (hESC-CMs) in Patients with Chronic Ischemic Left Ventricular Dysfunction.” PI=Joseph Wu, Woo=Co-Investigator
- 2020-2024 NIH R01 HL15199702 “Injectable Hydrogels to Deliver Gene Therapy for Myocardial Infarct” PI= Sarah Heilshorn, Woo=Co-Investigator
- 2021-2025 California Institute of Regenerative Medicine DISC2-12540 “Hypoxia-Specific Production of Exosomes from iPSC-derivatives for Myocardial Repair” PI=Phillip Yang, Woo=Co-Investigator
- 2019-2023 NIH R01 HL14567603 “Single Cell Sequencing of Human iPSC-CM Subtype Identity and Function” PI=Joseph Wu, Woo=Co-Investigator
- 2017-2023 NIH R01 HL13483005 “Multimodality Molecular Imaging of Stem Cell Therapy for Ischemic Cardiomyopathy” PI=Patricia Nguyen, Woo=Co-Investigator
- 2016-2022 NIH R01 HL12711305 “Aligned Nanofibrillar Scaffolds Enhance Angiogenesis and Viability in Ischemia” PI=Ngan Huang, Woo=Co-Investigator
- 2017-2020 NIH R21 HL13804201 “Engineered Protein Hydrogels to Modulate Adipose-Derived Stromal Cell Secretome and Exosomes for Injectable Myocardial Infarction Therapy” PI= Sarah Heilshorn, Woo=Co-Investigator
- 2016-2018 Stanford BioX “Injectable Hydrogels for the Controlled Delivery of Cells, Oxygen, and Nutrients to the Myocardium for Treatment of Heart Failure” PI=Eric Appel, Woo=Co-Investigator
- 2015-2018 California Institute of Regenerative Medicine RT3-07798 “Macaca Mulatta as an Advanced Model for Predictive Preclinical Testing of Engineered Cardiac Autografts and Allografts.” PI=Joseph Wu, Woo=Co-Investigator
- 2007-2017 NIH U01HL088957 Network for Cardiothoracic Surgical Investigations in Cardiovascular Medicine. Prospective Randomized Multi-center Clinical Trials in Cardiac Surgery. Overall PI=Michael A. Acker, Co-PI=Woo.
- 2013-2014 NIH SBIR R41 HL118851 “Implantable Construct for Architectural Control of Revascularization of Ischemic Myocardium.” PI= Michael Yang, Woo=Co-Investigator

Research Laboratory Trainees:

<u>Trainee</u>	<u>Date</u>	<u>Current Position</u>
Vasant Jayasankar, M.D.	1/2002-6/2003	Cardiothoracic Surgeon Nebraska
Matthew Taylor, M.D.	1/2002-6/2005	Assistant Professor, Penn State University
Jeffrey E. Cohen, M.D.	4/2002-present	General Surgery Chief Resident, University of Pennsylvania
Mark F. Berry, M.D.	7/2002-6/2004	Associate Professor, Stanford University
Todd Grand	8/2002-8/2004	Veterinarian Florida
Vivian Hsu	1/2003-6/2007	Plastic Surgeon Pennsylvania
M. Astrid Moise, M.D.	7/2003-6/2004	Vascular Surgeon, Ohio
Steven J. Kolakowski, M.D.	7/2003-6/2004	Vascular Surgery Fellow, Pennsylvania Hospital
Omar Fisher, Ph.D.	7/2003-7/2004	Postdoctoral Research Fellow, Massachusetts Inst of Tech
Suzanne Zentko, M.D.	9/2003-6/2004	Cardiologist Florida
Max Smith	5/2004-6/2010	Radiology Resident, Brigham and Womens' Hospital
George P. Liao	6/2004-7/2006	Medical Student, UMDNJ
Corinna Panlillio	7/2004-5/2006	Medical Student, UMDNJ
Pavan Atluri, M.D.	7/2004-6/2006	Associate Professor of Surgery, University of Pennsylvania
Erik Suarez, M.D.	11/2004-2/2007	General Surgery Resident, Baylor Medical College
Matthew Leskowicz	6/2005-6/2007	Medical Student, Columbia University
Elliot Nacke, M.D.	6/2005-5/2008	Orthopedics Resident, NYU Medical Center
Kevin Southerland, M.D.	6/2006-5/2009	Assistant Professor Duke University
William Hiesinger, M.D.	7/2006-present	Assistant Professor Stanford University
Rebecca Levitt, M.D.	9/2006-5/2007	Assistant Professor, Emory University
Feng Wei, M.D.	1/2007-12/2007	Cardiac Surgeon,

Tao Jin, M.D.	1/2007-12/2007	FuWai Hospital Beijing China MPH Student, Johns Hopkins University
Carinne LaPorte	5/2007-7/2008	Veterinary Student, University of Pennsylvania
Elliot Kozin	6/2007-6/2009	Medical Student, University of Pennsylvania
David Harris	6/2007-8/2008	Medical Student, University of Virginia
John R. Frederick, M.D.	7/2007-6/2009	Cardiothoracic Surgeon North Carolina
J. Raymond Fitzpatrick, M.D.	7/2007-6/2009	Cardiothoracic Surgeon Pennsylvania
Nicole Marotta	7/2008-6/2010	Medical Student Philadelphia College of Osteopathy
Ah-Young Kim	7/2008-6/2010	Graduate Student Yale University
Jeffrey Muenzer	7/2009-7/2011	Medical Student Jefferson Medical College
Kaitao Jian, M.D.	3/2011-3/2012	Postdoctoral Research Fellow University of Pennsylvania
Philip Hsiao	5/2011-6/2012	Medical Student Jefferson Medical College
Hiraoka Arudo, M.D.	5/2012-5/2013	Attending Cardiovascular Surgeon Sakakibara Heart Institute, Japan
Alexander Fairman	7/2011-6/2013	Vascular Surgery Resident University of Pennsylvania
Bryan Edwards	7/2012-12/2017	Technology Developer Independent Start-up
Alen Trubleja	1/2012-12/2013	PhD Student Rice University
John MacArthur, M.D.	7/2011-present	Cardiothoracic Surgery Fellow Stanford University
Yasuhiro Shudo, M.D. Ph.D.	10/2011-present	Assistant Professor Stanford University
Chiaka Aribeara	2014-2015	Medical Student Stanford University
Chris Jensen	2015-2016	Medical Student Stanford University
Andrew Goldstone M.D. Ph.D.	7/2014-6/2017	Cardiothoracic Surgery Resident University of Pennsylvania
Michael Paulsen, M.D.	7/2016-present	Postdoctoral Research Fellow Stanford University
Cassandra Burnett	2015-2017	PhD Student, Molecular Biology

William Patrick M.D.	2015-2017	Univ. CA San Francisco Cardiothoracic Surgery Resident
Vi Hoang	2015-2017	University of Pennsylvania PhD Student, Molecular Biology
Alexandra Bourdillon	6/2016-6/2018	Oregon Health Sciences University Medical Student
Masashi Kawamura MD PhD	10/2015-2/2017	Yale University Postdoctoral Research Fellow
Daniel von Bornstadt MD	7/2016-7/2018	Stanford University Postdoctoral Research Fellow
Camille Hironaka	7/2017-6/2019	Stanford University Medical Student
Frederick Grady	7/2018-6/2019	Tufts University Medical Student
Amanda Steele	1/2015-present	Meharry Medical School PhD Student, BioEngineering
Lyndsay Stapleton	1/2016-present	Stanford University PhD Student, BioEngineering
Hanjay Wang, M.D.	7/2017-present	Stanford University Postdoctoral Research Fellow
Annabel Imbrie-Moore	1/2018-7/2021	Stanford University PhD Student, Mechanical Engineering
Yuanjia Zhu, M.D.	7/2019-present	Stanford University Postdoctoral Research Fellow
Mateo Marin-Cuartas MD PhD	6/2020-7/2021	Stanford University Cardiac Surgery Fellow, Leipzig Heart
Matt Park	7/2018-present	Mechanical Engineering PhD Candidate
Pearly Pandya	1/2021-present	Mechanical Engineering PhD Candidate

Ph.D. Thesis Advisor:

Andrew Goldstone 7/2014 – 6/2017
Improving Evidence from Administrative Data to Better Inform the Practice of Cardiac Surgery

Amanda Steele 1/2015 – 8/2019
In Situ Cardiac Tissue Engineering with a Novel Shear-Thinning Therapeutic Biomimetic Hydrogel.

Lyndsay Stapleton 1/2016 - 6/2020
Supramolecular Biomaterials as Translational Cardiac Surgical Therapeutics in Ischemic Heart Disease.

Annabel Imbrie-Moore 1/2018 – 6/2021

Biomechanical Optimization of Cardiac Valve Repair Operations

Clinical Teaching Responsibilities:

Cardiothoracic Surgery Residents and Fellows:

All aspects of operative cardiac surgery and perioperative care, with a particular focus upon Mitral Valve and Aortic Root Surgery and Thoracic Transplantation.

Weekly Didactic Conferences: Wednesday 7:00-7:30am Intraoperative Decision Making

Wednesday 7:30-8:30am Joint CV Surgery/Cardiology Teaching Conference Coordinator

General Surgery Residents (PGY2):

Surgical Intensive Care Unit

Basic operative procedures: Saphenous vein harvest, Sternotomy, Cannulation, Tracheostomy, Femoral Arterioplasty

Medical Students:

Surgery 200: Coordinate learning activities and exposure to all aspects of cardiac surgery for junior level medical students, one student per two week block, all year-long.

Give formal bi-monthly lecture on cardiac surgery.

Surgery 300: Coordinate elective sub-internship for senior level medical student in cardiac surgery

Curriculum 2000 Cardiovascular Block: Applied Thoracic Anatomy Lecture and Workshop for second year medical students.

Surgery 800: Summer-long clinical research rotation.

2005 Elliot Nacke-Robotic Mitral Valve Repair Database, Publication #46 below.

2006 Kevin Southerland-Lung Transplantation Database, Abstract #77 below.

2007 Elliot Kozin-Off-Pump Mitral Valve Repair Prospective Randomized Trial abstract

Classes

Stanford University Med223

Stanford University BioE310

Patents and Filings:

Application Filed October 27, 2004: Cytoprotective Effects of Ethyl Pyruvate 10/577,256 (assumed by Critical Therapeutics Inc.)

Issued Patent April 19, 2011: Device for Facilitating Antegrade Cardioplegia delivery in Patients with Aortic Insufficiency, Patent Number: 7,998,129 (co-inventor Howard C. Herrmann, MD)

Notice of Allowance: 7/23/2015 Ventricular Assist Device Sleeve Adapter 14/294,880 (co-inventor Pavan Atluri, MD)

Provisional Application Filed April 3, 2017: Adhesion Prevention with Shear-thinning Polymeric Hydrogels 62/480636, Non-Provisional Application No. 15/943358 Filed April 2, 2018 (co-inventors Eric Appel PhD and Lyndsay Stapleton BSE)

Provisional Application Filed November 9, 2017: Engineering Multilevel Cell Sheet-Derived Blood Levels 62/584088 (co-inventor Daniel von Bornstaedt MD)

Issued Patent November 27, 2018: Use of Photosynthesis to Rebalance Ischemic Energetics Patent Number 10,137,158 (co-inventors Jeffrey E. Cohen MD and Andrew B. Goldstone MD)

Provisional Application Filed August 28th, 2018: Methods and apparatus for measuring mitral valve chordae tendineae, annular, and leaflet forces in vitro and in vivo using Fiber Bragg grating optical force sensors to create a force-sensing mitral valve neo-chordae, 62/723949 (co-inventors Michael J. Paulsen, MD; Mark R Cutkosky, PhD; and Jung Hwa Bae, PhD)

Peer-Reviewed Publications:

1. Bavaria JE, **Woo YJ**, Hall RA, Carpenter JP, Gardner TJ. Retrograde Cerebral and Distal Aortic Perfusion During Ascending and Thoracoabdominal Aortic Operations. *Ann Thoracic Surg* 1995;60:345-352; Discussion 352-353.
2. Bavaria JE, **Woo YJ**, Hall RA, Wahl PM, Acker MA, Gardner TJ. Circulatory Management with Retrograde Cerebral Perfusion for Acute Type A Aortic Dissection. *Circulation* 1996;94(9):173-176.
3. **Woo YJ**, Raju GP, Swain JL, Richmond ME, Gardner TJ, Balice-Gordon RJ. In Utero Cardiac Gene Transfer via Intraplacental Delivery of Recombinant Adenovirus. *Circulation* 1997;96:3561-3569.
4. **Woo YJ**, Zhang JCL, Vijayarathy C, Zwacka RM, Englehardt JF, Gardner TJ, Sweeney HL. Recombinant Adenovirus-Mediated Cardiac Gene Transfer of Superoxide Dismutase and Catalase Attenuates Postischemic Contractile Dysfunction. *Circulation* 1998;98(19):255-260; Discussion 260-261.
5. Zhang JCL, **Woo YJ**, Chen JA, Swain JL, Sweeney HL. Efficient Transmural Cardiac Gene Transfer by Intrapericardial Injection in Neonatal Mice. *J Molecular Cellular Cardiology* 1999;31:721-732.
6. Chatterjee S, Bish LT, Stewart AS, Jayasankar V, Kim EM, Pirolli T, Burdick J, **Woo YJ**, Gardner TJ, Sweeney HL. Viral Gene Transfer of the Antiapoptotic Factor Bcl-2

- Protects Against Chronic Postischemic Heart Failure. *Circulation* 2002;106(12):212-217.
7. Bavaria JE, Brinster DR, Gorman RC, **Woo YJ**, Gleason T, Pochettino A. Advances in the Treatment of Acute Type A Dissection: An Integrated Approach. *Ann Thoracic Surg* 2002;74:1848-52; Discussion 1857-1863.
 8. **Woo YJ**, Childers H. Minimally Invasive Video Assisted Graft Replacement of a Descending Thoracic Aortic Aneurysm. *Heart Surgery Forum* 2002;6(3):E59-61.
 9. Chatterjee S, Bish LT, Jayasankar V, Stewart AS, **Woo YJ**, Crow MT, Gardner TJ, Sweeney HL. Blocking the Development of Postischemic Cardiomyopathy with Viral Gene Transfer of the Apoptosis Repressor with Caspase Recruitment Domain. *J Thoracic Cardiovasc Surg* 2003;125(6):1461-1469.
 10. Jayasankar V, **Woo YJ**, Bish LT, Pirolli TJ, Chatterjee S, Berry MF, Burdick J, Gardner TJ, Sweeney HL. Gene Transfer of Hepatocyte Growth Factor Attenuates Postinfarction Heart Failure. *Circulation* 2003;108:230-236.
 11. **Woo YJ**, Grand T, Valettas N. Off-Pump Coronary Artery Bypass Grafting Attenuates Postoperative Bleeding Associated with Preoperative Clopidogrel Administration. *Heart Surgery Forum* 2003;6(5):282-285.
 12. Berry MF, **Woo YJ**. Repair of Acute Type A Aortic Dissection Associated with Temporal Arteritis. *Annals Thoracic Surgery* 2003;76(5):1717-1718.
 13. **Woo YJ**, Atluri P, Grand TJ, Hsu V, Gardner TJ. Should Standard On-Pump Protamine Dosing Formulas be Recalculated for Off-Pump Coronary Artery Bypass Grafting? *Heart Surgery Forum* 2004;7(1):42-44.
 14. Jayasankar V, Pirolli TJ, Bish LT, Berry MF, Burdick J, Grand T, **Woo YJ**. Targeted Overexpression of Growth Hormone by Adenoviral Gene Transfer Preserves Myocardial Function and Ventricular Geometry in Ischemic Cardiomyopathy. *J Molec Cell Cardiol* 2004;36(4):531-538. [Cover Article]
 15. **Woo YJ**, Taylor MD, Cohen JE, Jayasankar V, Bish LT, Burdick J, Pirolli TJ, Berry MF, Hsu V, Grand T. Ethyl Pyruvate Preserves Cardiac Function and Attenuates Oxidative Injury After Prolonged Myocardial Ischemia. *J Thoracic Cardiovasc Surg* 2004;127(5):1262-1269.
 16. Jayasankar V, Bish LT, Pirolli TJ, Berry MF, Burdick J, **Woo YJ**. Local Myocardial Overexpression of Growth Hormone Attenuates Postinfarction Remodeling and Preserves Cardiac Function. *Annals Thoracic Surg* 2004;77(6):2122-2129; Discussion 2129.

17. Berry MF, Pirolli TJ, Jayasankar V, Burdick J, Morine KJ, Gardner TJ, **Woo YJ**. Apelin Has In Vivo Inotropic Effects on Normal and Failing Hearts. *Circulation* 2004;110(11):187-193.
18. Jayasankar V, **Woo YJ**, Bish LT, Pirolli TJ, Berry MF, Burdick JW, Bhalla RC, Sharma RV, Gardner TJ, Sweeney HL. Inhibition of Matrix Metalloproteinase Activity by TIMP-1 Gene Transfer Effectively Treats Ischemic Cardiomyopathy. *Circulation* 2004;110(11):180-186.
19. Moise MA, Hsu V, Braslow B, **Woo YJ**. Innominate Artery Transection in the Setting of a Bovine Arch. *J Thoracic Cardiovasc Surg* 2004;128(4):632-634.
20. Berry MF, **Woo YJ**, Pirolli TJ, Bish LT, Moise MA, Burdick JW, Morine KJ, Jayasankar V, Gardner TJ, Sweeney HL. Administration of a Tumor Necrosis Factor Inhibitor at the Time of Myocardial Infarction Attenuates the Subsequent Ventricular Remodeling. *J Heart Lung Transplant* 2004;23(9):1061-1068.
21. Berry MF, Pirolli TJ, Jayasankar V, Morine KJ, Moise MA, Fisher O, Gardner TJ, Patterson PH, **Woo YJ**. Targeted Overexpression of Leukemia Inhibitory Factor to Preserve Myocardium in a Rat Model of Postinfarction Heart Failure. *J Thoracic Cardiovasc Surg* 2004;128(6):866-875.
22. **Woo YJ**, Zhang JCL, Taylor MR, Cohen JE, Sweeney HL. One Year Transgene Expression after Adeno-Associated Virus Cardiac Gene Transfer. *International J of Cardiology* 2005;100(3):421-426.
23. Taylor MD, Grand TJ, Cohen JE, Hsu V, Liao GP, Zentko S, Berry MF, Gardner TJ, **Woo, YJ**. Ethyl Pyruvate Enhances ATP Levels, Reduces Oxidative Stress, and Preserves Cardiac Function in a Rat Model of Off-Pump Coronary Bypass. *Heart Lung Circulation* 2005;14(1):25-31.
24. Kolakowski S, **Woo YJ**. Minimally Invasive Aortic Valve Replacement Combined with Radiofrequency-Modified Maze Procedure. *J Cardiac Surg* 2005;20(2):164-166.
25. **Woo YJ**. Guest Editor. Anticoagulation Advances and Heparin-Induced Thrombocytopenia: Introduction. *Seminars in Thoracic and Cardiovasc Surg* 2005;17(1):51.
26. **Woo YJ**. Cardiac Surgery in Patients on Antiplatelet and Antithrombotic Agents. *Seminars in Thoracic and Cardiovasc Surg* 2005;17(1):66-72.
27. Jayasankar V, **Woo YJ**, Pirolli TJ, Bish LT, Berry MF, Gardner TJ, Sweeney HL. Induction of Angiogenesis and Inhibition of Apoptosis by Hepatocyte Growth Factor Effectively Treats Postischemic Heart Failure. *J Cardiac Surg* 2005;20(1):93-101.

28. **Woo YJ**, Atluri P, Grand TJ, Hsu V, Cheung AT. Active Thermoregulation Improves Outcome of Off-Pump Coronary Artery Bypass. *Asian Cardiovascular and Thoracic Annals* 2005;13(2):157-160.
29. Hockstein NG, Nolan JP, O'Malley BW, **Woo YJ**. Robotic Microlaryngeal Surgery: A Technical Feasibility Study Using the daVinci Surgical Robot and an Airway Mannequin. *The Laryngoscope* 2005;115(5):780-785.
30. **Woo YJ**, Grand TJ, Berry MF, Atluri P, Moise MA, Hsu V, Cohen J, Fisher O, Pirolli T, Burdick J, Taylor M, Zentko S, Jayasankar V, Gardner TJ, Sweeney HL. Stromal Cell-Derived Factor and Granulocyte-Monocyte Colony Stimulating Factor Form a Combined Neovascuogenic Therapy for Ischemic Cardiomyopathy. *J Thoracic Cardiovasc Surg* 2005;130(2):321-329.
31. Hockstein NG, Nolan JP, O'Malley BW, **Woo YJ**. Robot-Assisted Pharyngeal and Laryngeal Microsurgery: Results of Robotic Cadaver Dissections. *Laryngoscope* 2005;115(6):1003-1008.
32. **Woo YJ**, Grand TJ, Weiss SJ. Robotic Resection of Aortic Valve Papillary Fibroelastoma. *Annals Thoracic Surgery* 2005;80(3):1100-1102.
33. Grossi EA, Saunders PC, **Woo YJ**, Gangahar DM, Lashinger JC, Kress DC, Caskey MP, Schwartz CF, Wudel J. Intraoperative Effects of the Coapsys Annuloplasty System in a Randomized Evaluation (RESTOR-MV) of Functional Ischemic Mitral Regurgitation. *Annals Thoracic Surgery* 2005;80(5):1706-1711.
34. Berry MF, McGarvey ML, Zeng L, **Woo YJ**, Neurological Monitoring and Off-Pump Surgery in a Very High-Risk Stroke Patient. *Annals Thoracic Surgery* 2005;80(6):2372-2374.
35. **Woo YJ**, Grand TJ, Zentko S, Cohen JE, Hsu V, Atluri P, Berry MF, Taylor MD, Moise MA, Burdick J, Fisher O, Kolakowski S. Creatine Phosphate Administration Preserves Myocardial Function in a Model of Off-Pump Coronary Revascularization. *J Cardiovasc Surg* 2005;46(3):297-305.
36. Cohen JE, Atluri P, Taylor MD, Grand TJ, Liao GP, Panlilio CM, Suarez EE, Zentko SE, Hsu VM, Berry MF, Smith MJ, Gardner TJ, Sweeney HL, **Woo YJ**. Fructose 1,6-Diphosphate Administration Attenuates Post-Ischemic Ventricular Dysfunction. *Heart Lung and Circulation* 2006;15(2):119-123.
37. Meijia VM, **Woo YJ**, Herrmann HC. Left Main Coronary Embolism. *J Invasive Cardiology* 2006;18(6):296.

38. Berry MF, Engler AJ, **Woo YJ**, Pirolli TJ, Bish LT, Bell P, Jayasankar V, Morine KJ, Gardner TJ, Discher DE, Sweeney HL. Mesenchymal Stem cell Injection after Myocardial Infarction Improves Myocardial Compliance. *American Journal of Physiology* 2006;290(6):H2196-2203.
39. Leshnower BG, Gleason TG, OHara ML, Pochettino A, **Woo YJ**, Morris RJ, Gardner TJ, Acker MA. Safety and Efficacy of Left Ventricular Assist Device Support in Postmyocardial Infarction Cardiogenic Shock. *Annals of Thoracic Surgery* 2006;81(4):1365-1371.
40. Atluri P, Liao GP, Panlilio CM, Hsu V, Leskowitz MJ, Morine KJ, Cohen JE, Berry MF, Suarez EE, Murphy DA, Lee WMF, Gardner TJ, Sweeney HL, **Woo YJ**. Neovasculogenic therapy to augment perfusion and preserve viability in ischemic cardiomyopathy. *Annals of Thoracic Surgery* 2006;81(5):1728-1737.
41. Grossi EA, **Woo YJ**, Gangahar DM, Subramanian VA, Patel N, Wudel J, Schwartz C, Singh A, Davis RD. Comparison of Coapsys annuloplasty and Internal Reduction Mitral Annuloplasty in the randomized treatment of functional ischemic mitral regurgitation: Impact on the Left Ventricle. *J Thorac and Cardiovasc Surg* 2006;131(5):1095-1098.
42. Floyd TF, Shah PN, Price CC, Harris F, Ratcliffe SJ, Acker MA, Bavaria JE, **Woo YJ**, Rahmouni H, Kuersten B, Wieggers S, McGarvey ML, Pochettino A, Melhem ER. Clinically silent cerebral ischemic events after cardiac surgery: Their incidence, regional vascular occurrence, and procedural dependence. *Annals of Thoracic Surgery* 2006;81:2160-2166.
43. **Woo YJ**, Panlilio CM, Cheng RK, Liao GP, Atluri P, Cohen JE, Chaudhry HW. Therapeutic delivery of cyclin A2 induces myocardial regeneration and enhances cardiac function in ischemic heart failure. *Circulation* 2006;114(1):206-213.
44. Suarez E, Keane M, **Woo YJ**. Combined Dor Ventriculoplasty and Aortic Valve Replacement in the Treatment of Post Infarction Ventricular Aneurysm and Aortic Regurgitation. *J Cardiac Surg* 2006;21(5):486-488.
45. **Woo YJ**, Nacke EA. Robotic minimally invasive mitral valve reconstruction yields less blood product transfusion and shorter length of stay. *Surgery* 2006;140(2):263-267.
46. Woo EY, Bavaria JE, Carpenter JC, Velazquez OC, Gleason TG, Pochettino A, **Woo YJ**, Fairman RM. Techniques for preserving vertebral artery perfusion during thoracic aortic stent grafting requiring aortic arch landing. *Vascular Endovascular Therapy* 2006;40(5):367-373.

47. **Woo YJ**, Grand TJ, Liao GP, Panlilio CM. Off-pump revascularization for significant left ventricular dysfunction. *Asian Cardiovascular and Thoracic Annals* 2006;14(4):306-309.
48. **Woo YJ**. Robotic cardiac surgery. *Int J Medical Robotics and Computer Assist Surg* 2006;2(3):225-232.
49. Kolakowski S, Berry MF, Grand TJ, Fisher O, Moise MA, Cohen JE, Hsu V, Atluri P, **Woo YJ**. Placental growth factor provides a novel local angiogenic therapy for ischemic cardiomyopathy. *J Cardiac Surg* 2006;21(6):559-564.
50. **Woo YJ**, Rodriguez E, Atluri P, Chitwood WR. Minimally-invasive, robotic, and off-pump mitral valve surgery. *Seminars in Thoracic and Cardiovasc Surg* 2006;18(2):139-147.
51. Hsu VM, Atluri P, Keane M, **Woo YJ**. Minimally invasive aortic valve papillary fibroelastoma resection. *Interact Cardiovasc and Thoracic Surgery* 2006;5:779-781.
52. **Woo YJ**. Advances in Type A Aortic Dissection. *Vascular Specialist* 2006;2:13.
53. Atluri P, Morine KJ, Liao GP, Panlilio CM, Berry MF, Hsu VM, Hiesinger W, Cohen JE, **Woo YJ**. Ischemic heart failure enhances endogenous myocardial apelin and APJ receptor expression. *Cellular & Molecular Biology Letters* 2007;12:127-138.
54. Floyd TF, Ratcliffe SJ, Detre JA, **Woo YJ**, Wang JJ, Acker MA, Bavaria JE, Resh BF, Pochettino A, and Eckenhoff RA. Integrity of the cerebral blood-flow response to hyperoxia after cardiopulmonary bypass. *J Cardiothorac and Vasc Anes* 2007;21(2):212-217.
55. Atluri P, **Woo YJ**. High-Risk Repair of Ascending Aortic Aneurysm Due to Giant Cell Aortitis. *Asian Cardiovascular and Thoracic Annals* 2007;15(3):252-254.
56. **Woo YJ**, Panlilio CM, Cheng RK, Liao GP, Suarez EE, Atluri P, Chaudhry HW. Myocardial regeneration therapy for ischemic cardiomyopathy with cyclin A2. *J Thoracic Cardiovasc Surg* 2007;133(4):927-933.
57. Giersson A, Szeto WY, Pochettino A, McGarvery ML, Keane MG, **Woo YJ**, Augoustides JG, Bavaria JE. Significance of malperfusion syndromes prior to contemporary surgical repair for type A dissection: outcomes and need for additional revascularizations. *Eur J Cardiothoracic Surg* 2007;32(2):255-262.
58. Kim RW, Jeffery M, Smith M, Wilensky R, Woo EY, **Woo YJ**. Minimally invasive resection of papillary fibroelastoma in a high-risk patient. *J Cardiovasc Medicine* 2007;8(8):639-641.

59. Ahya VN, Douglas L, Charalambos A, Arnoldi S, Svoboda J, Kotloff RM, Hadjiliadis D, Christie JD, **Woo YJ**, Pochettino A, Schuster SJ, Stadtmauer EA, Tsai DE. Association between elevated whole blood Epstein-Barr Virus(EBV)-Encoded RNAEBV Polymerase Chain Reaction and reduced incidence of acute lung allograft rejection. *J Heart and Lung Transplantation* 2007;26(8):839-844.
60. Geirsson A, Bavaria JE, Swarr D, Keane MG, **Woo YJ**, Szeto WY, Pochettino A. Fate of the residual distal and proximal aorta after acute type A dissection repair using a contemporary surgical reconstruction algorithm. *Ann Thorac Surg* 2007;84(6):1955-1964; Discussion 1964.
61. Mikkelsen ME, Pugh ME, Hansen-Flaschen JH, **Woo YJ**, Sager JS. Emergency extracorporeal life support for asphyxic status asthmaticus. *Respiratory Care* 2007;52(11):1525-1529.
62. **Woo YJ**. Guest Editor. Minimal-Incision Cardiac Surgery: Introduction. *Seminars in Thoracic and Cardiovasc Surg* 2007;19(4):279-280.
63. **Woo YJ**, Seeburger J, Mohr FW. Minimally invasive valve surgery. *Seminars in Thoracic and Cardiovasc Surg* 2007;19(4):289-298.
64. Atluri P, Panlilio CM, Liao GP, Suarez EE, McCormick RC, Hiesinger W, Cohen JE, Smith MJ, Patel AB, Feng W, **Woo YJ**. Transmyocardial revascularization to enhance myocardial vasculogenesis and hemodynamic function. *J Thoracic Cardiovasc Surg* 2008;135(2):283-291.
65. Reade CC, Morris RJ, Acker MA, Jessup M, Banbury MK, **Woo YJ**. Acute myocardial infarction requiring mechanical bridge to transplantation in a patient with undiagnosed anti-phospholipid antibody syndrome. *J Heart Lung Transplant* 2008;27(6):682-684.
66. Messe SR, Bavaria JE, Mullen M, Cheung AT, Davis R, Augoustides JG, Gutsche J, Woo EY, Szeto WY, Pochettino A, **Woo YJ**, Kasner SE, McGarvey M. Neurologic outcomes from high risk descending thoracic and thoracoabdominal aortic operations in the era of endovascular repair. *Neurocritical Care* 2008;9(3):344-351.
67. Atluri P, Hiesinger W, Gorman RC, Pochettino A, Jessup M, Acker MA, Morris RJ, **Woo YJ**. Cardiac retransplantation is an efficacious therapy for primary cardiac allograft failure. *J Cardiothor Surg* 2008;3:26-30.
68. Atluri P and **Woo YJ**. Pro-angiogenic cytokines as cardiovascular therapeutics: Assessing the potential. *BioDrugs* 2008;22(4):209-222.

69. Fitzpatrick JR, Frederick JR, Hsu VM, Kozin ED, O'Hara ML, Howell E, McCormick RC, Laporte CM, Cohen JE, Southerland KW, Howard JL, Jessup ML, Morris RJ, Acker MA, **Woo YJ**. Risk Score Derived from Pre-operative Data Analysis Predicts the Need for Biventricular Mechanical Circulatory Support. *J Heart and Lung Transplantation* 2008;27(12):1286-1292.
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414. Zhu Y, Yajima S, Wilkerson RJ, Park MH, Kim JY, Pandya PK, **Woo YJ**. Anterior

- Pericardial Patch Augmentation Repair and Neochord Implantation of Rheumatic Mitral Valves. *Annals of Thoracic Surgery* 2023 (accepted)
415. Zhu Y, **Woo YJ**. Has Personalized Surgery Made Another Advancement in Aortic Root Surgery? *Heart* 2023 (accepted)
416. Krishnan A, Kasinpila P, Wang H, Chawannuch R, Jackson E, **Woo YJ**. First-in-Human Transplant from a Donation after Cardiac Death Donor. *JTCVS Techniques* 2023 (accepted)
417. Stapleton LM, Farry JM, Zhu Y, Lucian HJ, Wang H, Paulsen MJ, Totherow KP, Roth GA, Brower KK, Fordyce PM, Appel EA, **Woo YJ**. Microfluidic Encapsulation of Photosynthetic Cyanobacteria in Hydrogel Microparticles Augments Oxygen Delivery to Rescue Ischemic Myocardium. *J Bioscience and Bioengineering*. 2023 (accepted)
418. Zhu Y, Paulsen MJ, **Woo YJ**. American One-Cut Ascending and Aortic Root Resection Technique. *JTCVS Techniques* 2023 (accepted)

Contributions to Peer-Reviewed Clinical Research Publications, Participation Cited by Name:

1. Wang P, Acker MA, Bilello M, Melham ER, Stambrook E, Ratcliffe SJ, Floyd TF, and for the **DENOVO (Determining neurologic Outcomes from Valve Operations) Investigators**. Sex, Aging, and Preexisting Cerebral Ischemic Disease in Patients with Aortic Stenosis. *Ann Thorac Surg* 2010 October; 90(4):1230-1235.
2. Christie JD, Chah CV, Kawut SM, Mangalmurti N, Lederer DJ, Sonett JR, Ahya VN, Palmer SM, Wille K, Lama V, Shah PD, Shah A, Weinaker A, Deutschman CS, Kohl BA, Demisse E, Bellamy S, Ware B, for the **Lung Transplant Outcomes Group**. Plasma Levels of Receptor for Advanced Glycation End products, Blood Transfusion, and Risk of Primary Graft Dysfunction. *Am J Resp & Crit Care Med* 2009;180(10):1010-1015.
3. Lederer DJ, Kawut SM, Wickersham N, Winterbottom C, Bhorade S, Palmer SM, Lee J, Diamond JM, Wille KM, Weinacker A, Lama VN, Crespo M, Orens JB, Sonett JR, Arcasoy SM, Ware LB, and Christie JD, for the **Lung Transplant Outcomes Group**. Obesity and Primary Graft Dysfunction after Lung Transplantation: The Lung Transplant Outcomes Group Obesity Study. *Am J Resp & Crit Care Med* 2011; 184: 1054-1061.
4. Feldman T, Foster E, Glower DD, Kar S, Rinaldi MJ, Fail PS, Smalling RW, Siegel R, Rose GA, Engeron E, Loghin C, Trento A, Skipper ER, Fudge T, Letsou GV, Massaro

- JM, Mauri L; **EVEREST II Investigators**. Percutaneous Repair or Surgery for Mitral Regurgitation. *New England Journal of Medicine* 2011;364:1395-1406.
5. Messé SR, Acker MA, Kasner SE, Fanning M, Giovannetti T, Ratcliffe SJ, Bilello M, Szeto WY, Bavaria JE, Hargrove WC 3rd, Mohler ER 3rd, Floyd TF; **Determining Neurologic Outcomes from Valve Operations (DeNOVO) Investigators**. Stroke After Aortic Valve Surgery: Results From a Prospective Cohort. *Circulation* 2014 Jun;129(22):2253-2261.
 6. Gulack BC, Kirkwood KA, Shi W, Smith PK, Alexander JH, Burks SG, Gelins AC, Thourani VH, Bell D, Greenberg A, Goldfarb SD, Mayer ML, Bowdish ME, **Cardiothoracic Surgical Trials Network Collaborators**. Secondary Surgical-Site Infection After Coronary Bypass Grafting: A Multi-Institutional Prospective Cohort Study. *J Thorac Cardiovasc Surg* 2018 Apr;155(4):1555-1562.
 7. Blackstone EH, Chang HL, Rajeswaran J, Parides MK, Ishwaran H, Li L, EhrlingerJ Gelijins AC, Moskowitz AJ, Argenziano M, DeRose JJ, Couderic JP, Balda D, Dagenais F, Mack MJ, Ailawadi G, Smith PK, Acker MA, O’Gara PT, Gillinov AM, **Cardiothoracic Surgical Trials Network Investigators**. Biatrial Maze Procedure versus Pumonary Vein Isolation for Atrial Fibrillation During Mitral Valve Surgery: New Analytical Approaches and End Points. *J Thorac Cardiovasc Surg* 2019 Jan;157(1):234-243.
 8. DeRose JJ, Mancini DM, Chang HL, Argenziano M, Dagenais F, Ailawadi G, Perrault LP, Parides MK, Taddei-Peters WC, Mack MJ, Glower DD, Babatunde AY, Atluri P, Mullen JC, Puskas JD, O’Sullivan K, Sledz NM, Tremblay H, Moquete E, Ferket BS, Moskowitz AJ, Irbarne A, Gelijns AC, O’Gara PT, Blackstone EH, Gillinov AM, for the **CTSN Investigators**. Pacemaker Implantation after Mitral Valve Surgery with Atrial Fibrillation Ablation. *J Amer Coll Cardiol* 2019 May 21;73(19):2427-2435.

Chapters:

1. **Woo YJ**, Bavaria JE, Mohler ER. Clinical features and diagnosis of thoracic aortic aneurysm. Up-to-Date 1999
2. **Woo YJ**, Bavaria JE, Mohler ER. Management and outcome of thoracic aortic aneurysm. Up-to-Date 1999
3. **Woo YJ** and Gardner TJ. Myocardial Revascularization with Cardiopulmonary Bypass. *Cardiac Surgery in the Adult*, Second Edition. L. Cohn, Ed., 2003, Chapter 21, p581-607.

4. Atluri P and **Woo YJ**. Cardiovascular System. The Surgical Review, Second Edition, P. Atluri, Ed. 2005, Chapter 21 p308-322.
5. Atluri P and **Woo YJ**. Cardiovascular Disease and Cardiac Surgery. The Surgical Review, Third Edition, P. Porrett Ed. 2010, Chapter 19 p265-288.
6. Hiesinger W and **Woo YJ**. Angiogenic Cytokine Therapy for Ischemic Heart Disease. Cytokines, V. Preedy and R Hunter Ed. 2011, Chapter 17, p251-278.
7. Frederick JR and **Woo YJ**. Aortic Root Replacement with Tissue Valved Conduits. Cardiothoracic Surgery Review, K. Franco Ed. 2012, Chapter 71, p330-333.
8. Goldstone AB, **Woo YJ**. Surgical Treatment of the Mitral Valve. Sabiston and Spencer's Surgery of the Chest 9th Edition. F Sellke, P del Nido, and S Swanson Ed. 2016, Chapter 80, p1384-1429.
9. Paulsen M, **Woo YJ**. Angiogenic Cytokines in the Treatment of Ischemic Heart Disease. In Engineering Stems Cells for Tissue Regeneration, N Huang, N L'Heureux, S Li Ed. 2018, Chapter 7, p161-184.
10. **Woo YJ**. Mitral Valve Replacement. Current Therapy in Thoracic and Cardiovascular Surgery 2nd Edition. D Cameron and S Yang Ed. 2018 (in press)

University Visiting Professorships/Lectureships--National

1. University of Connecticut Health Center, Farmington CT, October 19, 2005, "Cardiac Surgery State-of-the-Art"
2. University of California at San Francisco Cardiothoracic Surgery Grand Rounds, San Francisco CA, February 15, 2007, "Advances in Minimally Invasive Cardiovascular Surgery"
3. Oregon Health Sciences University, Portland OR, September 10, 2008, "Extreme Bioprosthetic Valve Surgery"
4. Distinguished Visiting Professor of Surgical Sciences, Emory University School of Medicine, Atlanta, GA, May 20, 2010. Department of Surgery Grand Rounds Lecture "A New Paradigm in Cardiovascular Surgery: Rebuilding the Heart from Native Components---Scientific Research and Clinical Advances" Judged Research Day Competition.

5. Loma Linda University Department of Surgery Grand Rounds, Loma Linda CA, January 19, 2011, “Complex Aortic and Mitral Valve Repair Surgery”
6. Visiting Professor, SUNY Stony Brook, Stony Brook NY, Dec 7, 2011. Department of Surgery Grand Rounds Lecture “Re-engineering the Gold Standards for Cardiovascular Surgery: New Operations for a New Era.” Moderated Resident Research Presentations.
7. Harvard Medical School Center for Regenerative Medicine, Boston MA, March 5, 2014, “Endogenous Myocardial Regeneration”
8. University of Michigan Department of Cardiovascular Surgery Grand Rounds, Ann Arbor MI, December 4, 2014, “Clinical and Scientific Advances in Native Cardiac Reconstruction”
9. Frontiers in Research Lecturer, Heart Institute, Cedars-Sinai Medical Center, Los Angeles CA, December 16, 2014, “Basic Translational and Clinical Advances in Natural Cardiac Repair”
10. University of California San Diego, Cardiovascular Grand Rounds, San Diego CA, April 1, 2016, “Biologic and Mechanical Reconstruction of the Heart”
11. Evarts Graham Visiting Professor, University of Texas Houston, Houston TX, April 6, 2016, “Innovative Minimally Invasive and Biologic Approaches to Cardiac Disease” and ICU Rounds.
12. Richard J. Cleveland Visiting Professor, Tufts University, Boston MA “Bridging Science to Surgery in Cardiovascular Disease” May 19, 2016.
13. The Karl P. Klassen Lecture. Klassen Research Day, The Ohio State University, Columbus OH, “Science and Surgery on the Journey to Repair the Heart from Within” May 18, 2017.
14. Rhode Island Hospital Cardiology Grand Rounds, “Complex Aortic and Mitral Valvular Repair Surgery” and Providence VA Hospital Cardiopulmonary Vascular Biology Seminar Series, “Complementary Biologic and Surgical Strategies to Regenerate and Reconstruct the Heart”, Brown University, June 16, 2017.
15. Cleveland Clinic Foundation Cardiovascular Surgery Visiting Professor, “New Insights in Aortic and Mitral Valve Repair Surgery” Cleveland OH, July 10, 2019.
16. The Champ Lyons Medical History Lectureship, University of Alabama at Birmingham, Department of Surgery, “Norman Shumway and His Stanford Trainees” Birmingham AL, November 19, 2019.

17. Columbia University Department of Surgery 2020 Research Symposium Keynote Lecturer, “Unifying Basic Science, Engineering, and Surgery in Cardiovascular Disease Therapy” Virtual October 30, 2020.
18. University of Pennsylvania Department of Surgery 2021 Julius A. Mackie Lecturer, “The Sun Rises in the West” Virtual May 20, 2021.
19. Harvard, Massachusetts General Brigham and Women’s Hospital, Division of Thoracic and Cardiac Surgery, Lawrence Cohn Visiting Professor, “Cold Fusion: The Energetic Convergence of Cardiovascular Surgery and Bioengineering in the Operating Room” Boston MA, June 1, 2022.
20. Baylor University, Michael E. DeBakey Distinguished Lecturer, “Innovation in Cardiovascular Surgery and Science: Finding Inspiration Around Us in the Usual and Unusual Places” Houston TX, Nov 9, 2022.

International Visiting Professorships

1. Visiting Professor, National Heart Center of Malaysia, Kuala Lumpur, Malaysia, March 3, 2009. Lecture on “Advanced Valve Repair Surgery ” and Clinical Teaching Rounds.
2. Visiting Professor, Yonsei University Medical Center, Seoul Korea, August 31, 2009. Lecture on “Advanced Aortic Surgery and TEVAR,” Clinical Rounds and Observation of Minimally Invasive Mitral Valve Repair in Operating Room.
3. Visiting Professor, Osaka University, Osaka Japan, September 7, 2010. Lecture on “Complex Aortic Valve Repair and Root Reconstruction” and Clinical Teaching Rounds with Focus on rounding on multiple patients with multiple configurations of mechanical circulatory support with adjunctive tissue engineered stem cell sheet implantation to facilitate ventricular recovery.
4. Anthony P.C. Yim Visiting Professor, Chinese University of Hong Kong, Hong Kong, China, May 15, 2015. Lecture on “Developing into a Minimally Invasive Heart Surgeon”, Clinical Rounds, Research Rounds.
5. Wilfred G. Bigelow Visiting Professor, University of Toronto, Toronto Canada “Are Surgeons Going Green? The Quest for Natural Reconstruction, Recovery, and Renewables” October 7, 2016
6. Visiting Professor, Freiburg University, Freiburg Germany, “Cardiovascular Surgical Sustainability: Repairing and Regenerating” October 26, 2017.

7. Collins Visiting Professor, University of Ottawa, Ottawa Canada, “Researching and Designing the Next Generation of Surgical Therapy: Natural Reconstruction” May 11, 2018.

International Visiting Professor and Surgeon by Invitation to Perform Live Demonstration Surgery (China, Taiwan, India, Japan, Thailand, Vietnam, Malaysia, Russia):

1. Xiangya University School of Medicine, Changsha, China, September 14, 2005. Lecture: “Cardiac Surgery at the Cutting Edge” Rounds in ICU and Ward. Performed live demonstration surgery: Off-Pump CABG and Aortic Valve Replacement.
2. Xinjiang Medical University and Xinjiang Air Force Hospital, Urumqi, China, September 19, 2005. Lecture: “Emerging Techniques in Complex Adult Cardiac Surgery” Rounds in ICU and Ward. Performed live demonstration surgery: Off-Pump CABG and Mitral Valve Replacement.
3. National Defense Medical Center, Tri-Service General Hospital, Taipei, Taiwan, December 2, 2005. Lecture: “Advanced Surgical and Biologic Approaches to Cardiovascular Disease” Performed live demonstration surgery: Off-Pump CABG.
4. Shenyang Northern Hospital, Shenyang, China, July 2, 2006. Lecture: “Cardiovascular Surgery Advances” Rounds on Ward. Performed live demonstration surgery, also videocast to conference hall: Mitral Valve Replacement and Atrial Fibrillation BiAtrial MAZE.
5. Xiangya 1st Hospital, Central South University, Changsha, China, July 4, 2006. Lecture and Performed Off-Pump CABG.
6. Xiangya 2nd Hospital, Changsha, China, July 5, 2006 Lecture and Performed Double Valve Replacement(Aortic/Mitral)
7. Sun Yat Sen Hospital, Shenzhen, China, July 6, 2006. Lecture, Teaching Rounds, and Performed Mitral Valve Replacement and Atrial Fibrillation BiAtrial MAZE.
8. Lanzhou University, Lanzhou, China, November 19, 2007. Lecture and Performed Redo Mitral Valve Replacement and Mitral Valve Replacement.
9. Xian High-Tech Hospital, Xian, China, November 21, 2007. Lecture and Performed Mitral Valve Replacement.

10. Guangdong Provincial Hospital, Guangzhou, China, November 23, 2007. Lecture and Performed ASD Repair/Tricuspid Repair/Atrial Fibrillation BiAtrial MAZE and then Mitral Valve Replacement/Tricuspid Valve Repair/Atrial Fibrillation BiAtrial MAZE.
11. Zhengzhou University, Zhengzhou, China, Invited Visiting Professor, Lecture on Robotic Surgery and Performed Mitral Valve Repair (Posterior Leaflet Remodeling)/Tricuspid Valve Repair/Atrial Fibrillation BiAtrial MAZE, November 23, 2008.
12. Henan Provincial Hospital, Zhengzhou, China, Lecture on Atrial Fibrillation Surgery and Performed Aortic Valve Replacement/Mitral Valve Replacement/Tricuspid Valve Repair/Atrial Fibrillation BiAtrial MAZE, November 24, 2008.
13. China Medical University, Shenyang, China, Lecture on Minimally Invasive CABG and Performed Mitral Valve Replacement/ Atrial Fibrillation BiAtrial MAZE, November 26, 2008
14. Zhejiang Provincial People's Hospital, Hangzhou, China, Lecture on Advances in Cardiac Surgery and Performed Performed Aortic Valve Replacement/Mitral Valve Replacement/Atrial Fibrillation BiAtrial MAZE, December 2, 2008.
15. Wuhan Union Hospital, Wuhan, China, Lecture on Minimally Invasive Cardiac Surgery and Lung Transplantation and Performed Off-Pump CABG and Mitral Valve Replacement/Tricuspid Valve Repair, December 3, 2008.
16. Zhejiang Sir Run Run Shaw Hospital, Hangzhou, China, Lecture on Concomitant Atrial Fibrillation and Complex Mitral Valve Surgery and Performed Atrial Fibrillation Ablation and Mitral Valve Replacement, June 9, 2009.
17. Medical University of People's Liberation Army Third Affiliated Hospital Xinqiao, Chongqing, China, Lecture on Complex Valve Surgery and Performed Mitral Valve Replacement, June 11, 2009.
18. Kunming Medical University, Kunming, China, Honorary Professorship, Performed Mitral Valve Replacement, June 15, 2009.
19. Krishna Institute of Medical Sciences, Hyderabad India, Performed Two Minimally Invasive Mitral Valve Repairs, (Anterior Leaflet Remodeling), May 24, 2011.
20. Keio University Medical Center, Tokyo Japan, Performed Minimally Invasive Mitral Valve Repair (Bileaflet Reconstruction), October 7, 2011.
21. Lampang Hospital, Lampang Thailand, Lecture on Aortic Valve Surgery and Performed Aortic Valve Replacement and Aortic Valve Replacement/Mitral Valve Replacement/Atrial Fibrillation MAZE, February 18, 2013.

22. ChiangMai University, ChiangMai Thailand, Lecture on Complex Aortic Valve Surgery. Performed Emergency Type A Aortic Dissection Repair with Total Arch Replacement Under Deep Hypothermic Circulatory Arrest with Antegrade and Retrograde Cerebral Perfusion. Performed Minimally Invasive Aortic Valve Replacement case and Minimally Invasive Complex Mitral Repair case. February 18 and 19, 2013.
23. Tam Duc Hospital, Ho Chi Minh City (Saigon) Vietnam, Rounds on Thoracic Aortic Pathology Patients. Treated patient with prosthetic aortic valve endocarditis, aortic root abscess, anomalous right coronary artery, and asymmetric ventricular septal hypertrophy by performing Redo Aortic Root Replacement, Annular Reconstruction, Ventricular Septal Myomectomy, CABG. December 9, 2013.
24. Cho Ray Hospital, Ho Chi Minh City Vietnam, Lecture on Complex Aortic And Valve Surgery. Performed Aortic Valve Replacement. December 10, 2013.
25. Tam Duc Hospital, Ho Chi Minh City Vietnam. Asked to evaluate complex patient felt to be inoperable by all regional surgeons consulted in Ho Chi Minh City area. Also deemed inoperable by four separate visiting foreign surgeons, from UK, France, Belgium and Australia. 18 year old patient with congenital aortic stenosis underwent aortic valve replacement, developed prosthetic valve endocarditis, under redo aortic root replacement. The right coronary button subsequently dehiscd and pt underwent transcather coil emboloziation attempt followed by transcatheter placement of Amplatzer ASD closure device to attempt control of aortic fistula into pseudoaneurysm. Aortic root subsequently dehiscd and pseudoaneurysm grew to 17cm with erosion into sternum. Patient also developed left ventricular dysfunction from para-aortic regurgitation and then developed severe mitral regurgitation. I performed Third Time Redo, Circulatory Arrest Prior to Sternotomy, Transaortic Mitral Valve Replacement, Cabrol Aortic Root Replacement, Arch Reconstruction under Deep Hypothermic Circulatory Arrest, December 10, 2013.
26. Sertang Hospital, Putrajaya Malaysia, Lecture on Valve Sparing Aortic Root Replacement, Performed David 5 Valve Sparing Root Replacement + Aortic Valve Leaflet Repair + CABGx3 on 48 year old patient with 6cm aortic root aneurysm, severe eccentric aortic valve regurgitation, and multivessel CAD. Performed two minimally-invasive aortic valve replacement operations. December 12,13, 2013.
27. Central Chest Institute, Nonthaburi Thailand, Performed Two Cases of Mitral Valve Repair, Anterior Leaflet Nechoardal Reconstruction and Posterior Leaflet Ventricular Anchoring Nechoard with Remodeling, August 21 and 22, 2017.
28. Interregional Clinical Diagnostic Center, Kazan Medical University, Kazan, Russia Performed Left Ventricular Aneurysm Repair, Mitral Valve Repair, Tricuspid Valve Repair, and Coronary Artery Bypass Grafting on patient with severe ischemic cardiomyopathy. October 23, 2017.

Lectures by Invitation:

International:

1. “Minimally Invasive and Robotic Cardiac Surgery” Il Congresso Medico UNIMED Paulistana, Sao Paulo, Brazil, May 19, 2005.
2. “Advanced Techniques in Mitral Valve Reconstruction” Il Congresso Medico UNIMED Paulistana, Sao Paulo, Brazil, May 20, 2005.
3. “Robotic Coronary Artery Bypass Grafting: State of the Art” Fifth Annual International Symposium on Minimally Invasive Coronary Artery Bypass Grafting, Nanjing University, Nanjing, China, June 11, 2005.
4. “Advanced Technologies in Cardiac Surgery” Wuhan Asia Heart Hospital Grand Rounds, Wuhan, China, June 14, 2005.
5. “Robotic and Minimally Invasive Surgical Technology” Shandong Provincial Hospital, Jinan, China, June 15, 2005.
6. “Emerging Operative Strategies and Biologic Therapies for Heart Failure” International Heart Forum, Beijing, China, September 17, 2005. Chinese Circulation Journal 2005;20:2.
7. “Latest Advances in Valve Reconstruction” Sixth Annual International Symposium on Minimally Invasive Cardiac Surgery, Nanjing University, Nanjing, China, May 26, 2006.
8. “New Paradigms in Biologic Therapies for Cardiovascular Surgical Diseases” International Society for Minimally Invasive Cardiothoracic Surgery/Australasian Society for Cardiac and Thoracic Surgeons Joint Meeting, Cairns Australia, October 26, 2006.
9. “Off-Pump Repair of Ischemic Mitral Regurgitation during OPCAB” Japanese Coronary Artery Society 12th Annual Meeting, Tokyo Japan July 14, 2007.
10. “Tricks for OPCAB Grafting of Circumflex Branches” Japanese Coronary Artery Society 12th Annual Meeting, Tokyo Japan July 15, 2007.
11. Invited Discussant for: “Novel Bio-Engineered Small Caliber Vascular Graft Incorporating Heparin and Sirolimus: Excellent 6 Month Patency” Japanese Coronary Artery Society 12th Annual Meeting, Tokyo Japan July 15, 2007.

12. “What is the Ideal CABG and Best Graft Combination?” Japanese Coronary Artery Society 12th Annual Meeting, Tokyo Japan July 15, 2007.
13. “Biosurgical Myocardial Repair for Cardiovascular Disease” 1st Coronary Artery Surgery International Forum, Tokyo Japan July 15, 2007.
14. “Novel Endogenous Myocardial Repair Strategies for the Treatment of Heart Failure.” International Academy of Cardiology 13th World Congress on Heart Disease, Vancouver Canada, July 29, 2007.
15. “Early Career Development in Cardiac Surgery” Young Surgeon’s Forum, Chinese Society for Thoracic and Cardiovascular Surgery, Suzhou China, November 15, 2007.
16. “Academic Cardiac Surgery” Chinese Society for Thoracic and Cardiovascular Surgery, Suzhou China, November 16, 2007.
17. “Optimizing Atrial Fibrillation Surgery” Chinese Society for Thoracic and Cardiovascular Surgery, Suzhou China, November 17, 2007.
18. “Early Revascularization after Acute Myocardial Infarction.” American Association for Thoracic Surgery Postgraduate Course, Singapore, March 13, 2008.
19. “Minimally Invasive and Off-Pump Mitral Valve Surgery.” Asian Society of Cardiovascular and Thoracic Surgery 16th Annual Meeting, Singapore, March 14, 2008.
20. “Valve Selection in Complex Cases.” Asian Society of Cardiovascular and Thoracic Surgery 16th Annual Meeting, Singapore, March 15, 2008.
21. “Bioprosthetic Valve Applications.” Yan An Hospital, Kunming, China, November 27, 2008.
22. “Advances in Cardiac Surgery.” Li Hui Li Hospital, Ningbo, China, December 1, 2008.
23. “Will Minimally Invasive Cardiac Surgery be the Desired Option in the Future” Society of Thoracic Surgery of Thailand 34th Annual Meeting, Bangkok Thailand, January 10, 2009.
24. “Latest Advances in Valvular Surgery” Society of Thoracic Surgery of Thailand 34th Annual Meeting, Bangkok Thailand, January 10, 2009.
25. “How to Set Up a Minimally Invasive Surgery Program” Society of Thoracic Surgery of Thailand 34th Annual Meeting, Bangkok Thailand, January 10, 2009.

26. “AortoMitral Anatomic Considerations in Reconstruction” Hospital Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia, March 3, 2009.
27. “Advanced Bioprosthetic Valve Applications” Asian Society for Cardiovascular and Thoracic Surgery 17th Annual Meeting, Taipei Taiwan, March 5, 2009.
28. “Complex Mitral Valve Repair Techniques and Minimally Invasive Exposure: Harm or Harmony?” Asian Society for Cardiovascular and Thoracic Surgery 17th Annual Meeting, Taipei Taiwan, March 6, 2009.
29. Invited Session Chair: Tissue Valve State-of-the-Art, Asian Society for Cardiovascular and Thoracic Surgery 17th Annual Meeting, Taipei Taiwan, March 7, 2009.
30. “Neovasculogenic Tissue Engineering for Ischemic Heart Failure” Asian Society for Cardiovascular and Thoracic Surgery 17th Annual Meeting, Taipei Taiwan, March 7, 2009.
31. “Overview of Minimally Invasive Surgery: What It Is and What It Isn’t” Society of Cardiovascular Anesthesiologists 14th Annual Cardiopulmonary Bypass Meeting, Whistler, British Columbia, Canada, March 16, 2009.
32. “Implications for the Surgeon: Decision-Making Pre-and Peri-Operatively.” Society of Cardiovascular Anesthesiologists 14th Annual Cardiopulmonary Bypass Meeting, Whistler, British Columbia, Canada, March 16, 2009.
33. Debate: Optimal Perfusion Flow Rate “The Patient Does not Need That Flow” Society of Cardiovascular Anesthesiologists 14th Annual Cardiopulmonary Bypass Meeting, Whistler, British Columbia, Canada, March 17, 2009.
34. “Minimally Invasive and Robotic Cardiac Surgery.” 5th International Chinese Cardiovascular Anesthesia Forum, Hong Kong, May 2, 2009.
35. “Complex Aortic and Mitral Repair Surgery.” Shiga University of Medical Science, Shiga Japan, July 13, 2009.
36. “Innovative Advances in Valve Surgery.” Japanese Association for Coronary Artery Surgery 14th Annual Meeting, Kumamoto Japan, July 15, 2009.
37. “Emergency CABG.” Japanese Association for Coronary Artery Surgery 14th Annual Meeting, Kumamoto Japan, July 17, 2009.
38. “The Future of Off-Pump CABG.” Japanese Association for Coronary Artery Surgery 14th Annual Meeting, Kumamoto Japan, July 17, 2009.

39. “Stem Cell Therapies.” Cardiac Society of Australia and New Zealand 57th Annual Meeting Joint Congress with International Society for Heart Research, Sydney Australia, August 14, 2009.
40. “Complex Valve Reconstruction and Minimally Invasive Cardiac Surgery.” Seoul, South Korea, September 1, 2009.
41. Invited Session Chair: Young Investigator Award Competition. Tissue Engineering and Regenerative Medicine International Society World Congress, Seoul South Korea, September 2, 2009.
42. “Research In and Translational Clinical Application of Angiogenic Tissue Engineering Technology in Ischemic Heart Disease.” Tissue Engineering and Regenerative Medicine International Society World Congress, Seoul South Korea, September 3, 2009.
43. “Predicting and Managing RV Failure During LVAD Implantation” 6th Biennial Berlin Symposium on Mechanical Circulatory Support, Deutsches Herzzentrum Berlin, Germany, November 6, 2009.
44. Invited Discussant for: “Transforming growth factor-beta induces the expression of extracellular matrix molecules in myxomatous mitral valves” Arnar Geirsson MD, American Association for Thoracic Surgery 90th Annual Meeting, Toronto Canada, May 4, 2010.
45. “Moving Towards an Anticoagulation Free Mechanical Valve.” Chest Disease Institute of Thailand, Phuket Thailand, May 28, 2010.
46. “Minimally Invasive Valve Surgery.” Chest Disease Institute of Thailand, Phuket Thailand, May 28, 2010.
47. “Latest Therapies for Advanced Heart Failure.” Chest Disease Institute of Thailand, Phuket Thailand, May 29, 2010.
48. “Debate Pro: Hybrid Coronary Revascularization is Unnecessary.” Chest Disease Institute of Thailand, Phuket Thailand, May 29, 2010.
49. “CD133⁺ Stem Cell Harvest, Isolation, and Implantation Concurrent with Coronary Bypass Surgery.” European Society of Cardiology Annual Meeting, Stockholm, Sweden, August 28, 2010.
50. “Advanced VAD Operative Techniques” Japanese Society for Cardiovascular Surgery, Karuizawa Japan, September 3, 2010.

51. “Minimally Invasive and Complex Mitral Valve Surgery” Japanese Society for Cardiovascular Surgery, Karuizawa Japan, September 4, 2010.
52. “New Insights into Minimally Invasive Cardiac Surgery” Akita University, Akita Japan, September 5, 2010.
53. “Minimally Invasive Valve Surgery” Shizuoka Hospital, Shizuoka Japan, September 6, 2010.
54. “Mathematically Designed Synthetic Polypeptide Analog of Stromal Cell-Derived Factor 1alpha Functions as a Superpotent Neovascuogenic Agent for Treating Myocardial Ischemia” International Conference on Drug Discovery and Therapy, Dubai, United Arab Emirates, February 8, 2011.
55. “Pathophysiology and Mechanisms of Functional Mitral Regurgitation” Society of Cardiovascular Anesthesiologists, Whistler, BC, Canada, March 7, 2011.
56. “Protecting and Augmenting the Injured Heart” Society of Cardiovascular Anesthesiologists, Whistler, BC, Canada, March 8, 2011.
57. “Innovative Valve Reconstructive Strategies” Jaipur Heart Institute, Jaipur India, May 22, 2011.
58. “Planning for Redo Cardiac Surgery” American Association for Thoracic Surgery Postgraduate Course, Phuket Thailand, May 26, 2011.
59. “Novel Aortic and Mitral Valve Repair Surgical Techniques” Asian Society for Cardiovascular Surgery and Asian Thoracic and Cardiovascular Association Joint Meeting, Phuket Thailand May 26, 2011.
60. Invited Judge and Commentator for Furuse Award Competition, Asian Society for Cardiovascular Surgery and Asian Thoracic and Cardiovascular Association Joint Meeting, Phuket Thailand May 28, 2011.
61. “Minimally Invasive Mitral Valve Surgery” Asian Society for Cardiovascular Surgery and Asian Thoracic and Cardiovascular Association Joint Meeting, Phuket Thailand May 28, 2011.
62. “Complex Aortic and Mitral Repair Surgery” Tokyo Medical and Dental University, Tokyo Japan, October 6, 2011.
63. “The Future of Cardiovascular Surgery” Kanagawa University, Yokohama Japan, October 6, 2011.

64. “Minimally Invasive Valve Surgery” Keio University, Tokyo Japan, October 7, 2011.
65. “Minimally Invasive Mitral Valve Replacement” Japanese Association for Thoracic Surgery 64th Annual Meeting, Nagoya Japan, October 11, 2011.
66. “Minimally Invasive Aortic Valve Replacement” Japanese Association for Thoracic Surgery 64th Annual Meeting, Nagoya Japan, October 11, 2011.
67. “Minimally Invasive Mitral Valve Repair Techniques” Japanese Association for Thoracic Surgery 64th Annual Meeting, Nagoya Japan, October 12, 2011.
68. “Myocardial Regeneration Therapy” Japanese Association for Thoracic Surgery 64th Annual Meeting, Nagoya Japan, October 12, 2011.
69. “Complex Mitral Valve Surgery” Japanese Association for Thoracic Surgery 64th Annual Meeting, Nagoya Japan, October 12, 2011.
70. “New Mechanical Circulatory Support Devices and Techniques” Japanese Association for Thoracic Surgery 64th Annual Meeting, Nagoya Japan, October 12, 2011.
71. “Current Status of Cell Therapy in Heart Surgery” Canadian Society for Cardiovascular Surgery, Vancouver Canada, October 23, 2011.
72. “Left Ventricular Assist Device Implantation is Superior to Cardiac Transplantation” Debate, International Society for Heart and Lung Transplantation Annual Meeting, Prague Czech Republic, April 18, 2012.
73. “Posterior Ventricular Anchoring Neochordal Repair of Degenerative Mitral Regurgitation Efficiently Remodels and Repositions Posterior Leaflet Prolapse” European Association for Cardiothoracic Surgery, Barcelona Spain, October 30, 2012.
74. “Surgical Revascularization Early After Myocardial Infarction: Strategies and Outcomes.” Association of Thoracic and Cardiovascular Surgeons of Asia 23rd Annual Meeting, Kota Kinabalu Malaysia, Nov 17, 2012.
75. “Minimally Invasive Mitral Valve Surgery.” Association of Thoracic and Cardiovascular Surgeons of Asia 23rd Annual Meeting, Kota Kinabalu Malaysia, Nov 17, 2012.
76. “Minimally Invasive Aortic Valve Surgery.” Association of Thoracic and Cardiovascular Surgeons of Asia 23rd Annual Meeting, Kota Kinabalu Malaysia, Nov 18, 2012.
77. “Complex Mitral Repair Techniques” Heart Care Heart International Symposium, ChiangMai Thailand, February 15, 2013.

78. “Valve Sparing Root Replacement” Heart Care Heart International Symposium, ChiangMai Thailand, February 15, 2013.
79. “Alternate Approaches to Mitral Valve Surgery” Heart Care Heart International Symposium, ChiangMai Thailand, February 17, 2013.
80. “Advanced Mitral Repair Concepts and Techniques to Maximize Repairability” Asian Society for Cardiovascular and Thoracic Surgery Annual Meeting, Kobe Japan, April 6, 2013.
81. “Cytokine, Stem Cell, and Tissue Engineering to Rebuild the Heart” Asian Society for Cardiovascular and Thoracic Surgery Annual Meeting, Kobe Japan, April 7, 2013.
82. “Minimally Invasive Aortic Valve Surgery” Saitama Medical University, Hidaka Japan, April 8, 2013.
83. “Ischemic Mitral Regurgitation” Jichi University Medical Center, Omiya Japan, April 8, 2013.
84. “Novel Mitral Repair Techniques” Tokyo Medical and Dental University, Tokyo Japan, April 9, 2013.
85. “Tissue Engineering Technologic Breakthroughs” Osaka University, Osaka Japan, April 9, 2013.
86. “MICS Mitral Surgery” Kagoshima University, Kagoshima Japan, April 10, 2013.
87. “Minimally Invasive and Robotic MV Surgery: Is It Really Better Than Sternotomy?” Society for Heart Valve Disease, Venice Italy, June 24, 2013.
88. “Minimally Invasive Mitral Valve Repair: Current Technique of Choice?” Society for Heart Valve Disease, Venice Italy, June 24, 2013.
89. “Optimal Utilization of Resources: VAD is the Best Option” 8th Berlin MCS Symposium, Deutsches Herzzentrum Berlin, Berlin Germany, November 8, 2013.
90. “Aortic Valve Repair during LVAD” 8th Berlin MCS Symposium, Deutsches Herzzentrum Berlin, Berlin Germany, November 9, 2013.
91. Invited Moderator, Cardiac Surgery Session, American Association for Thoracic Surgery 94th Annual Meeting, Toronto Canada, April 28th, 2014.

92. Invited Moderator, C. Walton Lillehei Competition, American Association for Thoracic Surgery 94th Annual Meeting, Toronto Canada, April 28th, 2014.
93. Invited Discussant for “Three year hemodynamic performance of rapid deployment aortic valve device”, American Association for Thoracic Surgery 94th Annual Meeting, Toronto Canada, April 29th, 2014.
94. “The Minimally Invasive Approach Will Be the Gold Standard” AATS/ASCVTS Postgraduate Course, 23rd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Hong Kong, China, May 11, 2015.
95. “Surgical AVR: How to Choose Between Stented or Sutureless” AATS/ASCVTS Postgraduate Course, 23rd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Hong Kong, China, May 11, 2015.
96. “Aortic Root Replacement with Transaortic Mitral Reconstruction” 23rd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Hong Kong, China, May 12, 2015.
97. Invited Moderator, Mitral Valve Surgery Session, 23rd Annual Meeting of the Asian Society for Cardiovascular and Thoracic Surgery, Hong Kong, China, May 13, 2015.
98. Invited Plenary Moderator, Mitral Valve Repair Session, 3rd Heart Care Heart International Symposium, Bangkok Thailand, September 4, 2015.
99. Plenary Lecture “Complex Aortic Root Surgery: Current Advances” 3rd Heart Care Heart International Symposium, Bangkok Thailand, September 5, 2015.
100. “Mitral Valve Surgery after MitraClip” 3rd Heart Care Heart International Symposium, Bangkok Thailand, September 5, 2015.
101. “Challenges in Cardiothoracic Surgery Training” 3rd Heart Care Heart International Symposium, Bangkok Thailand, September 6, 2015.
102. “Surgical Treatment Strategies for Advanced Heart Failure” Japanese Surgical Society, Osaka Japan, April 14, 2016.
103. “Managing Change, Managing Future: How to Prepare and Shape Our Specialty” Royal College of Surgeons of Thailand, Pattaya Thailand, July 17, 2016.
104. “Minimally Invasive Mitral Valve Surgery” Royal College of Surgeons of Thailand, Pattaya Thailand, July 18, 2016.

105. “Valve Sparing Aortic Root Surgery” Royal College of Surgeons of Thailand, Pattaya Thailand, July 18, 2016.
106. “Specific Benefits of Right Thoracotomy Approach for Mitral Valve Surgery” Scandinavian Association for Thoracic Surgery Annual Meeting, Reykjavik Iceland, August 18, 2016.
107. “Integrating Multiple Mitral Valve Repair Techniques to Achieve Near 100% Repair Rates” The 19th International Heart Valve Disease Symposium, Korean Society for Thoracic and Cardiovascular Surgery, Seoul, South Korea, August 18, 2017.
108. “Innovative Approach for PML Type II Lesion” 7th Global Valve Repair Summit, Central Chest Institute, Nonthaburi Thailand, August 23, 2017.
109. “Aortic Valve Repair: How I Do It” 7th Global Valve Repair Summit, Central Chest Institute, Nonthaburi Thailand, August 23, 2017.
110. “Aortic Valve Sparing Operation” 4th Heart Care Heart International Symposium Pre-Congress at Bangkok Heart Hospital, Bangkok Thailand, August 24, 2017.
111. “Innovative Approaches to Mitral Re-Repair Post MitraClip and Failed Repair” 4th Heart Care Heart International Symposium Main Congress, Bangkok Thailand, August 25, 2017.
112. “Current Challenges, Advances, and Research in Heart Failure” 4th Heart Care Heart International Symposium Main Congress, Bangkok Thailand, August 26, 2017.
113. “Surgery for Complex Aortic Dissection” 4th Heart Care Heart International Symposium Main Congress, Bangkok Thailand, August 26, 2017.
114. “Transventricular MV Repair” 4th Heart Care Heart International Symposium Main Congress, Bangkok Thailand, August 26, 2017.
115. “Advanced Mitral Leaflet Repair Techniques” Advanced Medical Technology Education Center, Kazan, Russia, October 23, 2017.
116. “Transaortic and Transventricular Mitral Valve Surgery” Advanced Medical Technology Education Center, Kazan, Russia, October 23, 2017.
117. “Current Status and Future of Cardiovascular Surgery in the United States” Japanese Circulation Society Special Session, Osaka, Japan, March 24, 2018.

118. “The Ultra-Hybrid Convergence of Science, Engineering, Surgery, and Interventions to Cure Cardiovascular Disease” University of Sydney, Keynote Lecturer at Sydney Imaging Inaugural Symposium, Sydney, Australia, April 6, 2018.
119. Invited Debate Moderator: “Current Controversy of Cardiovascular Surgery—Ring Annuloplasty for Mild Secondary Tricuspid Regurgitation” Japanese Association for Thoracic Surgery, Tokyo, Japan, October 5, 2018.
120. “Team Approach, Women’s Activity, and Development of the Next Generation in Cardiothoracic Surgery” Japanese Association for Thoracic Surgery, Tokyo, Japan, October 6, 2018.
121. “History of Heart Transplantation at Stanford University, 50th Anniversary, and Heart Transplantation Technique” Japanese Association for Thoracic Surgery, Tokyo, Japan, October 6, 2018.
122. “MICS Tips and Pitfalls” Japanese Association for Thoracic Surgery, Tokyo, Japan, October 6, 2018.
123. “SAVR vs TAVR” Japanese Association for Thoracic Surgery Postgraduate Course AATS Lecture, Tokyo, Japan, October 6, 2018.
124. “Coronary Intervention and Aneurysmectomy in End Stage Heart Failure” European Association for Cardiothoracic Surgery, Milan, Italy, October 19, 2018.
125. “How to Build an Academic Career” American Association for Thoracic Surgeons Careers College, Toronto Canada, May 4, 2019.
126. “Mitral Approach and Access” American Association for Thoracic Surgeons, Toronto Canada, May 5, 2019.
127. Invited Discussant for “Does Early Exposure to Surgery Help with Recruiting?” American Association for Thoracic Surgeons, Toronto Canada, May 6, 2019.
128. “Reoperation: Sternotomy or Thoracotomy” American Association for Thoracic Surgeons, Toronto Canada, May 7, 2019.
129. “Preliminary Data: Compiling and Publishing” American Association for Thoracic Surgeons Grant Writing Workshop, Toronto Canada, May 7, 2019.
130. “Cardiovascular Surgical Diseases: Is It Better to Repair Than to Replace?” Hamburg Heart Days, University of Hamburg, Hamburg Germany, May 18, 2019.

131. “Mitral Valve Repair: Surgical and Engineering Innovations” Society for Clinical Surgery, Edinburgh, Scotland UK, September 6, 2019.
132. “Valve-Sparing Aortic Root Replacement: Straight Graft” Debate vs Ruggero De Paulis, VSARR: Valsalva Graft, European Association for Cardiothoracic Surgery, Lisbon Portugal, Oct 4, 2019.
133. “Is There Still an Indication for Aneurysmectomy and Remodelling Surgery?”, European Association for Cardiothoracic Surgery, Lisbon Portugal, Oct 5, 2019.
134. “Building the Future Academic Cardiothoracic Surgery Department” Association of Thoracic and Cardiovascular Surgeons of Asia Annual Meeting, Taipei, Taiwan, Nov 1, 2019.
135. “Aortic Valve Repair Techniques” Association of Thoracic and Cardiovascular Surgeons of Asia Annual Meeting, Taipei, Taiwan, Nov 2, 2019.
136. “Myocardial Regeneration” Association of Thoracic and Cardiovascular Surgeons of Asia Annual Meeting, Taipei, Taiwan, Nov 2, 2019.
137. “Mitral Valve Repair Techniques” Association of Thoracic and Cardiovascular Surgeons of Asia Annual Meeting, Taipei, Taiwan, Nov 2, 2019.
138. “Aortic Valve Repair Basics” Australian New Zealand Society of Cardiothoracic Surgeons Annual Meeting, Hobart Tasmania, Australia, Nov 6, 2019.
139. “Minimally Invasive Cardiac Surgery Setup” Australian New Zealand Society of Cardiothoracic Surgeons Annual Meeting, Hobart Tasmania, Australia, Nov 6, 2019.
140. “Complex Mitral Valve Repair” Royal Australasian College of Surgeons Invitee. Australian New Zealand Society of Cardiothoracic Surgeons Annual Meeting, Hobart Tasmania, Australia, Nov 7, 2019.
141. “Minimally Invasive Mitral Valve Repair Setup” Australian New Zealand Society of Cardiothoracic Surgeons Annual Meeting, Hobart Tasmania, Australia, Nov 7, 2019.
142. “Cardiac Reconstruction and Regeneration: Science and Engineering Advances” Australian New Zealand Society of Cardiothoracic Surgeons Annual Meeting, Hobart Tasmania, Australia, Nov 8, 2019.
143. “Complex Aortic Valve Repair Videos” Australian New Zealand Society of Cardiothoracic Surgeons Annual Meeting, Hobart Tasmania, Australia, Nov 8, 2019.

144. Moderator, Surgery for the Left Ventricle: Less is More? More is Less? European Association for Cardiothoracic Surgery, Virtual, October 8, 2020.
145. Invited Discussant on Myomectomy, European Association for Cardiothoracic Surgery, Virtual, October 8, 2020.
146. Invited Discussant on KV Remodeling European Association for Cardiothoracic Surgery, Virtual, October 8, 2020.
147. “Surgical Options for Restrictive Cardiomyopathy” European Association for Cardiothoracic Surgery, Virtual, October 9, 2020.
148. Panelist, Nightmares in Heart Failure – My Case is Worse than Yours, European Association for Cardiothoracic Surgery, Virtual, October 10, 2020.
149. “Value of Research Training During Cardiovascular Surgery Residency” Japanese Society of Cardiovascular Surgery, Virtual, February 21, 2021.
150. “Repair Strategies for Degenerative Mitral Valve Disease” American Association for Thoracic Surgery China Symposium, Virtual, February 26, 2021.
151. “Non-Thrombogenic Valve Replacement: Growing Evidence for Biologic Valves” American Association for Thoracic Surgery China Symposium, Virtual, February 26, 2021.
152. “Evolution of Aortic and Mitral Valve Surgery Techniques Under the Competitive Pressures of Transcatheter Therapeutics” Japanese Circulation Society 85th Annual Meeting Plenary, Virtual, March 28, 2021.
153. “Severe Mitral Annular Calcification” Asian Society for Cardiovascular and Thoracic Surgery, Virtual June 4, 2021.
154. “Strategies in Degenerative Repair” AATS Thailand Valve Course, Virtual June 26, 2021.
155. “Technical Facets of Aortic Valve Repair” Wuhan International Heart Valve Symposium Virtual July 24, 2021
156. “Adjuncts to Simplify Complex Mitral Valve Repair” Wuhan International Heart Valve Symposium Virtual July 24, 2021
157. “Aortic Cusp Repair Techniques and Outcomes” Asian Thoracic and Cardiovascular Surgery Association, Virtual November 5, 2021.

158. “Valve Sparing Aortic Root Replacement: Tips and Tricks” Asian Society for Cardiovascular and Thoracic Surgery, Virtual March 24, 2022.
159. “Non-Thrombogenic Valve Replacement: Growing Evidence for Biologic Valves” American Association for Thoracic Surgery / Indian Association for Cardiothoracic Surgery Symposium, Virtual, April 7, 2022.
160. “Dacron Graft for Reimplantation: Straight or Bulged, What are the Pros and Cons?” European Association for Cardiothoracic Surgery Aortic Valve Repair Summit, Rome Italy, June 23, 2022.
161. Moderator, The Root and the Bicuspid Valve: An Intimate Relationship, European Association for Cardiothoracic Surgery Aortic Valve Repair Summit, Rome Italy, June 23, 2022.
162. “Biological and Non-Biological Models for Evaluating Valve Therapies”. Japanese Association for Thoracic Surgery AATS Mitral Conclave, Yokohama Japan, October 8, 2022.
163. Panel Discussant, Surgery for Asymptomatic Mitral Regurgitation, Japanese Association for Thoracic Surgery AATS Mitral Conclave, Yokohama Japan, October 8, 2022.
164. Moderating Live Surgery Aortic Valve Repair, Instituto Cardiovascular de Buenos Aires Argentina, Dec 5, 2022
165. “Aortic Cusp Repair Tips” Instituto Cardiovascular de Buenos Aires Argentina, Dec 5, 2022
166. “Type A Aortic Dissection Tips and Tricks”, Instituto Cardiovascular de Buenos Aires Argentina, Dec 5, 2022
167. “Aortic Valve Repair and Root Repair” Favalaro Foundation Hospital, Buenos Aires Argentina, Dec 6, 2022.
168. “Aortic Valve Repair Techniques” Austral Hospital, Buenos Aires Argentina, Dec 7, 2022.
169. “Complex Mitral Repair Techniques in Degenerative and Rheumatic Disease” Austral Hospital, Buenos Aires Argentina, Dec 7, 2022.

National:

1. "Update on the MIRA Mechanical Valve Trial." Pennsylvania Association for Thoracic Surgery, Pittsburgh PA, September 22, 2001.
2. Invited Discussant for: "Use of Nitinol U-Clips Decreases Time for Annuloplasty Band Placement in Robotic Mitral Valve Repairs. Maziarz DM, Chu VF, Conquest AM, Garofalo JH, Sun YS, Nifong LW, Chitwood WR. " American College of Surgeons Clinical Congress, San Francisco CA, October 8, 2002.
3. "Current Status of da Vinci Robotic Cardiac Surgery Trials." Pennsylvania Association for Thoracic Surgery, Miami FL, October 19, 2002.
4. Invited Moderator: Intraoperative Management and Anticoagulation Session. Cardiothoracic Techniques and Technologies 9th Annual Meeting, Miami FL, March 19, 2003.
5. "Cardiac Surgery on the Patient on Antiplatelet and Antithrombotic Drugs." American College of Cardiology Scientific Sessions, New Orleans LA, March 7, 2004.
6. Invited Discussant for: "Stromal Cell-Derived-1 α Gene Therapy Improves Endothelial Progenitor Cells Mobilization, Myocardial Neovascularization and Cardiac Function in Chronic Myocardial Infarction." Tang YL, Qian K, Shen L, Badhwar V, Phillips MI, American Association for Thoracic Surgery 85th Annual Meeting, San Francisco CA, April 12, 2005.
7. "Active Thermoregulation in OPCAB" Knowledge Network Symposium. Thermal Regulation: Implications for the Complex Surgical Patient, Atlanta GA, November 16, 2005.
8. Invited Debater: "Coronary Off-Pump Debate, Pro" Society of Thoracic Surgeons 42nd Annual Meeting, Chicago IL, January 31, 2006.
9. "Ideal Thermal Management in Complex Surgery Improves Outcomes" Cardiothoracic Surgical Critical Care 2006, Washington DC, April 28, 2006.
10. "Intraoperative Thermoregulation for Advanced Cardiac Surgery" Knowledge Network Symposium. Atlanta GA, September 14, 2006.
11. "Instrumentation/Robotics-Dexterity, Automation" NHLBI Image Guided Interventions Working Group, Bethesda MD, September 21, 2006.
12. "Decision Making in Coronary Artery Surgery: Off Pump Versus On Pump Approaches" American College of Chest Physicians, Salt Lake City, October 22, 2006.

13. “Robotic Cardiac Surgery” Pre-Sessions Symposium, American Heart Association Scientific Sessions, Chicago IL, November 11, 2006.
14. “How to Start a Robotic Cardiac Surgery Program” How To Session, American Heart Association Scientific Sessions, Chicago IL, November 13, 2006.
15. “Intraoperative Hemodynamic Monitoring: Surgeon’s Perspective” Special Session, American Heart Association Scientific Sessions, Chicago IL, November 14, 2006.
16. “Evolving Technologies in Cardiac Surgery: Robotics, Artificial Hearts, and Tissue Engineering” North Shore Medical Center 2007 Cardiovascular Conference, Lynn MA, February 8, 2007.
17. “Career Development Awards” American Association for Thoracic Surgery Grantsmanship Workshop 2007, Bethesda MD, March 2, 2007.
18. “Getting Started in Off-Pump Coronary Revascularization” Cardiothoracic Technology Symposium, University of Cincinnati, Cincinnati OH, April 20, 2007.
19. “Vasculogenic Mechanisms of Transmyocardial Laser Revascularization” Cardiogenesis Meet The Experts, American Association for Thoracic Surgery 87th Annual Meeting, Washington DC, May 7, 2007.
20. “Intraoperative Hypothermia and Thermoregulation” Knowledge Network Symposium. Atlanta GA, May 11, 2007.
21. Invited Moderator: Heart Failure: Cell- and Gene-Based Therapies Session, American Heart Association Scientific Sessions, Orlando FL, November 5, 2007.
22. “Advanced Biocor Applications” St Jude Clinical Applications and Beyond Cardiovascular Surgery Symposium, NYC NY, December 8, 2007.
23. Invited Moderator: Parallel Surgical Forum IV: Adult Cardiac II, Society of Thoracic Surgeons 44th Annual Meeting, Ft Lauderdale FL, January 29, 2008.
24. “Biocor Experience at University of Penn.” St. Jude Clinical Applications and Beyond Cardiovascular Surgery Symposium, San Francisco CA, April 12, 2008.
25. “Getting Started in OPCAB.” Cardiothoracic Technology Symposium, University of Cincinnati, Cincinnati OH, April 18, 2008.
26. Invited Discussant: “Layered Implantation of Sheet-Shaped Myoblast Attenuates Cardiac Remodeling of Infarcted Heart.” Sekiya N, Miyagawa S, Saito A, Matsuura N,

- Kawaguchi N, Shimizu T, Okano T, Sawa Y. American Association for Thoracic Surgery 88th Annual Meeting, San Diego CA, May 13, 2008.
27. Invited Discussant for: “Profound Hypothermia Decreases Cardiac Apoptosis Through Preservation of Akt Survival Pathway” Fahad Shuja. American College of Surgeons 94th Annual Clinical Congress, San Francisco CA, October 14, 2008.
 28. “Stroke and Paraplegia Following TEVAR: Prevention and Management.” American College of Surgeons 94th Annual Clinical Congress, San Francisco CA, October 15, 2008.
 29. Invited Moderator: Vivien Thomas Young Investigator Award Competition, American Heart Association Scientific Sessions, New Orleans LA, November 9, 2008.
 30. “Angiogenic Repair Strategies.” Cardiovascular Seminar on Current Applications of Tissue Engineering and Biologic Myocardial Repair, American Heart Association Scientific Sessions, New Orleans LA, November 9, 2008.
 31. Invited Moderator: Heart Failure: Cell- and Gene-Based Therapies Session, American Heart Association Scientific Sessions, New Orleans LA, November 10, 2008.
 32. Course Director: St. Jude Cardiac Surgery Fellows Program. Austin TX, November 12-13, 2008. Lectures: “Starting Your Practice and Early Career Development”, “Mitral Valve Repair Techniques”, “Aortic Root Reconstruction”
 33. Invited Moderator: Aortic Valve Surgery Module, St Jude Clinical Applications and Beyond Cardiovascular Surgery Symposium, NYC NY, December 12, 2008.
 34. “Complex Aortic Root Surgery.” St Jude Clinical Applications and Beyond Cardiovascular Surgery Symposium, NYC NY, December 12, 2008.
 35. Invited Moderator: Parallel Surgical Forum II: Adult Cardiac II, Society of Thoracic Surgeons 45th Annual Meeting, San Francisco CA, January 27, 2009.
 36. “Complex Valvular Repair and Replacement Techniques” Cardiac Surgery Grand Rounds, Kaiser Permanente Medical Center, Los Angeles CA, February 3, 2009.
 37. “Indications for Surgical Revascularization in Heart Failure Patients.” American Association for Thoracic Surgery 89th Annual Meeting Postgraduate Course, Boston MA, May 10, 2009.
 38. “Complex Aortic Root Surgery.” Lillehei Memorial Workshop, St. Paul MN, August 4, 2009.

39. “Minimally Invasive Complex Mitral Valve Repair Techniques.” American Heart Association Scientific Sessions, Orlando FL, November 15, 2009.
40. Invited Session Chair: Stem Cell and Tissue Engineering: Basic Science and Clinical Application, American Heart Association Scientific Sessions, Orlando FL, November 15, 2009.
41. Invited Session Chair: Heart Failure: Cell and Gene Based Therapies, American Heart Association Scientific Sessions, Orlando FL, November 17, 2009.
42. “Aortic Root Reconstruction.” InterMountain Symposium, Salt Lake City Utah, February 26, 2010.
43. “Management of the Small Aortic Annulus and Complex Root Reconstruction.” Allegheny Health System, Pittsburgh PA, March 1, 2010.
44. “Advanced Mitral Reconstruction Surgery: Leaflet Remodeling and Minimally Invasive Approaches.” Allegheny Healthy System Grand Rounds, Pittsburgh PA, March 2, 2010.
45. Invited Session Chair: Stem Cell Therapies, International Society for Heart and Lung Transplantation 30th Annual Scientific Meeting, Chicago IL, April 22, 2010.
46. “Complex Mitral Valve Repair Techniques” California Pacific Medical Center, San Francisco CA, October 29, 2010.
47. “The Challenges of Aortic Valve Repair” California Pacific Medical Center, San Francisco CA, October 29, 2010.
48. Invited Moderator of the Grantsmanship Workshop, American Heart Association Scientific Sessions, Chicago IL, November 14, 2010.
49. “Viability, Support Devices, and Revascularization in Patients with Poor Left Ventricular Function” Plenary Session, American Heart Association Scientific Sessions, Chicago IL, November 15, 2010.
50. “Leaflet Remodeling Mitral Valve Repair Techniques” American Heart Association Scientific Sessions, Chicago IL, November 16, 2010.
51. Invited Moderator: Valve Disease and Therapy Session, American Heart Association Scientific Sessions, Chicago IL, November 16, 2010.
52. “Advanced Valve Repair Techniques” Society of Thoracic Surgeons, San Diego CA, January 30, 2011.

53. Course Director, American Association for Thoracic Surgery Grant Writing Workshop, Moderator, Funding Organizations and Grant Types Session, Lecturer, “Hypothesis and Specific Aims—The Importance of Clarity” Bethesda MD, March 4, 2011.
54. “Continuous Flow Ventricular Assist Devices Improve Functional Tricuspid Regurgitation and Right Ventricular Function” International Society for Heart and Lung Transplantation 31st Annual Scientific Meeting, San Diego CA, April 14, 2011.
55. “Simplified Non-Resectional Leaflet-Inverting Mitral Valve Repair for Degenerative Mitral Regurgitation: Technique and Outcomes.” Western Thoracic Surgical Association 37th Annual Meeting, Colorado Springs CO, June 24, 2011.
56. “Advanced Valvular Reconstructive Surgery” Washington Hospital Center Grand Rounds, Washington DC, October 18, 2011.
57. “The ABCs of Type A Aortic Dissection” California Pacific Medical Center, San Francisco CA, October 29, 2011.
58. “Complex Aortic Root Surgery” California Pacific Medical Center, San Francisco CA, October 29, 2011.
59. “The Right Ventricle is Key During LVAD Implantation” American Heart Association Scientific Sessions, Orlando FL, November 13, 2011.
60. Invited Session Chair: Valve Disease and Therapy Session, American Heart Association Scientific Sessions, Orlando FL, November 15, 2011.
61. “Stem Cell Therapy for Heart Failure” Society of Thoracic Surgeons Annual Meeting, Ft. Lauderdale FL, January 28, 2012.
62. Invited Moderator: Cardiothoracic: Clinical and Basic Sciences Oral Paper Session, 7th Annual Academic Surgical Congress of the Society of University Surgeons and Association for Academic Surgery, Las Vegas NV, February 14, 2012.
63. Invited Discussant for: “Mechanical Preconditioning Enables Electrophysiological Coupling of Skeletal Myoblasts to Myocardium” American Association for Thoracic Surgery Annual Meeting, San Francisco CA, May 1, 2012.
64. “Evolving Aortic and Mitral Reconstructive Techniques” Kaiser San Francisco Grand Rounds, San Francisco CA, August 16, 2012.
65. “Anterior Leaflet Mitral Valve Repair Techniques” American Heart Association Scientific Sessions, Los Angeles CA, November 4, 2012.

66. Invited Moderator: Surgery for Valvular Heart Disease Session, American Heart Association Scientific Sessions, Los Angeles CA, November 5, 2012.
67. “Hypothesis and Specific Aims: The Importance of Clarity” American Association for Thoracic Surgery/NIH Grant Workshop, Bethesda MD, March 8, 2013.
68. “Posterior Ventricular Anchoring Neochordal Repair of Mitral Regurgitation” Mitral Conclave, NYC NY, May 2, 2013.
69. “Mitral Valve Repair vs. Replacement: Optimizing Selection Criteria and Surgical Techniques to Enhance Your Repair Rate” Mitral Conclave, NYC NY, May 3, 2013.
70. Invited Moderator: C. Walton Lillehei Competition, American Association for Thoracic Surgery Annual Meeting, Minneapolis MN, May 5, 2013.
71. Invited Moderator: Cardiac Surgery Forum, American Association for Thoracic Surgery Annual Meeting, Minneapolis MN, May 7, 2013.
72. “Aortic Valve Leaflet Repair Techniques” American Heart Association Scientific Sessions, Dallas TX, November 18, 2013.
73. “Minimally Invasive Aortic and Mitral Valve Surgery” American Heart Association Scientific Sessions, Dallas TX, November 19, 2013.
74. Invited Discussant: “Myocardial Cytochrome Oxidase Activity Increases with Age and Hypoxemia with CHD: A Basis for Ischemia Reperfusion Injury” Western Thoracic Surgical Association, Dana Point, CA, June 27, 2014.
75. Invited Moderator: The Emerging Importance of Diastolic Dysfunction, AHA Basic Cardiovascular Science Meeting, Las Vegas NV, July 14, 2014.
76. Invited Moderator: A Step-by-Step, How to Do It Course on Advanced Cardiac Surgical Techniques, American Heart Association Scientific Sessions, Chicago IL, November 16, 2014.
77. “LVAD and Cell Therapy-Feasibility and Efficacy” American Heart Association Scientific Sessions, Chicago IL, November 17, 2014.
78. “Complex Valvular Reconstruction” Cedars-Sinai Medical Center Grand Rounds, Los Angeles CA, December 16, 2014.

79. Invited Moderator: Latest Advances in Mechanical Circulatory Support, Society of Thoracic Surgeons Annual Meeting TechCon Symposium, San Diego CA, January 25, 2015.
80. Invited Course Proctor: Mitral Valve BiLeaflet Repair Techniques, Society of Thoracic Surgeons University, San Diego CA, January 28, 2015.
81. “Complex Leaflet Repair Techniques” Houston Aortic Symposium, Houston TX, March 5, 2015.
82. “Research Strategy-Innovation: How to Make Your Grant New and Unique” American Association for Thoracic Surgery/National Institutes of Health Grant Workshop, Bethesda MD, March 27, 2015.
83. Invited Moderator: Mitral Valve Endocarditis, Mitral Conclave, NYC NY, April 23, 2015.
84. “How to Become a Successful Minimally Invasive Mitral Surgeon” Mitral Conclave, NYC NY, April 24, 2015.
85. “Blending Techniques to Achieve Excellence” Mitral Conclave, NYC NY, April 24, 2015.
86. Invited Discussant for: “A Scoring System for Predicting Complexity of Mitral Valve Repair for Leaflet Prolapse” by David Adams and Mount Sinai Group, American Association for Thoracic Surgery, Seattle WA, April 27, 2015.
87. Invited Moderator: Emerging Technologies and Techniques Session, American Association for Thoracic Surgery, Seattle WA, April 27, 2015.
88. “Mitral Valve Replacement 2015” Rocky Mountain Valve Symposium XXV, Missoula Montana, July 24, 2015.
89. “AortoMitral Curtain Endocarditis Reconstruction” Rocky Mountain Valve Symposium XXV, Missoula Montana, July 25, 2015.
90. “Current Management Options for Mitral Valve Diseases”, Kaiser Permanente 16th Annual Cardiovascular CME Conference, Newport Beach CA, September 12, 2015.
91. Invited Panelist “Surgical, Catheter, and Medical Management of Aortic Valve Disease” Kaiser Permanente 16th Annual Cardiovascular CME Conference, Newport Beach CA, September 12, 2015.

92. “Developing a Mitral Repair Program” American Heart Association Scientific Sessions, Orlando FL, November 7, 2015.
93. Invited Moderator for Lasker Awardee Lecturer Alain Carpentier, American Heart Association Scientific Sessions, Orlando FL, November 9, 2015.
94. Invited Moderator for Late Breaking Clinical Trial Session “Mitral Valve Repair or Replacement for Severe Ischemic Mitral Regurgitation: Two Year Follow-Up” American Heart Association Scientific Sessions, Orlando FL, November 9, 2015.
95. “Sutureless Aortic Valves” American Heart Association Scientific Sessions, Orlando FL, November 10, 2015.
96. Invited Moderator for Gene Therapy for Cardiac Repair Session, American Heart Association Scientific Sessions, Orlando FL, November 10, 2015.
97. “VAD-Induced Unloading and Stem Cells: Why Combine Them?” Utah Cardiac Recovery Symposium, Salt Lake City UT, January 15, 2016.
98. “Bileaflet Prolapse Repair Approaches” Society of Thoracic Surgeons Annual Meeting, Phoenix AZ, January 24, 2016.
99. Invited Moderator: Basic Science Research-Adult Cardiac, Society of Thoracic Surgeons Annual Meeting, Phoenix AZ, January 25, 2016.
100. “Perfusion Considerations in Minimally Invasive Cardiac Surgery” CREF Meeting, Long Beach CA, February 26, 2016.
101. “Is the Grass Greener Elsewhere?” AATS Leadership Academy, Baltimore MD, May 13, 2016.
102. “Redo Mitral Surgery After Aortic Surgery” American Association for Thoracic Surgery, Baltimore MD, May 14, 2016.
103. “Intervening on the Bicuspid Aorta: When, Why, and How” American Association for Thoracic Surgery, Baltimore MD, May 15, 2016.
104. Invited Discussant for “Mid-Term Multi-Center Clinical and Hemodynamic Results of a High Performance Pericardial Surgical Valve” American Association for Thoracic Surgery, Baltimore MD, May 17, 2016.
105. “Surgery as a Bridge to TAVR: Is the Mechanical Valve Dead?” Rocky Mountain Valve Symposium XXVI, Missoula MT, July 21, 2016.

106. “Transverse Arch in Bicuspid Aortic Valve: How Big is Too Big?” Rocky Mountain Valve Symposium XXVI, Missoula MT, July 21, 2016.
107. Duran Lecture: “Surgery for Endocarditis: Indications and Timing, Valve Choices, Bio, Ross, Mechanical, Complex Solutions for Abscess and Fistula” Rocky Mountain Valve Symposium XXVI, Missoula MT, July 22, 2016.
108. “Redo Mitral Surgery: Repair or Replace?” Rocky Mountain Valve Symposium XXVI, Missoula MT, July 22, 2016.
109. “Becoming Department Chair: Advantages and Pitfalls” American Heart Association Scientific Sessions, New Orleans LA, November 12, 2016.
110. “Robotic Mitral Surgery: Why Innovation Did Not Prevail” American Heart Association Scientific Sessions, New Orleans LA, November 14, 2016.
111. Invited Moderator for Innovation in Mitral Surgery Session. American Heart Association Scientific Sessions, New Orleans LA, November 14, 2016.
112. “Tricuspid Regurgitation: Time to Change How We Treat? Surgical Options” American Heart Association Scientific Sessions, New Orleans LA, November 15, 2016.
113. “Indications for Aortic Aneurysm Surgery and Aortic Valve Repair” American College of Cardiology Cardiovascular Conference at Snowmass, Snowmass CO, January 15, 2016.
114. “Surgical Options for End Stage Heart Failure and the Role of LVADs” American College of Cardiology Cardiovascular Conference at Snowmass, Snowmass CO, January 16, 2016.
115. “How Does the Heart Team Differentiate Between Transcatheter and Open Mitral Valve Surgery” American College of Cardiology Cardiovascular Conference at Snowmass, Snowmass CO, January 16, 2016.
116. Meet the Experts Workshop “Heart Failure” American College of Cardiology Cardiovascular Conference at Snowmass, Snowmass CO, January 16, 2016.
117. “Department Startup Funds, Intramural Seed Grants, Foundation/Society Fellowships” American Association for Thoracic Surgery NIH Grant Workshop, Bethesda MD, March 10, 2017.
118. “Optimizing Neochord Length” American Association for Thoracic Surgery Mitral Conclave, NYC, NY, April 27, 2017.

119. “Combining Basic, Translational, and Clinical Research with a Busy Clinical Practice” American Association for Thoracic Surgery Mitral Conclave, NYC, NY, April 27, 2017.
120. “Faculty Recruiting: When and Who?” American Association for Thoracic Surgery Leadership Academy, Boston MA, April 28, 2017.
121. “One Greatest Leadership Mistake I Have Made” American Association for Thoracic Surgery Leadership Academy, Boston MA, April 28, 2017.
122. Invited Discussant for “The Aortic Root Does Not Dilate Over Time After Replacement of the Aortic Valve and Ascending Aorta in Patients with Bicuspid Aortic Valves” by Tirone David and University of Toronto Group, American Association for Thoracic Surgery, Boston MA, May 2, 2017
123. “Losing Our Shirts: The Impact of Disruptive or Innovative Technology on Our Livelihood” Western Thoracic Surgical Association, Colorado Springs CO, June 23, 2017.
124. “What Do You Need to Start? Don't Just Sign on the Line” American Heart Association Scientific Sessions, Early Career Session, Anaheim CA, November 11, 2017.
125. “LVADs and Stem Cells” American Heart Association Scientific Sessions, Anaheim CA, November 12, 2017.
126. “Engineering, Science, and Surgery Converging to Cure Cardiovascular Diseases” Frontiers in Cardiovascular Bioengineering Lectureship, Department of Biomedical Engineering, University of Alabama, Birmingham AL, January 26, 2018.
127. “Mini-Thoracotomy Planning and Execution” Adult Cardiac Skills Session: Mitral Valve, American Association for Thoracic Surgery, San Diego CA, April 28, 2018.
128. “Leaflet Repair Techniques in Trileaflet and Bicuspid Aortic Valves” Adult Cardiac Skills Session: Aortic Root, American Association for Thoracic Surgery, San Diego CA, April 28, 2018.
129. Invited Moderator for Session 4. Industry Discussion, Innovation Summit, American Association for Thoracic Surgery, San Diego CA, April 29, 2018.
130. “Operative Skills. Learning, Teaching, and Leading in the OR” Careers College, American Association for Thoracic Surgery, San Diego CA, April 29, 2018.
131. “How to Write Great Papers and Reviews: JTCVS Perspective” Careers College, American Association for Thoracic Surgery, San Diego CA, April 29, 2018.

132. Invited Moderator, Seminars in Thoracic and Cardiovascular Surgery Roundtable on Education and Training in Cardiothoracic Surgery, American Association for Thoracic Surgery, San Diego CA, April 30, 2018.
133. Invited Discussant for “Causes of Death in Intermediate Risk Patients from the Randomized Surgical Replacement and Transcatheter Aortic Valve Implantation Trial” Michael Reardon MD, Senior Author, American Association for Thoracic Surgery, San Diego CA, May 1, 2018.
134. “Minimally Invasive MVRepair: State of the Art” Surgical Cinema, American Association for Thoracic Surgery, San Diego CA, May 1, 2018.
135. Invited Discussant for “Patient Specific iPSC Disease Model Identified Structural and Functional Abnormalities of Vascular Smooth Muscle Cells as a Cause of Loeys-Dietz Syndrome” Kui Hu MD, American Association for Thoracic Surgery, San Diego CA, May 1, 2018.
136. “Multivessel CAD in Diabetes Mellitus: PCI or CABG?” American College of Cardiology, Napa CA, June 7, 2018.
137. “Mechanical vs Biologic Valve Prosthesis in SAVR and SMVR: Is There Equipoise?” American College of Cardiology, Napa CA, June 8, 2018.
138. “Contemporary Surgeons: Masters of Their Trade or Operators of Equipment?” American College of Cardiology, Napa CA, June 9, 2018.
139. Debater: “Surgeons are Ethically Obligated to Inform The Patient that This is their First Time Performing This Operation” Pro. Western Thoracic Surgical Association, Santa Barbara, CA, June 25, 2018.
140. Duran Lecture: “Ischemic Mitral Regurgitation: Adjudicating the Data—Repair or Replace?” Rocky Mountain Valve Symposium 28th Annual. Missoula MT, July 19, 2018.
141. “Mitral Valve Replacement: Mechanical vs. Tissue” Rocky Mountain Valve Symposium 28th Annual. Missoula MT, July 19, 2018.
142. Invited Moderator for “Molecular Profiling to Guide Cardiac and Thoracic Surgery” American College of Surgeons, Boston MA, October 25, 2018.
143. “Asymptomatic Aortic Stenosis Gets a New Valve” American Heart Association Scientific Sessions Main Event, Chicago IL, Nov 10, 2018.
144. “Aortic Valve Repair Techniques, Technology, and Devices: Where Are We Going?”

- Society of Thoracic Surgeons, TechCon, San Diego CA, January 26, 2019.
145. “Heart Team: Therapeutic Options for Mitral Regurgitation and Cardiomyopathy” Society of Thoracic Surgeons, San Diego CA, January 28, 2019.
 146. “Surgical Therapy for Mitral and Aortic Valve Regurgitation” Annual Symposium of Central Coast Cardiology, Santa Barbara CA, Feb 1, 2019.
 147. “Doing Translational Research That Matters” AATS Mitral Conclave, NYC NY, May 2, 2019.
 148. “Degenerative Video Tour” AATS Mitral Conclave, NYC, NY, May 3, 2019.
 149. “Hybrid Robotic GABG” American College of Cardiology, Napa CA, June 6, 2019.
 150. “PCI vs CABG?” American College of Cardiology, Napa CA, June 8, 2019.
 151. “Aortomitral Junction Endocarditis: Commando Operation” American Heart Association Scientific Sessions, Philadelphia PA, November 16, 2019.
 152. “Left Ventricular Disruption and Rupture During Mitral Valve Surgery” American Heart Association Scientific Sessions, Philadelphia PA, November 17, 2019.
 153. Moderator, Adult Cardiac Plenary Session, American Association for Thoracic Surgeons, Virtual, May 22, 2020.
 154. Invited Discussant for “Observations from Reoperations for Mitral Stenosis after Mitral Valve Repair” by El-Eshmawi and Adams, Mt Sinai, American Association for Thoracic Surgeons, Virtual, May 22, 2020.
 155. “The History of Stanford Type A Aortic Dissection: Experience Over Five Decades” American Association for Thoracic Surgeons, Virtual, May 23, 2020.
 156. “Current Techniques and Outcomes of Tricuspid Valve Surgery” TransCatheter Therapeutics, Virtual, October 17, 2020.
 157. “Transitioning to Independent NIH Funding” American Heart Association Scientific Sessions, Virtual, November 13, 2020.
 158. Moderator, Percutaneous Interventions: Novel Therapies to Traditional Surgical Problems. American Heart Association Scientific Sessions, Virtual, November 13, 2020.
 159. Moderator, Panelist, Early Leadership Challenges, American Association for Thoracic Surgeons Leadership Academy, Virtual, November 13, 2020.

160. “How to Recruit a Diverse A-Team” American Association for Thoracic Surgeons Leadership Academy, Virtual, April 30, 2021.
161. “Bicuspid and Tricuspid Aortic Valve Cusp Repair Techniques” American Association for Thoracic Surgeons, Virtual, May 1, 2021.
162. Invited Discussant for “Heart Lung Transplantation for Pulmonary Hypertension with and without Eisenmenger Syndrome” Western Thoracic Surgical Association Annual Meeting, Phoenix AZ, Oct 1, 2021.
163. Invited Discussant for “Evaluating the Benefit of Concomitant Tricuspid Repair During Mitral Valve Surgery” by James Gammie MD for the NIH NHLBI CTSN, American Heart Association Scientific Sessions, Virtual, Nov 13, 2021.
164. “Biological vs Mechanical Prostheses for Aortic Valve Replacement” Heart Valve Collaboratory, Virtual Jan 22, 2022.
165. “Personal Reflections: Mistakes and Successes as a Leader” Society of Thoracic Surgeons Leadership Institute Keynote Address, Chicago IL, April 29, 2022.
166. “Diversity, Equity and Inclusion: A Leadership Imperative” American Association for Thoracic Surgeons Leadership Academy, May 13, 2022.
167. “Why I Prefer a Thoracotomy Approach With Direct Vision” American Association for Thoracic Surgeons Mitral Conclave Workshop, May 13, 2022.
168. Roundtable Moderator , Valve Prostheses and Annuloplasty Devices, American Association for Thoracic Surgeons Mitral Conclave Workshop, May 13, 2022.
169. “Biologic and Non-Biologic Models for Design and Evaluation of Valve Interventions” American Association for Thoracic Surgeons Mitral Conclave Workshop, May 14, 2022.
170. “How to Advance Your Academic Career” American Association for Thoracic Surgeons Careers College, May 14, 2022.
171. Moderator Minimally Invasive Mitral Surgery Master Class, American Association for Thoracic Surgeons, May 15, 2022.
172. “High Performance Cardiothoracic Surgery in the Digital Age: Clinical” American Association for Thoracic Surgeons, May 16, 2022.
173. “Ischemic CMP: Myocardial Viability before CABG?” American College of Cardiology,

Napa CA, June 2, 2022.

174. “Left Atrial Appendage Surgical Excision” American College of Cardiology, Napa CA, June 3, 2022.
175. “Insights into Valve Repair Surgery via an Ex Vivo Left Heart BioSimulator” Edwards MVT Aortic Course, Aortic Valve Repair Special Lecture, Virtual, June 10, 2022.

Local/Regional:

1. “Cardiac Gene Transfer.” Cardiothoracic Surgery Grand Rounds, University of Pennsylvania, May 16, 1997.
2. “Brachiocephalic Vascular Disease.” Vascular Surgery Grand Rounds, University of Pennsylvania, August 25, 1997.
3. “Gene Therapy in Cardiovascular Disease.” Surgical Grand Rounds, Chestnut Hill Hospital, Philadelphia PA, September 23, 1997.
4. “Antioxidant Gene Transfer.” Cardiothoracic Surgery Grand Rounds, University of Pennsylvania, December 5, 1997.
5. “Emerging Technologies in Cardiac Surgery.” Cardiology Grand Rounds, Veterans Affairs Medical Center, Wilkes Barre PA, August 16, 2002.
6. “Technologic Advancements in Cardiac Surgery.” Cardiology Grand Rounds, University of Pennsylvania, October 17, 2002.
7. “New Frontiers in Cardiac Surgery.” D. Hayes Agnew Surgical Society, Philadelphia, PA, November 12, 2002.
8. “Robotics and Advanced Technologies in Cardiac Surgery.” Babcock Surgical Society, Philadelphia PA, January 20, 2003.
9. “Robotics and New Developments in Cardiac Surgery.” Philadelphia International Medicine, Philadelphia PA, September 12, 2003.
10. “Blood Conservation with Minimally Invasive and Robotic Techniques in Cardiac Surgery.” Society for the Advancement of Bloodless Medicine, Philadelphia PA, May 1, 2004.

11. “The High Risk CABG Patient: Will Robotics Help?” Heart Failure: Current Practice and Future Frontiers CME Course, Philadelphia PA, May 7, 2004.
12. “Robotics in Collaborative Cardiovascular Care.” Best Practices in Collaborative Cardiovascular Care CME Course, Philadelphia PA, June 2, 2004.
13. “Valvular Reconstruction with Minimally Invasive and Robotic Techniques.” Penn Cardiac Valve Symposium CME Course, Philadelphia PA, September 11, 2004.
14. “Cardiac Robotics” Society of Clinical Surgery Meeting, Philadelphia PA, November 5, 2004.
15. “Robotics and Emerging Technologies in Cardiovascular Care” Chester County Hospital Grand Rounds, West Chester PA, December 9, 2004.
16. “Robotic Heart Surgery” Lehigh Valley Hospital Update on Heart and Lung Surgery Symposium, Allentown PA, March 19, 2005.
17. “Robotic Cardiac Surgery” Trends in Cardiovascular and Trauma Nursing Conference, Valley Forge PA, April 4, 2005.
18. “VAD vs. Transplant” Heart Failure: Current Practice and Future Frontiers CME Course. Philadelphia PA, April 29, 2005.
19. “Robotic Cardiac Surgery” Wisconsin Surgical Club Meeting, Philadelphia PA, May 3, 2005.
20. “Developing Surgical and Biologic Strategies for Heart Disease” Holy Redeemer Hospital Grand Rounds, Meadowbrook PA, October 6, 2005.
21. “Hypothermia in the Perioperative Setting” Division of Cardiothoracic Anesthesia, Presbyterian Medical Center, Philadelphia PA, April 11, 2006.
22. “Advances in Cardiac Surgery” Trends in Cardiovascular and Trauma Nursing Conference, Valley Forge PA, April 24, 2006.
23. “Advanced Surgical and Biologic Approaches to Cardiovascular Disease” Grand Rounds, Department of Surgery, Mercy Fitzgerald Hospital, Darby PA, June 8, 2006.
24. “Progressive Technologies in CHF: Novel Biologics to Minimally Invasive/Robotics to LVAD/Artificial Heart” Philadelphia International Medicine Videoconference Lecture with Albert Einstein Hospital, Sao Paulo, Brazil, August 8, 2006.

25. “Robotic Surgery Advances: Imaging, Instrumentation, and Force-Feedback ” Philadelphia International Medicine Videoconference Lecture with Albert Einstein Hospital, Sao Paolo, Brazil, June 4, 2007.
26. “Robotic Cardiac Surgery Advances.” Temple University Department of Surgery Grand Rounds, Philadelphia PA, January 16, 2008.
27. Invited Panelist: “Surgical Ablation of Atrial and Ventricular Arrhythmias: The Time Has Passed or Time Has Come?” 17th Annual State-of-the-Art Arrhythmia Symposium, PennMedicine and American Heart Association, Philadelphia PA, September 14, 2009.
28. “Minimally Invasive Cardiac Surgery.” American College of Cardiology, Pennsylvania Chapter Annual Scientific Meeting, Skytop PA, October 2, 2009.
29. “Surgeon’s Perspective on the Aortic Valve and New Techniques.” Drexel University College of Medicine, Philadelphia PA, January 10, 2010.
30. “Endothelial Precursor CD133⁺ Cell Therapy During CABG.” International Stem Cell Therapy Meeting, Philadelphia PA, May 22, 2010.
31. “Cardiac Surgeons Going GREEN? Natural, Restorative Surgical Approaches to Valvular, Coronary, and Ventricular Disease” Division of Cardiovascular Medicine Grand Rounds, University of Pennsylvania, February 24, 2011.
32. “VADs and Valves: A Primer on the Newest Devices and Repair Techniques” Department of Medicine Grand Rounds, Crozer Chester Medical Center, Upland PA, March 18, 2011.
33. “Complex Aortic and Mitral Valve Repair Techniques” American Association for Thoracic Surgery, Philadelphia PA, May 9, 2011.
34. Invited Session Chair: Cardiac Surgery Forum Session, American Association for Thoracic Surgery, Philadelphia PA, May 10, 2011.
35. “Complex Mitral Valve Repair vs. Replacement.” Cardiovascular Institute of Philadelphia, Philadelphia PA, January 22, 2012.
36. “New Paradigms in Type A Aortic Dissection Surgery” Bay Area Society of Thoracic Surgeons, San Francisco CA, May 15, 2014.
37. “Future of MCS” Stanford MCS State of the Art CME Program, Stanford CA, May 17, 2014.

38. “Natural Cardiac Reconstruction via Surgical and Biologic Therapies” Stanford Cardiovascular Institute Frontiers Lecture, June 3, 2014.
39. “Bioengineering in Cardiovascular Surgery” Stanford Bioengineering Department Retreat, Monterey CA, November 22, 2014.
40. “Advances in Valvular Repair” Cardiology Grand Rounds, California Pacific Medical Center, San Francisco CA, January 7, 2015.
41. “Mitral Valve Surgery” Stanford BioDesign Program Fellows Course, Stanford CA, January 27, 2015.
42. “The Fusion of Biology, Engineering, and Surgery in the Treatment of Cardiovascular Disease” Stanford BioX Program, August 2, 2017.
43. “Stanford Cardiothoracic Surgery” Stanford University Provost’s Office, New Chairs Workshop, September 18, 2017.
44. “Stanford Cardiothoracic Surgery” Stanford School of Medicine Office of Faculty Development and Diversity, Women Faculty Networking Lunch, Oct 4, 2017.
45. “The 50th Anniversary of Heart Transplantation” Stanford Historic Society, May 22, 2018
46. Welcome Address to Incoming Class of Masters of Science in Physician Assistance White Coat Ceremony, Stanford University, August 25, 2018.
47. “Innovative Therapies for Ischemic Cardiomyopathy” Stanford-Duke Cardiovascular Institute Symposium, November 30, 2018.
48. “The Cure for Heart Disease: Repair and Regenerate” Stanford Parents’ Club Distinguished Speaker Program, October 8, 2019.
49. “Innovations in Complex Cardiovascular Care” Chinese Hospital, San Francisco, Oct 11, 2019.
50. “New Horizons in Cardiothoracic Surgery” Stanford Department of Radiology Faculty Meeting, Stanford CA July 8, 2020.
51. “Biomechanical Modeling of Cardiovascular Surgery and Translation into the Operating Room” Functional Imaging and Modeling of the Heart 11th Meeting, Keynote Address, Stanford University, June 24, 2021.
52. “Stanford Cardiothoracic Surgery” Society for Clinical Surgery, Stanford CA, Nov 5, 2021.

53. “E pluribus unum: Surgery, Science, and Engineering”. Stanford Cardiovascular Institute Frontiers Lecturer, Stanford CA, Oct 4, 2022.
54. “Ross Renaissance: Reviving, Re-Engineering, and Researching the Pulmonary Autograft Operation”. Stanford Cornell Cardiovascular Research Symposium, Stanford CA, Nov 28, 2022.