

Daniel I. Simon

Office Address: Division of Cardiovascular Medicine
11100 Euclid Avenue LKSD 3001
Cleveland, OH 44106-5038

E-mail: daniel.simon@uhhospitals.org Fax: 216-844-8318

Education:

1983 A.B. *summa cum laude* Harvard College
1987 M.D. Harvard Medical School

Postdoctoral Training:

Internship and Residency:

1987-1988 Medical Intern, Brigham and Women's Hospital, Boston, MA
1988-1989 Medical Resident, Brigham and Women's Hospital, Boston, MA

Clinical and Research Fellowships:

1987-1990 Clinical Fellow in Medicine, Harvard Medical School, Boston, MA
1990-1992 Research Fellow in Medicine, Harvard Medical School, Boston, MA
1989-1992 Research/Clinical Fellow in Medicine, Cardiovascular Division, Brigham and Women's Hospital, Boston, MA
1993-1995 Clinical Fellow in Medicine, Interventional Cardiology Section, Beth Israel Hospital, Boston, MA

Licensure and Certification:

1988 Diplomate, National Board of Medical Examiners
1989 Massachusetts Board of Registration in Medicine
1991 Diplomate, American Board of Internal Medicine
1993 Diplomate, Cardiovascular Disease (Re-certification 2003)
1999 Diplomate, Interventional Cardiology

Academic Appointments

1992-1995	Instructor in Medicine, Harvard Medical School
1995-2002	Assistant Professor of Medicine, Harvard Medical School
2002-2006	Associate Professor of Medicine, Harvard Medical School
2002-2006	Research Affiliate, Harvard-MIT Division of Health Sciences and Technology
2006-	Herman K. Hellerstein Professor of Cardiovascular Research, Case Western Reserve University School of Medicine, Cleveland, Ohio
2006-	Professor of Medicine, Case Western Reserve University School of Medicine, Cleveland, Ohio
2006-	Director, Case Cardiovascular Center, Case Western Reserve University School of Medicine, Cleveland, Ohio

Hospital Appointments

1992-2006	Associate Physician, Brigham and Women's Hospital, Boston, MA
1992-2006	Staff Physician, Brockton/West Roxbury VA Medical Center, West Roxbury, MA
1998-2005	Clinical Associate, Massachusetts General Hospital, Boston, MA
1999-2006	Associate Director, Interventional Cardiology, Brigham and Women's Hospital, Boston, MA
2006-	Chief, Division of Cardiovascular Medicine, University Hospitals Case Medical Center, Cleveland, OH
2006-	Director, Heart & Vascular Institute, University Hospitals, Cleveland, OH

Major Committee Assignments:

Brigham and Women's Hospital/Partners Health Care System

1993-2006	Thrombosis/Thrombolysis Research Group, Director, Brigham and Women's Hospital
1997-2005	Young Faculty Leadership/Advisory Committee (FLAME Group), Member, Brigham and Women's Hospital
1997-1999	House Staff Selection Committee, Member, Brigham and Women's Hospital
1998-2006	Cardiovascular Division Research Seminar Series, Organizer and Moderator, Brigham and Women's Hospital
1999-2000	Catheter Based Gene Therapy Working Group, Member, Partners Health Care System/Genzyme
2000	Strategic Investment Planning Committee, Member, Department of Medicine, Brigham and Women's Hospital
2002-2006	Partners Technology Assessment Committee, Member, Partners Health Care Systems, Inc.
2003-2004	Fellowship Selection Committee, Cardiovascular Division, Brigham and Women's Hospital

- 2003-2004 Junior Faculty Appointment and Promotions Sub-Committee, Department of Medicine, Brigham and Women's Hospital
- 2003-2004 Quality of Life Improvement Committee, Cardiovascular Division, Brigham and Women's Hospital
- 2004-2005 Research Service Improvement Committee, Brigham and Women's Hospital
- 2004-2005 Search Committee, Program in Cardiovascular Transcriptional Biology, Brigham and Women's Hospital
- 2005-2006 Research Oversight Committee, Brigham Biomedical Research Institute

University Hospitals/Case Western Reserve University School of Medicine

- 2006- Director, Cardiovascular Service Line, University Hospitals
- 2006- Member, Physician Marketing Advisory Council, University Hospitals Case Medical Center
- 2006- Member, Time-Is-Muscle (Door-to-Balloon Time) Committee, University Hospitals Case Medical Center
- 2006- Member, Fellowship Selection Committee, Division of Cardiovascular Medicine, University Hospitals Case Medical Center
- 2006- Member, Cardiovascular QA/Operations Committee, University Hospitals
- 2006- Member, Finance Committee, Heart & Vascular Institute, University Hospitals
- 2006- Member, UHConnect (volunteer and donor patient access program), University Hospitals Case Medical Center
- 2007- Co-Chair (Chair, Robert Salata, M.D.), Search Committee for Chief, Division of Clinical and Molecular Endocrinology; Director, Case Diabetes and Obesity Center, University Hospitals Case Medical Center, Case Western Reserve University School of Medicine
- 2007- Chair, Leadership Advisory Council, Heart & Vascular Institute, University Hospitals
- 2007-2008 Co-Chair (Chair, Kevin Cooper, M.D., Ph.D.), Task Force on Clinical Interfaces for Strategic Planning Steering Committee

Regional (New England)

- 1994-2005 Organizing Committee, Co-Chairman, Greater Boston Interventional Cardiology Forum
- 1996 Organizing Committee of Scientific Symposium Honoring Dr. Eugene Braunwald, Co-Chairman, XVIth Greater Boston Interventional Cardiology Forum
- 2000-2005 New England Cardiovascular Research Competition, Judge

Regional (Ohio)

- 2006- Director, Ohio Cell-Based Therapy Consortium-Cardiovascular

National

1997-1999 TIMI 11b Event Review Committee, Member, TIMI Study Group
1997-1998 TIMI 14 Event Review Committee, Member, TIMI Study Group
1998 Special Emphasis Panel, National Institutes of Health (EDC)
1998 TIMI16/OPUS Event Review Committee, Member, TIMI Study Group
2002 Ad Hoc Member, Thrombosis Study Section, American Heart Association
2003 TAXUS V Data Monitoring Committee, Boston Scientific
2003 Member, Special Emphasis Panel (CVB & CCVS), National Institutes of Health
2003 Ad Hoc Member, Pathology A Study Section, National Institutes of Health
2003 Scientific Committee, The 15th Annual Scientific Symposium, Transcatheter Cardiovascular Therapeutics 2003, Washington DC
2003- Data Safety Monitoring Committee, TAXUS V (sponsor: Boston Scientific)
2003- Steering Committee, Evaluation of Drug Eluting Stents and Ischemic Events (EVENT) Registry (sponsor: Millennium Pharmaceuticals)
2004- Steering Committee, Drug-eluting stent/Steppeler program, Cordis/J&J, Miami, FL
2004 Member, Special Emphasis Panel (RFA HL-04-005 Inflammation and Thrombosis), NHLBI, National Institutes of Health
2004 Scientific Committee, The 16th Annual Scientific Symposium, Transcatheter Cardiovascular Therapeutics 2004, Washington DC
2005-2007 American College of Cardiology Annual Scientific Sessions Program Committee
2005 Basic Science Abstract Grading Committee, Society for Cardiovascular Angiography and Interventions
2005 Member, Special Emphasis Panel (Occluded Artery Trial: Long-Term Follow-up), NHLBI, National Institutes of Health
2006 Member, NHLBI Strategic Plan Level I Working Group on Critical Role of Inflammation in Ischemic Disorders, National Institutes of Health
2006- Steering Committee, CHAMPIONS-PCI Trial (sponsor: Medicines Company)
2007- Member, Vanderbilt University Medical Center SCCOR Grant in Thrombosis and Hemostasis Advisory Board

International

2007-2008 Member, Scientific Advisory Boards of the International Academy of Cardiology and of the 14th World Congress on Heart Disease, Toronto, Ontario, Canada
2008-2009 Member, Scientific Advisory Board of the XXIInd International Society for Thrombosis and Hemostasis Congress, Boston, MA

Consultant/Advisory Boards

1998-2003 Scientific Advisory Board, Member, Pharmacyclics, Inc., Sunnyvale, CA
1999 Thrombosis Advisory Board, Consultant, Centocor/Pharmacia & Upjohn, Malvern, PA
1999- Consultant, Cordis/Johnson & Johnson, Miami Lakes, FL
2000- Consultant, Genzyme Corp., Cambridge, MA
2000-2002 Consultant, Novoste Corp., Norcross, GA
2000-2002 Consultant, Genentech Corp., South San Francisco, CA

2001-2002 Sunol-cH36 Clinical Advisory Board, Member, Sunol Molecular Corp., Miramar, FL

2001- Consultant, Morgan Stanley, New York, NY

2001-2005 Scientific Advisory Board (Thrombosis), Member, Millennium Pharmaceuticals, Inc., Cambridge, MA

2002-2003 Consultant, Activx Biosciences, La Jolla, CA

2002- Consultant, Millennium Partners, Healthcare Group, New York, NY

2002-2003 Consultant, Xerion Pharmaceuticals, Cambridge, MA

2002-2005 Consultant, Trinity Capital, Jacksonville, FL

2003- Consultant, Gerson Lehrman Group's Council of Healthcare Advisors, New York, NY

2005- Strategic Council, Millennium Pharmaceuticals, Inc., Cambridge, MA and Schering-Plough Pharmaceuticals, Kenilworth, NJ

2005- Consultant, Scios/Johnson & Johnson, Inc., Fremont, CA

2005- Consultant, Biogen/Idec, Cambridge, MA

2007- Member, Cordis Opinion Board, Cordis/Johnson & Johnson, Miami Lakes, FL

2007 Member, Coronary Commercialization Advisory Board, Medtronic Vascular, Santa Rosa, CA

2007- Member, North American Advisory Board, Medtronic Vascular, Santa Rosa, CA

2007- Member, Advisory Board, Lutonix, Inc., Minneapolis, MN

Professional Societies:

1990- Council on Thrombosis, Member

1990- American Heart Association, Member

1991- American Federation for Clinical Research, Member

1992- Massachusetts Medical Society, Member

1993- American College of Physicians, Member

1993- American Association for the Advancement of Science, Member

1994- International Society of Thrombosis and Hemostasis, Member

1996 American College of Cardiology, Fellow

1997- Council on Arteriosclerosis, Thrombosis, and Vascular Biology, American Heart Association, Member

1997 Council on Arteriosclerosis, Thrombosis, and Vascular Biology, American Heart Association, Member

1999- Basic Science Council, American Heart Association, Member

2001 American Heart Association and Council on Arteriosclerosis, Thrombosis, and Vascular Biology, Fellow

2005 The Society for Cardiovascular Angiography and Interventions (SCAI), Fellow

Editorial Boards:

1993- Ad Hoc Reviewer *Arteriosclerosis, Thrombosis and Vascular Biology*

1994- Ad Hoc Reviewer *Blood*

1994- Ad Hoc Reviewer *Circulation Research*

1993-	Ad Hoc Reviewer	<i>Coronary Artery Disease</i>
1993-	Ad Hoc Reviewer	<i>Fibrinolysis</i>
1996-	Ad Hoc Reviewer	<i>New England Journal of Medicine</i>
1996-	Ad Hoc Reviewer	<i>Proceedings of the National Academy of Science U.S.A.</i>
1993-	Ad Hoc Reviewer	<i>Thrombosis Research</i>
1997-	Ad Hoc Reviewer	<i>Circulation Research</i>
1998-	Ad Hoc Reviewer	<i>Thrombosis and Haemostasis</i>
1996-	Ad Hoc Reviewer	<i>Vascular Medicine</i>
1998-	Ad Hoc Reviewer	<i>Trends in Cardiovascular Medicine</i>
1998-	Ad Hoc Reviewer	<i>Circulation</i>
1998-	Ad Hoc Reviewer	<i>Journal of Infectious Diseases</i>
1999-	Ad Hoc Reviewer	<i>American Journal of Medicine</i>
1999-	Ad Hoc Reviewer	<i>Journal Clinical Investigation</i>
2000-	Ad Hoc Reviewer	<i>American Heart Journal</i>
2002-	Ad Hoc Reviewer	<i>American J of Respiratory and Critical Care Medicine</i>
2002-	Ad Hoc Reviewer	<i>Journal of Pharmacology and Experimental Therapeutics</i>
2003-	Ad Hoc Reviewer	<i>European Heart Journal</i>
2004-2005	Editorial Board	<i>Circulation</i>
2004-	Editorial Board	<i>Journal American College Cardiology</i>
2005-2006	Associate Editor	<i>Circulation</i>
2006-	Guest Editor	<i>Circulation</i>
2006-	Editorial Board	<i>Journal of Molecular and Cellular Cardiology</i>
2007-	Advisory Board	<i>Journal of Cardiology (Japanese College of Cardiology)</i>
2008-	Senior Editor	<i>Hurst's The Heart ONLINE and AccessMedicine</i>

Awards and Honors:

1979	Westinghouse Talent Search Research Award
1980-1983	John Harvard Scholar
1983	Phi Beta Kappa
1989-1991	American Heart Association Postdoctoral Fellowship Research Award
1990	Samuel A. Levine Fellowship Award, American Heart Association, MA Affiliate
1991-1993	Young Investigator Awards: American Heart Association 1990,1993; American College of Cardiology 1990; American Federation for Clinical Research 1991,1992
1992-1996	Clinician Scientist Award, American Heart Association (declined)
1992-1996	Clinician Investigator Development Award, National Institutes of Health
1994	Finalist, Raymond L. Kalil Memorial Cardiovascular Research Award
1994	Finalist, American Heart Association, Thrombosis Council Young Investigator Award
1995-1997	Grant-in-Aid, American Heart Association, Massachusetts Affiliate
1996	Fellow, American College of Cardiology
1997	Fellow, Council on Arteriosclerosis, Thrombosis, and Vascular Biology, American Heart Association
2001	Fellow, American Heart Association
2002	Member, The American Society for Clinical Investigation

	(Nominated by Dr. Peter Libby, seconded by Dr. Barry Coller)
2003	Partners in Excellence Award, Partners HealthCare
2005	Fellow, The Society for Cardiovascular Angiography and Interventions (SCAI)
2007	Member, Association of Professors of Cardiology
2007	Member, Association University Cardiologists
2007-2017	MERIT (Method to Extend Research in Time) Award; National Heart, Lung, and Blood Institute
2008	Member, The Association of American Physicians (Nominated by Dr. Richard Walsh, seconded by Dr. Joseph Loscalzo)

II. Research, Teaching, and Clinical Contributions

A. Narrative report of research, teaching, and clinical contributions:

Research activities:

1. As Director of the Case Cardiovascular Center, Dr. Simon supervises the activities of the Case Cardiovascular Research Institute (CVRI), which serves as the research arm of the Case Cardiovascular Center. Dr. Simon recruited Dr. Mukesh Jain to serve as the director of the CVRI. The mission of the CVRI is to develop a world-class research organization focused on basic and translational studies in cardiovascular disease. Prior to the arrival of the current leadership no such organization existed. Current scientific focus areas include fundamental aspects of heart and blood vessel biology along with stem cell and regenerative medicine. Key initiatives and accomplishments include:

- (1) Founding of the CVRI and consolidation of basic investigators in the Wolstein Research Building.
- (2) Rapid growth of the CVRI. Current census = 55, including 17 faculty (12 MD and 5 PhD), 36 staff (including postdoctoral fellows, students, technicians) and 2 administrators.
- (3) Centralization of pre- and post-grant award process for cardiovascular faculty.
- (4) Aggressive expansion of extra-mural support. Current annual funding total for 2006-2007 is \$5.5 million including 15 R01 grants, 6 Faculty Development Awards (K-grant, Robert Wood Johnson, and AHA Scientific Development Grant) along with industry and foundation awards.
- (5) Establishment of city wide Cardiovascular Research Seminar Series (CRISS) routinely attended by 40-50 scientists.
- (6) Inaugurated Case Cardiovascular Center Retreat at Squire Valleevue Farm.

- (7) Development of Integrative Cardiovascular Physiology Laboratory accessible to CWRU community.
- (8) Strengthening of research interactions with the members of the Lerner Research Institute (CCF) as part of the Global Cardiovascular Innovation Center and R01/Program Project grants.

2. Principal investigator of vascular biology laboratory comprised of 2 junior faculty, 2-4 post-doctoral research fellows, 2 technicians, and 1-2 medical students. The laboratory's main focus is the role inflammation in vascular injury and repair. Our studies have centered on the function, regulation, and signaling of the integrin family of leukocyte adhesion molecules, establishing that Mac-1 (CD11b/CD18, $\alpha M\beta 2$) is a molecular determinant of the biological response to vascular injury. Projects include the molecular mechanisms of leukocyte-platelet interactions, regulation of leukocyte integrins by membrane-associated proteins, integrin-induced gene expression using differential display and cDNA arrays, integrin control of monocyte differentiation via novel forkhead transcription factor, and the identification of acute MI genes using the transcriptional profiling of platelets. The goal of these studies is to develop novel, translational approaches to target inflammation in vascular injury in atherosclerosis, restenosis, vasculitis, and transplant vasculopathy.

3. Principal Investigator and Co-Investigator of multi-center device and pharmacologic trials based in the cardiac catheterization laboratory.

B. Funding Information:

Past:

1989-1991	American Heart Association Massachusetts Affiliate/ Postdoctoral Fellowship Research Award PI Lipoprotein(a) and plasminogen activation
1992-1996	NIH/Clinician Investigator Development Award PI K08 HL02768 Lipoprotein(a), fibrin(ogen) binding, and atherogenesis
1992-1997	NitroMed, Inc.PI Nitric oxide and coagulation/fibrinolysis
1995-1997	American Heart Association Massachusetts Affiliate/ Grant-in-Aid PI #13-526-945 Reciprocal interactions between Mac-1 (CD11b/CD18) and the urokinase receptor (CD87)
1998-2000	Pharmacyclics PI

Photodynamic therapy and vascular injury

- 1999-2000 Cor Therapeutics, Inc. PI
Iib/IIIa inhibitors and shear-induced platelet aggregation
- 1999-2001 Merck Medical School Grant PI
Statins, inflammation, and restenosis
- 1999-2003 NIH/R01 (G.-P. Shi) Co-Investigator
HL60942
Role of cysteine proteases in atherosclerosis
- 1999-2004 NIH/R01 (Keaney/Simon) Co-PI
DK55656
Cellular vitamin E status and integrin function
- 2003-2004 Merck Medical School Grant PI
Identification of simvastatin targets in vascular injury and repair
- 2001-2003 Amylin Pharmaceuticals PI
AC3056, Inflammation, and Restenosis
- 2001-2003 Cor Therapeutics, Inc. Co-PI
Influence of glycoprotein IIb-IIIa inhibitors on inflammation following percutaneous coronary intervention: A trial comparing eptifibatide and abciximab to placebo.
- 2002-2005 Millennium Pharmaceuticals, Inc. PI
Identification of novel targets for treatment and prevention of thrombotic disorders
- Active:
- 1997-2017 NIH/R01 PI
HL/DK57506
Inflammation in Vascular Injury and Repair
MERIT Award 2007-2017
- 2003-2008 NIH/R01 PI
HL073852
Monocyte differentiation and Mac-1-regulated Forkhead
- 2007-2012 NIH/R01 PI
HL085816
MRP-14 and Cardiovascular Disease

2005- Schering-Plough, Inc. National PI
RESISTOR: Research Evaluation to Study Individuals who Show
Thromboxane Or P2Y12 Receptor Resistance.

C. Report of Current Research Activities

Current Bench Research Activity

Principal investigator of vascular biology laboratory comprised of 2 junior faculty, 2-4 post-doctoral research fellows, 2 technicians, and 1-2 medical students. The laboratory's main focus is the role inflammation in vascular injury and repair. Our studies have centered on the function, regulation, and signaling of the integrin family of leukocyte adhesion molecules, establishing that Mac-1 (CD11b/CD18, α M β 2) is a molecular determinant of the biological response to vascular injury. Projects include the molecular mechanisms of leukocyte-platelet interactions, regulation of leukocyte integrins by membrane-associated proteins, integrin-induced gene expression using differential display and cDNA arrays, integrin control of monocyte differentiation via novel forkhead transcription factor, and the identification of acute MI genes using the transcriptional profiling of platelets. The goal of these studies is to develop novel, translational approaches to target inflammation in vascular injury in atherosclerosis, restenosis, vasculitis, and transplant vasculopathy.

Clinical Trial Activity (since 1998)

- 1998 CADILLAC: Controlled abciximab and device investigation to lower late angioplasty complications (Study PI: Greg Stone)
Site Co-Investigator
- 1998 Mini-Crown: A multi-center study of the Palmaz-Schatz MiniCrown balloon-expandable stent mounted on the cordis dynasty OTW system for patients undergoing elective MiniCrown stent placement versus balloon angioplasty in small coronary arteries (Study PI: Sheldon Goldberg)
Site Co-Investigator
- 1998 DISTINCT: Biocompatibles *BiodivYsio* stent randomized control trial (Study PI: Jeffrey Moses)
Site Principal Investigator
- 1998 Beta-Cath: A prospective, randomized, placebo-controlled, triple-masked trial to evaluate the safety and effectiveness of the Novoste Beta-Cath system in native coronary arteries (Study PI: Richard Kuntz)
Site Principal Investigator
- 1998 ATLAS: Acolysis during treatment of lesions affecting saphenous vein bypass grafts (Study PI: David Holmes)
Site Co-Investigator

- 1998 START: A prospective, randomized, placebo-controlled, triple-masked trial to evaluate the effectiveness of the Novoste Beta-Cath system in the treatment of in-stent restenosis of native coronary arteries (Study PI: Jeffrey J. Popma)
Site Co-Investigator
- 1999 ESPRIT: Enhanced suppression of the platelet IIb/IIIa receptor with Integrilin therapy (Study PI: James E. Tchong)
Site Co-Investigator
- 1999 NICE-1: The safety of enoxaparin therapy in patients undergoing percutaneous coronary interventions (Study PI: Cindy Grines)
Site Co-Investigator
- 1999 Accumetrics Ultegra: A prospective, multicenter, observational study evaluating platelet function with Accumetrics Ultegra-Rapid platelet function assay in patients undergoing coronary interventions using platelet glycoprotein IIb/IIIa inhibitors
Site Co-Investigator
- 1999 START 40/20 Trial: Novoste Beta-Cath system in the treatment of in-stent restenosis of native coronary arteries (Study PI: Jeffery J. Popma)
Site Principal Investigator
- 1999 NOGA Project: A comparison of methods to assess myocardial viability (Study PI: Jeffrey J. Popma)
Site Co-Investigator
- 1999 VENUS Trial: A multicenter study of the BX Velocity balloon-expandable stent mounted on the Raptor over the wire stent delivery system in patients with *de novo* or restenotic native coronary artery lesions (Study PI: James Zidar)
Site Principal Investigator
- 1999 Shear-induced Platelet Aggregation Study: Observational pilot study utilizing a new, highly automated dynamic flow system, the Xylum Clot Signature Analyzer (CSA), that simulates vascular injury to assess multiple aspects of hemostasis under near-physiologic conditions
Study Principal Investigator
- 1999 PREDICT Trial: Pre-dilation vs. direct stenting in coronary treatment
Site Co-Investigator
- 2000 PCYC-0551: Phase I, Dose-escalation clinical trial of Antrin injection and far-red light activation (photoangioplasty) in subjects with coronary artery

- disease undergoing percutaneous intervention (PCI) with stent placement
(Study PI: Dean J. Kereiakes)
Site Principal Investigator
- 2000 DISTINCT Registry: Biocompatibles *BiodivYsio* stent in randomized
control trial stents registry (Study PI: Jeffrey Moses)
Site Principal Investigator
- 2000 MedNova distal protection device testing site (Study PI: David Holmes)
Site Co-Investigator
- 2000 SAFER: Saphenous vein graft angioplasty free of emboli randomized
study (Study PI: Donald Baim)
Site Co-Investigator
- 2000 Novoste Corporation's Compassionate Use Protocol (CUP) for use With
Beta Cath System (Study PI: Raul Bonan)
Site Principal Investigator
- 2000 SILENT: Sonotherapy for in Lesion Elimination of Neointimal Tissue
(Study PI: Richard E. Kuntz)
Site Co-Investigator
- 2000 GAMMA V: A multicenter trial of localized radiation therapy to inhibit
re-stenosis (Study PI: Paul Tierstein)
Site Co-Investigator
- 2000 SAFE-STEER: Guide wire System Coronary Artery Total
Occlusion Study
Site Co-Investigator
- 2000 VESTA: Saphenous Vein Graft Intervention Using the BX Velocity™
Stent and Angioguard
Site Co-Investigator
- 2000 GUARD: Saphenous Vein Graft Intervention Using AngioGuard™ for.
Reduction of Distal Embolization
Site Co-Investigator
- 2000 A Prospective, Multicenter, Non- Randomized Registry Study, to evaluate
the safety and efficacy of the Medtronic AVE S7 with Discrete
Technology™ Coronary Stent System with Denovo and Restenotic
Lesions of the Native Coronary Arteries (Study PI: Jefferey J. Popma)
Site Co-Investigator
- 2000 INTEGRITI: Integrillin and Tenectaplaste in Acute Myocardial Infarction

(Study PI: Eugene Braunwald)
Site Co-Investigator

- 2001 Beta-Cath: A prospective, randomized, placebo-controlled, triple-masked trial to evaluate the safety and effectiveness of the Novoste Beta-Cath system in native coronary arteries, Site Principal Investigator
- 2001 PCYC-0551: Phase I, Dose-escalation clinical trial of Antrin injection and far-red light activation (photoangioplasty) in subjects with coronary artery disease undergoing percutaneous intervention (PCI) with stent placement, Site Principal Investigator
- 2001 START Continued Access 40/20 Trial: Novoste Beta-Cath system in the treatment of in-stent restenosis of native coronary arteries, Site Principal Investigator
- 2001 DISTINCT Registry: Biocompatibles *BiodivYsio* stent in randomized control trial stents registry
Site Principal Investigator
- 2001 Novoste Corporation's Compassionate Use Protocol (CUP) for use with beta cath system
Site Principal Investigator
- 2001 SILENT: Sonotherapy for in lesion elimination of neointimal tissue
Site Co-Investigator
- 2001 SAFE-STEER: Guide wire system coronary artery total occlusion study,
Site Co-Investigator
- 2001 REPLACE: A randomized evaluation in percutaneous coronary intervention linking AngioMax to reduce clinical events
Site Co-Investigator
- 2001 EXTRACT: X-sizer treatment of thrombus and atherosclerosis in coronary interventions trial
Site Co-Investigator
- 2001 EXTRACT AMI: X-sizer treatment of thrombus and atherosclerosis in coronary intervention trial AMI
Site Co-Investigator
- 2001 TENAX XR Registry
Site Co-Investigator

- 2001 EMBOLIC: Embolic protection filter wire system during transluminal intervention of saphenous vein grafts (Study PI: Campbell Rogers)
Site Co-Investigator
- 2001 SIRIUS: Multicenter, randomized, double blind study of the Sirolimus-coated BX Velocity balloon-expandable stent in the treatment of patients with de novo coronary artery lesions (Study PI: Jeffrey Moses, Martin Leon)
Site Co-Investigator
- 2001 CAPTIVE: CardioShield application protects during transluminal intervention of vein grafts by reducing emboli
Site Co-Investigator
- 2001 Cook Logic AC/TAC
Site Co-Investigator
- 2001 CORLOPAM: A phase IIIb, multicenter, randomized, double-blind, placebo-controlled study to determine the safety, efficacy and tolerability of Fenoldopam methylete in subjects undergoing interventional cardiology procedures
Site Co-Investigators
- 2001 The SWING Trial: Sound wave inhibition of neointimal growth (Study PI: Richard Kuntz)
Site Co-Investigator
- 2001 Millennium Pharmaceuticals, Inc. Identification of novel targets for treatment and prevention of thrombosis disorders related to coronary artery disease and determination of the prevalence of aspirin resistance
PI
- 2002 COOL-MI: Cooling as an adjunctive therapy to percutaneous intervention in patients with acute myocardial infarction (Study PI: William O'Neill)
Site PI
- 2002 BARRICADE: The Barrier Approach to Restenosis: Restrict Intima and Curtail Adverse Events (Study PI: Gregg Stone)
Site PI
- 2002 TIMI-34/TITAN: Time to Integrillin therapy in acute myocardial infarction (Study PI: Michael Gibson)
Site PI
- 2002 ANTHEM/TIMI 32: A randomized, double blind placebo-controlled study to assess the safety of factor VIIa/tissue factor inhibitor, Recombinant

- nematode anticoagulant protein c2 (rNAPc2), in patients with non-ST-elevation acute coronary syndromes- ANTHEM (Anticoagulation with NAPc2 to help eliminate MACE)/TIMI 32 (Study PI: Robert Giugliano Site PI
- 2003 JUMBO-TIMI 26 (Joint Utilization of Medications to Block Platelets Optimally): A Double-Blind, Randomized, Multicenter, Dose-Ranging Trial of CS-747 Compared with Clopidogrel in Subjects Undergoing Percutaneous Coronary Intervention (Study PI: Elliott Antman) Site Co-Investigator
- 2004 EVENT: A Multicenter Registry for the Evaluation of Drug Eluting Stents and Ischemic Events (Study PI: Neal Kleiman and David Cohen) Steering Committee Member
- 2004 AMEthyst: Clinical Evaluation of Medtronic AVE Interceptor Coronary Filter System (Study PI: Dean Kereiakes and Campbell Rogers) Site Co-Investigator
- 2004 BE-RITE: BeNEPHit System Renal Infusion Therapy Registry (Study PI: Vandana Mathur) Site Co-Investigator
- 2004 BLAZE II: Embolic protection transluminally with the FilterWire EZ device (BLAZE) in saphenous vein grafts protocol (Study PI: David Cox and Campbell Rogers) Site Co-Investigator
- 2004 The D.E.S.covery Registry (Study PI: David Williams) Site Co-Investigator
- 2004 ENDEAVOR: A Randomized Controlled Trial of the Medtronic Endeavor Drug (ABT-578) Eluting Stent System versus the Cypher Sirolimus-Eluting Coronary Stent System in De Novo Native Coronary Artery Lesions (Study PI: Martin Leon and David Kandzari)
- 2004 FETCH: The freedom from emboli in the treatment of coronary saphenous vein grafts feasibility study (Study PI: Donald Baim) Site Co-Investigator
- 2004 FLAME: The FilterWire EZ system used in the treatment of an acute myocardial infarction for embolic protection protocol (Study PI: James B. Hermiller and David Cox) Site Co-Investigator

- 2004 PROXIMAL: Proximal Protection during Saphenous Vein Graft Intervention using the Proxis Embolic Protection System: A Randomized, Prospective, Multicenter, Clinical Trial (Study PI: Campbell Rogers) Site Co-Investigator
- 2005 EVENT - A Multicenter Registry for the Evaluation of Drug Eluting Stents and Ischemic Events (Study PI: Neal S. Kleiman) Steering Committee and Site Co-Investigator
- 2005 SPIRIT III - A Clinical Evaluation of the XIENCE V Everolimus Eluting Coronary Stent System in the Treatment of Subjects with de novo Native Coronary Atery Lesions (Study PIs: Gregg Stone and Campbell Rogers) Site Co-Investigator
- 2005 RESISTOR: Research Evaluation to Study Individuals who Show Thromboxane Or P2Y12 Receptor Resistance. A double-blind, randomized, multi-center trial of eptifibatide compared with placebo in aspirin non-responsive subjects undergoing percutaneous coronary intervention stratified on the basis of clopidogrel responsiveness. NCT00289601 National PI
- 2006 HEART: Harvard Evaluation of Angiomax Reducing Thrombotic and Hemorrhagic Events (Registry). Co-PI

D. Report of Teaching:

1. Local Contributions:

a. Harvard Medical School courses

- 1997-1999 M.D./Ph.D. Re-Introductory to Clinical Medicine
2 medical students
- 1997- Ambulatory Cardiology
1 medical student
- 2001- ABS Program Course PA514.0
“Revisiting Biomedical Sciences and Pathology”
30 medical students
Preparation and contact time 10 hr

b. Graduate medical courses (none)

c. Local invited teaching presentations

Massachusetts

- 1992 Research Seminar, Department of Pathology, Boston University School of Medicine, Boston, MA
- 1994 Fifth International IBC Symposium on Advances in Anticoagulant, Antithrombotic and Thrombolytic Drugs, Cambridge, MA
- 1996 Medical Grand Rounds, Carney Hospital, Boston, MA
- 1996 Pulmonary Cellular Biology Seminar, New England Medical Center, Boston, MA
- 1996 Cardiovascular Grand Rounds, West Roxbury VA Medical Center, Boston, MA
- 1998 Research Seminar, Whitaker Cardiovascular Research Institute, Boston University School of Medicine, Boston, MA
- 1998 Medical Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 1998 Cardiovascular Grand Rounds, West Roxbury VA Medical Center, Boston, MA
- 1999 Research Seminar, Vascular Biology Seminar Series, Harvard Medical School, Boston, MA
- 2000 Cardiovascular Grand Rounds, West Roxbury VA Medical Center, West Roxbury, MA
- 2000 Cardiology Grand Rounds, Norwood Hospital, Norwood, MA
- 2001 Cardiology Grand Rounds, Memorial Hospital, Pawtucket, RI
- 2001 Cardiac Catheterization Conference, Charlton Memorial Hospital, Fall River, MA
- 2001 Clinical Conference, Parkland Hospital, Derry, NH
- 2001 Cardiac Catheterization Conference, Lowell General Hospital, Lowell, MA
- 2001 Cardiovascular Grand Rounds, University of Massachusetts Medical Center, Worcester, MA
- 2001 Cardiology Grand Rounds, St. Vincent Hospital at Worcester Medical Center, Worcester, MA
- 2001 Cardiovascular Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 2001 Invited Lecturer, Department of Nursing Cardiovascular Retreat (Attitash Bear Peak), Brigham and Women's Hospital, Boston, MA
- 2001 Sixth Annual Thrombosis, Thrombolysis, and Anticoagulation for the clinician, University of Massachusetts Medical School, Worcester, MA
- 2002 Cardiology Grand Rounds, Memorial Hospital of Rhode Island, Brown University School of Medicine, Pawtucket, RI
- 2002 Cardiology Grand Rounds, Boston University Medical Center, Boston, MA
- 2002 Interventional Cardiology Conference, Lahey Clinic, Burlington, MA
- 2002 Invited Lecturer, Seminars in Vascular Biology, Harvard Medical School, Boston, MA
- 2003 Research seminar, Cardiovascular Research Seminar Series, St. Elizabeth's Medical Center, Tufts University School of Medicine, Boston, MA

- 2004 Research seminar, Pulmonary-Critical Care Division, Tufts-New England Medical Center, Boston, MA
- 2005 Cardiac Catheterization Laboratory Lecture Series, Rhode Island Hospital, Providence, RI

Ohio

- 2006 Course Director, Moderator, and Speaker. University Hospitals Heart & Vascular Institute Cardiovascular Update (2.0 CME), Cleveland, OH
- 2007 Invited Faculty, 22nd Annual Gabriel A. Sabga Cardiovascular Activity, Elyria, OH
- 2007 Invited Lecturer, New Faculty Symposium, Case Western Reserve University School of Medicine, Cleveland, OH
- 2007 Anesthesia Grand Rounds, University Hospitals Case Medical Center, Cleveland, OH
- 2007 Weinberg Lecture, Park Synagogue University Day, Cleveland Heights, OH
- 2007 Cardiovascular Course Director and Lecturer, Mini-Medical School, Case Western Reserve University School of Medicine
- 2007 Invited Faculty, 19th Annual Cardiovascular Invitational, Akron General Hospital, Akron, OH
- 2007 Course Director, Moderator, and Speaker. University Hospitals Heart & Vascular Institute Cardiovascular Update (3.0 CME), Cleveland, OH

d. Continuing Medical Education Courses:

- 1994- Intensive Review of Internal Medicine Course, Department of Medicine, Cardiovascular board review.
Preparation and contact time 10 hr
- 1996 Intensive Review of Hematology and Hematologic Oncology, Anticoagulation in interventional cardiology.
Preparation and contact time 8 hr
- 1998- Intensive Review of Cardiovascular Medicine, Cardiovascular Division, Interventional cardiology workshop.
Preparation and contact time 10 hr
- 1999- Combined Harvard-Hospitals Interventional Cardiology Course
Lecturer, panel discussion, live-case demonstrations
Preparation and contact time 20 hr
- 1999- American College of Cardiology Interventional Cardiology Board Review Course
Preparation and contact time 15 hr

- 2001 Albert Einstein Medical School Restenosis CD-ROM containing slide lecture, video animation, and extensive syllabus
Preparation time 25 hr
- 2004- Interventional cardiology training courses in China. Medtronic Teaching and Education Program with CME certification by SCAI. Core lectures, case review, and simulator training
Preparation and contact time 35 hr

e. Advisory and supervisory responsibilities in clinical and laboratory setting:

Brigham and Women's Hospital/Harvard Medical School:

- 1992-1994 Coronary Care Unit and Cardiology Consultation Service
CCU and Consult Attending
0-2 medical students; 3 interns; 1 resident; 1 cardiology fellow (CCU Attending); 0-2 medical students; 1 resident; 1 cardiology fellow (Consult Attending)
2 months/year
- 1994-2006 Cardiac Catheterization Laboratory
Diagnostic and Interventional Attending
0-2 medical students; 5 physician assistants; 2 general cardiology fellows; 5 interventional cardiology fellows
2 days per week x 52 weeks; 12 hours/day
- 1992-2006 Medical Housestaff Teaching Conferences
Select cardiovascular topics
2 hours/year as Lecturer
- 2000-2006 Housestaff Mentoring Program
1-2 advisees
10 hr/year

Brockton/West Roxbury VA Medical Center:

- 1992-1994 Coronary Care Unit/Medical Intensive Care Unit, Cardiac Catheterization Laboratory, and Medical Service
CCU/ICU, Consult, and Medicine Attending
0-2 medical students; 3 interns; 1 resident; 1 cardiology fellow (CCU/ICU Attending); 2 cardiology fellows (Cath Lab Attending); 0-2 medical students; 3 interns; 1 resident (Medical Service)
1-2 months/year
- 1994-1996 Cardiac Catheterization Laboratory

- Diagnostic and Interventional Attending
2 cardiology fellows
1 month/year
- 1996-2006 Cardiac Catheterization Laboratory
Diagnostic and Interventional Attending
2 cardiology fellows
periodic
- 1992-2006 Medical Housestaff Teaching Conferences
Select cardiovascular topics
3 hours/year as Lecturer

Research Laboratory:

- 1992- Principal investigator of vascular biology laboratory comprised of 3-4 post-doctoral research fellows, 1-2 technicians, and 1-2 medical students.
Daily contact hours (>500/year)

g. Past and current trainees:

- | | | |
|-----------|--------------------------|--|
| 1995-1997 | Clyde Meckel, M.D. | Assistant Professor of Medicine,
University of Nebraska |
| 1996-1999 | Navaneetha K. Rao, Sc.D. | Research Scientist, Cato Research |
| 1997- | Can Shi, Ph.D. | Instructor in Medicine, Brigham and
Women's Hospital, Harvard Medical
School |
| 1998-2000 | Vijay K. Nyak, M.D. | Assistant Professor of Medicine
Case Western Reserve University
Surgical Resident, Brigham and
Women's Hospital |
| 1998-2004 | Zhiping Chen, M.S. | Research Scientist, Novartis
Pharmaceuticals |
| 1999 | Karina Sulaiman | Medical Resident, Louisiana State
University-Baton Rouge |
| 1999-2000 | Tatsuya Fukutomi, M.D. | Assistant Professor of Medicine
Nagaya City University Medical
School, Japan |
| 2000-2004 | Xiaobin Zhang, M.D. | Research Scientist, Novartis
Pharmaceuticals |
| 2001-2003 | Raila Ehlers, M.D. | Post-doctoral Research Fellow,
Brigham and Women's Hospital |
| 2001-2005 | Alexandre Zago, M.D. | Post-doctoral Research Fellow,
Brigham and Women's Hospital
Ph.D. Advisor Sao Paulo University |

2003-2007	Masashi Sakuma, M.D.	Assistant Professor of Medicine Saga University, Japan
2004-	Yunmei Wang, Ph.D.	Post-doctoral Research Fellow, Brigham and Women's Hospital Assistant Professor of Medicine Case Western Reserve University
2004-	Kevin Croce, M.D., Ph.D.	Post-doctoral Research Fellow, Brigham and Women's Hospital
2007-	Toshi Mooroka, M.D.	Post-doctoral Research Fellow, Case Western Reserve University
2007-	John Mafi	Medical student thesis advisor Case Western Reserve University
2007-	Arjun Sharma	Undergraduate research student Case Western Reserve University

2. Regional, National, and International Contributions

a. Invited Presentations (selected)

- 1990 Endocrinology Grand Rounds, University of Alabama Medical Center, Birmingham, AL
- 1992 Research Seminar, Department of Pathology, Boston University School of Medicine, Boston, MA
- 1993 Combined Research Grand Rounds, Sheba Medical Center, Tel Hashomer, Israel
- 1994 Thrombolysis Research Seminar, Abbott Laboratories, Abbott Park, IL
- 1994 Thrombolysis Gordon Conference, Ventura, CA
- 1994 Fifth International IBC Symposium on Advances in Anticoagulant, Antithrombotic and Thrombolytic drugs, Cambridge, MA
- 1995 Thrombolysis Research Seminar, Genentech, Inc., S. San Francisco, CA
- 1995 European Society of Biochemical Pharmacology, Otzenhausen, Germany
- 1996 Lecturer, Thrombolysis Gordon Conference, Ventura, CA
- 1996 Medical Grand Rounds, Carney Hospital, Boston, MA
- 1996 Research seminar, Feinberg Cardiovascular Institute, Northwestern University Medical School, Chicago, IL
- 1996 Pulmonary Cellular Biology Seminar, New England Medical Center, Boston, MA
- 1996 Cardiovascular Grand Rounds, West Roxbury VA Medical Center, Boston, MA
- 1996 Research Seminar, Centocor, Inc., Malvern, PA
- 1997 Medical Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 1997 Canadian Cardiovascular Society Satellite Symposium, Winnipeg, Manitoba
- 1997 Research Seminar, Children's Hospital Research Foundation, Cincinnati, OH
- 1998 Lecturer, Thrombolysis Gordon Conference, Ventura, CA
- 1998 Research Seminar, Whitaker Cardiovascular Research Institute, Boston University School of Medicine, Boston, MA
- 1998 Research Seminar, Cardiovascular Research Center, University of Michigan Medical Center, Ann Arbor, MI
- 1998 Vascular Biology Research Seminar, Baylor College of Medicine, Houston, TX

- 1998 Medical Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 1998 Research Seminar, Department of Pathology, Yale University School of Medicine, New Haven, CT
- 1998 Cardiovascular Grand Rounds, West Roxbury VA Medical Center, West Roxbury, MA
- 1999 Research Seminar, Merck Research Laboratories, Rahway, NJ
- 1999 Cambridge Health Resources Executive Conference, Orlando, FL
- 1999 Research Seminar, Holland Laboratory, American Red Cross, Rockville, MD
- 1999 Invited Lecturer, Seminars in Vascular Biology, Harvard Medical School, Boston, MA
- 1999 Restenosis Cybersummit, The Cleveland Clinic Foundation, Cleveland, OH
- 1999 Lecturer and Live-Case Moderator, Transcatheter Cardiovascular Therapeutics 11, Washington DC
- 1999 Research Seminar, US-Australia Symposium on Cardiac and Vascular Remodeling in the Pathogenesis of Heart Disease, Atlanta, GA
- 1999 Research Seminar, Cor Therapeutics, South San Francisco, CA
- 1999 Research Seminar, Genentech, Inc., South San Francisco, CA
- 2000 Cardiology Grand Rounds, Yale-New Haven Hospital, New Haven, CT
- 2000 Session Co-Chairman, Meet-the-Experts Co-Chairman, and Lecturer, ACC2000, Anaheim, CA
- 2000 Experimental Models of Cardiovascular Disease: Concepts, Relevance, and Results. Satellite symposium Society of Toxicology 2000, Philadelphia, PA
- 2000 Plenary sessions and taped-case moderator, Scientific Congress Hong Kong College of Cardiology, Hong Kong, China
- 2000 Immunology 2000, Clinical Immunology Society Symposium: Immunology of atherosclerotic heart disease, Seattle, WA
- 2000 2nd International Meeting, Intensive Cardiac Care, Jerusalem, Israel
- 2000 Cardiology Update: Inflammation and Thrombosis. The Ohio State University Heart and Lung Institute, Columbus, OH
- 2000 Plenary Session and Research Seminar, Transcatheter Cardiovascular Therapeutics 12, Washington, DC
- 2000 Cardiology Grand Rounds, Dartmouth-Hitchcock Medical Center, Hanover, N.H.
- 2000 Cardiovascular seminar series, American Heart Association Scientific Sessions 2000, New Orleans, LA
- 2000 Cardiovascular Grand Rounds, West Roxbury VA Medical Center, West Roxbury, MA
- 2001 Cardiology Grand Rounds, Cardiovascular Center for Excellence, Uniformed Services University of the Health Sciences, Bethesda, MD
- 2001 SCOR Group Research Seminar, Mt. Sinai Medical Center, New York, NY
- 2001 Cardiology Grand Rounds, University of Massachusetts Medical Center, Worcester, MA
- 2001 Cardiology Grand Rounds, St. Vincent Hospital at Worcester Medical Center, Worcester, MA
- 2001 Cardiovascular Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 2001 Cardiovascular Grand Rounds, Nebraska Heart Institute, Lincoln, NE

- 2001 Cardiac Catheterization Laboratory Clinical and Research Conference, Medical College of Virginia, Richmond, VA
- 2001 Cardiovascular Grand Rounds, George Washington University Medical Center, Washington, DC
- 2001 Invited Lecturer and Live Case Operator, New Frontiers in Percutaneous Coronary Intervention, Hospital de Clinicas de Porto Alegre, Federal University of Rio Grande do Sul, Porto Alegre, Brazil
- 2001 Invited Lecturer, Coronary Restenosis VI, Hospital Barra D'Or, Rio De Janeiro, Brazil
- 2001 Cardiovascular Grand Rounds, Erlanger Hospital, Chattanooga Unit of the College of Medicine, The University of Tennessee Memphis, Chattanooga, TN
- 2001 Keynote Speaker, Lecturer, Live Case Discussant, Transcatheter Cardiovascular Therapeutics 2001, Washington, DC
- 2001 Invited Lecturer, Department of Nursing Cardiovascular Retreat (Attitash Bear Peak), Brigham and Women's Hospital, Boston, MA
- 2001 Sixth Annual Thrombosis, Thrombolysis, and Anticoagulation for the clinician, University of Massachusetts Medical School, Worcester, MA
- 2001 Research seminar, The Picower Institute for Medical Research, Manhasset, New York
- 2002 Cardiology Grand Rounds, Memorial Hospital of Rhode Island, Brown University School of Medicine, Pawtucket, RI
- 2002 Cardiology Grand Rounds, Boston University Medical Center, Boston, MA
- 2002 Seminars in Clinical Research, The Rockefeller University, New York, NY
- 2002 Cardiology Grand Rounds, North Shore University Hospital, Manhasset, NY
- 2002 Meet-the experts, Live-case operator, and Lecturer, ACC2002, Atlanta, GA
- 2002 Invited Faculty, Satellite Symposium (University of Michigan), American College of Physicians, Philadelphia, PA
- 2002 Chair and Faculty, Satellite Symposium 8th Annual Interventional Cardiology Fellows Course, San Jose, CA
- 2002 Invited Faculty, Advanced Cardiovascular Interventions, The Sanger Clinic, Hilton Head, SC
- 2002 Co-Chair, Lecturer, Panel Moderator, The Inflammation Summit, Transcatheter Cardiovascular Therapeutics 2002, Washington DC
- 2002 Invited Faculty, The Institute of Cardiovascular Science and Medicine, 6th Annual Scientific Meeting: Atherosclerosis, Inflammation, and Thrombosis, Hong Kong, China
- 2002 Research seminar, Department of Cardiology, Koshigaya Hospital, Dokkyo University School of Medicine, Tokyo, Japan
- 2002 Invited Lecturer, Seminars in Vascular Biology, Harvard Medical School, Boston, MA
- 2002 Moderator, National Scientific Sessions American Heart Association, Chicago, IL
- 2002 Invited Faculty, Duke School of Medicine Satellite Symposium National Scientific Sessions American Heart Association, Chicago, IL
- 2002 Molecular Cardiology Research Seminar, Lerner Research Institute, The Cleveland Clinic Foundation, Cleveland, OH

- 2003 Research seminar, Cardiovascular Research Seminar Series, St. Elizabeth's Medical Center, Tufts University School of Medicine, Boston, MA
- 2003 Cardiology Grand Rounds, University of Chicago, Chicago, IL
- 2003 Research seminar, DNAX, Inc., Palo Alto, CA
- 2003 Research seminar, Vascular Biology Research Series, Stanford University Medical Center, Palo Alto, CA
- 2003 Cardiac Catheterization Laboratory Lecture Series, Yale-New Haven Medical Center, New Haven, CT
- 2003 Cardiology Grand Rounds, Creighton University Medical Center, Omaha, NE
- 2003 Moderator, Invited Speaker, Live-case Operator, 15th Annual Scientific Symposium Transcatheter Cardiovascular Therapeutics 2003, Washington DC
- 2003 Invited Speaker, US-Russia joint symposium on the role of infections and inflammatory responses in the heart and lung, National Heart, Lung, and Blood Institute/National Institutes of Health, Orlando, FL
- 2003 Research seminar, Millennium Pharmaceuticals, Inc., Cambridge, MA
- 2004 Cardiology Grand Rounds, Columbia Presbyterian Medical Center, New York, NY
- 2004 Research seminar, Pulmonary-Critical Care Division, Tufts-New England Medical Center, Boston, MA
- 2004 Research seminar, University of Texas-San Antonio, San Antonio, TX
- 2004 Invited faculty, International CV Summit, Brigham and Women's Hospital, Boston, MA
- 2004 Cardiology Grand Rounds, Hartford Hospital, Hartford, CT
- 2004 Cardiology Grand Rounds, University of Pittsburgh Medical Center, Pittsburgh, PA
- 2004 Core Curriculum Lecture, Division of Cardiology, The Johns Hopkins Hospital, Baltimore, MD
- 2004 Live-case Operator and Moderator. Intervention 2004 and Fellows C³ Summit. Boston, MA, Atlanta, GA, San Jose, CA, and Cleveland, OH.
- 2004 Scientific Committee, Moderator, and Invited Speaker. 16th Annual Scientific Symposium Transcatheter Cardiovascular Therapeutics 2004, Washington DC
- 2004 Moderator Lecturer, and Simulator Trainer. Medtronic Teaching and Education Program (MedTEP), Beijing, China
- 2005 Invited Faculty and Live-case Moderator, PCI Summit 2005, Park City, Utah
- 2005 Cardiology Grand Rounds, The Johns Hopkins Hospital, Baltimore, MD
- 2005 Invited Faculty and Moderator, Society for Cardiovascular Angiography and Interventions, Ponte Vedra Beach, FL
- 2005 Invited Speaker, Atherosclerosis Gordon Conference, University of New England, Biddeford, ME
- 2005 Research seminar, School of Medicine, Case Western Reserve University, Cleveland, OH
- 2005 Cardiac Catheterization Laboratory Lecture Series, Rhode Island Hospital, Providence, RI
- 2005 Visiting Professor, Medical University of Ohio, Toledo, OH
- 2006 Invited Faculty, PCI Summit 2005, Park City, Utah

- 2006 Invited Faculty and Live-case Moderator, Joint Interventional Meeting 2006, Rome, Italy
- 2006 Scientific Organizing Committee, Session Chair, and Invited Speaker. ACC.06 and i2 Summit 2006. Atlanta, GA
- 2006 Cardiology Grand Rounds Speaker, University of Maryland Medical Center, Baltimore, Maryland
- 2006 Invited Faculty and Moderator, Society for Cardiovascular Angiography and Interventions, Chicago, IL
- 2006 Invited Speaker, Hemostasis Gordon Conference, Colby College, Waterville, ME
- 2006 Invited Faculty and Moderator. 18th Annual Scientific Symposium Transcatheter Cardiovascular Therapeutics 2006, Washington DC
- 2006 Invited Faculty. Global Cardiovascular Summit, Chicago, IL
- 2006 Invited Speaker. National Scientific Session American Heart Association, Chicago, IL
- 2007 Invited Faculty and Live-case Moderator, PCI Summit 2007, Park City, Utah
- 2007 Invited Lecturer, Endothelome Conference 2007, Okinawa, Japan
- 2007 Invited Faculty, Fellows Course in Interventional Cardiology, Kyoto, Japan
- 2007 Research Seminar, Saga University, Saga, Japan
- 2007 Invited Faculty, Hemophilia and Thrombosis Research Society, Annual Scientific Symposium, Chicago, IL
- 2007 Plenary Session Speaker, American Heart Association 8th Annual Conference on Arteriosclerosis, Thrombosis, & Vascular Biology, Chicago, IL
- 2007 Invited Faculty, 10th Anniversary PCI Symposium “Quo Vadis Coronary Intervention,” Unfalckrankenhaus Berlin, Charite Medical School, Berlin, Germany
- 2007 Invited Faculty and Moderator. 19th Annual Scientific Symposium Transcatheter Cardiovascular Therapeutics 2007, Washington DC
- 2008 New member inductee lecture. Association University Cardiologists, Scottsdale, AZ
- 2008 Cardiology Grand Rounds and Visiting Professor Rounds. William Beaumont Hospital, Royal Oak, MI.

b. Leadership roles related to teaching:

- 1993-2006 Director, Thrombolysis Working Group, Brigham and Women’s Hospital
Organize program, select and recruit speakers, chair seminars for clinical and basic investigators dedicated to thrombosis/thrombolysis research
- 1994-2006 Co-Director, Greater Boston Interventional Cardiology Forum
Organize program, select and recruit speakers, co-chair annual meeting
- 1996 Co-Chairman, scientific symposium honoring Dr. Eugene Braunwald
Organized program, selected and recruited speakers, fund-raising, and co-chaired scientific sessions
- 1998-2006 Principal Faculty Supervisor and Moderator, Cardiovascular Division
Research Seminar Series, Brigham and Women’s Hospital

2000-2006 Organize series, select and recruit speakers, moderate discussion
Co-Principal Faculty Organizer and Moderator, Cor
Therapeutics/Brigham and Women's Hospital Interventional Cardiology
Educational Program
Organize program, lecturer, and moderate discussion

E. Report of Clinical Activities:

Brigham and Women's Hospital

1. Description of clinical practice

1993-2006 Attending Physician, Cardiac Catheterization Laboratory, Brigham and
Women's Hospital, Boston, MA

1993-2006 Attending Physician, Interventional Cardiovascular Services,
Brockton/West Roxbury VA Medical Center, West Roxbury

2. Patient load

Associate Director, Interventional Cardiology, Brigham and Women's Hospital, and core operator performing greater than 600 cardiac catheterization procedures per year, including 200-250 percutaneous coronary intervention procedures per year, diagnostic studies, and endomyocardial biopsies. Interventional procedures performed include balloon angioplasty, endovascular stenting, directional atherectomy, rotational atherectomy, rheolytic/ultrasonic thrombectomy, brachytherapy, distal embolic protection, and photoangioplasty. Attending responsibilities also include the Interventional Cardiology Service.

3. Clinical contributions

Introduced brachytherapy, photoangioplasty, platelet monitoring, systemic hypothermia, and native vessel proximal embolic protection into the Cardiac Catheterization Laboratory, Brigham and Women's Hospital as Principal Investigator of clinical trials.

4. Other relevant information about clinical role

Invited to participate in the leading international interventional cardiology meetings, Transcatheter Cardiovascular Therapeutics 1999-2004, Washington D.C., and ACCIS 2000-2003 as keynote address speaker, plenary session speaker, lecturer, and live-case discussant. Also participate in the national training and proctoring of interventional cardiologists in the performance of rotational atherectomy, brachytherapy, and photoangioplasty. Combined career as vascular biologist and interventional cardiologist has led to unique opportunities as a consultant for numerous biotechnology and cardiovascular device companies including Cordis/Johnson & Johnson, Genentech, Genzyme, Millennium Pharmaceuticals, Novoste, Pharmacia, and Amylin.

University Hospitals

1. Description of clinical practice

- 2006- Director, Heart & Vascular Institute
- 2006- Chief, Division of Cardiovascular Medicine
- 2006- Attending Physician, Cardiac Catheterization Laboratory and Coronary Intensive Care Unit, University Hospitals Case Medical Center, Cleveland, OH
- 2006- Attending Physician, Cardiac Catheterization Laboratory, Cleveland Stokes VA Medical Center, Cleveland, OH

2. Patient load

Core operator performing greater than 400 cardiac catheterization procedures per year, including 150 percutaneous coronary intervention procedures per year. Interventional procedures performed include balloon angioplasty, endovascular stenting, directional atherectomy, rotational atherectomy, rheolytic thrombectomy, distal embolic protection, endomyocardial biopsy, and NOGA XP navigation and stem cell delivery. Attending responsibilities also include the Interventional Cardiology Service and the Coronary Intensive Care Unit.

3. Clinical contributions

Heart & Vascular Institute: University Hospitals reorganized cardiovascular care for hospital system by adopting institute structure of previously siloed and disparate disciplines under the leadership of Dr. Simon as Director, University Hospitals Heart & Vascular Institute. Key initiatives and accomplishments include:

- (1) Founding of the Heart & Vascular Institute with 11 program Centers. Established physician and administrative leadership structure and reporting lines that integrate cardiovascular medicine, heart surgery, vascular surgery, cardiovascular imaging, congenital heart disease, and clinical trials into multi-disciplinary team.
- (2) Successful opening of new ambulatory Heart & Vascular Institute facilities in Mather Pavillion and Twinsburg.
- (3) Successful opening of low-risk cardiac catheterization laboratories at Richmond Medical Center and Bedford Medical Center. Impressive procedural growth with greater than 120 procedures per lab in Q1 2007.

- (4) Inaugurated Affiliated Partners Center, a creative mechanism to offer physician membership in the Heart & Vascular Institute to independent cardiology practitioners in the community. Affiliations include prominent Northeast Ohio cardiovascular groups such as North Ohio Heart (SJWS/SVH/Medina), Advanced Cardiovascular Consultants (Geauga/Geneva), Faith Medical (M. Reed, RMC/SVH), T.C. Sharma group (SWG/ Parma), Botti group (Geauga/Geneva), and Hawwa group (BMC).
- (5) Opened Lipid and Prevention program under directorship of Drs. Barry Effron and Carl Orringer. Specialized clinic for primary and secondary prevention of cardiovascular disease. Incorporates new SHAPE protocol to screen asymptomatic individuals for risk stratification using advanced cardiovascular imaging.
- (6) Established Leadership Advisory Council as development and philanthropic arms of Heart & Vascular Institute. Comprised of prominent business, community, and academic leaders including John Haugh (Co-Chair), Robert Risman, Robert Reitman, Samuel Glazer, Fred Weisman, Lee Hartzmark, David Heller, Jules Belkin, Gail Schlang, George Simon, Steven Weinberg, Michael Vranos, Dr. David Ginsburg, Dr. Douglas Vaughan, and Dr. Robert Glassman.
- (7) Centralization of all Heart & Vascular Institute research initiatives through the Research & Innovation Center. The Center oversees clinical trials not only at University Hospitals Case Medical Center, but also at wholly-owned and joint-venture medical centers. A group of 12 coordinators streamline patient and coordinate all IRB, grants and contracts, and regulatory issues.
- (8) Development of PCI without on-site cardiac surgery program for Geauga Medical Center, Richmond Medical Center, and Bedford Medical Center. Trial oversight through Mayo Clinic and Harvard Medical School/Harvard Clinical Research Institute.
- (9) Implementation of practice standards for non-invasive imaging and exercise testing in University Hospitals system (i.e., medical centers, ambulatory centers, UHMP practices).

Division of Cardiovascular Medicine: Dr. Simon assumed the leadership of the Division of Cardiovascular Medicine, University Hospitals Case Medical Center in July 2006. Dr. Simon's goal is to build a top 5 Division of Cardiovascular Medicine with premier clinical, research, and education programs. One of the most important accomplishments has been the successful recruitment of a strong leadership team, including Dr. Daniel Simon (Chief, Division of Cardiovascular Medicine), Dr. James Fang (Associate Chief, Clinical Affairs), and Dr. Mukesh Jain (Associate Chief, Research Affairs and Director, Cardiovascular Research Institute). This team was assembled early, enabling rapid and effective implementation of our comprehensive rebuilding programs.

A critical aspect of divisional activities involves providing outstanding clinical care with personalized attention and an evidence-based approach. Revitalizing the clinical services required several important changes in local culture including rapid access to University Hospitals Case Medical Center by transferring physicians, improved communication with referring physicians and primary care providers, and greater accountability of faculty for in-patient responsibilities. Important to our mission is to provide tertiary and quaternary referral cardiovascular care to Northeast Ohio while still serving the more primary cardiovascular needs of the local community. At the same time, we strive for a practice philosophy that is grounded in an academic and scholarly environment. Key initiatives and accomplishments include:

- (1) Established strong Section-based leadership structure for clinical operations and academic programs with charge to develop specific objectives and accountability for each Section (Interventional Cardiology, Electrophysiology, Non-invasive Imaging, Heart Failure/Transplant, Ambulatory).
- (2) Raised overall performance expectations by re-focusing the mission, values, and culture of the Division from “private practice” mentality to more academic pursuits and divisional goals.
- (3) Successful recruitment of clinician-scientists (Drs. Anne Hamik, Saptarsi Haldar, Brandy Atkins) and physician-investigators (Drs. Marco Costa, Richard Josephson, and Eric Larose) with promising/established investigative careers supported by extra-mural funding.
- (4) Implemented career development program for each individual faculty member.
- (5) Developed programs to increase in-patient volume at Case Medical Center. These programs include:
 - a. 24/7 access via on-call senior NPs.
 - b. Implementation of TIMI risk scoring protocol in Emergency Department for optimal patient triage.
 - c. Re-organization of admission process for CICU and telemetry floors using single transfer cardiologist.
 - d. Expansion of Hellerstein Service by using NPs to augment the number of daily admissions previously limited by the ACGME duty-hour requirements.
- (6) Highest rated Ohio cardiovascular program with residency in Solucient top 100.
- (7) Reactivated heart transplant program and reinvigorated circulatory assistance program for bridge and destination therapies. University Hospitals Heart Failure Program also reconstructed to expand outreach to Northeast Ohio community rather than limited to local east Cleveland community.

- (8) Successful recruitment of senior physician leader and professor for Cardiovascular & Pulmonary Rehabilitation.
- (9) AHA Sustained Performance Achievement Award for Get with the Guidelines CAD for 3rd consecutive year.
- (10) Improved referring physician communication with mandatory communication by UH attending cardiologist to primary care and referring cardiologists within 24 hours of discharge by both letter and phone.
- (11) Increased expectations of attending staff for primary communication and weekend responsibilities of patient care which had previously been relegated to trainees.
- (12) Restructuring the reporting and accountability for cardiovascular information systems to involve divisional leadership which had previously been ignored.
- (13) Increasing referral base for University Hospitals Case Medical Center- based cardiovascular surgery.

BIBLIOGRAPHY

Original Reports

1. Simon DI, Fless GM, Scanu AM, Loscalzo J. Tissue-type plasminogen activator binds to and is inhibited by surface-bound lipoprotein(a) and low density lipoprotein. *Biochemistry* 1991;30:6671-6677.
2. Stamler JS, Simon DI, Osborne JA, Mullins ME, Jaraki O, Michel T, Singel DJ, Loscalzo J. S-nitrosylation of proteins with nitric oxide: synthesis and characterization of biologically active compounds. *Proc Natl Acad Sci USA* 1992;89:444-448.
3. Stamler JS, Simon DI, Jaraki O, Osborne JA, Francis S, Mullins M, Singel D, Loscalzo J. S-nitrosylation of tissue-type plasminogen activator confers vasodilatory and antiplatelet properties on the enzyme. *Proc Natl Acad Sci USA* 1992;89:8087-8091.
4. Stamler JS, Jaraki O, Osborne JA, Simon DI, Keaney JF, Vita J, Singel D., Valeri CR, Loscalzo J. Nitric oxide circulates in mammalian plasma primarily as an S-nitroso adduct of serum albumin. *Proc Natl Acad Sci USA* 1992;89:7674-7677.
5. Stamler JS, Simon DI, Osborne JA, Mullins ME, Jaraki O, Michel T, Singel D, Loscalzo J. Exposure of sulfhydryl containing proteins to nitric oxide and endothelium-derived relaxing factor confers novel bioactivity and modulates their intrinsic functional properties. In: Moncada S, Marletta MA, Hibbs JB, eds. *Biology of Nitric Oxide I*. London: Porter Press Proceed, 1992:20-23.
6. Simon DI, Stamler JS, Jaraki O, Keaney JF, Jr, Osborne JA, Francis SA, Mullins ME, Singel DJ, Loscalzo J. Antiplatelet properties of protein S-nitrosothiols derived from nitric oxide and endothelium-derived relaxing factor. *Arteriosclerosis and Thrombosis* 1993;13:791-799.
7. Keaney JF, Jr, Simon DI, Stamler JS, Jaraki O, Scharfstein J, Vita JA, Loscalzo J. NO forms an adduct with serum albumin that has endothelium-derived relaxing factor-like properties. *J Clin Invest* 1993; 91:1582-1589.
8. Ezratty AM, Simon DI, Loscalzo J. Lipoprotein(a) binds to human platelets and attenuates plasminogen binding and activation. *Biochemistry* 1993;32: 4628-4633.
9. Simon DI, Ezratty AM, Francis SA, Rennke H, Loscalzo J. Fibrin(ogen) is internalized and degraded by activated human monocytoic cells via Mac-1 (CD11b/CD18): a nonplasmin fibrinolytic pathway. *Blood* 1993;82:2414-2422.
10. Simon DI, Ezratty AM, Loscalzo J. The fibrin(ogen)olytic properties of cathepsin D. *Biochemistry* 1994;33:6555-6563.

11. Ezratty AM, Freedman JE, Simon DI, Loscalzo J. The antithrombotic effects of acetylation of fibrinogen by aspirin. *J Vasc Biol and Med* 1994;5:152-159.
12. Simon DI, Xu H, Vaughan DE. Cathepsin D-like aspartyl protease mediates the degradation of tissue-type plasminogen activator/plasminogen activator inhibitor-1 complexes in human monocytes. *Biochim Biophys Acta* 1995;1268:143-151.
13. Simon DI, Stamler JS, Loh E, Loscalzo J, Francis SA, Creager MA. Effect of nitric oxide synthase inhibition on bleeding time in humans. *J Cardiovasc Pharm* 1995;26:339-342.
14. Suh TT, Jensen NJ, Daugherty CC, Small K, Simon DI, Potter S, Degen JL. Resolution of spontaneous bleeding events but failure of pregnancy in fibrinogen-deficient mice. *Genes & Development* 1995;9:2020-2033.
15. Simon DI, Mullins ME, Jia L, Gaston B, Singel DJ, Stamler JS. Polynitrosylated proteins: characterization, bioactivity and functional consequences. *Proc Natl Acad Sci USA* 1996;93:4736-4741.
16. Wong WSF, Simon DI, Rosoff PM, Rao NK, Chapman HA. Mechanisms of pertussis toxin-induced myelomonocytic cell adhesion: role of Mac-1 (CD11b/CD18) and the urokinase receptor (CD87). *Immunology* 1996;88:90-97.
17. Simon DI, Rao NK, Xu H, Wei Y, Majdic O, Ronne E, Kobzik L, Chapman HA. Mac-1 (CD11b/CD18) and the urokinase receptor (CD87) form a functional unit on monocytic cells. *Blood* 1996;88:3185-3194.
18. Wei Y, Lukashev M, Simon DI, Bodary SC, Rosenberg S, Doyle MV, Chapman HA. Regulation of integrin function by the receptor for urokinase. *Science* 1996; 273:1551-1555.
19. Simon DI, Xu H, Rogers C, Rao NK. 7E3 Monoclonal antibody directed against the platelet IIb/IIIa receptor cross-reacts with the leukocyte integrin Mac-1 and blocks adhesion to fibrinogen and ICAM-1. *Arter Thromb Vasc Biol* 1997;17:528-535.
20. Meckel CR, Anderson TJ, Mudge GH, Jr, Mitchell RN, Yeung AC, Selwyn AP, Ganz P, Simon DI. Hemostatic/fibrinolytic predictors of allograft coronary artery disease after cardiac transplantation. *Vascular Medicine* 1997;2:306-312.
21. Rogers C, Edelman ER, Simon DI. A monoclonal antibody to Mac-1 (CD11b/CD18) blocks leukocyte recruitment and reduces intimal thickening after experimental angioplasty or stent implantation. *Proc Natl Acad Sci USA* 1998;95:10134-10139.
22. Sukhova GK, Shi GP, Simon DI, Chapman HA, Libby P. Expression of the elastinolytic cathepsins S and K in human atheroma and regulation of their production in smooth muscle cells. *J Clin Invest* 1998;102:576-583.

23. Simon DI, Chen Z, Seifert P, Edelman ER, Ballantyne CM, Rogers C. Decreased neointimal formation in Mac-1^{-/-} mice reveals a role for inflammation in vascular repair after angioplasty. *J Clin Invest* 2000;105:293-300.
24. Simon DI, Ying W, Rao NK, Xu H, Chen Z, Rosenberg S, Chapman HA. Identification of a urokinase receptor-integrin interaction Site: Promiscuous regulator of integrin function. *J Biol Chem* 2000;275:10228-10234.
25. Simon DI, Chen Z, Xu H, Ballantyne CM, Zhang L, Berndt MC, Lopez JA. Platelet glycoprotein Ib α is a counter-receptor for the leukocyte integrin Mac-1 (CD11b/CD18). *J Exp Med* 2000;192:193-204.
26. Drew AF, Tucker HL, Kombrinck KW, Simon DI, Bugge TH, Degen JL. Plasminogen is a critical determinant of vascular remodeling in mice. *Circ Res* 2000;87:133-139.
27. Welt FGP, Edelman ER, Simon DI, Rogers C. Neutrophil, not macrophage, infiltration precedes neointimal thickening in balloon-injured arteries. *Art Thromb Vasc Biol* 2000;20:2553-2558.
28. Simon DI, Liu CB, Ganz P, Kirshenbaum JM, Piana RN, Rogers C, Selwyn AP, Popma JJ. A comparative study of light transmission aggregometry and automated bedside platelet function assays in patients undergoing percutaneous coronary intervention and receiving abciximab, eptifibatide, or tirofiban. *Catheter Cardiovasc Interv* 2001;52:425-432.
29. Chen Z, Woodburn K, Shi C, Adelman DC, Rogers C, Simon DI. Photoangioplasty with motexafin lutetium induces redox-sensitive apoptosis of vascular cells. *Art Thromb Vasc Biol* 2001;21:759-764.
30. Shi C, Zhang X, Chen Z, Robinson MK, Simon DI. Leukocyte integrin Mac-1 recruits Toll/Interleukin-1 receptor superfamily signaling intermediates to modulate NF- κ B activity. *Circ Res* 2001;89:859-865.
31. Resnic FS, Ohno-Machado L, Selwyn A, Simon DI, Popma JJ. Simplified risk score models accurately predict the risk of major in-hospital complications following percutaneous coronary interventions. *Am J Cardiol* 2001;88:5-9.
32. Chen Z, Fukutomi T, Zago AC, Ehlers R, Detmers PA, Wright SD, Rogers C, Simon DI. Simvastatin reduces neointimal thickening in LDL receptor-deficient mice after experimental angioplasty without changing plasma lipids. *Circulation* 2002;106:20-23.
33. Orford JL, Kinlay S, Adams MR, Simon DI, Selwyn AP. Clopidogrel inhibits shear-induced platelet function. *Platelets* 2002;13:187-189.

34. Danenberg HD, Szalai AJ, Swaminathan RV, Peng L, Chen Z, Seifert P, Fay WP, Simon DI, Edelman ER. Increased thrombosis after arterial injury in human c-reactive protein-transgenic mice. *Circulation* 2003;108:512-515.
35. Kereiakes D, Szyniszewski AM, Wahr D, Herrmann HC, Simon DI, Rogers C, Kramer P, Shear W, Yeung AC, Shunk KA, Chou TM, Popma J, Fitzgerald P, Carroll TE, Forer D, Adelman DC. A phase I drug and light dose-escalation trial of motexafin lutetium and far red light activation (phototherapy) in subjects with coronary artery disease undergoing percutaneous coronary intervention and stent deployment: Procedural and long-term results. *Circulation* 2003;108:1310-1315.
36. Wang JC, Denise Aucoin-Barry D, Manuelian D, Monbouquette R, Reisman M, William Gray W, Block PC, Block EH, Marc Ladenheim M, Simon DI. Incidence of aspirin non-responsiveness using the Ultegra Rapid Platelet Function Assay – ASA. *Amer J Cardiol* 2003;92:1492-1494.
37. Ehlers R, Ustinov V, Chen Z, Zhang X, Rao R, Luscinskas WF, Lopez J, Plow E, Simon DI. Targeting platelet-leukocyte interactions: Identification of the integrin Mac-1 binding site for the platelet counter-receptor glycoprotein Ib α . *J Exp Med* 2003;198:1077-1088.
38. Schulze PC, de Keulenaer GW, Kassik KA, Takahashi T, Chen Z, Simon DI, Lee RT. The biomechanically-induced gene *iex-1* inhibits vascular smooth muscle cell proliferation and neointima formation. *Circ Res* 2003;93:1210-1217.
39. Welt FGP, Demtrak S, Zhang X, Ehlers R, Chen Z, Nannizzi-Alaimo L, Phillips DR, Simon DI. GP IIb/IIIa inhibition with eptifibatide lowers levels of soluble CD40L and RANTES after percutaneous coronary intervention. *Catheter Cardiovasc Interv* 2004;61:185-189.
40. Chen Z, Sakuma M, Zago AC, Zhang X, Shi C, Bucala R, Simon DI. Evidence for a role of macrophage migration inhibitory factor in vascular disease. *Art Thromb Vasc Biol* 2004;24:1-8.
41. Feinberg MW, Shimizu K, Lebedeva M, Haspel R, Takayama K, Chen Z, Frederick JP, Wang X-F, Simon DI, Mitchell RN, Jain MK. An essential role for Smad3 in regulating MCP-1 expression and vascular inflammation. *Circ Res* 2004;94:601-608.
42. SenBanerjee S, Lin Z, Atkins GB, Greif DM, Rao RM, Kumar A, Feinberg MW, Chen Z, Simon DI, Luscinskas FW, Michel TM, Gimbrone MA Jr, García-Cardeña G, Jain MK. Identification of KLF2 as a novel transcriptional regulator of endothelial pro-inflammatory activation. *J Exp Med* 2004;199:1305-1315.
43. Pan J-H, Sukhova GK, Yang J-T, Wang B, Xie T, Fu H, Zhang Y, Satoskar AR, David JR, Metz C, Bucala R, Fang K, Simon DI, Chapman HA, Libby P, Shi G-P. Macrophage

- migration inhibitory factor deficiency impairs atherosclerosis in low-density lipoprotein receptor-deficient mice. *Circulation* 2004;109:3149-3153.
44. Shi C, Zhang X, Chen Z, Sulaiman K, Feinberg MW, Ballantyne CM, Jain MK, Simon DI. Integrin engagement regulates monocyte differentiation through the forkhead transcription factor Foxp1. *J Clin Invest* 2004;114:408-418.
 45. Chen Z, Keaney JF, Jr, Chen Z, Schulz E, Sakuma M, Zhang X, Shi C, Hazen SL, Simon DI. Decreased neointimal formation in Nox2-deficient mice reveals a direct role for NADPH oxidase in vascular repair after angioplasty. *Proc Natl Acad Sci USA* 2004;101:13014-13019.
 46. Sakata Y, Xiang F, Chen Z, Kiriyama Y, Kamei CN, Simon DI, Chin MT. The transcription factor CHF1/Hey2 regulates arterial neointimal formation by alteration of PDGF, HB-EGF and Rac1 signaling. *Art Thromb Vasc Biol* 2004;24:2069-2074.
 47. Cox N, Resnic FS, Popma JJ, Simon DI, Eisenhauer AC, Rogers C. Comparison of the risk of vascular complications associated with femoral and radial access coronary catheterization in obese versus nonobese patients. *Amer J Cardiol* 2004; 94:1174-1177.
 48. Coleman JL, Wang JC, Simon DI. Determination of individual response to aspirin therapy using the Accumetrics *Ultegra* RPPA-ASA system. *Point of Care: The Journal of Near-Patient Testing & Technology* 2004;3:77-82.
 49. Byrne JG, Leacche M, Unic D, Rawn JD, Simon DI, Rogers C, Cohn LH. Staged initial coronary intervention followed by valve surgery (“hybrid approach”) for patients with complex coronary and valve disease. *J Amer Coll Cardiol* 2005;45:14-18.
 50. Wang YM, Sakuma M, Chen Z, Ustinov V, Lopez J, Andre P, Plow E, Simon DI. Leukocyte engagement of platelet GP Iba α via the integrin Mac-1 is critical for the biological response to vascular injury. *Circulation* 2005;112:2993-3000.
 51. Wei J, Gorman TE, Liu X, Ith B, Chen Z, Simon DI, Layne MD, Yet S-F. Vascular injury increases neointima formation in cysteine-rich protein 2-deficient mice. *Circ Res* 2005;97:1323-1331.
 52. Healy AM, Pickard MD, Pradhan AD, Wang Y, Chen Z, Croce K, Sakuma M, Garasic J, Damokosh AI, Dowie TL, Poisson L, Lillie J, Libby P, Ridker PM, Simon DI. Platelet expression profiling and clinical validation of myeloid-related protein-14 as a novel determinant of cardiovascular events. *Circulation* 2006;113:2278-2284.
 53. Brinster DR, Byrne M, Rogers CD, Baim DS, Simon DI, Couper GS, Cohn LH. Effectiveness of same day percutaneous coronary intervention followed by minimally invasive aortic valve replacement for aortic stenosis and moderate coronary artery disease (“Hybrid Approach”). *Am J Cardiol* 2006;98:1501-1503.
 54. Giugliano RP, Wiviott SD, Stone PH, Simon DI, Schweiger MJ, Bouchard A, Leeser MA, Goulder MA, Deitcher SR, McCabe CH, Braunwald E, on behalf of the ANTHEM-

- TIMI-32 Investigators. Recombinant nematode anticoagulant protein c2 (rNAPc2) in patients with non-ST-elevation acute coronary syndromes. *J Amer Coll Cardiol* 2007;49:2398-2407.
55. Morrow DA, Wang Y, Croce K, Sakuma M, Sabatine MS, Gao H, Pradhan AD, Healy AM, Buross J, McCabe CH, Libby P, Cannon CP, Braunwald E, Simon DI. Myeloid-related protein-8/14 and the risk of cardiovascular death or myocardial infarction after an acute coronary syndrome in the PROVE IT-TIMI 22 Trial, *Am Heart J* 2008;155:49-55.
 56. Shimizu K, Libby P, Mitchell RN, Sakuma M, Wang Y, Simon DI. The Leukocyte integrin Mac-1 promotes acute cardiac allograft rejection. *Circulation* 2008, in press.
 57. Plutskota E, Woody NM, Szpak D, Ballantyne CM, Soloviev DA, Simon DI, Plow EF. Expression, activation and function of integrin $\alpha_M\beta_2$ (Mac-1) on neutrophil-derived microparticles. *Blood* 2008, in press.
 58. Jepsen K, Gleiberman AS, Shi C, Simon DI, Rosenfeld MG. The SMRT corepressor critically mediates repressive functions of a Fox protein in mammalian organogenesis. *Genes & Dev*, submitted for publication.
 59. Shi C, Sakuma M, Mooroka T, Wang Y, Liscoe A, Gao H, Croce KJ, Greaves DR, Kaplan D, Simon DI. Downregulation of the forkhead transcription factor Foxp1 is required for monocyte differentiation and macrophage function. *Blood*, submitted for publication.

Reviews, Chapters, and Editorials

1. Simon DI, Loscalzo J. Lipoprotein(a)--a risk factor for atherosclerosis. *J Cardiovasc Risk Fact* 1991;1:174-178.
2. Loscalzo J, Simon DI. "Lipoprotein(a): a risk factor for atherothrombotic disease." In: Braunwald E, ed. *Heart Disease: Clinical Update*. Philadelphia: W.B. Saunders, 1992, pp. 10-17.
3. Simon DI, Loscalzo J. Lipoprotein(a)--a unique atherothrombotic risk factor. *Choices in Cardiology* 1992;6:7-9.
4. Simon DI, Ezratty AM, Loscalzo J. Lipoprotein(a) and atherosclerosis. *Current Opinion in Cardiology* 1993;8:814-820.
5. Simon DI. "Thrombotic heart disease and myocardial infarction: introduction and contemporary therapies." In: Edelman E, ed. *Molecular Interventions and Local Drug Delivery in Cardiovascular Diseases*. London: W.B. Saunders, 1995, pp. 107-129.
6. Libby P, Geng Y-J, Sukhova GK, Simon DI, Lee RT. Molecular determinants of atherosclerotic plaque vulnerability. *Annals NY Acad Sci* 1997;811:134-145.
7. Keaney JF, Jr, Simon DI, Freedman JE. Vitamin E and vascular homeostasis: implications for atherosclerosis. *FASEB J* 1999;13:965-976.
8. Simon DI. Stent mania: Proving efficacy and improving safety. *Cardiology Scientific Update* 1999.
9. Simon DI. "Cardiology." In: Thaler DE, Hope RA, Longmore JM, eds. *Oxford Handbook of Clinical Medicine--U.S. Edition*. New York: Oxford University Press, 1999, pp. 254-321.
10. Chapman HA, Wei Y, Simon DI, Waltz DA. Role of urokinase receptor and caveolin in regulation of integrin signaling. *Thromb Haemost* 1999;82:291-297.
11. Simon DI, Kenmotsu-Rounds N. "Acute myocardial infarction." In: Wachter RM, Goldman L, Hollander H, eds. *Hospital Medicine*. Baltimore: Williams & Wilkins; 2000, pp 217-230.
12. Simon DI, Satyendra Giri. "Catheter-based treatment of restenosis." In: Braunwald E, ed. *Heart Disease: Clinical Update*. Philadelphia: W.B. Saunders; 2000, pp 1-14.
13. Libby P, Simon DI. "Thrombosis and Atherosclerosis." In: Colman RW, Hirsh J, Marder VJ, Clowes AW, George JN. Clowes eds. *Hemostasis and thrombosis: Basic principles and clinical practice*. Philadelphia: Lippincott Williams & Wilkins; 2001, pp. 743-752.

14. Libby P, Simon DI. Inflammation and thrombosis: The clot thickens. *Circulation* 2001;103:1718-1720.
15. Welt FG, Simon DI. Atherosclerosis and plaque rupture. *Catheter Cardiovasc Interv* 2001;53:56-63.
16. Simon DI, Zago A. Restenosis: Is the cure finally here? *CardiologyRounds* 2001; 5, Issue 5.
17. Giri S, Rogers C, Simon DI. "High risk patient subsets for percutaneous coronary interventions: Mechanisms and management." In: Antman E ed. *Cardiovascular Therapeutics: A companion to Braunwald's Heart Disease*. Philadelphia: W.B. Saunders; 2001, pp. 903-918.
18. Simon DI. "Atherosclerosis for the interventional cardiologist: The vulnerable plaque." In: Nissen SE, Popma JJ, Kern MJ, eds. *CathSAP, American College of Cardiology*; 2001.
19. Drachman DE, Simon DI. Restenosis: Intracoronary Brachytherapy. *Current Treatment Options in Cardiovascular Medicine* 2002;4:109-118.
20. Simon DI. Reply to Letters to the Editor (Re: A comparative study of light transmission aggregometry and automated bedside platelet function assays in patients undergoing percutaneous coronary intervention and receiving abciximab, eptifibatide, or tirofiban. *Catheter Cardiovasc Interv* 2001;52:425-432). *Catheter Cardiovasc Interv* 2002;55:130.
21. Welt FGP, Simon DI. The Interact trial. *Cardiology Scientific Update* 2002, in press.
22. Libby P, Simon DI, Rogers, C. "Inflammation and arterial injury." In: Topol E, ed. *Textbook of Interventional Cardiology*. Philadelphia: W.B. Saunders; 2003, pp 381-389.
23. Simon DI. Anti-thrombotic therapy during percutaneous coronary intervention: An update for 2004. *Interventional CardiologyRounds* 2003; volume 1, Issue 3.
24. Simon DI, Sakuma M. Platelet disaggregation: Putting time on your side in acute myocardial infarction (invited editorial). *J Amer Coll Cardiol* 2004;44:324-326.
25. Boden WE, Simon DI, Tcheng JE, Rogers C. Drug-eluting stents and glycoprotein IIb/IIIa inhibitors in contemporary percutaneous coronary intervention: Improving clinical outcomes. *Interventional CardiologyRounds (Snell Medical Communications)* 2004.
26. Simon DI, Fang JC, Kenmotsu-Rounds N. "Acute myocardial infarction." In: Wachter RM, Goldman L, Hollander H, eds. *Hospital Medicine*. Philadelphia: Lippincott Williams &Wilkins; 2005, pp 343-358.

27. Baim DS, Simon DI. "Complications and the optimal use of adjunctive pharmacology." In: Baim DS, ed. *Grossman's Cardiac Catheterization, Angiography, and Intervention*. Philadelphia: Lippincott Williams & Wilkins; 2005. p.36-75.
28. Baim DS, Simon DI. "Percutaneous approach, including trans-septal and apical puncture." In: Baim DS, ed. *Grossman's Cardiac Catheterization, Angiography, and Intervention*. Philadelphia: Lippincott Williams & Wilkins; 2005. p.79-106.
29. Drachman DE, Simon DI. Inflammation as a mechanism and therapeutic target for in-stent restenosis. *Current Atherosclerosis Reports* 2005;7:44-49.
30. Costa MA, Simon DI. Molecular basis of restenosis and drug eluting stents (Basic Science for Clinicians). *Circulation* 2005;111:2257-2273.
31. Giugliano GR, Lofti A, Simon DI. "Anti-thrombotic therapy for PCI." In: Clowes A, Colman R, George J, Goldhaber S, Marder V, eds. *Hemostasis and Thrombosis*. Philadelphia: Lippincott Williams & Wilkins; 2006. p. 1405-1432.
32. Inoue T, Simon DI, Sakuma M, Node K. Molecular bases and pharmacological prevention of restenosis. *Circulation Frontier* 2005;9:28-36.
33. Shi C, Simon DI. Integrin signals, transcription factors, and monocyte differentiation. *Trends Cardiovasc Med* 2006;16:146-152.
34. Simon DI, Rogers C, Libby P. "The role of inflammation and inflammatory mediators in the restenotic process." In: Stone GW, Leon MB, eds. *Textbook of Coronary Stenting*. New York: CRF Publications, 2006, in press.
35. Chen W-H, Simon DI. "Clinical significance of antiplatelet resistance." In: Braunwald E, ed. *Braunwald's Heart Disease 7th Edition: Clinical Update*. Philadelphia: W.B. Saunders, 2006, in press.
36. Cheng X, Chen WH, Simon DI. Aspirin resistance or variable response or both? *Am J Cardiol* 2006;98:S11-17.
37. Welt FGP, Rogers C, Simon DI. Arterial disease—Atherosclerosis. In: Kern MJ, ed. *SCAI Interventional Cardiology Board Review Book*. Philadelphia: Lippincott Williams & Wilkins; 2007, p. 3-15.
38. Healy AM, Pickard MD, Pradhan AD, Wang Y, Chen Z, Croce K, Sakuma M, Garasic J, Damokosh AI, Dowie TL, Poisson L, Lillie J, Libby P, Ridker PM, Simon DI. Letter to the Editor in response to Krishnan et al. regarding Healy et al. entitled, "Platelet expression profiling and clinical validation of myeloid-related protein-14 as a novel determinant of cardiovascular events." *Circulation* 2007;115:e187.

39. Simon DI, Pompili V. Editorial: A far-fetched benefit of inflammation. *Circulation* 2007;115:548-549.
40. Costa MA, Simon DI. "Restenosis." In: Topol E, ed. *Textbook of Interventional Cardiology*. Philadelphia: W.B. Saunders; 2007, pp. 567-580.
41. Simon DI, Schmaier AH. Editorial: Sweet and sticky—Diabetic platelets, enhanced platelet reactivity, and atherothrombotic risk. *J Amer Coll Cardiol* 2007;50:1548-1550.
42. Konkle BA, Simon DI, and Schafer AI. "Hemostasis, thrombosis, fibrinolysis, and cardiovascular disease." In: Braunwald's *Heart Disease*. Philadelphia: Saunders-Elsevier; 2008, pp. 2049-2078.
43. Croce K, Sakuma M, Simon DI. "Platelet-leukocyte-endothelium cross talk." In: Gresele, Fuster, Lopex, Page, Vermelyn, eds. *Platelets in Hematologic and Cardiovascular Disorders: A Clinical Handbook*. Cambridge, United Kingdom: Cambridge University Press, 2008, in press.

Books, Monographs, and Textbooks

1. Simon DI, Rogers C, eds. Contemporary Cardiology Series. Vascular Injury: Models and Preclinical Research. Totowa, NJ: Humana Press; 2001.
2. Angiolillo DJ, Kastrati A, Simon DI, eds. A Clinical Guide to the Use of Antithrombotic Drugs in Coronary Artery Disease. London: Informa Healthcare; 2008.

Clinical Communications

1. Simon DI, Brosius FC, Rothstein DM Sulfadiazine crystalluria revisited: the treatment of toxoplasma encephalitis in patients with acquired immunodeficiency syndrome. Arch IntMed 1990;150:2379-2384.
2. de Lemos JA, Delacretaz E, Piana RN, Smith T, Rivero J, Simon DI, Friedman PL. Ebstein's anomaly associated with an anomalous coronary artery, 2 myocardial bridges, and a Mahaim fiber. Circulation 1999;100:1757-1759.
3. Larose E, Rogers C, Simon DI. When size matters: Lessons learned from an unusual case of left main stent embolization and retrieval. J Interv Cardiol. 2006;19:350-5.

Nonprint Materials

1. Libby P, Simon DI. Video animation, "Multiple mechanisms of platelet activation." Commissioned by Bristol Myers Squibb to educate cardiologists regarding mechanisms of thrombosis after plaque rupture and endovascular stenting. Dynamic teaching tool used at local, regional, national, and international meetings. Available for web-based download at simonlab.bwh.harvard.edu
2. Simon DI, Rogers C, Popma JJ. Albert Einstein College of Medicine CME CD-ROM including syllabus, lecture, and video animation, "Integrin blockade for the prevention of restenosis after stenting." Commissioned by Albert Einstein College of Medicine and supported by unrestricted education grant from Eli Lilly & Co. to educate general cardiologists, interventionalists, and vascular biologists regarding the role of integrins in vascular injury and repair.
3. Simon DI. ACC Spotlight Series: ACCIS 2001 Interventional Symposium CME CD-ROM. "Intracoronary radiation for in-stent restenosis." Popma JJ, ed.
4. Simon DI. Aspirin resistance and clinical outcomes. Panel speaker for archived webcast (June 2004) sponsored by www.clinicaltrialresults.org.
5. Simon DI. "Percutaneous coronary intervention in the DES Era: Is there a need for GP IIb/IIIa inhibition?" Moderator and panel speaker for archived webcast (August 2004) sponsored by www.theheart.org.
6. Simon DI. Drug eluting stents and diabetes mellitus. Panel speaker for live and archived webcast, "Managing Complex Patients and Lesions with Drug Eluting Stents." January 20, 2005. Sponsored by Cordis/J&J and North American Center for Continuing Medical Education (NACCME).

Patents and Intellectual Property

- 1995 Stamler JS, Simon DI, Loscalzo J. S-nitrosothiols as smooth muscle relaxants and therapeutic uses thereof; U.S. Patent #5,380,758.
- 1996 Stamler JS, Loscalzo J, Slivka A, Simon DI, Brown R, Drazen J. S-nitrosothiols as smooth muscle relaxants and therapeutic uses thereof; U.S. Patent #5,574,068.
- 1997 Stamler JS, Loscalzo J, Slivka A, Simon DI, Brown R, Drazen J. Treatment of male impotence with S-nitrosylated compounds; U.S. Patent #5,648,393.
- 1999 Chapman HA & Simon DI. Peptides that bind to the urokinase receptor; patent pending.
- 2000 Chapman HA, Shi G-P, Libby P, Sukhova G, Simon DI. Human elastinolytic cysteine proteases as therapeutic targets for the treatment of vascular diseases; patent pending.
- 2004 Chapman HA, Shi G-P, Libby P, Sukhova G, Simon DI. Methods of treating vascular disease associated with cystatin C deficiency; U.S. Patent #6,773,704.

Abstracts

1. Simon DI, Fless GM, Scanu AM, Loscalzo J. Tissue-type plasminogen activator binds to and is inhibited by surface-bound lipoprotein(a). *Circulation* 1990;82(III): 599.
2. Simon DI, Schoen FJ, Fless GM, Ezratty AM, Schmidt DA, Safian RD, Penny WF, Baim DS, Loscalzo J. Lipoprotein(a) accumulates intracellularly in coronary atherectomy specimens obtained from primary lesions and restenotic lesions after PTCA. *J Am Coll Cardiol* 1990;17:299A.
3. Ezratty AM, Simon DI, Loscalzo J. Lipoprotein(a) inhibits the binding of plasminogen to plasminogen receptors on platelets. *Clin Research* 1991;39:198A.
4. Simon DI, Fless GM, Ezratty AM, Scanu AM, Loscalzo J. Tissue-type plasminogen activator binds to and is inhibited by low density lipoprotein and lipoprotein(a). *Clin Research* 1991;39:262A.
5. Keaney JF, Jr, Simon DI, Stamler JS, Jaraki O, Vita JA, Loscalzo J. S-nitroso-bovine serum albumin: a NO adduct with unique hemo-dynamic properties. *Circulation* 1991;84 (II):672.
6. Ezratty AM, Simon DI, Loscalzo J. Lipoprotein(a) competitively inhibits plasminogen activation on the platelet surface. *Circulation* 1991;84 (II):566.
7. Stamler JS, Simon DI, Osborne JA, Jaraki O, Mullins ME, Michel T, Singel DJ, Loscalzo J. Endothelium-derived relaxing factor reacts with protein sulfhydryl groups to form stable, biologically active S-nitrosothiols. *Circulation* 1991;84(II): 672.
8. Stamler JS, Simon DI, Jaraki O, Osborne JA, Mullins JE, Singel DJ, Loscalzo J. S-nitrosylation of tissue-type plasminogen activator confers upon the enzyme vasodilatory and antiplatelet properties. *Blood* 1991;78:282a.
9. Stamler JS, Simon DI, Osborne JA, Jaraki O, Mullins ME, Michel T, Singel DJ, Loscalzo J. Sulfhydryl-containing proteins react with nitric oxide and endothelium-derived relaxing factor to form biologically active S-nitrosothiols. *Proc Second Int Mtg Biol Nitric Oxide* 1992;I: 7.
10. Simon DI, Stamler JS, Jaraki O, Keaney JF, Osborne JA, Francis SA, Ezratty AM, Mullins ME, Singel DJ, Loscalzo J. Protein thiols stabilize endothelium-derived relaxing factor to form S-nitrosothiols with potent antiplatelet properties. *Clin Research* 1992;40:171A.
11. Ezratty AM, Simon DI, Loscalzo J. Acetylated fibrinogen facilitates plasminogen activation and attenuates platelet aggregation. *Clin Research* 1992; 40: 201A.
12. Jaraki O, Stamler JS, Osborne JA, Keaney JF, Jr, Simon DI, Vita J, Valeri CR, Loscalzo

- J. Nitric oxide circulates in plasma primarily as an S-nitroso adduct of serum albumin. Clin Research 1992;400:200A.
13. Simon DI, Ezratty AM, Loscalzo J. The integrin Mac-1 on human monocytoid cells binds, internalizes, and degrades fibrin(ogen): a novel fibrinolytic pathway. Circulation 1992;86(I):757.
 14. Stamler JS, Jaraki O, Osborne JA, Simon DI, Keaney JF, Vita J, Loscalzo J. S-nitroso-albumin is the predominant bioactive form of nitric oxide in human plasma. Circulation 1992;86(I):757.
 15. Simon DI, Ezratty AM, Francis SA, Rennke H, Loscalzo J. Fibrin is internalized and degraded by activated human monocytes via Mac-1 (CD11b/CD18): a non-plasmin fibrinolytic pathway. Thromb and Haemost 1993;69:579.
 16. Simon DI, Stamler JS, Loh E, Loscalzo J, Creager MA. L-NMMA infusion shortens template bleeding time in humans. Clin Research 1993;41: 117A.
 17. Ezratty AM, Simon DI, Fless GM, Scanu AM, Loscalzo J. Lipoprotein(a) inhibits fibrinogen uptake and degradation by mononuclear cells. Clin Research 1993;41:183A.
 18. Ezratty AM, Simon DI, Loscalzo J. Oxidized fibrinogen enhances plasminogen activation and attenuates platelet aggregation. Clin Research 1993;41:147A.
 19. Simon DI, Ezratty AM, Loscalzo J. Fibrin(ogen) is internalized and degraded by activated human monocytoid cells via Mac-1 (CD11b/CD18): a novel fibrinolytic pathway. Clin Research 1993;41:183A.
 20. Simon DI, Ezratty AM, Loscalzo J. Alternative fibrinolysis mediated by Mac-1 and cathepsin D. Circulation 1993;88(I):616.
 21. Simon DI, Xu H, Vaughan DE. Cathepsin D Mediates the degradation of tissue-type plasminogen activator/plasminogen activator inhibitor-1 complexes in human monocytes. Circulation 1994;90:I-620.
 22. Simon DI, Xu H, Chapman HA. Fibrin binding to Mac-1 (CD11b/CD18) on activated monocytoid cells induces the release of a novel calcium-dependent fibrinolytic protease. Circulation 1994;90:I-133.
 24. Simon DI, Mullins M, Xu H, Singel D, Stamler JS. Nitrogen oxides react with multiple functional groups on proteins to form polynitrosylated derivatives with diverse bioactivities. Circulation 1994;90:I-628.
 25. Meckel CR, Anderson TJ, Mudge GH, Jr, Ganz P, Simon DI. Plasma fibrinogen level predicts severity of intimal thickening after cardiac transplantation. J Amer Coll Card 1995;25:157A.

26. Sukhova GK, Simon DI, Chapman HA, Libby PL. In human atheroma cathepsin S is expressed by macrophages as well as smooth muscle cells, a novel source for this elastolytic protease. *J Invest Med* 1995;43:311A.
27. Simon DI, Xu H, Rao NK, Meckel CR. Monoclonal antibody directed against the platelet IIb/IIIa receptor cross-reacts with the leukocyte integrin Mac-1 and blocks adhesion to fibrinogen and ICAM-1. *Circulation* 1995;92:I-110.
28. Rao NK, Xu H, Wei Y, Chapman HA, Simon DI. Urokinase receptor occupancy modulates Mac-1 (CD11b/CD18)-mediated fibrinogen degradation by human monocytes. *Circulation* 1995;92:I-555.
29. Sukhova GK, Simon DI, Chapman HA, Libby PL. Cytokines regulate the expression by vascular smooth muscle cells of cathepsin S, an elastase found in human atheroma. *Circulation* 1995;92:I-169.
30. Simon DI, Rao NK, Xu H, Wei Y, Springer TA, Chapman HA. The functional linkage between the urokinase receptor and leukocyte integrin Mac-1 is mediated by interaction of their extracellular domains. *Circulation* 1996;94:I-42.
31. Rogers C, Edelman ER, Simon DI. A monoclonal antibody to Mac-1 (CD11b/CD18) blocks leukocyte recruitment and reduces intimal thickening after experimental angioplasty or stent implantation. *Circulation* 1997;96:I-667.
32. Rao NK, Xu H, Bodary SC, Ortlepp S, Chapman HA, Simon DI. The urokinase receptor interacts with the extracellular domain of the CD11b subunit and modulates Mac-1 (CD11b/CD18) function. *Circulation* 1997;96:I-37.
33. Rao NK, Simon DI, Xu H, Keaney JFK. α -Tocopherol inhibits Mac-1 (CD11b/CD18)-Dependent Monocyte Adhesion. *Circulation* 1997;96:I-489.
34. Simon DI, Chen Z, Seifert P, Edelman ER, Ballantyne CM, Rogers C. Markedly reduced neointimal thickening in Mac-1 (CD11b/CD18)-deficient mice after carotid artery dilation and endothelial denudation. *Circulation* 1998;98:I-238.
35. Rao NK, Xu H, Chen Z, Nayak V, Ballantyne CM, Chapman HA, Simon DI. Impaired Mac-1 (CD11b/CD18) function in leukocytes from urokinase receptor-deficient mice. *Circulation* 1998; 98:I-238.
36. Simon DI, Ying W, Rao NK, Xu H, Chen Z, Rosenberg S, Chapman HA. Identification of a urokinase receptor-integrin interaction Site: Promiscuous regulator of integrin function. *Circulation* 1999;100:I-I-333.

37. Simon DI, Xu H, Ballantyne CM, Berndt MC, Lopez JA. Platelet glycoprotein Iba is an adhesive ligand for the leukocyte integrin Mac-1 (CD11b/CD18). *Circulation* 1999;100:I-332-333.
38. Simon DI, Woodburn K, Xu H, Wai-Fung C, Raman V, Adelman D, Miller RA, Rogers C. Photodynamic therapy with Lutetium Texaphyrin induces apoptosis of vascular cells. *Circulation* 1999;100:I-700.
39. Resnic FS, Olmo-Machado L, Blake GJ, Selwyn A, Simon DI, Popma JJ. Observed protective effect of glycoprotein IIb/IIIa antagonists against in-hospital death stratified by patient risk. *J Amer Coll Cardiol* 2000;35:91A.
40. Kereiakes DJ, Szyniszewski AM, Simon DI, Rogers C, Wahr DW, Adelman DC, Chou TM. Coronary photoangioplasty using motexafin lutetium (Antrin): early findings of a Phase I safety trial in patients undergoing stent implantation. *Circulation* 2000;102:II-565.
41. Giri S, Kiernan FJ, Simon DI, Fram DB, Hirst JA, FitzPatrick M, Prpic R, Popma JJ, Mitchel J. Angiographic thrombus as a marker for adverse outcomes following primary angioplasty: a time-related phenomenon. *Circulation* 2000;102:II-385-386.
42. Chen Z, Woodburn K, Wai-Fung C, Xu H, Adelman DC, Simon DI. Photoangioplasty with motexafin lutetium induces redox-sensitive apoptosis of vascular cells. *Circulation* 2000;102:II-306.
43. Liu CB, Popma JJ, Chan S, Ganz P, Kirshenbaum JM, Piana RN, Rogers C, Selwyn AP, Simon DI. A comparative study of light transmission aggregometry and automated bedside platelet function assays in patients undergoing percutaneous coronary intervention and receiving abciximab, eptifibatid, or tirofiban. *Circulation* 2000;102:II-418.
44. Chen Z, Fukutomi T, Lawn RM, Rogers C, Simon DI. Neointimal thickening after carotid artery dilation and endothelial denudation is markedly enhanced in LDL-receptor deficient but not apo(a) transgenic mice. *Circulation* 2000;102:II-127.
45. Shi C, Zhang X, Simon DI. Regulation of gene expression by the leukocyte integrin Mac-1 via an IL-1-receptor-like pathway. *Circulation* 2000;102:II-307.
46. Kereiakes DJ, Szyniszewski AM, Wahr D, Herrmann HC, Simon DI, Rogers C, Kramer PH, Yeung AC, Adelman DC, Chou TM. Antrin photoangioplasty: Initial human experience and results of a Phase I trial as adjuvant therapy to intracoronary stent. *Society of Photo-Optical Instrumentation* 2001.
47. Chen Z, Rogers C, Detmers PA, Wright SD, Simon DI. Simvastatin reduces neointimal thickening after experimental angioplasty independent of cholesterol lowering. *Circulation* 2001;104:II-213.

48. Satyendra Giri, Michael Gibson, Andrew C. Eisenhauer, Richard E. Kuntz, Campbell Rogers, Sabina Murphy, Joseph Mitchel, Elliott M. Antman, Daniel I. Simon. Aging of intracoronary thrombus due to delayed time-to-reperfusion increases ischemic and angiographic complications in acute myocardial infarction. *J Amer Coll Cardiol* 2002;39 (supplement A):281A.
49. Popma JJ, Cox, N, Wahr D, Hermann H, Simon DI, Rogers C, Kramer P, Shear W, Shunk K, Yeung A, Prpic R, Adelman D, Kereiakes D. A quantitative assessment of regional changes in lumen diameter after photodynamic therapy with motexafin lutetium in patients undergoing stent implantation. *J Amer Coll Cardiol* 2002;39 (supplement A):26A.
50. Simon DI, Aucoin-Barry D, Manuelian D, Mombouquette R, Block P, Block E, Reisman M, Gray W. Identifying aspirin-responsive patients using a rapid platelet function assay. *Am J Cardiol* 2002;155H.
51. Kereiakes DJ, Syzniszewski AM, Hermann HC, Simon DI, Rogers C, Kramer P, Shear W, Yeung AC, Shunk KA, Chou TM, Popma J, Fitzgerald P, Carroll TE, Forer D, Adelman DC. Optimizing drug and light dose for antrion phototherapy during percutaneous coronary stenting. *Am J Cardiol* 2002;156H.
52. Feinberg MW, Haspel R, Watanabe M, Takayama K, Shimizu K, Wang X-F, Chen Z, Simon DI, Mitchell RN, Jain MK. TGF- β 1 inhibition of MCP-1 expression is mediated by Smad3. *Circulation* 2002;106:II-221.
53. Chin MT, Sakata Y, Kiriyama Y, Kamei CN, Nakagami H, Chen Z, Simon DI, Liao JK. Ventricular septal defects, cardiomyopathy and vascular dysfunction in mice lacking the transcription factor CHF1/Hey 2. *Circulation* 2002;106:II-229.
54. Ehlers R, Chen Z, Ustinov VA, Lopez JA, Plow EF, Simon DI. Identification of the Mac-1 binding site for the platelet counter-receptor glycoprotein GP Iba. *Circulation* 2002;106:II-145.
55. Shi C, Zhang X, Simon DI. Leukocyte integrin regulates macrophage differentiation via the expression of a novel forkhead-like transcription factor. *Circulation* 2002;106:II-145.
56. Welt FGP, Demtrak S, Zhang X, Ehlers R, Chen Z, Nannizzi-Alaimo L, Phillips DR, Simon DI. GP IIb/IIIa inhibition with eptifibatide lowers levels of soluble CD40L and RANTES post stenting. *J Amer Coll Cardiol* 2003;41:284A.
57. Chen Z, Keaney JF, Jr, Schulz E, Shi C, Zhang X, Simon DI. Decreased neointimal formation in gp91phox-deficient mice reveals a direct role for NAD(P)H oxidase in vascular repair after angioplasty. *Circulation* 2003;108:IV-45.
58. Danenberg HD, Szalai AJ, Swaminathan RV, Peng L, Chen Z, Seifert P, Fay WP, Simon DI, Edelman ER. Increased thrombosis after arterial injury in human c-reactive protein-transgenic mice. *Circulation* 2003;108:IV-159.

59. Feinberg MW, Shimizu K, Lebedeva M, Haspel R, Takayama K, Chen Z, Frederick JP, Wang X-F, Simon DI, Mitchell RN, Jain MK. An essential role for Smad3 in regulating monocyte chemoattractant protein (MCP)-1 expression and vascular inflammation. *Circulation* 2003;108:IV-52.
60. Schulze P, de Keulenaer GW, Chen Z, Kassik KA, Simon DI, Lee RT. The mechanically induced gene IEX-1 is overexpressed in atherosclerosis and inhibits vascular smooth muscle cells in vitro and neointimal formation in vivo. *Circulation* 2003;108:IV-285.
61. SenBanerjee S, Lin Z, Atkins GB, Greif DM, Rao RM, Feinberg MW, Chen Z, Simon DI, Lusinskas FW, Michel TM, Garcia-Cardena G, Gimbrone MA, Jr, Jain MK. KLF2 as a novel transcriptional regulator of endothelial function. *Circulation* 2003;108:IV-169.
62. Sakata Y, Xiang F, Chen Z, Kiriya Y, Kamei CN, Simon DI, Chin MT. Mice lacking the transcription factor CHF2/Hey2 show decreased neointimal formation after injury and impaired vascular smooth muscle cell responsiveness to growth factors. *J Amer Coll Cardiol* 2004;43 (Supplement A):533A.
63. Han Q, Peng Y, Chen Z, Ugaroova TP, Plow EF, Simon DI, López JA. Detailed mapping of the binding site within platelet glycoprotein Ib α for leukocyte integrin Mac-1 ($\alpha_M\beta_2$). *Blood*, in press.
64. Giugliano RP, Wiviott SD, Morrow DA, Simon DI, Schweiger MJ, Chandra M, Deitcher S, Skene A, Braunwald E. Addition of a tissue-factor/Factor VIIa inhibitor to standard treatments in NSTEMI-ACS managed with an early invasive strategy: Results of the Phase 2 ANTHEM-TIMI 32 double-blind randomized clinical trial. *Circulation* 2005;112:II-432.
65. Simon DI, Burton P, Palabrica T, Tchong JE. Impact of eptifibatid therapy on outcome in patients undergoing multiple stent insertion: An ESPRIT subanalysis. *Circulation* 2005;112:II-571.
66. Bach RG, Giugliano RP, Simon DI, Schweiger MJ, Leeser MA, Wiviott SD, Goulder MA, Deitcher SR, Braunwald E. Safety and tolerability of a novel tissue factor / factor VIIa inhibitor rNAPc2 in patients with NSTEMI-ACS managed invasively: Results from the ANTHEM-TIMI 32 trial. *J Amer Coll Cardiol* 2007;49 (Supplement A):196A.
67. Shimizu K, Libby P, Sakuma M, Wang Y, Mitchell RN, Simon DI. The leukocyte integrin Mac-1 promotes acute cardiac allograft rejection. *Circulation* 2007, in press.