

**Harvard Medical School/Harvard School of Dental Medicine**

**Date Prepared:** March 2011  
**Name:** Jorge Plutzky, MD  
**Office Address:** 77 Avenue Louis Pasteur  
New Research Building 742  
Boston, Massachusetts 02115  
**Home Address:** 110 Middlesex Road  
Chestnut Hill, Massachusetts 02467-1840  
**Work Phone:** 617-525-4360  
**Work Email:** [jplutzky@rics.bwh.harvard.edu](mailto:jplutzky@rics.bwh.harvard.edu)  
**Work FAX:** 617-525-4366  
**Place of Birth:** Havana, Cuba

**Education**

1981	BA, summa		University of Virginia, Charlottesville, VA (Echol's Scholar), "With Highest Distinction"
1986	MD	Medicine	University of North Carolina School of Medicine, Chapel Hill, NC

**Postdoctoral Training**

1983-1984	Research Fellow	Protein C cloning and analysis, Laboratory of Gerald R. Crabtree, MD	National Cancer Institute, Bethesda, Maryland
1985-1986	Holderness Fellow	Independent studies in protein C deficiency	University of North Carolina
07/1986- 06/1989	Resident	Internal Medicine	Brigham and Women's Hospital/Harvard Medical School, Boston, Massachusetts
1989	Chief Medical Resident	Internal Medicine	West Roxbury Veterans' Administration Hospital/Harvard Medical School, Boston, MA
1989-92	Research Fellow	Program for Excellence in Molecular Biology of the Cardiovascular System: Cell Signaling via Phosphotyrosine Phosphatases, Laboratories of Robert D. Rosenberg, MD, PhD, and Benjamin G. Neel, MD, PhD	Massachusetts Institute of Technology, Cambridge, MA
1989-94	Clinical	Cardiology	Brigham and Women's

	Fellow		Hospital/Harvard Medical School
2007-2008		Physician Leadership Course	Harvard Business School, Cambridge, MA

### Faculty Academic Appointments

1995-2000	Instructor	Medicine	Harvard Medical School
2000-2006	Assistant Professor	Medicine	Harvard Medical School
2006	Associate Professor	Medicine	Harvard Medical School

### Appointments at Hospitals/Affiliated Institutions

7/1989-6/1993	Attending Physician	Brigham Internal Medicine Associates, Weekly Spanish Clinic	Brigham and Women's Hospital
1993	Attending Physician	Ward Service	Brockton/West Roxbury VA Hospital, West Roxbury, MA
1994-current	Attending Physician	Inpatient Services: Cardiology Consult, Cardiology B (Ward) Team, Cardiac Surgery Service, Electrocardiogram Reading	Brigham and Women's Hospital
1994-current	Attending Physician	Outpatient Services: Lipid/Prevention Clinic, BWH/Partners Premature Atherosclerosis Center	Brigham and Women's Hospital

### Other Professional Positions

1994-current	Director, The Lipid/Prevention Clinic, The Vascular Disease Prevention Program	Brigham and Women's Hospital
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### Major Administrative Leadership Positions

<b>Local</b>		
1994-current	Director, Basic Science Laboratory	Brigham and Women's Hospital, Department of Medicine, Cardiovascular Division
1996-current	Director, The Vascular Disease Prevention Program (preventive cardiology program encompassing Lipid/Prevention Clinic)	Brigham and Women's Hospital, Department of Medicine, Cardiovascular Division
1998 – current	Director, BWH/Partners Premature Atherosclerosis Center (clinical and research program on premature atherosclerosis)	Brigham and Women's Hospital, Department of Medicine, Cardiovascular Division

### **Regional**

## National and International

### Committee Service

#### Local

1994 – current	Summer Honors Undergraduate Research Program, Preceptor (Harvard research program for minority students)	Harvard Medical School
1994-2000	Medical Residency Selection Committee, member	Harvard Medical School
1995-2002	Professional Education Committee	American Heart Association New England, Framingham, MA
1995-2000	Pharmacy and Therapeutics Committee, Cardiovascular Subcommittee, member	Brigham and Women's Hospital
1996-2004	Health Education and Promotion Committee, member	Brigham and Women's Hospital
1997-1999	Cardiology Fellowship Selection Committee, member	Brigham and Women's Hospital
1998-2005	Future Leaders of Academic Medicine, member (advisory group to Chief of Medicine)	Brigham and Women's Hospital
1999-2003	Founding member, Atorvastatin Research Awards Committee (annual competitive research award)	
2000- current	Women's Cardiovascular Guidelines, Women's Health, member	Brigham and Women's Hospital
2000-2005	Smoking Cessation Program Co-Founder, Steering Committee, member	Brigham and Women's Hospital
2002	Research Council, Dual Mentored Fellowship Review Committee, member	Brigham and Women's Hospital
2004-2005	Cardiology Fellowship Selection Committee, member	Brigham and Women's Hospital
2005	PhD Qualifying Exam Committee, member	Harvard School of Public Health, Boston, Massachusetts
2007- current	Cardiovascular, Metabolism, Diabetes Research Institute Steering Committee, member	Brigham and Women's Hospital
2007- current	Cardiovascular, Metabolism, Diabetes Research Institute Research Seminar Series/Visiting Scientist Research Forum, Co-Chair	Brigham and Women's Hospital
2009- current	Senior Advisor, Physician Leadership Projects: Development of a BWH International Research Center	BWH/Harvard Business School

2009	PhD Qualifying committee, member, advisor (Laboratory of Chih-Hao Lee, PhD), Sihao Liu, PhD candidate in Biology	Harvard School of Public Health
2010	PhD Qualifying committee, member, advisor (Laboratory of Gokhan Hotamisligil, MD, PhD), Meric Erikci, PhD candidate, G2-PhD Program in Biological Sciences in Public Health	Harvard School of Public Health
<b>Regional</b>		
1994-2005	Steering Committee, member	New England Lipid Group, Boston, MA
1995-2002	Professional Education Committee	American Heart Association New England, Framingham, MA
2004	Section Chair	Gordon Conference on Lipid Metabolism
<b>National and International</b>		
1999-2007	Education Council (National physician educational program regarding diabetes), member	National Diabetes Educational Initiative, Secaucus, NJ
2001-current	National Lipid Education Council	
2002- 2006	Council on Nutrition, Physical Activity, and Metabolism, member	American Heart Association, Dallas, TX
2002-current	Nutrition, Physical Activity, and Metabolism Executive Committee	American Heart Association, Dallas, TX
2003-current	Clinical Lipidology Committee	American Heart Association
2003-2007	Clinical Lipidology and Thrombosis Committee, member	American Heart Association
2004	Invited PhD Thesis Opponent	Karolinska Institute, Stockholm, Sweden
2004-current	Preventive Cardiology Committee	American College of Cardiology, Washington, DC
2004-2007	Prevention of Cardiovascular Disease Committee, member,	American College of Cardiology, Washington, DC
2004-2007	Endocrine and Metabolic Drugs Advisory Committee, member	Food and Drug Administration, Washington, DC
2004-2007	Prevention Task Force, member	American College of Cardiology
2005	3 <sup>rd</sup> International PPAR Symposium, Co-Chair	Lorenzini Medical Foundation
2005	Data Safety Monitoring Board, Rivoglitazone Safety/Efficacy Trial, Chair	Daiichi Sankyo, Cliffside Park, NJ
2005-2008	Fellowship Selection Committee	American College of Cardiology
2005- 2009	Board of Directors	Northeast Regional National Lipid Association, Jacksonville, FL
2005	International PPAR Task Force, member	Loos, France
2005	International PPAR Nomenclature Committee, member	

2005- current	International Chair on Cardiometabolic Risk, Board Member	Hôpital Laval Research Centre, Quebec, Canada
2006	Working Group on Diabetic Cardiovascular Complications, Chair	NHLBI/NIH, Washington, DC
2006- 2008	Scientific Sessions Planning Committee, member	American Diabetes Association, Alexandria, VA
2006- current	International Advisory Board, XVIth International Symposium on Drugs Affecting Lipid Metabolism, member	Lorenzini Medical Foundation
2007- current	International Committee for Insulin Resistance, member, the scientific organizing committee	The Annual World Congress on the Insulin Resistance Syndrome
2009-2011	The Fall Program Committee for the Council on Arteriosclerosis, Thrombosis, and Vascular Biology, member	American Heart Association
2009-2012	Scientific Committee, member	Sarnoff Cardiovascular Research Foundation, Great Falls, VA
2010	Data Monitoring Committee, Chairman	Medpace, Cincinnati, OH

### Professional Societies

1994 – 2007	Massachusetts Medical Society, member
1995	Society for Vascular Medicine and Biology, Fellow
1996	American College of Cardiology, Fellow
1997	American Heart Association, member
1998	American Diabetes Association, member
1999	North American Vascular Biology Organization, member
2004	American Society for Clinical Investigation, member
2009- current	National Lipid Association, Fellow

### Grant Review Activities

1994	Invited Outside Reviewer	The Netherlands Organization for Scientific Research, Netherlands
1998-2003	Atorvastatin Research Awards Committee (Grant review committee for national research grant program)	Pfizer Permanent Member
2000-2006	National Grant Study Section, Vessel Wall Biology	American Heart Association Permanent Member
2001	Invited Outside Reviewer	Scottish Hospital Endowment Research Trust, Edinburgh, UK
2000-2003	Invited Outside Reviewer	University of Pennsylvania Diabetes Center and Diabetes, Endocrinology Research Center, Philadelphia, PA Permanent Member

2000-2003	Invited Outside Reviewer	US Veterans' Administration National Research Program, Washington, DC Permanent Member
2004-current	Program Project Grant External Advisory Board: "Vascular Biology, Exercise Training, and Coronary Disease"	University of Missouri, Columbia, MO Permanent Member
2004	Program Project Grant Review Committee	NHLBI/NIH Permanent Member
2004-2007	Lipoproteins, Lipid Metabolism, and Nutrition Grant Review Committee	American Heart Association Permanent Member
2005-2008	Research Fellowship Awards Committee	American College of Cardiology Foundation

### Editorial Activities

#### **Ad Hoc Reviewer**

American Journal of Medicine  
 Arteriosclerosis, Thrombosis, and Vascular Biology  
 Circulation  
 Circulation Research  
 Diabetes  
 Diabetes & Vascular Disease Research, Editorial Board Member  
 Diabetes, Editorial Board Nominee  
 Journal of Cardiovascular Pharmacology  
 Journal of Clinical Endocrinology and Metabolism  
 Journal of Clinical Investigation  
 Journal of Nutrition  
 Molecular Medicine  
 Molecular and Cellular Biology  
 Nature Medicine  
 New England Journal of Medicine  
 Nutrition  
 Proceedings of the National Academy of Sciences  
 Thrombosis and Hemostasis

#### **Other Editorial Roles**

1996-2006	Associate Editor	Prevention/Lipids, Vascular Medicine, Arnold Publishing, London
2004-2006	Section Editor	Current Atherosclerosis Reports
2009	Editor-in-Chief	FB Communication S.r.l. a socio unico, Modena, Italy
	Hot Topics in Cardiometabolic Disorders	

### Honors and Prizes

1977	Echol's Scholar	University of Virginia	
1980	Crispell Award, Room 1,	University of Virginia	Outstanding premedical

	West Lawn		student
1986	Kuno Award	University of North Carolina	Student Research
1986	J. B. Bullitt Outstanding Achievement Award	University of North Carolina	
2000	Young Investigator Award	International Society for Thrombosis and Hemostasis	
2001	Young Investigator Award	Kern Lipid Conference: Atherosclerosis	
2002	Nominee, Best Clinical Presenter	Harvard Medical School	First-Year HMS Teaching Awards
2002	First prize, Best Abstract	Oxygen Society, International Society for Free Radical Research, Paris, France	
2004		American Society of Clinical Investigation	
2004	DeStevens Lectureship in Preventive Cardiology	Northwestern University, Chicago, IL	
2005	Ernst Klenk Lectureship	University of Cologne, Germany	
2006	Rabin Lectureship in Diabetes Mellitus	Vanderbilt University, Nashville, TN	
2007	Eugene Braunwald Teaching Award	Brigham and Women's Hospital	Cardiology Fellows
2007	Annual Honorary Plenary Lecture	Japan Society of Ningen Dock, Tokyo, Japan	
2009	American College of Cardiology Foundation/ Pfizer Visiting Professorship in Preventive Cardiovascular Medicine	The George Washington University, Washington, DC	
2010	Tucker Collins Memorial Lectureship	Brigham and Womens' Hospital	HMS/Children's Hospital Vascular Biology Seminar Series

## **Report of Funded and Unfunded Projects**

### **Funding Information**

#### **Current**

- 2003-2010    Inflammation and Insulin Resistance in PAD  
NIH/NHLBI R01/RFA HL-075771  
PI: Mark Creager, MD  
Collaborator  
The major goals of this study are to examine arterial mechanisms of endothelial dysfunction as they relate to peripheral arterial disease. One aspect that is examined is the role of synthetic PPAR activators in these responses in patients.
- 2010-2015    Arterial Dysfunction: Basic and Clinical Mechanisms  
NHLBI PPG HL048743

PI: Thomas Michel, MD

Project 2 PI on a program project:

Modulation of Endogenous PPAR Activation

This project, which supplanted a previously funded R01, studies novel mechanisms of PPAR inhibition. (Note: R01 HL79117-01 was relinquished to accept this award.)

2007-2012 Clinical and Research Training Program for Academic Vascular Medicine Specialists

NIH HL083786 K12

PI: Mark Creager, MD

Mentor

2009-2011 The impact of omega 3 fatty acids on lipoproteins and their transcriptional effects

GlaxoSmithKline; Investigator initiated trial

PI

2009-2011 Inflammatory Mechanisms and Treatment Strategies for Atherosclerosis in HIV

NIH/NHLBI R01 HL095123-01

PI: Steven Grinspoon, MD

Co-Investigator

2009-2011 Natural Language Processing to Study Epidemiology of Statin Side Effects

NIH ARRA 5RC1LM010460-02

PI: Alexander Turchin, MD, MS

Co-Investigator

2009-2011 Mouse Models to Delineate a Unique Metabolic and Skeletal Network

NIH Competitive Supplement NIAMS 3R01 AR054604-03S1

PI: Clifford Rosen, MD

Co-Investigator

### Current Unfunded Projects

#### **Completed Research Projects:**

2004-2010 Lipolytic Mechanisms of PPAR Activation

NIH R01-HL071745

PI

This R01 studies mechanisms underlying lipase-mediated PPAR activation.

2003-2007 Atherosclerosis: Prediction, Prevention, Treatment

D.W. Reynolds Foundation/Harvard Medical School Grant

PI: Peter Libby, MD

Reynold's Associate

2004-2005 PPAR-gamma Activators in Restenosis

Takeda Pharmaceuticals Research Grant

PI: Jorge Plutzky, MD

Co-Principal Investigator: Campbell Rogers, MD

2004-2007 The Dallas Heart Project

D.W. Reynolds Foundation/University of Texas Southwestern Medical Center Award

PI: Helen Hobbs, MD

External Investigator

2005 Endogenous Mechanisms of PPAR Modulation

NIH R01 HL079117 (Terminated for the NHLBI Program Project Grant)

PI: Jorge Plutzky, MD

### **Report of Local Teaching and Training**

#### Teaching of Students in Courses

Harvard Medical School



1996 – 1998	Introduction to Clinical Medicine Preceptor, two 2 <sup>nd</sup> year medical students	One 2-hr session per wk for 8 wks Preparation: 5 hrs
1997-2002	Human Systems Cardiovascular Section: “Hypercholesterolemia” Lecturer, 120 1 <sup>st</sup> year medical students	One 1.5-hr lecture per yr Preparation time: 3 hrs
1999-2004	Cell Biology “Lipid Metabolism” 120 1 <sup>st</sup> year medical students	One 1.5-hr lecture per yr Preparation time: 3 hrs
2000	Cardiology Course (E. Edelman, Director) 50 2 <sup>nd</sup> year HST students	Harvard/MIT Division of Health Science and Technology (HST) Three 2-hr lectures (Vascular Anatomy, Hypertension, Lipids); Four 2-hr tutorial sessions Lecture preparation time 30 hrs total (10 hrs per lecture)
2000	“Preventive Cardiology” 1 visiting medical student full-time clerkship	Contact time ~ 50 hrs (~7 hrs per week for 8 wks) Preparation time: 20 hrs
2000-2003	Program Course PA514.0 “Revisiting Biomedical Sciences and Pathology” 20 4 <sup>th</sup> year medical students	One 1.5 hr lecture per yr Preparation time: 4 hrs
2001 – 2003	Independent Research/Study Elective 1 <sup>st</sup> or 2 <sup>nd</sup> year medical student in clinical research or laboratory research elective, full time during the summer, part time during the academic term.	2 hrs per wk Preparation time: 2 hrs/week
2003	HST 350, Pharmacology and Clinical Therapeutics Course Therapy of Lipid Disorders 40 2 <sup>nd</sup> year HST students	Harvard/MIT Division of Health Sciences and Technology Three 2-hr lectures Preparation time: 12 hrs (4 hrs per lecture)
2003-2007	IN708.0b Human Systems, Respiratory & Cardiovascular Pathophysiology Course 120 students 2003-2005 2006	One 2-hr lecture per yr Preparation time: 3 hrs per lecture  Lipid Disorders Cardiovascular Disease in Diabetes
2004- current	Students Teaching Early Prevention Program (STEP) Founder, Faculty sponsor, Lecturer 20 1 <sup>st</sup> and 2 <sup>nd</sup> year medical students	Three lectures per year, Preparation time: 9 hrs (3 hrs per lecture) Contact time: 14 hrs (lectures, training sessions, planning and advisory meetings)
2006	Medical Science 220, Pathophysiology, session on atherosclerosis and dyslipidemia 12-16 Leder Medical Science Program students	One 3-hr lecture Preparation time: 3 hrs
2007	Biological Chemistry of Molecular Pharmacology 234, Cellular Metabolism and Human Disease: Lipid metabolism and transcriptional mechanisms	Five 2-hr lectures Preparation time: 8 hrs (3 hrs lecture) 2-hr <i>Critical reading conference</i> : Preparation: 4 hrs 2-hr <i>Clinical correlation</i>

2007	12 Leder Medical Science Program students, 20 Harvard PhD students HST 146, Human Biochemistry and Metabolic Diseases 50 HST students	Preparation: 4 hrs  Harvard/MIT Division of Health Sciences and Technology One 2-hr lecture Preparation time: 98 hrs
2008	HST 220, Graduate Education in Medical Sciences (GEMS) Program on Atherosclerosis and Dyslipidemia-Coronary Artery Disease 30 PhD students	Harvard/MIT Division of Health Sciences and Technology One 2-hr lecture Preparation time: 4 hrs
2008	HST 146, Human Biochemistry and Metabolic Diseases 50 HST Program students	Harvard/MIT Division of Health Sciences and Technology One 2-hr lecture Preparation time: 98 hrs

**Formal Teaching of Residents, Clinical Fellows, and Research Fellows (post-docs)**

**Graduate Medical Courses (all lipid and/or cardiovascular risk-related presentations)**

1995-current	Cardiology Noon Conferences 50 fellows, residents, students, faculty	Brigham and Women's Hospital 2 1-hr lectures per year Preparation time: 4 hrs/lecture
1995-current	Clinical Conference 50 fellows, residents, students, faculty	Brigham and Women's Hospital 4 ½ hr lectures per year Preparation time: 4 hrs/lecture
1995-current	House staff lecture series, Lipid Disorders 40 fellows, residents, faculty	Brigham and Women's Hospital 2 1-hr lectures per year Preparation time: 2 hrs/lecture
1998-current	Organizer and Co-Chair, US-Japan-Asia Dialogues on Cardiovascular Disease Symposium	Harvard Medical School/Brigham and Women's Hospital Annual symposium between Japanese and BWH academic physicians
2000, 2009, 2010	Resident Supervised Research Block 1 resident	Brigham and Women's Hospital 30 hrs/month, total 60 hrs (2 months full-time, 10 months part-time) Preparation time: 20 hrs
2001	Faculty, Diabetes and Cardiovascular Disease in Hispanic Patients	National education series involving development of a slide set, a workbook, and lectures
	Founder and Director, Lipid Review Course In-depth review of lipid disorders and treatment	Harvard Medical School Office of Continuing Medical Education
2001 – 2008	Primary Care House staff lecture series	Brigham and Women's Hospital 1 1-hr lecture per year Preparation time: 2 hrs/lecture
2007, 2008	Center for Integration of Medicine and Innovative Technology (CIMIT) Program Fellows, residents, students, faculty	Harvard Medical School/Massachusetts General Hospital One 3-hr lecture

Preparation time: 3 hrs

### Clinical Supervisory and Training Responsibilities

2004-current	Lipid/Prevention Clinic supervisor 2 cardiology fellows per session 1 endocrine fellow	Brigham and Women's Hospital 1 5-hr session per wk, ~48 wks per yr Preparation time: 1 hr per session
	Vascular Medicine Case Conference	Brigham and Women's Hospital Monthly meeting of BWH Vascular Medicine Staff to discuss difficult management cases
	Training program in lipids and their management, including curriculum for Cardiovascular Fellows rotation Founder, Greater Boston Preventive Cardiology Fellows Forum	Brigham and Women's Hospital  Quarterly meeting of cardiology fellows and junior faculty interested in preventive cardiology, during which attendees meet with a prominent senior investigator for a roundtable discussion.
	Founder, Faculty mentor, Students Teaching Early Prevention (STEP)	A novel extracurricular program at Harvard Medical School in which 1 <sup>st</sup> and 2 <sup>nd</sup> year medical students undergo training in prevention issues prior to their going out into local area middle and high schools to give presentations on healthy lifestyles.

### Laboratory and Other Research Supervisory and Training Responsibilities

2000-current	Basic Science Laboratory Supervision of ~5 laboratory fellows (Post-doctoral PhD fellows, cardiology fellows, medical students)/ Brigham and Women's Hospital	Daily mentorship ~10 hrs per wk (2 hrs per trainee per wk) Preparation time: ~ 5 hrs/week (1 hr per trainee per wk)
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### Formally Supervised Trainees and Faculty

1995	Sonia Lobo Planey, PhD*/Assistant Professor of Biochemistry, The Commonwealth Medical College Published seven manuscripts including Mol Biol Cell, Cancer Res, J Biol Chem
1996	Sonia Gonzalez-Razzetti, PhD, DMS*/Biogen Idec, Associate Director, Bioanalytical Control
1997-1999	Nikolaus Marx, MD <sup>#+</sup> /Professor of Medicine, University of Ulm, Ulm, Germany
1997-2000	Curran Murphy, BS/Clinical Research Coordinator, Millennium Pharmaceuticals, Cambridge, MA
1998	Kristi Mizelle, MD*/Rheumatology Fellow, Johns Hopkins University, Baltimore, MD

2000-2004 Ouliana Ziouzenkova, PhD<sup>#</sup>+/Assistant Professor, Ohio State University, Columbus, Ohio  
Published twenty-three manuscripts including PNAS, J Biol Chem, Nature Med, Mol Endocrinol, Circ Res, Blood. She received two Young Investigators Awards, Louis and Norman Katz Basic Science Award, and Lerner Young Faculty Award

2000 Wilmer Roberts, MD\*/Assistant Professor, Department of Urology, University of Michigan Health System

2001 Arindel Maharaj\*/MD/PhD student, HMS

2002-2003 Stephan Perrey, PhD/Vice President, Third Wave Technologies,, Madison, WI

2002 Donnie Bell, MD/Internal Medicine Physician, Mass. General Hospital (MGH), Boston, MA

2002 Evan Lau, MD/Cardiologist, MGH

2002 Daniel Kramer, MD/Resident, MGH

2003- current Annaswamy Raji, MD/Assistant Professor, Endocrinology, BWH  
Published eleven manuscripts including three in J Clin Endocrinol Metab, two in Diabetes Care, and one in Atherosclerosis; was nominated as the Woman of the Year, India New England (2005) and received an award Partners in Excellence for exemplary performance in the area of “Quality Treatment and Service”, Brigham and Women’s Hospital (2006)

2003-2004 Arturo Saavedra, MD/Critical Care Fellow, BWH

2003-2005 Waleed Ahmed, MD/Cardiologist, MGH

2003-2005 Vedika Nehra, BS/Medical Student, NY Medical College, New York, NY

2002- current Gabriela Orasanu, MD<sup>#</sup>/ Resident, University Hospitals Case Medical Center, Case Western Reserve University School of Medicine, Cleveland, OH  
Published ten manuscripts including J Clin Invest, J Biol Chem, Circ Res, ATVB, Nat Med, J Am Col Cardiol, and received several awards including Collaborative Programs in Drug Discovery Award (Partners Center for Drug Discovery, Cambridge, MA) and Research Excellence Award (Biomedical Research Institute, Brigham and Women’s Hospital)

2004 Brett Palama, BS\*/Medical Student, University of Michigan, Ann Arbor, MI

2005 Nicole McWhorter, BS\*/Teacher, Cornell Cooperative Extension School

2005-2007 Molly Sharlach, BS/Graduate Student, UC Berkeley  
Published two manuscripts; one in Nat Med, one in J Intern Med

2005- current Jonathan Brown, MD<sup>+</sup>/Cardiology Fellow, BWH  
Co-author on several manuscripts including one in J Clin Invest, K08 Awardee

2005 Mitul Kadakia, MD/Resident, Harvard Medical School

2005-2006 Eric Oligino, MD/Medicine Resident, University of Pennsylvania

2006-2007 Bethany Strong, BS\*/Medical Student, HMS

2006- current Takeshi Kanda, MD/Cardiologist, Keio University, Tokyo, Japan  
Published a manuscript in J Clin Invest, and also received awards from the Sankyo Foundation of Life Science (2006, 2007), the Mochida Memorial Foundation for Medical and Pharmaceutical Research (2006), and the Uehara Memorial Foundation (2008)

2006-2008 Fokko Zandbergen, PhD/Research Fellow, Marine Biology Lab, Josephine Bay Paul Center, Woods Hole, MA  
Published six manuscripts including two in J Biol Chem, one in Biochim Biophys Acta, and one in J Intern Med

2006-2008 Sanjeev Francis, MD/Imaging Fellow, Brigham and Women’s Hospital  
Published four manuscripts including two in J Biol Chem and one in Blood, and received Distinguished Excellence in Teaching Award and Soma Weiss Award (2005, Dept. of Medicine, Brigham and Women’s Hospital) and Thomas W. Smith Fellowship in

- Cardiovascular Research (2007, Division of Cardiovascular Medicine, Brigham and Women's Hospital)
- 2007 Maxwell A. Ruby, BS/Research Graduate Student, Children's Hospital Oakland Research Institute, Oakland, CA
- 2007 Mark Cunningham\*/Senior, Morehouse College
- 2007, 2009 Katharina Volz, BS/University of Graz, Austria  
Received 2009 AHA Undergraduate Student Summer Fellowship Award
- 2007-2008 Farouc Jaffer, MD, PhD<sup>+</sup>/Cardiologist, MGH  
Published forty-four manuscripts including one in JAMA, three in ATVB, seven in Circulation, two in JACC, and one in PNAS. Dr. Jaffer was a finalist for the Brian A. McGovern Memorial Teaching Award (2008, MGH Department of Medicine) and received the Early Career Award (2007, Howard Hughes Medical Institute) and Cardiovascular Research Technology (CRT) Young Leadership Award, D.C. (2009)
- 2007-2008 Kiyuk Chang, PhD/Post-doctoral Fellow, MGH
- 2008-current Shriram Nallamshetty, MD/Post-doctoral Fellow, MGH  
Published four manuscripts including one in Molec Therapy, one in EMBO, and one in FEBS Lett. He also received AHA Founder's Affiliate Postdoctoral Fellowship Award (7/2009) and was a Finalist for the AHA Laennec Young Clinician Award (11/2008)
- 2009 Raymond Rios\*, University of Puerto Rico, Río Piedras Campus, Puerto Rico
- 2009 Satoru Tatematsu, MD, Keio University, Tokyo, Japan
- 2010 Florian Kiefer, MD, Medical University, Vienna, Austria
- 2010 Cesar Cardenas, Jr.\*, Texas A&M International U, Laredo, TX
- 2010 Philip Luger, med student, Medical University Vienna, Austria
- 2010 Eun-Jung Rhee, MD, PhD; Assistant Professor of Medicine, Sungkyunkwan U School of Medicine, Korea
- 2010 Steffen Spoerl, med student, Ludwig Maximilian University, Munich, Germany
- 2011 Patrick O'Brien, student, University of Veterinary Medicine, Vienna, Austria, MSc Biomedicine and Biotechnology, expected graduation in 2011
- 2 Harvard Medical School summer minority research program participant
- # Young investigator award recipient
- + Career development award recipient

### Formal Teaching of Peers (e.g., CME and other continuing education courses)

#### **Continuing Medical Education Courses**

None of the presentations below were sponsored by outside entities

1997-current, annual	Annual Intensive Review of Internal Medicine, "Management of Lipid Disorders"	Harvard Medical School and Brigham and Women's Hospital One 1-hr lecture per year Preparation time: 3 hrs/lecture
1997-current, annual	Cardiology Review Course, "Management of Lipid Disorders"	Harvard Medical School and Brigham and Women's Hospital One 2-hr lecture per year Preparation time: 3 hrs/lecture
2000	Neurology "Management of Stroke" Review Course: "Lipid Disorders and Stroke"	Harvard Medical School and Brigham and Women's Hospital One 2-hr lecture

		Preparation time: 2 hrs/lecture
2002	“Lipid Disorders In Vascular Disease” Course Course founder, organizer, lecturer 100 physicians (regional and national)	Harvard Medical School One 3-hr lecture Preparation: 40 hrs curriculum development, meeting planning
2004	“Lipids Disorders and Cardiovascular Disease” 100 physicians	University of Pennsylvania, Philadelphia, PA One 2-hr lecture Preparation: 3 hrs
2005	Cardiology for the Internist, “The Metabolic Syndrome”	Boston University, Boston, MA One 1-hr lecture Preparation time: 2 hrs
2005	Curso Intensivo Sobre Diabetes Diabetic dyslipidemia, Atherosclerosis	Baylor University, Waco, TX Two 2-hr lectures Preparation time: 8 hrs (including developing lecture and materials in Spanish)
2006	Annual Review of Internal Medicine, “Management of Lipid Disorders”	Harvard Medical School and Massachusetts General Hospital One 1-hr lecture Preparation time: 2 hrs
2005, 2007	Cardiovascular Medicine: Review and Update for the Practitioner 200 physicians	Harvard Medical School and Brigham and Women’s Hospital One 2-hr lecture per year Preparation time: 4 hrs
2008	Exploratory Seminar, “Unexplored Sex Differences in Cardiovascular Disease” <i>Sex differences in vascular disease</i> 20 physicians	Harvard University Radcliff Institute for Advance Study One 6-hr seminar Preparation time: 4 hrs
2010	Update in General Internal Medicine for Subspecialists	Harvard Medical School/Massachusetts General Hospital/Brigham and Women’s Hospital One 1-hr lecture Preparation time: 3 hrs

### Local Invited Presentations

#### **Local Invited Teaching Presentations**

1999, 2001	Longwood Medical Area Vascular Biology Seminar Series (PPARs) 50 physicians, scientists, fellows	Harvard Medical School One 1-hr lecture per year Preparation: 4 hrs
2002	Medical Grand Rounds, Young Investigators Forum 100 physicians, residents, fellows, medical students	Brigham and Women’s Hospital One 1-hr lecture Preparation: 6 hrs
2004	Cardiology Grand Rounds (Diabetic Atherosclerosis) 70 physicians, residents, fellows, medical	Brigham and Women’s Hospital One 1-hr lecture Preparation: 6 hrs

2002, 2006	students Endocrinology Grand Rounds (PPARs) 30 physicians, residents, fellows, medical students	Brigham and Women's Hospital One 1-hr lecture per year Preparation: 3 hrs
2006	Men's Health Symposium 2006, "New Insights Into Preventing Cardiovascular Disease" 30 physicians, lay public	Brigham and Women's Hospital One 1-hr lecture Preparation: 3 hrs
2006	TIMI Study Group Grand Rounds "PPARs" 20 physicians, residents, fellows, medical students	Brigham and Women's Hospital One 1-hr lecture Preparation: 3 hrs
2007	Medical Grand Rounds 120 physicians, residents, fellows, medical students	Brigham and Women's Hospital One 1-hr lecture Preparation: 20 hrs
2007	Plenary Lecture, Primary Care Faculty Development Retreat, Waltham Woods, MA <i>Updates in Hyperlipidemia Treatment</i> 75 physicians, fellows, residents	Brigham and Women's Hospital 4 hrs Preparation: 3 hrs
2008	Medical Grand Rounds 95 physicians, residents, fellows, medical students	Brigham and Women's Hospital One 1-hr lecture Preparation: 18 hrs
2008	Taking Charge of the Burden of Cardiometabolic Disease <i>Modifying pathways of cardiometabolic risk</i> 100 physicians, scientists, fellows, graduate students	Brigham and Women's Hospital/Harvard Medical School One 2-hr lecture Preparation: 8 hrs
2008	Clinical Pathology Grand Rounds	Brigham and Women's Hospital One 1-hr lecture Preparation: 1 hrs
2010	Medical Grand Rounds	Faulkner Hospital, Boston, MA One 1-hr lecture Preparation: 6 hrs

## **Report of Regional, National and International Invited Teaching and Presentations**

### **[Invited Presentations and Courses](#)**

#### **Regional, National and International Invited Presentations and Courses**

#### **Regional, National and International Presentations**

##### **Regional**

1998	Cardiovascular Grand Rounds Maine Medical Center, Portland, ME
1998	Medical Grand Rounds Cape Cod Hospital, Hyannis, MA
1998	Cardiology Grand Rounds University of Pennsylvania
1999	Maine American Heart Association Annual Meeting

1999 New England Lipid Group  
 2000 Medical Grand Rounds  
 Brockton-West Roxbury VA Hospital  
 2000 Cardiology Grand Rounds  
 University of Florida  
 2000 Cardiology Grand Rounds  
 Newton-Wellesley Hospital  
 2001 Medical Grand Rounds  
 Springfield Hospital  
 2001 Visiting Scientist Seminar Series  
 Parke Davis, Ann Arbor, MI  
 2001 Medical Grand Rounds  
 Maine Medical Center  
 2001 Chinese Medical Society of New England Lecture  
 2002 Combined Endocrinology Grand Rounds  
 Brown University, Providence, RI  
 2002 Cardiovascular Grand Rounds  
 Cleveland Clinic, Cleveland, OH  
 2002 Cardiology Lecture Series  
 Johns Hopkins University  
 2002 Cardiology Conference  
 St. Elizabeth's Medical Center, Brighton, MA  
 2003 Cardiovascular Grand Rounds  
 Massachusetts General Hospital  
 2003 Cardiovascular Grand Rounds  
 Montefiore Medical Center  
 2003 Cardiology Grand Rounds  
 Mt. Sinai Hospital, New York, NY  
 2003, 2005 Annual Symposium Lecture  
 New York Lipid and Vascular Biology Research Club, New York, NY  
 2003 Cardiology Grand Rounds  
 University of Florida, Gainesville, FL  
 2003 Basic Science Rounds  
 University of Pennsylvania  
 2004 Cardiology Grand Rounds  
 Beth Israel Deaconess Medical Center, Boston, MA  
 2004 Grand Rounds  
 Beth Israel Medical Center NY, New York, NY  
 2004 Cardiovascular Grand Rounds  
 Boston University, Boston, MA  
 2004 Biochemistry Seminar/Journal Club Series Lecture  
 Boston University  
 2004 Cardiovascular Grand Rounds  
 Johns Hopkins University  
 2004 Cardiovascular Grand Rounds  
 Maine Medical Center  
 2004 Basic Science Seminar Series Lecture  
 Washington University, St. Louis, MO



2004 Cardiovascular Grand Rounds  
Yale University, New Haven, CT

2004 Endocrinology Grand Rounds  
Yale University

2004 DeStevens Lectureship in Preventive Cardiology/Grand Rounds  
Northwestern University Feinberg School of Medicine, Chicago, IL

2004 Cardiovascular Research Seminar Series  
St. Elizabeth's Medical Center/Tufts University School of Medicine, Brighton, MA

2004 Grand Rounds  
Strong Memorial Hospital/U. of Rochester Medical School Medical, Rochester, NY

2004 Combined Endocrinology/Cardiology Grand Rounds  
University of California, Los Angeles, CA

2004 Endocrinology Grand Rounds  
University of Colorado, Denver, CO

2004 Endocrine Basic Science Rounds  
University of Colorado

2005 Medical Grand Rounds  
Bridgeport Hospital, Bridgeport, CT

2005 Cardiology Grand Rounds  
Dartmouth Medical School/Dartmouth-Hitchcock Medical Center

2005 Medical Grand Rounds  
Emory University, Atlanta, GA

2005 Endocrinology Grand Rounds  
Joslin Diabetes Center

2005 Cardiovascular Grand Rounds  
Tufts University, Medford, MA

2005 Endocrinology Grand Rounds  
Tufts University

2005 Cardiology Grand Rounds  
University of Massachusetts

2005 Cardiology Ground Rounds, Endocrinology Grand Rounds  
University of Michigan

2005 Cardiology Grand Rounds  
University of New Mexico

2006 Endocrinology Grand Rounds  
University of Virginia

2006 2<sup>nd</sup> Annual Coastal Medical CME Seminar  
"CAD and the metabolic syndrome in type 2 diabetes"  
Coastal Care Medical Management  
Providence, RI

2007 Vascular Biology Seminar Series & School of Medicine  
*Modulation of PPAR Responses via endogenous pathways:  
implications for inflammation and atherosclerosis*  
University of California

2007 *Retinoid metabolites as nuclear receptor modulators*  
Merck Research Laboratories

2007 Medical Grand Rounds  
University of Virginia

2008 Cardiovascular Seminar "*Dys-metabolism and atherosclerosis: issues and opportunities in  
CV risk reduction*"  
University of Rochester Medical Center

2008 A Reappraisal "*Inflammation/inflammatory response*"

2008 American Academy of Periodontology Inflammation and Periodontal Diseases  
Cardiology Grand Rounds  
Cornell University, Ithaca, NY

2008 *Diabetic atherosclerosis: sweet and sour?* Grand Rounds  
Montefiore Medical Center, Albert Einstein College of Medicine, Bronx, NY

2008 Preventive Medicine & Nutrition Seminar  
Columbia University, New York, NY

2008 Endocrinology Grand Rounds  
Emory University

2008 *“Diabetic Atherosclerosis: Issues and Opportunities”* /Lecture  
American Association of Clinical Endocrinologists, Georgia Chapter, Atlanta, GA

2008 Endocrinology Intercity Grand Rounds  
University of Connecticut Health Center, Farmington, CT

2009 Joint Endocrinology/Cardiology Grand Rounds  
The Cheney Cardiovascular Institute, The George Washington University

2009 Primary Care Conference  
The George Washington University, Washington, DC

2009 Department of Medicine Grand Rounds  
The George Washington University

2009 Cardiology Fellows Conference  
The George Washington University

2009 Cardiovascular Grand Rounds  
Yale University, New Haven, CT

2009 Cardiovascular Grand Rounds  
Case Western University, Cleveland, OH

2009 Pharmacology Journal Club Conference  
Case Western University, Cleveland, OH

2010 *The PPAR-RXR transcriptional complex in energy balance: at the intersection of nutrient metabolism and vascular biology*  
The Institute of Diabetes, Obesity, and Metabolism (IDOM) Fall 2010 Seminar Series  
The University of Pennsylvania, Philadelphia, PA

**National**

2000 *New Mechanisms and Therapeutic Targets: PPARs*  
American Diabetes Association Scientific Sessions, San Antonio, TX

2000 *Pri-Med Primary Care Conference: Dyslipidemia*

2001 *PPARs in Atherosclerosis*/Plenary Lecture  
Vascular Biology Working Group National ACC Meeting, Orlando, FL

2001 *Clinical Controversies: MI in Diabetics: Plaque or Non-Plaque*  
American Diabetes Association Scientific Sessions, Philadelphia, PA

2001 *Dyslipidemia: Diagnosis and Treatment*/Primary Care Conference  
Nurse Practitioner Associates for Clinical Education, Falmouth, MA

2001 Featured Research: *PPARs and Atherosclerosis*  
Nuclear Receptors as Therapeutic Targets: *PPARs and Vascular Biology*  
Nuclear Receptor session: *PPARs in Endothelial Cell Biology*  
American Heart Association Scientific Sessions, Anaheim, CA

2002 *PPARs in Vascular Biology and Atherosclerosis*, ATVB Annual Scientific Meeting, Salt Lake City, Utah

2002 *PPARs in Vascular Biology and Atherosclerosis*, American Association of Clinical Endocrinologists, Chicago, IL

2002 Keynote Speaker, *PPARs as a Therapeutic Target*, Merck Dual PPAR Agonist MK767 Cardiac Safety Study Investigators Meeting, Philadelphia, PA

- 2002 *PPARs: Potential Modulators of Inflammation and Atherosclerosis/Modulating Obesity, Diabetes and Cardiovascular Diseases with PPAR Ligands*  
New York Academy of Sciences, New York, NY
- 2002 *Molecular Mechanisms of Atherosclerotic Vascular Disease in Type 2 Diabetes, Endothelial Signaling Pathways*  
Sunday Science: *PPARs in Diabetic Atherosclerosis*  
American Heart Association Scientific Sessions, Chicago, IL
- 2003 *PPARs as Modulators of the Inflammatory Response in the Vasculature*  
Keystone Symposium on PPARs: Transcriptional Regulators of Metabolism and Metabolic Disease, Keystone, CO
- 2003 *Lipids and Carbohydrates in CVD and HIV Disease and Their Treatment*  
Women's Interagency HIV Study and the Multicenter AIDS Cohort Study Joint Retreat, National Institute of Allergy and Infectious Diseases, Herndon, VA
- 2003 *PPARs in the Vasculature*  
18<sup>th</sup> Annual Meeting of the American Society of Hypertension, New York, NY
- 2003 *PPARs: Transcriptional Links Between Metabolism and Atherosclerosis*  
International Symposium on Triglycerides, Metabolic Disorders and Cardiovascular Disease, New York, NY
- 2003 *Lipid Management and Challenge in Practice*  
Nurse Practitioner Associates for Continuing Education, Hyannis, MA
- 2003 *PPARs in Inflammation and Atherosclerosis*  
Cardiovascular Drug Discovery Symposium, Philadelphia, PA
- 2003 *PPARs, Inflammation, and Insulin Resistance*  
Rachmiel Levine Symposium: Advances in Diabetes Research: From Cell Biology to Cell Therapy, City of Hope National Medical Center, Universal City, CA
- 2003 *Inflammation and the Metabolic Syndrome*  
Updates in Preventive Cardiovascular Medicine: Managing Aspects of the Metabolic Syndrome, University of Pennsylvania Medical Center, Bryn Mawr, PA
- 2004 *Impaired Glucose Tolerance/Fasting Glucose/Insulin Resistance, Cardiovascular Risk, and Therapeutic Targets*  
Type 2 Diabetes, The Metabolic Syndrome and Obesity: Evolving the Paradigms, Duke Clinical Research Institute, McLean, VA
- 2004 *Diabetic Atherosclerosis: New Targets, New Pathways*  
American Diabetes Association Rifkin Open Meeting, New York, NY
- 2004 *LDL Particles, Inflammation, and PPARs*  
American Diabetes Association, Orlando, FL
- 2004 *A Clinical Approach to the Patient with the Metabolic Syndrome*  
Cardiology for the Consulting Cardiologist, Boston University School of Medicine/American College of Cardiology Foundation Symposium, Boston, MA
- 2004 *PPARs, Vascular Inflammation, Insulin Resistance, and Atherosclerosis*  
American Heart Association Scientific Sessions, New Orleans, LA
- 2004 *Metabolic and Vascular Effects of Peroxisome Proliferator-Activated Receptor (PPAR) Agonists*  
Northeast Lipid Association Inaugural Scientific Forum, New York, NY
- 2005 *Diabetic Atherosclerosis: New Pathways, New Targets*  
Heart Foundation of Dayton Heart Hospital Distinguished Lecturer Series, Wright School of Medicine, Dayton, OH
- 2005 *Cardiovascular Risk Prediction in the General Population*

- 2005 12<sup>th</sup> Conference on Retroviruses and Opportunistic Infections, Boston, MA  
*The Natural History of the Vulnerable Plaque*  
 Cardiovascular Disease: State of the Art 2005, 16<sup>th</sup> Annual Lahey Clinic Symposium, Cape Cod, MA
- 2005 *Inflammation — What Do We Know?*  
 Prevention and Reversing Coronary Heart Disease, American College of Cardiology Foundation, Santa Fe, CA
- 2005 *Diabetes and Atherosclerosis: New Targets, New Pathways/John N. Wilson Lectureship in Cardiovascular Diseases, Cardiology Update 2005*  
 Presbyterian Healthcare Services, Albuquerque, CA
- 2005 Obesity and cardiovascular disease: mechanistic insights and therapeutic implications, AHA Featured Research  
 The role of nuclear receptors in managing metabolic syndrome, Joint AHA/APSC 10<sup>th</sup> Anniversary Symposium: Metabolic Syndrome – East vs. West  
 Discussant, Plenary Session: Late-Breaking Clinical Trials IV, The effect of pioglitazone on recurrent myocardial infarction in 2445 patients with type 2 diabetes and preexisting myocardial infarction.  
 American Heart Association Scientific Sessions, Dallas, TX
- 2006 *Lipolytic Mechanisms of PPAR Activation*  
 Plenary Session Chair, Cardiovascular Aspects of the Metabolic Syndrome/ Diabetes  
 Keystone Conference, Atherosclerosis, Keystone, CO
- 2006 *PPAR  $\alpha/\gamma$  Dual agonists: Lessons Learned*  
 Keynote Speaker, *Metabolic Syndrome: Issues and Suggestions*  
 American Diabetes Association, 21<sup>st</sup> Annual Southern Regional Conference on Diabetes, Obesity, and Cardiovascular Disease, Marco Island, FL
- 2006 *Endogenous mechanisms of PPAR regulation: implications for inflammation, atherosclerosis, and PPAR therapeutics*  
 Bay Area Lipid Club, San Francisco, CA
- 2006 *Potential new predictors – leveraging new scientific insights*  
 Joint National Institute of Diabetes and Digestive and Kidney Disease and the Food and Drug Administration Meeting: Predictors, Pathogenesis, and Prevention of Insulin Resistance and Type 2 Diabetes Meeting, Bethesda, MD
- 2006 *PPARs as therapeutic targets: reverse cardiology?*  
 Nuclear Receptors: Bench to Bedside, Cold Spring Harbor Laboratory, NY
- 2006 Invited Presentations:  
 A critical analysis of PPARs in coronary heart disease, Clinical Lipidology Update  
 PPARs in obesity, Circulation Research Symposium  
 PPARs in diabetes and cardiovascular disease, Cardiovascular Seminar Session  
 American Heart Association Scientific Sessions, Chicago, IL
- 2007 *PPARs, vascular inflammation, and atherosclerosis in diabetes*  
 Inflammation in Atherosclerosis: Thirty Years of Exploration in Basic and Clinical Science, Texas Heart Institute and Brigham & Women's Hospital, Boston, MA
- 2007 *PPARs and Lipid Metabolism*  
 Keystone Symposia, Nuclear Receptor Pathways to Metabolic Regulation/Metabolic Syndrome and Cardiovascular Risk, Steamboat Springs, CO
- 2007 *Biomarkers and cardiovascular risk*, American Heart Association Initiative to Decrease Cardiovascular Risk and Increase Quality of Care for Patients Living with HIV/AIDS, Chicago, IL

- 2007 *PPAR $\gamma$  agonists: great for rodents, PPARs and Heart Disease/ Invited Presentation*  
American Heart Association Scientific Sessions, Orlando, FL
- 2008 *Retinoid Metabolism in Energy Balance/Adipocytes from the Inside Out*  
Keystone Symposia, Banff, Alberta, Canada
- 2008 *Lipid management update; Understanding atherosclerosis in patients with diabetes*  
National Association for Continuing Education CME Symposium, Jacksonville, FL
- 2008 *Mechanisms of PPAR-RXR modulation: implications for inflammation and atherosclerosis*  
American Heart Association: Arteriosclerosis, Thrombosis and Vascular Biology Annual Conference, Atlanta, GA
- 2008 *PPAR $\gamma$  signaling in vascular dysfunction*  
Vascular Biology Working Group Global Chapter Meeting: Novel concepts in vascular biology during the American Heart Association Scientific Sessions
- Evolving concepts of primary prevention of cardiovascular disease*  
*Mechanisms of atherosclerosis and plaque rupture*  
*Mechanisms of macrovascular disease in diabetes*  
Cardiovascular Disease Prevention 2009: Seventh Annual Comprehensive Symposium, Baptist Health South Florida, Miami, FL
- 2009 *Role of PPARs in vascular biology, inflammation, and atherosclerosis: clinical implications*  
American College of Cardiology Foundation/Pfizer Visiting Professorship in Preventive Cardiovascular Medicine at The George Washington University, Washington, DC
- 2009 *Peroxisome Proliferators-activated receptors (PPARs) and cardiovascular disease/ Genomics/Proteomics Seminar*  
The George Washington University, Washington, DC
- 2009 *Does it matter how we get to lipid goals?*  
American Diabetes Association, New Orleans, LA
- 2010 *PPAR $\gamma$  agonists and antagonists – the future for bone, heart, and inflammation*  
15<sup>th</sup> Annual Maine Symposium on Osteoporosis, Carrabassett Valley, Maine
- 2010 Metabolism Basic Science Seminar Series, U. Texas, Southwestern, Dallas, TX
- 2010 *Innovation in risk stratification tools, The Type 2 Diabetes Prevention Summit, The George Washington University, Washington, DC*
- 2010 *Molecular insights into the role of diabetes in atherosclerosis, Cleveland Clinic Satellite Symposium at the American Heart Association Scientific Sessions, Chicago, IL*

#### **International**

- 2000 *New Developments in Lipid-Lowering Therapy*  
InterAmerican Cardiology Association Meeting, San Juan, Puerto Rico
- 2001 *Diabetes and Atherosclerosis*  
World Cardiology Netherlands Research Congress, Amsterdam, Netherlands
- 2001 *PPAR Alpha: From Basic Science to Clinical Applications/Plenary Lecture*  
First International Symposium on PPARs, Fondazione Giovanni Lorenzini, Florence, Italy
- 2001 *PPARs in Atherosclerosis*  
European Society for Clinical Investigation, Satellite Symposium, Barcelona, Spain
- 2001 *PPARs in Inflammation*  
European Association for Science and Diabetes, Glasgow, Scotland
- 2001 *PPARs in Endothelial Biology*  
International Vascular Biology Meeting, Kyoto, Japan
- 2001 *PPARs/Plenary Lecture*  
International Society for Cardiovascular Pharmacology and Therapeutics, Montreal, Canada

- 2001 *Rationale for Lipid Interventions*  
Netherlands Cardiology Association, Amsterdam, Netherlands
- 2002 *PPARs and the Endothelium*  
PPARs and Cardiovascular Disease Symposium, German Heart Institute, Berlin, Germany
- 2003 *PPAR Activation: Exogenous and Endogenous Mechanisms*  
2<sup>nd</sup> International PPAR Symposium, Lorenzini Foundation, Florence, Italy
- 2003 *Insulin Resistance And Cardiovascular Disease; Is Diabetes a Cardiovascular Disease?*  
Japanese Diabetes Society, Toyama and Tokyo, Japan
- 2003 *PPARs and Vascular Disease*  
Atherothrombosis 2003, European Society of Cardiology/Thrombosis Working Group, Florence, Italy
- 2003 *Exogenous and Endogenous Mechanisms of PPAR Activation; Insulin Resistance, Diabetes and Atherosclerosis: Thiazolidinediones as Therapeutic Interventions*  
The 13<sup>th</sup> International Symposium on Atherosclerosis, Kyoto, Japan
- 2003 *Atherosclerosis and PPARs/ Satellite Symposium*  
International Symposium on Atherosclerosis: Molecular Aspects of Metabolic Syndrome, Tokyo, Japan
- 2003 *PPAR-gamma: Transcriptional Links Between Metabolism and Atherosclerosis*  
Canadian Cardiovascular Congress, Toronto, Canada
- 2003 *PPARs as Modulators of the Inflammatory Response in the Vasculature: Exogenous and Endogenous Mechanisms*  
PPARs: From Basic Science to Clinical Applications, 3<sup>rd</sup> International PPAR Symposium, Lorenzini Foundation, Florence, Italy
- 2004 *Hyperlipidemia; Diabetes, Insulin Resistance and Cardiovascular Disease*  
LiveMed Current Issues in Primary Care, Harvard Medical School, Mexico City, Mexico
- 2004 *Lipolytic Mechanisms of PPAR Activation*, Gordon Conference on Lipid Metabolism, New Hampshire
- 2005 *Advances in the Management of Diabetes and Atherosclerosis*  
University of Puerto Rico Medical Sciences First Cardiovascular Congress, San Juan, Puerto Rico
- 2005 *PPARs and Atherosclerosis/Plenary lecture*  
*PPAR $\alpha$  in the Treatment of Dyslipidemia*, 3<sup>rd</sup> Lorenzini PPAR Meeting, Monte Carlo, Monaco
- 2005 *PPARs: Nuevos Enfoques Multifactoriales; Inflamacion y Aterosclerosis – Marcador? O Mediador?*  
*PPARs*, XXIV Congreso Nacional de Cardiologia, Buenos Aires, Argentina (2 lectures)
- 2005 *Vascular Biology of Metabolic Syndrome and CVD: Understanding Basic Mechanism and New Targets*  
2<sup>nd</sup> International Symposium on Triglycerides and HDL: Role In Cardiovascular Disease and the Metabolic Syndrome, G. Lorenzini Medical Foundation, New York, NY
- 2005 *Atherosclerosis: Mediators, Mechanisms and Interventions/ Keynote Lecture*  
21<sup>st</sup> Ernst Klenk Symposium in Molecular Medicine, University of Cologne, Germany
- 2006 *Plenary Lecture, Session IV*  
8<sup>th</sup> International Workshop on Adverse Drug Reactions and Lipodystrophy in HIV, San Francisco, CA
- 2006 *Metabolic syndrome and type 2 diabetes*, World Congress of Cardiology, Barcelona, Spain
- 2006 *Inflammation in the arterial wall and development of CVD*  
Diabetes, Inflammation, and Cardiovascular Disease, Journal of Internal Medicine Symposium, Göteborg, Sweden
- 2006 *PPARs as therapeutic targets: reverse cardiology?*  
Nuclear Receptors: Bench to Bedside, Cold Spring Harbor Laboratory, NY
- 2006 *PPARs and atherosclerosis*  
19<sup>th</sup> World Diabetes Congress, the International Diabetes Federation, Capetown, South Africa
- 2007 *Effects of thiazolidinediones on vascular structure/function/Parallel Session: Vascular*

- effects on gluco-metabolic therapies  
 2<sup>nd</sup> International Congress on Prediabetes, Barcelona, Spain
- 2007 *Current and future treatment strategies in cardiometabolic complications*  
 4<sup>th</sup> Metabolic Syndrome, Type II Diabetes, and Atherosclerosis Congress, Lisbon, Portugal
- 2007 *Endogenous mechanisms of PPAR modulation*  
 Gordon Research Conference on Atherosclerosis, Nuclear Receptors and Co-Regulators  
 Session, Il Ciocco, Italy
- 2007 *PPAR como agente terapéutico en el logro de objetivos: Promesas y decepciones*  
 Asociación Latinoamericana de Diabetes, Havana, Cuba
- 2008 *Modulation of the PPAR-RXR system*  
 British Atherosclerosis Society, Cambridge, UK
- 2008 *Meet the Specialist Presentation*, Tokyo University, Japan
- 2008 *Therapeutic targeting of the RXR-PPAR complex: promises, pitfalls, and ongoing progress*  
 Meet the Specialist, Iwate Medical University, Iwate, Japan
- 2008 *Therapeutic targeting of the RXR-PPAR complex: promises, pitfalls, and ongoing progress*  
 Meet the Specialist, Kumamoto University, Kumamoto, Japan
- 2009 Keynote Lecture, *GLP-1 and cardiovascular risk*, LEAD™ 1-6 Results Summit, Berlin,  
 Germany
- 2009 *Pathophysiology of metabolic syndrome and related global cardiometabolic risk. What's  
 new?*  
 The International Atherosclerosis Society, XV International Symposium on  
 Atherosclerosis, Boston, MA
- 2009 *The RXR-PPAR complex in the regulation of energy balance*  
 The International Atherosclerosis Society, XV International Symposium on  
 Atherosclerosis
- 2009 *Endothelial control of metabolism*, Meet the Specialist, Iwate Medical University, Iwate,  
 Japan
- 2009 *Endothelial control of metabolism*, Meet the Specialist, Center for Integrated Medical  
 Research, Keio University, Keio, Japan
- 2009 *Endothelial control of metabolism? 7<sup>th</sup> Annual World Congress on Insulin Resistance*, San  
 Francisco, CA
- 2010 *Diabetes and Cardiovascular Disease*, Atherothrombosis Summit, Leuven, Belgium
- 2010 *Endothelial Control of Metabolism*, Deuel Conference on Lipids, Dana Point, California
- 2010 *Diabetes and cardiovascular disease*, American College of Physicians Internal Medicine  
 2010, Toronto, Canada
- 2010 *Future treatment of diabetes: integrating perspectives from bench, bedside, and beyond*  
 Keynote Lecture, 8<sup>th</sup> International Discovery on Target: Targeting Diverse Pathways for  
 Tomorrow's Therapeutics, Cambridge Healthtech Institute, Boston, MA
- 2010 *Integrating energy balance with cardiometabolic disease: the RXR-PPAR complex*  
 8<sup>th</sup> Annual World Congress on Insulin Resistance, Los Angeles, CA

## **Report of Clinical Activities and Innovations**

### **Current Licensure and Certification**

- 1986 Massachusetts Board of Registration in Medicine  
 1986 North Carolina Board of Registration in Medicine  
 1989 American Board of Internal Medicine  
 1993 American Board of Internal Medicine, Subspecialty Cardiovascular Diseases

### **Practice Activities**

1994-current	Ambulatory Care - Weekly Lipid/Prevention Clinic, with areas of focus on dyslipidemia, insulin resistance/diabetes mellitus, premature atherosclerosis, HIV-related dyslipidemia, primary prevention.	Watkins Cardiovascular Clinic, Brigham and Women's Hospital	Weekly sessions, One rotation, cardiology
1994-current	BWH/Partners Premature Atherosclerosis Center	Watkins Cardiovascular Clinic, Brigham and Women's Hospital	Weekly sessions
1994-current	BWH Executive Health Center	Watkins Cardiovascular Clinic, Brigham and Women's Hospital	Weekly sessions
1994-current	Attending - the Cardiology Consult service (vascular surgery as well as general cardiology)	Brigham and Women's Hospital	One-three months per year
1994-current	Attending – Cardiology B team (ward cardiology)	Brigham and Women's Hospital	One month per year
1944-current	Attending - Cardiac Surgery Consult Service	Brigham and Women's Hospital	One month per year

**Clinical Innovations**

**Report of Technological and Other Scientific Innovations**

Methods for identifying a tyrosine phosphatase abnormally associated with neoplastic disease. US Patent 5,536,636. Issued on July 16, 1996. Freeman R, **Plutzky J**, Neel B, Rosenberg R. Beth Israel Hospital, Massachusetts Institute of Technology, assignees.

Lipoprotein lipase and lipoprotein lipase activators in the treatment of inflammatory conditions. US Patent 6,869,603. Issued on March 22, 2005. **Plutzky J**, Ziouzenkova O. Brigham and Women's Hospital, assignee.

Retinaldehyde in the treatment of obesity and diabetes. Patent application in review. 2008 July 8. **Plutzky J**, Ziouzenkova O. Brigham and Women's Hospital, assignee.

**Report of Education of Patients and Service to the Community**

1989-1992 Physician, Primary care for Spanish Speaking patients, Brigham Internal Medicine



Associates, Brigham and Women's Hospital  
 1995-current Advisor, Hispanic/other minority college and medical students  
 2000-current Volunteer, American Heart Association  
 2003-current Volunteer, American Diabetes Association  
 2004-current National Spokesperson, American Heart Association, including "Heart of Diabetes" Program

### Educational Material for Patients and the Lay Community

No educational materials below were sponsored by outside entities.

### **Educational material or curricula developed for non-professional students**

Author

### **Patient educational material**

### Recognition

2003	Nominee, Clifford Barger Mentorship Award	
2006-2007	Awardee, The Eugene Braunwald Teaching Awards for Excellence in the Teaching of Clinical Cardiology (awarded by the Cardiovascular Fellows)	Brigham and Women's Hospital

### Report of Scholarship

### Peer reviewed publications in print or other media

### Research investigations

1. Beckman RJ, Schmidt RJ, Santerre RF, **Plutzky J**, Crabtree GR, Long GL. The structure and evolution of a 461 amino acid human protein C gene precursor and its messenger RNA based upon the DNA sequence of cloned human liver cDNAs. *Nucleic Acids Res* 1985;13(14):5233-47.
2. **Plutzky J**, Hoskins JA, Long GL, Crabtree GR. Evolution and organization of the protein C gene. *Proc Natl Acad Sci USA* 1986;83(3):546-550.
3. **Plutzky J**. On Being a Physician. *Arch Intern Med* (letter) 1989;323:1232-3.
4. **Plutzky J**, Neel BG, Rosenberg RD. Isolation of src homology 2-containing tyrosine phosphatase. *Proc Natl Acad Sci USA* 1992;89(3):1123-1127.
5. **Plutzky J**, Neel BG, Rosenberg RD, Eddy BL, Byers MG, Jani-Sait S, Shows TB. Chromosomal localization of an SH2-containing tyrosine phosphatase (PTPN6). *Genomics* 1992;13(3):869-872.

6. Freeman RJ, **Plutzky J**, Neel BG. Identification of a human src homology 2-containing-protein-tyrosine-phosphatase: a putative homologue of drosophila corkscrew. *Proc Natl Acad Sci USA* 1992;89:11239-11243.
7. Neel BG, **Plutzky J**, Rosenberg RD, Freeman RM, Lorenz U, Lechleider RJ. Molecular cloning and characterization of a subfamily of nontransmembrane PTPs containing src homology 2 (SH2) domains. *Adv Protein Phosphatases* 1993;7:127-151.
8. Laufs U, La Fata Vito, **Plutzky J**, Liao, J. Upregulation of endothelial nitric oxide synthetase by HMG CoA reductase inhibitors. *Circulation* 1998;97:1129-1135.
9. Marx N, Sukhova G, Murphy C, Libby P, **Plutzky J**. Macrophages in human atheroma contain PPAR gamma: differentiation dependent peroxisomal proliferation activated receptor gamma expression and reduction of MMP9 activity through PPAR activation in mononuclear phagocytes in vitro. *Am J Pathol* 1998;153:17-23.
10. Marx N, Schoenbeck U, Lazar M, Libby P, **Plutzky J**. PPAR gamma activators inhibit gene expression and migration in human vascular smooth muscle cells. *Circulation Res* 1998;83:1097-1103.
11. Marx N, Bourcier T, Libby P, **Plutzky J**. PPAR gamma activation in human endothelial cells increases plasminogen activator inhibitor type-1 expression: PPAR gamma as a potential mediator in vascular disease. *Arterioscler Thromb Vasc Biol* 1999;19:546-551. (“ATVB: Most Cited Papers in 2000”)
12. Marx N, Sukhova G, Collins T, Libby P, **Plutzky J**. PPAR alpha activators inhibit cytokine-induced vascular cell adhesion molecule 1 expression in human endothelial cells. *Circulation* 1999; 99:3125-3131.
13. Marx N, Mach F, Sauty A, Leung J H, Sarafi MN, Ransohoff RM, Libby P, **Plutzky J**, Luster AD. Peroxisome proliferator-activated receptor-gamma activators inhibit IFN-gamma-induced expression of the T cell-active CXC chemokines IP-10, Mig, and I-TAC in human endothelial cells. *J Immunol* 2000;164:6503-8.
14. Marx N, Mackman N, Schonbeck U, Yilmaz N, Hombach VV, Libby P, **Plutzky J**. PPAR alpha activators inhibit tissue factor expression and activity in human monocytes. *Circulation* 2001; 103:213-219.
15. Sethi S, Ziouzenkova O, Heyu N, Wagner D, **Plutzky J**, Mayadas T. Oxidized omega-3 fatty acids inhibit leukocyte: endothelial interactions through PPAR alpha activation. *Blood* 2002;100(4)1340-46.
16. Marx N, Kehrle B, Kohlhammer K, Grüb M, Koenig W, Hombach V, Libby P, **Plutzky J**. PPAR activators as anti-inflammatory mediators in human T-lymphocytes: implications for atherosclerosis and transplantation-associated arteriosclerosis. *Circ Res* 2002;90(6):703-10.
17. Ziouzenkova O, Perrey S, Asatryan L, Hwang J, MacNaul KL, Moller DE, Rader DJ, Sevanian A, Zechner R, Hoefler G, **Plutzky J**. Lipolysis of triglyceride-rich lipoproteins limits inflammatory responses through PPAR-alpha activation. *Proc Natl Acad Sci USA* 2003;(5):2730-2735.
18. Ridker PM, Cook N, Cheng S, Erlich H, Lindpaintner K, **Plutzky J**, Zee R. Alanine for proline substitution in the peroxisome proliferators-activated receptor gamma-2 (PPARG2) gene and the risk of incident myocardial infarction. *Arterioscler Thromb Vasc Biol* 2003; 23(5):859-63.

19. Ziouzenkova O, Asatryan L, Sahady D, Orasanu G, Perrey S, Cutak B, Hassell T, Akiyama T, Berger J, Sevanian A, **Plutzky J**. Dual roles for lipolysis and oxidation in peroxisome proliferation-activator receptor responses to electronegative low density lipoprotein. *J Biol Chem* 2003;278(41):39874-39881. Epub Jul 23, 2003.
20. McMahon GT, **Plutzky J**, Daher E, Bhattacharyya T, Grunberger G, DiCarli MF. Effect of a peroxisome proliferator-activated receptor-gamma agonist on myocardial blood flow in type 2 diabetes. *Diabetes Care* 2005; 28(5)1145-1150.
21. Ahmed W, Orasanu G, Nehra V, Asatryan L, Rader DJ, Ziouzenkova O, **Plutzky J**. HDL hydrolysis by endothelial lipase activates PPARalpha - a candidate mechanism for HDL-mediated repression of leukocyte adhesion. *Circ Res* 2006;98(4):490-498. Epub. Jan 26, 2006.
22. Han CY, Chiba T, Campbell JS, Fausto N, Chaisson M, Orasanu G, **Plutzky J**, Chait A. Reciprocal and coordinate regulation of serum amyloid A versus apolipoprotein A-I and paraoxonase-1 by inflammation in murine hepatocytes. *Arterioscler Thromb Vasc Biol* 2006;26(8):1806-13. Epub May 18, 2006.
23. Ziouzenkova O, Orasanu G, Sukhova G, Lau E, Berger J, Tang G, Krinsky NI, Dolnikowski GG, **Plutzky J**. Asymmetric cleavage of beta-carotene yields a transcriptional repressor of RXR and PPAR responses. *Mol Endocrinology* 2007;21(1)77-88. Epub Sept. 28, 2006.
24. Ziouzenkova O, Orasanu G, Sharlach M, Akiyama T, Berger J, Viereck J, Hamilton J, Tang G, Dolnikowski D, Vogel S, Duyster G, **Plutzky J**. Retinaldehyde represses adipogenesis and diet-induced obesity. *Nature Medicine* 2007;13(6):695-702. Epub May 27.
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## Narrative Report (limit to 500 words)

I am a preventive cardiologist who directs a basic science laboratory focused on transcriptional mechanisms relevant to diabetes, atherosclerosis and their intersection. My clinical efforts directing a lipid clinic and preventive cardiology program integrate closely with my laboratory interests. During a medical school NIH research fellowship with Dr. Gerald R. Crabtree, I identified cDNA and genomic clones for human protein C, work that led to recombinant activated protein C (Xigris). After residency, I received a fellowship in the Program for Excellence in the Molecular Biology of the Cardiovascular System (AHA), working with Drs. Robert D. Rosenberg (MIT) and Benjamin G. Neel (Beth Israel Hospital). I identified the novel phosphotyrosine phosphatases (PTPs) SHP1 and SHP2, helping establish the *src* homology 2 domain-containing branch of the PTP family. Subsequent BWH clinical cardiology training fostered my interest in preventive cardiology, and the connections between metabolic abnormalities and atherosclerosis.

A major laboratory focus has been on transcriptional regulation via ligand activated steroid hormone nuclear receptors, including peroxisome proliferator-activated receptors (PPARs) and retinoid x receptors. We helped establish PPAR expression in inflammatory and vascular cells and PPAR regulation of target genes relevant to atherosclerosis and inflammation *in vitro* and *in vivo*. Our findings raised fundamental questions as to the nature of endogenous PPAR ligands. We took a novel, less biased approach to this key issue, probing PPAR activation through metabolic pathways. We found that lipoprotein lipase (LPL) hydrolyzes triglyceride-rich lipoproteins (VLDL) to generate PPAR $\alpha$  ligands. These studies revealed surprising selectivity as to the PPAR activated, the lipases involved, and the preferred lipid substrate, while also uncovering a novel anti-inflammatory role for LPL. Subsequent work supports our working model of an endogenous network that generates distinct transcriptional responses by modulating nuclear receptor activity. We reported HDL hydrolysis by endothelial lipase as a distinct mechanism for PPAR activation. We applied this approach to the study of RXR and uncovered a previously unrecognized role for retinaldehyde, and the enzymes involved with retinaldehyde metabolism in adipogenesis and diabetes. Similar approaches are being applied to hepatic lipase and hepatic nuclear factor 4-alpha.

These basic science efforts relate closely to the Vascular Disease Prevention Program (VDPP), which I direct. The VDPP leads patient care, education, and research initiatives in preventive cardiology, with a special emphasis on issues related to obesity and diabetes. Clinically, I direct our weekly Lipid/Prevention Clinic. VDPP educational programs include CME courses, the US/Japan Dialogue in Lipids and Atherosclerosis (in its 11th year), treatment algorithms, and teaching resources. Translational research is also coordinated through the VDPP. The VDPP also provides training on prevention issues; MGH and BWH cardiology fellows as well as BWH endocrine fellows rotate through the Lipid/Prevention Clinic.