

## CURRICULUM VITAE

### PART I. General Information

**DATE PREPARED:** January 2009

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**Place of Birth:** Havana, Cuba

### EDUCATION:

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

### POSTDOCTORAL TRAINING:

#### Internship and Residencies:

1986 - 1989 Resident Physician (PGY1-3), Internal Medicine, Brigham and Women's Hospital,  
Harvard Medical School, Boston, Massachusetts  
1989 Chief Medical Resident, West Roxbury Veterans' Administration Hospital,  
Harvard Medical School, Boston, Massachusetts

#### Fellowships:

1983 - 1984 Research Fellow, National Cancer Institute  
Protein C cloning and analysis, Laboratory of Gerald R. Crabtree, MD,  
National Institutes of Health, Bethesda, Maryland  
1985 - 1986 Holderness Fellow, University of North Carolina, Chapel Hill  
Independent studies in protein C deficiency  
1989 - 1994 Clinical Fellow in Cardiology, Brigham and Women's Hospital,  
Harvard Medical School  
1989 - 1992 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,  
Massachusetts

### 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

## **ACADEMIC APPOINTMENTS:**

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

## **HOSPITAL APPOINTMENTS:**

1993 - 1994 Physician, Brockton/West Roxbury Veterans' Administration Hospital  
1994 - current Associate Physician, Brigham and Women's Hospital (BWH)

## **OTHER PROFESSIONAL POSITIONS (all BWH):**

1994 - current Director, The Lipid/Prevention Clinic

## **HOSPITAL SERVICE RESPONSIBILITIES (all current BWH):**

1989 - 1993 Attending Physician, Brigham Internal Medicine Associates,  
Weekly Spanish Clinic  
1993 Attending Physician, Ward Service,  
Brockton/West Roxbury V.A. Hospital  
1994 - current Attending Physician, Inpatient Services:  
Cardiology Consult, Cardiology B (Ward) Team, Cardiac Surgery Service,  
Electrocardiogram Reading  
1994 - current Attending Physician, Outpatient Services:  
Lipid/Prevention Clinic, BWH/Partners Premature Atherosclerosis Center,  
BWH Executive Health Center

## **MAJOR ADMINISTRATIVE RESPONSIBILITIES (all BWH):**

1994 - current Director, Basic Science Laboratory  
1996 - current Director, The Vascular Disease Prevention Program  
(Preventive cardiology program encompassing Lipid/Prevention Clinic)  
1998 - current Director, BWH/Partners Premature Atherosclerosis Center  
(Clinical and research program on premature atherosclerosis)

## **MAJOR COMMITTEE ASSIGNMENTS:**

### **Hospital and Medical School:**

1994 - current Summer Honors Undergraduate Research Program, Preceptor  
(Harvard research program for minority students)  
1994 - 2000 Medical Residency Selection Committee, member  
1995 - 2000 BWH Pharmacy and Therapeutics Committee, Cardiovascular Subcommittee,  
member  
1996 - current BWH Health Education and Promotion Committee, member  
1997 - 1999 Cardiology Fellowship Selection Committee, member  
1998 - 2005 Future Leaders of Academic Medicine, member  
(BWH advisory group to Chief of Medicine)  
2000 - current Women's Cardiovascular Guidelines, Women's Health, member  
2000 - 2005 Smoking Cessation Program Co-Founder, Steering Committee, member  
2002 BWH Research Council, Dual Mentored Fellowship Review  
Committee, member  
2004 - 2005 Cardiology Fellowship Selection Committee, member  
2005 Harvard School of Public Health PhD Qualifying Exam Committee,

member

**National and Regional:**

1994 - current New England Lipid Group Steering Committee, member  
1998 - 2003 Atorvastatin Research Awards Committee, member  
(Grant review committee for national research grant program)  
1999 - current Education Council, member, National Diabetes Educational Initiative  
(National physician educational program regarding diabetes)  
2000 - current National Grant Study Section, Vessel Wall Biology, member, American Heart  
Association  
2000 - 2003 Invited Outside Expert Reviewer:  
University of Pennsylvania Diabetes Center and Diabetes, Endocrinology  
Research Center; US Veterans' Administration National Research Program  
2002 - current Council on Nutrition, Physical Activity, and Metabolism, member,  
American Heart Association  
2003 - current "The Heart of Diabetes" Campaign, National spokesperson,  
American Heart Association  
2003 - 2007 Clinical Lipidology and Thrombosis Committee, member, American Heart  
Association  
2004 External Advisory Board, member, University of Missouri Program Project Grant:  
"Vascular Biology, Exercise Training, and Coronary Disease"  
2004 Program Project Grant Review Committee, member, NHLBI/NIH  
2004 Program Project Grant Review Committee, member, NHLBI/NIH,  
Blood and Vascular Review Group  
2004 - 2007 Prevention of Cardiovascular Disease Committee, member, American College of  
Cardiology  
2004 - 2007 Endocrine and Metabolic Drugs Advisory Committee, member,  
Food and Drug Administration  
2004 - 2007 Prevention Task Force, member, American College of Cardiology  
2004 - 2007 Lipoproteins, Lipid Metabolism, and Nutrition Grant Review Committee,  
member, American Heart Association  
2005 - current Board of Directors, Northeast Regional National Lipid Association  
2005 - current Research Fellowship Awards Committee, member, American College of  
Cardiology Foundation  
2005 Data Safety Monitoring Board, Rivoglitazone Safety/Efficacy Trial, Chair, Daiichi  
Sankyo  
2006 Working Group on Diabetic Cardiovascular Complications, Chair, NHLBI/NIH  
2006 - current Scientific Sessions Planning Committee, member, American Diabetes Association  
2006 - current Council on Basic Cardiovascular Sciences, member, American Heart Association  
2009 - 2011 The Fall Program Committee for the Council on Arteriosclerosis, Thrombosis and  
Vascular Biology, member, American Heart Association

**International:**

1994 Invited Outside Expert Reviewer,  
The Netherlands Organization for Scientific Research  
2001 Invited Outside Expert Reviewer,  
Scottish Hospital Endowment Research Trust  
2003 International Advisory Board, International Symposia on Triglycerides,  
Metabolic Disorders, and Cardiovascular Disease, member, Lorenzini  
Medical Foundation  
2004 Invited PhD Thesis Opponent, Karolinska Institute, Atherosclerosis Research Unit,  
Stockholm, Sweden  
2005 - current International Chair on Cardiometabolic Risk, Hôpital Laval Research Centre,  
Academic Board Member

- 2005 3<sup>rd</sup> International PPAR Symposium, Co-Chair, Lorenzini Medical Foundation, Monte Carlo, Monaco
- 2005 - current International PPAR Task Force, member
- 2005 - current International PPAR Nomenclature Committee, member
- 2006 - current AVIATOR Steering Committee (renin inhibitor clinical trial), member, Imperial College, London, UK
- 2006 - current International Advisory Board, XVIth International Symposium on Drugs Affecting Lipid Metabolism, member, Lorenzini Medical Foundation
- 2007 International Committee for Insulin Resistance, member, the scientific organizing committee for the Annual World Congress on the Insulin Resistance Syndrome

**PROFESSIONAL SOCIETIES:**

- 1994 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

**COMMUNITY SERVICE RELATED TO PROFESSIONAL WORK:**

- 1989 - 1992 Physician, Primary care for Spanish Speaking patients, Brigham Internal Medicine Associates, Brigham and Women's Hospital
- 1995 - current Advisor, Hispanic college and medical students
- 2000 - current Volunteer, Fundraising, American Heart Association
- 2003 - current Volunteer, Fundraising, Educational materials, American Diabetes Association
- 2004 National Spokesperson, "Heart of Diabetes" Program, American Heart Association
- 2004 - current National Spokesperson, American Heart Association

**EDITORIAL BOARDS:**

- 1996 - 2006 Associate Editor, Prevention/Lipids, Vascular Medicine, Arnold Publishing, London
- 1996 - current Ad hoc reviewer: *American Journal of Medicine; Arteriosclerosis, Thrombosis, and Vascular Biology; Circulation; Circulation Research; Diabetes; Journal of Nutrition; Journal of Clinical Investigation; Journal of Clinical Endocrinology and Metabolism; Nutrition; Journal of Clinical Investigation; Journal of Clinical Endocrinology and Metabolism; Thrombosis and Hemostasis, Journal of Cardiovascular Pharmacology; Nature Medicine; Molecular Medicine; Molecular and Cellular Biology; New England Journal of Medicine, Proceedings of the National Academy of Sciences*
- 2004 - 2006 Section Editor, *Current Atherosclerosis Reports*

**AWARDS AND HONORS:**

- 1977 Echol's Scholar, University of Virginia
- 1980 Crispell Room (outstanding premedical student), Room 1, West Lawn, U. of Virginia
- 1986 Kuno Award, U. of North Carolina Student Research
- 1986 J. B. Bullitt Outstanding Achievement Award, U. 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, 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 (BWH Cardiology Fellows)
2007	Annual Honorary Plenary Lecture, Japan Society of Ningen Dock, Tokyo, Japan
2008	American College of Cardiology Foundation/Pfizer Visiting Professorship in Preventive Cardiovascular Medicine at The George Washington University

## PART II. RESEARCH, TEACHING, AND CLINICAL CONTRIBUTIONS

### A. Narrative report

I am a preventive cardiologist who directs a basic science laboratory focused on transcriptional mechanisms in vascular biology and atherosclerosis. My clinical efforts directing a lipid clinic and preventive cardiology program integrate closely with my laboratory interests on the relationship between atherosclerosis and metabolic abnormalities like dyslipidemia, obesity, and diabetes mellitus. 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 especially lipid metabolism and atherosclerosis.

A major laboratory focus has been on peroxisome proliferator-activated receptors (PPARs), ligand-activated transcription factors in the steroid hormone nuclear receptor family. Synthetic PPAR ligands in clinical use include lipid-lowering fibrates (PPAR $\alpha$ ) and insulin-sensitizing thiazolidinediones (PPAR $\gamma$ ). We hypothesized PPARs, if expressed in vascular and inflammatory cells, might directly regulate vascular and/or inflammatory responses. We and others established this to be the case, with PPAR regulation of target genes relevant to atherosclerosis and inflammation *in vitro* and *in vivo*. Applying our insight into vascular biology and atherosclerosis, we reported PPAR regulation of specific MMPs, cytokines, chemokines, adhesion molecules, and coagulation factors. This data raised fundamental questions as to the nature of endogenous PPAR ligands. Rather than focus on specific candidate molecules, we took a novel, less biased approach to this key unresolved 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 a transcriptional network in which specific lipases act on different lipoproteins to generate distinct transcriptional responses. For example, we showed that HDL hydrolysis by endothelial lipase is a distinct mechanism for PPAR activation that may underlie HDL's anti-inflammatory effects. Similar approaches are being applied to hepatic nuclear factor 4-alpha and retinoid receptors.

These basic science studies are tightly coupled with the Vascular Disease Prevention Program (VDPP), which I direct. The VDPP leads patient care, education, and research initiatives in preventive cardiology, including the weekly Lipid/Prevention Clinic. VDPP educational programs include CME courses, the US/Japan Dialogue in Lipids and Atherosclerosis (in its 9<sup>th</sup> year), treatment algorithms, and teaching resources. Students Teaching Early Prevention (STEP) trains pre-clinical medical students on prevention prior to their presenting on lifestyle choices and cardiovascular risk in Boston

area middle and high schools. Translational research is also coordinated through the VDPP, including clinical studies on PPAR agonists. The VDPP also provides training on prevention issues; all cardiovascular fellows rotate through the Lipid/Prevention Clinic, in addition to supervision of trainees in the laboratory and during ward attending (2 - 3 months/year).

## C. Report of Current Research Activities

### 1. Basic Science

PPAR Signaling in Vascular Cells (Principal Investigator)

Lipolytic Mechanisms of PPAR Activation (Principal Investigator)

Endogenous Mechanisms of PPAR Modulation (Principal Investigator)

Hepatic Nuclear Factor 4- $\alpha$  (Principal Investigator)

PPAR Activation in Humans (Collaborator)

### 2. Clinical Trials

Rosiglitazone Effects on Cardiac Ischemia (Co-PI)

Rimonabant Effects on Cardiovascular Risk Factors in Diabetes (Co-PI)

### 3. Efficacy and Outcomes, Epidemiology Studies, Other

Insulin Resistance and Other Cardiac Risk Factors in HIV Patients (Co-PI)

Gene: Environment Interactions in Premature CAD (Co-PI)

## D. Report of Teaching (all invited local, national, and international presentations)

### 1. Local:

#### a. Harvard Medical School

1996 – 1998, Introduction to Clinical Medicine.

Preceptor, Two 2<sup>nd</sup> year medical students

Preparation time: 5 hrs/week

Contact time: 2 hrs/week/8 weeks

1997 – 2002, annual lecture, Human Systems Cardiovascular Section, “Hypercholesterolemia”

Lecturer, 120 1<sup>st</sup> year medical students

Preparation time: 3 hrs

Contact time: 1.5 hrs

1999 – 2004, annual lecture, Cell Biology “Lipid Metabolism”

Lecturer, 120 1<sup>st</sup> year medical students

Preparation time: 3 hrs

Contact time: 1.5 hrs

2000, Harvard/MIT Health Science and Technology Program Cardiology Course (E. Edelman, Director). 3 lectures (Vascular Anatomy, Hypertension, Lipids), 4 tutorial sessions, 50 2<sup>nd</sup> year HST students.

Preparation time 30 hrs total, 10 hrs/lecture. Tutorial: 8 hrs total, 2 hrs/tutorial

Contact time: 14 hrs total (2 hrs/lecture, 2 hrs/tutorial)

2000, HMS visiting medical student full-time clerkship “Preventive Cardiology”. (8 weeks)

Preparation time 20 hrs; contact time ~ 50 hrs (~7 hrs/week). One student.

2000 - 2003, annually, Program Course PA514.0 “Revisiting Biomedical Sciences and Pathology”

Lecturer, 20 4<sup>th</sup> year medical students

Preparation time: 4 hrs

Contact time: 1.5 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.  
 Preparation time: 2 hrs/week  
 Contact time: 2 hrs/week
- 2003, HST 350 Pharmacology and Clinical Therapeutics Course: Therapy of Lipid Disorders  
 Lecturer, 3 lectures, 40 2<sup>nd</sup> year HST students  
 Preparation time: 12 hrs (4 hrs/lecturer)  
 Contact time: 6 hrs (2 hrs/lecture)
- 2003 - 2007, annually, IN708.0b Human Systems, Respiratory & Cardiovascular Pathophysiology Course, Lecturer. 120 students  
 Lipid Disorders, 2003-2005  
 Cardiovascular Disease in Diabetes, 2006  
 Preparation time: 3 hrs/lecturer  
 Contact time: 2 hrs/lecture
- 2004 - current, Students Teaching Early Prevention  
 Founder, Faculty sponsor, lecturer, 3 lecturers/year, 20 1<sup>st</sup> and 2<sup>nd</sup> year medical students  
 Preparation time: 9 hrs (3 hrs/lecturer, )  
 Contact time: 14 hrs (Lectures, training sessions, planning and advisory meetings)
- 2006 Medical Science 220, Pathophysiology, session on atherosclerosis and dyslipidemia  
 Lecturer, 1 lecture/year, 12-16 Leder Medical Science Program students  
 Preparation time: 3 hrs (3 hrs/lecturer)  
 Contact time: 3 hrs (3 hrs/lecturer)
- 2007 Biological Chemistry of Molecular Pharmacology 234, Cellular Metabolism and Human Disease  
 Lecturer, 5 lectures/yr, 12 Leder Medical Science Program students, 20 Harvard PhD students  
*Lecture:* Lipid metabolism and transcriptional mechanisms  
 Preparation time: 8 hrs (3 hrs lecturer)  
 Contact time: 2 hrs (2 hrs lecture)  
*Critical reading conference:*  
 Preparation: 4 hrs  
 Contact: 2 hrs  
*Clinical correlation:*  
 Preparation: 4 hrs  
 Contact: 2 hrs
- 2007 Harvard/MIT Health Sciences and Technology HT 146, Human Biochemistry and Metabolic Diseases  
 Lecturer, 1 lecture/yr, 50 Health Sciences and Technology Program students  
 Preparation time: 98 hrs (2 hrs/lecturer)  
 Contact time: 2 hrs (2 hrs lecture)
- 2007 Center for Integration of Medicine and Innovative Technology (CIMIT)/Harvard Medical School/Massachusetts General Hospital  
 Lecturer, 1 lecture/year, fellows, residents, students, faculty  
 Preparation time: 3 hrs (3 hrs/lecturer)  
 Contact time: 3 hrs (3 hrs/lecture)
- 2008 Harvard/MIT Division of Health Sciences and Technology (HST) Graduate Education in Medical Sciences 220 (GEMS) Program on Atherosclerosis and Dyslipidemia-Coronary Artery Disease  
 Lecturer, 1 lecture/year, 30 PhD students  
 Preparation time: 4 hrs  
 Contact time: 2 hrs (2 hrs/lecture)
- 2008 Harvard/MIT Health Sciences and Technology Program HST 146, Human Biochemistry and Metabolic Diseases  
 Lecturer, 1 lecture/yr, 50 Health Sciences and Technology Program students  
 Preparation time: 98 hrs (2 hrs/lecturer)

Contact time: 2 hrs (2 hrs lecture)

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

- 1995 – current, BWH Cardiology Noon Conferences  
Lecturer, 2 lectures/yr, 50 fellows, residents, students, faculty  
Preparation time: 4 hrs/lecture  
Contact time: 1 hr/lecture
- 1995 – current, BWH Clinical Conference  
Lecturer, 4 lectures/yr, 50 fellows, residents, students, faculty  
Preparation time: 4 hrs/lecture  
Contact time: 30 minutes
- 1995 – current, BWH House staff lecture series, Lipid Disorders  
Lecturer, 2 lectures/yr, 40 fellows, residents, faculty  
Preparation time: 2 hrs/lecture  
Contact time: 1 hr
- 2000 BWH Resident Supervised Research Block (2 months full-time, 10 months part-time).  
One resident.  
Preparation time: 20 hrs  
Contact time: 30 hrs/month, total 60 hrs
- 2001 – 2005, BWH Primary Care House staff lecture series  
Lecturer, 1 lecture/yr  
Preparation time: 2 hrs/lecture  
Contact time: 1 hr/lecture

**c. Local Invited Teaching Presentations**

- 1999, 2001  
Longwood Medical Area Vascular Biology Seminar Series (PPARs)  
Attendees: 50 physicians, scientists, fellows  
Preparation: 4 hrs  
Contact time: 1 hr
- 2002  
Brigham and Women's Hospital Medical Grand Rounds, Young Investigators Forum  
Attendees: 100 physicians, residents, fellows, medical students  
Preparation: 6 hrs  
Contact time: 1 hr
- 2004  
Brigham and Women's Hospital Cardiology Grand Rounds (Diabetic Atherosclerosis)  
Attendees: 70 physicians, residents, fellows, medical students  
Preparation: 6 hrs  
Contact time: 1 hr
- 2002, 2006  
Brigham and Women's Hospital Endocrinology Grand Rounds (PPARs)  
Attendees: 30 physicians, residents, fellows, medical students  
Preparation: 3 hrs  
Contact time: 1 hr
- 2006  
Brigham and Women's Hospital Men's Health Symposium 2006, "New Insights Into Preventing Cardiovascular Disease"  
Attendees: 30 physicians, lay public  
Preparation: 3 hrs  
Contact time: 1 hr
- 2006  
Brigham and Women's Hospital TIMI Study Group Grand Rounds "PPARs"  
Attendees: 20 physicians, residents, fellows, medical students  
Preparation: 3 hrs  
Contact time: 1 hr

- 2007  
 Brigham and Women's Hospital Medical Grand Rounds,  
 Attendees: 120 physicians, residents, fellows, medical students  
 Preparation: 20 hrs  
 Contact time: 1 hr
- 2007  
 Plenary Lecture, Brigham and Women's Hospital Primary Care Faculty  
 Development Retreat, Waltham Woods, MA  
*Updates in Hyperlipidemia Treatment*  
 Attendees: 75 physicians, fellows, residents  
  
 Preparation: 3 hrs  
 Contact time: 4 hrs
- 2008  
 Brigham and Women's Hospital Medical Grand Rounds,  
 Attendees: 115 physicians, residents, fellows, medical students  
 Preparation: 18 hrs  
 Contact time: 1 hr
- 2008  
 Brigham and Women's Hospital/Harvard Medical School,  
 Taking Charge of the Burden of Cardiometabolic Disease  
*Modifying pathways of cardiometabolic risk*  
 Attendees: 100 physicians, scientists, fellows, graduate students  
 Preparation: 8 hrs  
 Contact time: 2 hrs
- 2008  
 Brigham and Women's Hospital Clinical Pathology Grand Rounds,  
 Attendees: 50 physicians, residents, fellows, medical students  
 Preparation: 1 hr  
 Contact time: 2 hr

**d. Continuing Medical Education Courses**

- 1997-current, annual  
 Harvard Medical School and Brigham and Women's Hospital, Annual Intensive Review of  
 Internal Medicine, "Management of Lipid Disorders"  
 Preparation time: 3 hrs/lecture  
 Contact time: 2 hrs/lecture
- 1997-current, annual  
 Harvard Medical School and Brigham and Women's Hospital, Cardiology Review Course,  
 "Management of Lipid Disorders"  
 Preparation time: 3 hrs/lecture  
 Contact time: 2 hrs/lecture
- 2000  
 Harvard Medical School and Brigham and Women's Hospital, Neurology "Management of  
 Stroke" Review Course: "Lipid Disorders and Stroke"  
 Preparation time: 2 hrs/lecture  
 Contact time: 2 hrs/lecture
- 2002  
 Harvard Medical School Course "Lipid Disorders In Vascular Disease"  
 Course founder, organizer, lecturer. 100 physicians (regional and national)  
 Preparation: 3 hrs/lecture (1), 40 hrs curriculum development, meeting planning  
 Contact time: 8 hrs
- 2004  
 University of Pennsylvania "Lipids Disorders and Cardiovascular Disease"  
 Lecturer. 100 physicians  
 Preparation: 3 hrs

- Contact time: 2 hrs
- 2005  
Boston University, Cardiology for the Internist, “The Metabolic Syndrome”  
Preparation time: 2 hrs  
Contact time: 1 hr
- 2005  
Baylor University, Curso Intensivo Sobre Diabetes, 2 lectures, Diabetic dyslipidemia, Atherosclerosis  
Preparation time: 8 hrs (including developing lecture and materials in Spanish)  
Contact time: 4 hrs
- 2006  
Harvard Medical School and Massachusetts General Hospital Annual Review of Internal Medicine, “Management of Lipid Disorders”.  
Preparation time: 2 hrs  
Contact time: 1 hr
- 2005, 2007  
Harvard Medical School and Brigham and Women’s Hospital, Cardiovascular Medicine: Review and Update for the Practitioner  
Attendees: 200 physicians  
Preparation time: 4 hrs  
Contact time: 2 hr
- 2008  
Harvard University Radcliffe Institute for Advance Study Exploratory Seminar, “Unexplored Sex Differences in Cardiovascular Disease”  
*Sex differences in vascular disease*  
Attendees: 20 physicians  
Preparation time: 4 hrs  
Contact time: 6 hr

**e. Advisory and Supervisory Responsibilities**

- 2000-current, BWH Basic Science Laboratory  
Laboratory supervisor, ~5 laboratory fellows (Post-doctoral PhD fellows, cardiology fellows, medical students)  
Preparation time: ~ 5 hrs/week (1 hr/trainee/week)  
Contact time: ~10 hours (2 hrs/trainee/week)
- 2004 – current, BWH Lipid Clinic  
Clinic supervisor, 2 cardiology fellows/session (1 session/week)  
Preparation time: 1 hr/session  
Contact time: 5 hrs/week, ~48 weeks/yr

**g. Advisees/Trainees**

<b>Year</b>	<b>Name</b>	<b>Current Status</b>
1995	Sonia Lobo Planey, PhD	Assistant Professor of Biochemistry, The Commonwealth Medical College, PA
1996	Sonia Gonzalez Razetti, PhD, DMS	Biogen Idec, Associate Director, Bioanalytical Control
1997-1999	Nikolaus Marx, MD	Professor of Medicine, University of Ulm, Germany
1997-2000	Curran Murphy, BS	Lab supervisor, Millennium
1998	Kristi Mizelle, MD	Rheumatology Fellow, Johns Hopkins
2000-2004	Ouliana Ziouzenkova, PhD	Assistant Professor, Ohio State University, Columbus, Ohio

2000	Wilmer Roberts, MD	Assistant Professor, Department of Urology, U. Michigan Health System
2001	Arindel Maharaj	MD/PhD student, HMS
2002-2003	Stephan Perrey, PhD	Vice President, Third Wave
2002	Donnie Bell, BS	Clinical Fellow in Radiology, Mass. General Hospital
2002	Evan Lau, MD	Resident, MGH
2002	Daniel Kramer, MD	Resident, MGH
2003-current	Annaswamy Raji, MD	Assistant Professor, Endocrinology, BWH
2003-2004	Arturo Saavedra, MD	Critical Care Fellow, BWH
2003-2005	Waleed Ahmed, MD	Cardiology Fellow, UCSD
2003-2005	Vedika Nehra	Medical Student, NY Medical College
2002-current	Gabriela Orasanu, MD	Instructor, BWH/HMS
2004	Brett Palama	Medical Student, University of Michigan
2005	Nicole McWhorter, BS	Teacher, Cornell Cooperative Extension School
2005-2007	Molly Sharlach, BS	Graduate Student, UC Berkeley
2005-current	Pallavi Devchand, PhD	Instructor, Cardiology, BWH
2005-current	Jonathan Brown, MD	Cardiology Fellow, BWH
2005	Mitul Kadakia	Resident, HMS
2006	Bethany Strong, BS	Medical Student, HMS
2005-2006	Eric Oligino	Medical Student, U. Connecticut
2006-current	Takeshi Kanda, MD	Post-doctoral Fellow, BWH
2006-current	Fokko Zandbergen, PhD	Post-doctoral Fellow, BWH
2006-current	Sanjeev Francis, MD	Cardiology Fellow, BWH
2007	Mark Cunningham	Senior, Morehouse College
2007-	Farouc Jaffer, MD, PhD	Cardiologist, MGH
2007-	Kiyuk Chang, PhD	Post-doctoral Fellow, MGH
2008	Shriram Nallamshetty	Post-doctoral Fellow, MGH

## **2a. Regional, National, International Contributions**

**(Lectures all on PPARs, Diabetic Atherosclerosis, and/or Lipid Disorders.)**

### **Regional (chronological):**

1998	Maine Medical Center Cardiovascular Grand Rounds Attendees: 50 physicians, fellows, residents, medical students Preparation: 2 hrs Contact time: 2 hrs
1998	Carney Hospital Medical Grounds Attendees: 50 physicians Preparation: 2 hrs Contact time: 2 hrs
1998	Cape Cod Hospital Medical Grounds Attendees: 25 physicians Preparation: 2 hrs Contact time: 2 hrs

- 1998 University of Pennsylvania Cardiology Grand Rounds  
Attendees: 50 physicians, scientists, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 4 hrs
- 1999 Maine American Heart Association Annual Meeting  
Attendees: 200 physicians, fellows, residents, nurses  
Preparation: 3 hrs  
Contact time: 8 hrs
- 1999 New England Lipid Group  
Attendees: 30 physicians, fellows, residents, medical students  
Preparation: 3 hrs  
Contact time: 2 hrs
- 1999 South Shore Hospital Medical Ground Rounds  
Attendees: 25 physicians, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2000 Brockton-West Roxbury VA Hospital Medical Grand Rounds  
Attendees: 25 physicians, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2000 University of Florida Cardiology Grand Rounds  
Attendees: 25 physicians, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 4 hrs
- 2000 Newton-Wellesley Hospital Cardiology Grand Rounds  
Attendees: 20 physicians, fellows, residents, medical students  
Preparation: 1 hr  
Contact time: 1 hr
- 2001 Springfield Hospital Medical Grand Rounds  
Attendees: 75 physicians, fellows, residents, medical students, nurses  
Preparation: 1 hr  
Contact time: 2 hrs
- 2001 Parke Davis Visiting Scientist Seminar Series, Ann Arbor, MI  
Attendees: 75 physicians, scientists  
Preparation: 4 hrs  
Contact time: 8 hrs
- 2001 Maine Medical Center Medical Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2001 Chinese Medical Society of New England  
Attendees: 50 physicians  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2002 Brown University Combined Endocrinology Grand Rounds  
Attendees: 30 physicians, fellows, residents, medical students  
Preparation: 1 hr  
Contact time: 2 hrs
- 2002 Cleveland Clinic Cardiovascular Grand Rounds  
Attendees: 30 physicians, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 4 hrs
- 2002 Leonard Morse Cardiology Grand Rounds  
Attendees: 30 physicians  
Preparation: 1 hr  
Contact time: 2 hrs

- 2002 Johns Hopkins University Cardiology Lecture Series  
Attendees: 30 physicians, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 4 hrs
- 2002 St. Elizabeth's Medical Center Cardiology Conference, Boston  
Attendees: 30 physicians, fellows, residents, medical students, laboratory fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2002 Newton-Wellesley Hospital Cardiology Grand Rounds  
Attendees: 20 physicians, fellows, residents, medical students  
Preparation: 1 hr  
Contact time: 1 hr
- 2003 Massachusetts General Hospital Cardiovascular Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students  
Preparation: 4 hrs  
Contact time: 3 hrs
- 2003 Montefiore Medical Center Cardiovascular Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 3 hrs
- 2003 Mt. Sinai Hospital Cardiology Grand Rounds, NYC  
Attendees: 50 physicians, fellows, residents, medical students  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2003, 2005 New York Lipid and Vascular Biology Research Club Annual Symposium  
Attendees: 50 physicians, fellows, residents, medical students, laboratory fellows  
Preparation: 3 hrs  
Contact time: 4 hrs
- 2003 University of Florida Cardiology Grand Rounds  
Attendees: 20 physicians, fellows, residents, medical students  
Preparation: 3 hrs  
Contact time: 3 hrs
- 2003 University of Pennsylvania Basic Science Rounds  
Attendees: 50 physicians, fellows, residents, medical students, laboratory fellows  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2004 Beth Israel Deaconess Medical Center Cardiology Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students  
Preparation: 4 hrs  
Contact time: 1 hr
- 2004 Beth Israel Medical Center NY Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students, laboratory fellows  
Preparation: 2 hrs  
Contact time: 1 hr
- 2004 Boston University Cardiovascular Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students, laboratory fellows  
Preparation: 3 hrs  
Contact time: 2 hr
- 2004 Boston University Biochemistry Seminar/Journal Club Series  
Attendees: 20 PhD students, 2 principal investigators  
Preparation: 4 hrs

- 2004 Johns Hopkins University Cardiovascular Ground Rounds  
 Contact time: 4 hrs (including Journal Club)  
 Attendees: 50 physicians, fellows, residents, medical students  
 Preparation: 3 hrs  
 Contact time: 2 hrs
- 2004 Maine Medical Center Cardiovascular Grand Rounds  
 Attendees: 30 physicians, fellows, residents, medical students  
 Preparation: 2 hrs  
 Contact time: 2 hrs
- 2004 Washington University Basic Science Seminar Series, St. Louis  
 Attendees: 50 physicians, fellows, residents, medical students  
 Preparation: 4 hrs  
 Contact time: 2 hrs
- 2004 Yale University Cardiovascular Grand Rounds  
 Attendees: 30 physicians, fellows, residents, medical students  
 Preparation: 2 hrs  
 Contact time: 1 hr
- 2004 Yale University Endocrinology Grand Rounds  
 Attendees: 20 physicians, fellows, residents, medical students  
 Preparation: 2 hrs  
 Contact time: 1 hr
- 2004 DeStevens Lectureship in Preventive Cardiology, Northwestern University  
 Feinberg School of Medicine Grand Rounds, Chicago  
 Attendees: 75 physicians, fellows, residents, medical students  
 Preparation: 6 hrs  
 Contact time: 4 hrs
- 2004 St. Elizabeth's Medical Center/Tufts University School of Medicine Cardio-  
 vascular Research Seminar Series, Boston  
 Attendees: 30 physicians, fellows, residents, medical students, laboratory  
 fellows  
 Preparation: 2 hrs  
 Contact time: 2 hrs
- 2004 Strong Memorial Hospital/U. of Rochester Medical School Medical Grand Rounds  
 Attendees: 75 physicians, fellows, residents, medical students  
 Preparation: 4 hrs  
 Contact time: 2 hrs
- 2004 UCLA Combined Endocrinology/Cardiology Grand Rounds  
 Attendees: 50 physicians, fellows, residents, medical students, laboratory  
 fellows  
 Preparation: 4 hrs  
 Contact time: 3 hrs
- 2004 University of Colorado Endocrinology Grand Rounds  
 Attendees: 20 physicians, fellows, residents, medical students, laboratory  
 fellows  
 Preparation: 3 hrs  
 Contact time: 2 hrs
- 2004 University of Colorado Endocrine Basic Science Rounds  
 Attendees: 20 physicians, fellows, residents, medical students, laboratory  
 fellows  
 Preparation: 3 hrs  
 Contact time: 2 hrs
- 2005 Bridgeport Hospital Medical Grand Rounds, Bridgeport, CT  
 Attendees: 50 physicians, fellows, residents, medical students, laboratory  
 fellows  
 Preparation: 1 hr  
 Contact time: 3 hrs

- 2005 Dartmouth Medical School/Dartmouth-Hitchcock Medical Center Cardiology  
Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 2 hrs  
Contact time: 4 hrs
- 2005 Emory University Medical Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 3 hrs  
Contact time: 3 hrs
- 2005 Joslin Diabetes Center Endocrinology Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 3 hrs  
Contact time: 1 hr
- 2005 Tufts University Cardiovascular Grand Rounds  
Attendees: 20 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2005 Tufts University Endocrinology Grand Rounds  
Attendees: 20 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2005 University of Massachusetts Cardiology Grand Rounds  
Attendees: 20 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2005 University of Michigan Cardiology Ground Rounds, Endocrinology Grand Rounds  
Attendees: 20 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2005 University of New Mexico Cardiology Grand Rounds  
Attendees: 20 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2006 University of Virginia Endocrinology Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2006 Coastal Care Medical Management: 2<sup>nd</sup> Annual Coastal Medical CME Seminar  
“CAD and the metabolic syndrome in type 2 diabetes”  
Attendees: 20 physicians, fellows, residents, medical students, laboratory  
fellows  
Preparation: 2 hrs  
Contact time: 2 hrs (faculty briefing and presentation)
- 2007 UCLA Vascular Biology Seminar Series & School of Medicine  
*Modulation of PPAR Responses via endogenous pathways:  
implications for inflammation and atherosclerosis*  
Attendees: 100 physicians, fellows, residents, medical students, laboratory

- fellows
- Preparation: 6 hrs  
Contact time: 8 hrs
- 2007 Merck Research Laboratories  
*Retinoid metabolites as nuclear receptor modulators*  
Attendees: 100 physicians, laboratory fellows  
Preparation: 4 hrs  
Contact time: 3 hrs
- 2007 University of Virginia Medical Grand Rounds  
Attendees: 50 physicians, fellows, residents, medical students, laboratory fellows  
Preparation: 3 hrs  
Contact time: 7 hrs
- 2008 University of Rochester Medical Center Cardiovascular Seminar  
*Dys-metabolism and atherosclerosis: issues and opportunities in CV risk reduction*  
Attendees: 50 physicians, fellows, residents  
Preparation: 6 hrs  
Contact time: 8 hrs
- 2008 American Academy of Periodontology Inflammation and Periodontal Diseases – A Reappraisal  
*Inflammation/inflammatory response*  
Attendees: 150 physicians, fellows, residents  
Preparation: 4 hrs  
Contact time: 4 hrs
- 2008 Cornell University Cardiology Grand Rounds  
*Vascular Complications of Diabetes: Sweet and Sour*  
Attendees: 50 physicians, fellows, residents  
Preparation: 3 hrs  
Contact time: 3 hrs
- 2008 Montefiore Medical Center, Albert Einstein College of Medicine, Grand Rounds  
*Diabetic atherosclerosis: sweet and sour?*  
Attendees: 90 physicians, fellows, residents  
Preparation: 3 hrs  
Contact time: 3 hrs
- 2008 Columbia University Preventive Medicine & Nutrition Seminar  
Attendees: 75 physicians, fellows, residents  
Preparation: 3 hrs  
Contact time: 3 hrs
- 2008 Emory University Endocrinology Grand Rounds  
Attendees: 30 physicians, fellows, residents  
Preparation: 3 hrs  
Contact time: 3 hrs
- 2008 American Association of Clinical Endocrinologists, Georgia Chapter  
Lecture “*Diabetic Atherosclerosis: Issues and Opportunities*”  
Attendees: 35 physicians  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2008 University of Connecticut Health Center, Endocrinology Intercity Grand Rounds  
Attendees: 40 physicians, fellows, residents  
Preparation: 3 hrs  
Contact time: 2 hrs
- National**  
2000 *New Mechanisms and Therapeutic Targets: PPARs*, American Diabetes Association Scientific Sessions, San Antonio, TX

- Attendees: 250 physicians, scientists, fellows, nurses  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2000 *Pri-Med Primary Care Conference: Dyslipidemia*  
Attendees: 500 physicians,  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2001 Plenary Lecture, *PPARs in Atherosclerosis*, Vascular Biology Working Group  
National ACC Meeting, Orlando, FL  
Attendees: 100 physicians  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2001 *Clinical Controversies: MI in Diabetics: Plaque or Non-Plaque*, American  
Diabetes Association Scientific Sessions, Philadelphia, PA  
Attendees: 250 physicians, nurses  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2001 *Dyslipidemia: Diagnosis and Treatment*, Primary Care Conference, Nurse  
Practitioner Associates for Clinical Education, Falmouth, MA  
Attendees: 200 nurses  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2001 American Heart Association Scientific Sessions, Anaheim, CA:  
Featured Research: *PPARs and Atherosclerosis*  
Attendees: 200 physicians, scientists, fellows  
Preparation: 4 hrs  
Contact time: 1 hr
- Nuclear Receptors as Therapeutic Targets: *PPARs and Vascular Biology*  
Attendees: 50 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 2 hrs
- Nuclear Receptor session: *PPARs in Endothelial Cell Biology*  
Attendees: 50 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2002 *PPARs in Vascular Biology and Atherosclerosis*, ATVB Annual Scientific  
Meeting, Salt Lake City, Utah  
Attendees: 100 investigators, fellows  
Preparation: 4 hrs  
Contact time: 3 hrs
- 2002 *PPARs in Vascular Biology and Atherosclerosis*, American Association of Clinical  
Endocrinologists, Chicago, IL  
Attendees: 200 physicians, nurses  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2002 Keynote Speaker, *PPARs as a Therapeutic Target*, Merck Dual PPAR Agonist  
MK767 Cardiac Safety Study Investigators Meeting, Philadelphia, PA  
Attendees: 100 study site investigators, research coordinators  
Preparation: 2 hrs  
Contact time: 2 hrs
- 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  
Attendees: 50 physicians, scientists, fellows  
Preparation: 2 hrs  
Contact time: 4 hrs

- 2002 American Heart Association Scientific Sessions, Chicago, IL:  
*Molecular Mechanisms of Atherosclerotic Vascular Disease in Type 2 Diabetes, Endothelial Signaling Pathways*  
Attendees: 100 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 2 hrs
- Sunday Science: *PPARs in Diabetic Atherosclerosis*  
Attendees: 100 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2003 *PPARs as Modulators of the Inflammatory Response in the Vasculature*, Keystone Symposium on PPARs: Transcriptional Regulators of Metabolism and Metabolic Disease, Keystone, CO  
Attendees: 400 investigators, fellows, graduate students  
Preparation: 4 hrs  
Contact time: Lecture, 1 hr, Meeting, 4 days
- 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  
Attendees: 30 physicians, research coordinators  
Preparation: 2 hrs  
Contact time: 4 hrs
- 2003 *PPARs in the Vasculature*, 18<sup>th</sup> Annual Meeting of the American Society of Hypertension, New York, NY  
Attendees: 200 physicians, scientists, fellows  
Preparation: 2 hrs  
Contact time: 1 hr
- 2003 *PPARs: Transcriptional Links Between Metabolism and Atherosclerosis*, 2003 International Symposium on Triglycerides, Metabolic Disorders and Cardiovascular Disease, New York, NY  
Attendees: 400 physicians, scientists, fellows, nurses  
Preparation: 4 hrs  
Contact time: Lecture, 1 hr; Meeting 3 days
- 2003 *Lipid Management and Challenge in Practice*, Nurse Practitioner Associates for Continuing Education, Hyannis, MA  
Attendees: 100 nurses  
Preparation: 1 hr  
Contact time: 1 hr
- 2003 *PPARs in Inflammation and Atherosclerosis*, Cardiovascular Drug Discovery Symposium, Philadelphia, PA  
Attendees: 100 investigator in biotechnology, pharmaceutical industry  
Preparation: 2 hrs  
Contact time: 4 hrs
- 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  
Attendees: 100 physicians, scientists, fellows  
Preparation: 4 hrs  
Contact time: Lecture, 1 hr; Meeting 1 day
- 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  
Attendees: 100 physicians, scientists, fellows, residents  
Preparation: 2 hrs  
Contact time: 2 hrs

- 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  
Attendees: 50 physician investigators, pharmaceutical industry leaders, FDA representatives  
Preparation: 2 hrs  
Contact time: 1 hrs
- 2004 *Diabetic Atherosclerosis: New Targets, New Pathways*, American Diabetes Association Rifkin Open Meeting, New York, NY  
Attendees: 50 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: Lecture 1 hr, Meeting 4 hrs
- 2004 *LDL Particles, Inflammation, and PPARs*, American Diabetes Association, Orlando, FL  
Attendees: 100 physicians, scientists, fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2004 *A Clinical Approach to the Patient with the Metabolic Syndrome*, Boston University School of Medicine/ American College of Cardiology Foundation Symposium, Cardiology for the Consulting Cardiologist, Boston, MA  
Attendees: 100 physicians, fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2004 *PPARs, Vascular Inflammation, Insulin Resistance, and Atherosclerosis*, American Heart Association Scientific Sessions, New Orleans, LA  
Attendees: 100 physicians, scientists, fellows  
Preparation: 4 hrs  
Contact time: 4 hrs
- 2005 *Metabolic and Vascular Effects of Peroxisome Proliferator-Activated Receptor (PPAR) Agonists*, Northeast Lipid Association Inaugural Scientific Forum, New York, NY  
Attendees: 100 physicians, nurses  
Preparation: 2 hrs  
Contact time: Lecture, 1 hr; Meeting 2 days
- 2005 *Diabetic Atherosclerosis: New Pathways, New Targets*, Heart Foundation of Dayton Heart Hospital Distinguished Lecturer Series, Wright School of Medicine, Dayton, OH  
Attendees: 75 physicians, fellows  
Preparation: 2 hrs  
Contact time: 6 hrs
- 2005 *Cardiovascular Risk Prediction in the General Population*, 12<sup>th</sup> Conference on Retroviruses and Opportunistic Infections, Boston, MA  
Attendees: 500 physicians, scientists, fellows, nurses  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2005 *The Natural History of the Vulnerable Plaque*, Cardiovascular Disease: State of the Art 2005, 16th Annual Lahey Clinic Symposium, Cape Cod, MA  
Attendees: 50 physicians  
Preparation: 1 hrs  
Contact time: 2 hrs
- 2005 *Inflammation — What Do We Know? Prevention and Reversing Coronary Heart Disease*, American College of Cardiology Foundation, Santa Fe, CA  
Attendees: 50 physicians  
Preparation: 2 hrs  
Contact time: 2 hrs

- 2005 *Diabetes and Atherosclerosis: New Targets, New Pathways*, John N. Wilson  
Lectureship in Cardiovascular Diseases – Cardiology Update 2005, Presbyterian  
Healthcare Services, Albuquerque, CA  
Attendees: 100 physicians, nurses, fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2005 American Heart Association Scientific Sessions, Dallas, TX:  
*Obesity and cardiovascular disease: mechanistic insights and therapeutic  
implications*, AHA Featured Research  
Attendees: 100 physicians, scientists, fellows  
Preparation: 4 hrs  
Contact time: 1 hr
- The role of nuclear receptors in managing metabolic syndrome*, Joint AHA/APSC  
10<sup>th</sup> Anniversary Symposium: Metabolic Syndrome – East vs. West  
Attendees: 100 physicians  
Preparation: 2 hrs  
Contact time: 1 hr
- 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.  
Attendees: 1000 physicians, scientists, fellows, nurses  
Preparation: 5 hrs  
Contact time: 1 hr
- 2006 Keystone Conference, Atherosclerosis, Keystone, CO:  
Speaker, *Lipolytic Mechanisms of PPAR Activation*  
Attendees: 500 scientists, fellows, graduate students  
Preparation: 4 hrs  
Contact time: Lecture, 1 hr; Meeting, 4 days
- Plenary Session Chair, Cardiovascular Aspects of the Metabolic Syndrome/  
Diabetes  
Attendees: 500 scientists, fellows, graduate students  
Preparation: 1 hr  
Contact time: 2 hrs
- 2006 American Diabetes Association, 21<sup>st</sup> Annual Southern Regional Conference on  
Diabetes, Obesity, and Cardiovascular Disease, Marco Island, FL:  
*PPAR  $\alpha/\gamma$  Dual agonists: Lessons Learned*  
Attendees: 100 physicians, nurses  
Preparation: 2 hrs  
Contact time: Lecture, 1 hr; Meeting, 2 days
- Keynote Speaker, Metabolic Syndrome: Issues and Suggestions  
Attendees: 100 physicians, nurses  
Preparation: 4 hrs  
Contact time: 1 hr
- 2006 *Endogenous mechanisms of PPAR regulation: implications for inflammation,  
atherosclerosis, and PPAR therapeutics*, Bay Area Lipid Club, San Francisco, CA  
Attendees: 50  
Preparation: 3 hrs  
Contact time: 3 hrs
- 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  
Attendees: 200  
Preparation: 10 hrs  
Contact: 6 hrs

- 2006 *PPARs as therapeutic targets: reverse cardiology?* Nuclear Receptors: Bench to Bedside, Cold Spring Harbor Laboratory, NY  
Attendees: 100 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2006 American Heart Association Scientific Sessions, Chicago, IL  
Invited Presentations:  
*A critical analysis of PPARs in coronary heart disease*, Clinical Lipidology Update  
Attendees: 200 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 3 hr  
*PPARs in obesity*, Circulation Research Symposium  
Attendees: 200 physicians, scientists, fellows  
Preparation: 6 hrs  
Contact time: 1 hr  
*PPARs in diabetes and cardiovascular disease*, Cardiovascular Seminar Session  
Attendees: 100 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 2 hr
- 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  
Attendees: 100 physicians, scientists, fellows  
Preparation: 4 hrs  
Contact time: 8 hr
- 2007 Keystone Conference, Nuclear Receptor Pathways to Metabolic Regulation/Metabolic Syndrome and Cardiovascular Risk, Steamboat Springs, CO:  
Speaker, *PARs and Lipid Metabolism*  
Attendees: 200 scientists, fellows, graduate students  
Preparation: 6 hrs  
Contact time: 16 hrs; Meeting, 3 days
- 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  
Attendees: 100 scientists, fellows  
Preparation: 4 hrs  
Contact time: 12 hrs; Meeting, 2 days
- 2007 American Heart Association Scientific Sessions, Orlando, FL  
Invited Presentation:  
*PPAR $\gamma$  agonists: great for rodents*, PPARs and Heart Disease  
Attendees: 200 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 3 hr
- 2008 Keystone Symposia, Adipocytes from the Inside Out, Banff, Alberta, Canada:  
Speaker, *Retinoid Metabolism in Energy Balance*  
Attendees: 200 scientists, fellows, graduate students  
Preparation: 8 hrs  
Contact time: 16 hrs; Meeting, 4 days
- 2008 National Association for Continuing Education CME Symposium, Jacksonville, FL  
Speaker: *Lipid management update;*  
*Understanding atherosclerosis in patients with diabetes*  
Attendees: 80 physicians  
Preparation: 8 hrs  
Contact time: 4 hrs; Meeting, 2 days

- 2008 *Mechanisms of PPAR-RXR modulation: implications for inflammation and atherosclerosis*, American Heart Association: Arteriosclerosis, Thrombosis and Vascular Biology Annual Conference, Atlanta, GA  
Attendees: 200 scientists, fellows  
Preparation: 4 hrs  
Contact time: 12 hrs; Meeting, 2 days

**International:**

- 2000 *New Developments in Lipid-Lowering Therapy*, InterAmerican Cardiology Association Meeting, San Juan, Puerto Rico  
Attendees: 500 physicians  
Preparation: 4 hrs  
Contact time: 4 hrs
- 2001 *Diabetes and Atherosclerosis*, World Cardiology Netherlands Research Congress, Amsterdam, Netherlands  
Attendees: 50 physicians  
Preparation: 4 hrs  
Contact time: 4 hrs
- 2001 Plenary Lecture, *PPAR Alpha: From Basic Science to Clinical Applications*, First International Symposium on PPARs, Fondazione Giovanni Lorenzini, Florence, Italy  
Attendees: 500 physicians, scientists, fellows, graduate students  
Preparation: 8 hrs  
Contact time: Lecture, 1 hr; Meeting 3 days
- 2001 *PPARs in Atherosclerosis*, European Society for Clinical Investigation, Satellite Symposium, Barcelona, Spain  
Attendees: 50 physicians  
Preparation: 4 hrs  
Contact time: 4 hrs
- 2001 *PPARs in Inflammation*. European Association for Science and Diabetes, Glasgow, Scotland  
Attendees: 250 physicians  
Preparation: 4 hrs  
Contact time: 4 hrs
- 2001 *PPARs in Endothelial Biology*, International Vascular Biology Meeting, Kyoto, Japan  
Attendees: 200 physicians, scientists, fellows, graduate students  
Preparation: 2 hrs  
Contact time: Lecture, 2 hrs; Meeting, 2 days
- 2001 Plenary Lecture, *PPARs*, International Society for Cardiovascular Pharmacology and Therapeutics, Montreal, Canada  
Attendees: 500 physicians  
Preparation: 2 hrs  
Contact time: 1 hr
- 2001 *Rationale for Lipid Interventions*, Netherlands Cardiology Association, Amsterdam, Netherlands  
Attendees: 50 physicians  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2002 *PPARs and the Endothelium*, PPARs and Cardiovascular Disease Symposium, German Heart Institute, Berlin, Germany  
Attendees: 50 physicians  
Preparation: 2 hrs  
Contact time: 2 hrs

- 2003 *PPAR Activation: Exogenous and Endogenous Mechanisms*, 2<sup>nd</sup> International PPAR Symposium, Lorenzini Foundation, Florence, Italy  
Attendees: 50 physicians, scientists, fellows, graduate students  
Preparation: 4 hrs  
Contact time: 2 hrs
- 2003 *Insulin Resistance And Cardiovascular Disease; Is Diabetes a Cardiovascular Disease?* Japanese Diabetes Society, Toyama and Tokyo, Japan  
Attendees: 200 physicians, scientists, fellows  
Preparation: 2 hrs  
Contact time: 2 hrs
- 2003 *PPARs and Vascular Disease*, Atherothrombosis 2003, European Society of Cardiology/Thrombosis Working Group, Florence, Italy  
Attendees: 100 physicians, scientists  
Preparation: 4 hrs  
Contact time: Lecture, 1 hr, Meeting, 2 days
- 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  
Attendees: 200 physicians, scientists, fellows, graduate students  
Preparation: 4 hrs  
Contact time: Lecture, 1 hr; Meeting, 2 days
- 2003 *Atherosclerosis and PPARs*, Satellite Symposium, International Symposium on Atherosclerosis: Molecular Aspects of Metabolic Syndrome, Tokyo, Japan  
Attendees: 100 physicians, scientists, fellows, graduate students  
Preparation: 2 hrs  
Contact time: Lecture, 2 hrs; Meeting, 2 days
- 2003 *PPAR-gamma: Transcriptional Links Between Metabolism and Atherosclerosis*, Canadian Cardiovascular Congress, Toronto, Canada  
Attendees: 100 physicians, scientists, fellows, graduate students  
Preparation: 2 hrs  
Contact time: Lecture, 1 hr
- 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  
Attendees: 500 physicians, scientists, fellows, graduate students  
Preparation: 4 hrs  
Contact time: Lecture, 1 hr; Meeting, 3 days
- 2004 *Hyperlipidemia; Diabetes, Insulin Resistance and Cardiovascular Disease*, LiveMed Current Issues in Primary Care, Harvard Medical School, Mexico City, Mexico  
Attendees: 1000 physicians, nurses  
Preparation: 3 hrs/lecture  
Contact time: Lecture, 2 hrs; Meeting, 2 days
- 2004 *Lipolytic Mechanisms of PPAR Activation*, Gordon Conference on Lipid Metabolism, New Hampshire.  
Attendees: 100 physicians, scientists, fellows, graduate students  
Preparation: 6 hrs  
Contact time: Lecture, 2 hrs; Meeting, 3 days
- 2005 *Advances in the Management of Diabetes and Atherosclerosis*, University of Puerto Rico Medical Sciences First Cardiovascular Congress, San Juan, Puerto Rico  
Attendees: 200 physicians  
Preparation: 3 hrs  
Contact time: Lecture, 1 hr
- 2005 *PPARs and Atherosclerosis*, Plenary lecture; *PPAR $\alpha$  in the Treatment of Dyslipidemia*, 3<sup>rd</sup> Lorenzini PPAR Meeting, Monte Carlo, Monaco

- Attendees: 500 physicians, scientists, fellows, graduate students  
Preparation: 4 hrs/lecture  
Contact time: Lecture, 1 hr;/lecture Meeting, 2 days
- 2005 *PPARs: Nuevos Enfoques Multifactoriales; Inflamacion y Aterosclerosis – Marcador? O Mediador?; PPARs*, XXIV Congreso Nacional de Cardiología, Buenos Aires, Argentina (2 lectures)  
Attendees: 300 physicians, scientists, fellows, graduate students  
Preparation: 4 hrs, 2 hrs/lecture  
Contact time: Lecture, 2 hrs (1 hr/lecture); Meeting, 2 days
- 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  
Attendees: 500 physicians, scientists, fellows, graduate students  
Preparation: 3 hrs  
Contact time: Lecture, 1 hr; Meeting, 2 days
- 2005 Keynote Lecture, *Atherosclerosis: Mediators, Mechanisms and Interventions*, 21<sup>st</sup> Ernst Klenk Symposium in Molecular Medicine, University of Cologne, Germany  
Attendees: 100 physicians, scientists, fellows, graduate students  
Preparation: 10 hrs  
Contact time: Lecture, 2 hrs; Meeting, 2 days
- 2006 Plenary Lecture, 8<sup>th</sup> International Workshop on Adverse Drug Reactions and Lipodystrophy in HIV, San Francisco, CA  
Attendees: 100  
Preparation: 6 hrs  
Contact time: Lecture, 2 hrs; Meeting, 2 days
- 2006 *Metabolic syndrome and type 2 diabetes, a very common clinical profile in cardiology*, Fournier Pharma Symposium, World Congress of Cardiology, Barcelona, Spain  
Attendees: 100  
Preparation: 4 hrs  
Contact time: Lecture, 3 hrs; Meeting, 2 days
- 2006 *Inflammation in the arterial wall and development of CVD*, Journal of Internal Medicine Symposium: Diabetes, Inflammation, and Cardiovascular Disease, Göteborg, Sweden  
Attendees: 50  
Preparation: 6 hrs  
Contact time: 8 hrs
- 2006 *PPARs as therapeutic targets: reverse cardiology?* Nuclear Receptors: Bench to Bedside, Cold Spring Harbor Laboratory, NY  
Attendees: 100 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 2 hrs
- 2006 *PPARs and atherosclerosis*, 19th World Diabetes Congress, the International Diabetes Federation, Capetown, South Africa  
Attendees: 300 physicians, scientists, fellows  
Preparation: 3 hrs  
Contact time: 3 hrs
- 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  
Attendees: 200 physicians, scientists, fellows  
Preparation: 4 hrs  
Contact time: 6 hrs

- 2007 *Current and future treatment strategies in cardiometabolic complications*, 4<sup>th</sup> Metabolic Syndrome, Type II Diabetes, and Atherosclerosis Congress, Lisbon, Portugal  
Attendees: 100 physicians, scientists, fellows  
Preparation: 4 hrs  
Contact time: 12 hrs
- 2007 *Endogenous mechanisms of PPAR modulation*, Gordon Research Conference on Atherosclerosis, Nuclear Receptors and Co-Regulators Session, Il Ciocco, Italy  
Attendees: 100 scientists  
Preparation: 10 hrs  
Contact time: 20 hrs; Meeting, 5 days
- 2007 *PPAR como agente terapéutico en el logro de objetivos: Promesas y decepciones*, Asociación Latinoamericana de Diabetes, Havana, Cuba  
Attendees: 200 scientists  
Preparation: 10 hrs  
Contact time: 20 hrs; Meeting, 4 days
- 2008 *Modulation of the PPAR-RXR system*, British Atherosclerosis Society, Cambridge, UK  
Attendees: 100 scientists  
Preparation: 10 hrs  
Contact time: 20 hrs; Meeting: 2 days

## **2b. Professional and Educational Leadership Role**

- 1994 - current Steering Committee, New England Lipid Group (regional organization for lipid and prevention issues)
- 1995 - 2002 Professional Education Committee, American Heart Association, New England
- 1999 - 2003 Founding member, Atorvastatin Research Awards Committee (annual competitive research award)
- 2000 - current Education Council, National Diabetes Education Initiative
- 2001 - current National Lipid Education Council
- 2002 - current Nutrition, Physical Activity, and Metabolism Executive Committee, American Heart Association
- 2003 - current Clinical Lipidology Committee, American Heart Association
- 2004 - current Preventive Cardiology Committee, American College of Cardiology
- 2004 Section Chair, Gordon Conference on Lipid Metabolism
- 2005 Co-Chair, 3<sup>rd</sup> International PPAR Symposium, Lorenzini Foundation
- 2005 - current American College of Cardiology Fellowship Selection Committee

## **3. Teaching Awards:**

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

## **4. Major Curriculum Offerings:**

Vascular Medicine Case Conference, monthly meeting of BWH Vascular Medicine Staff to discuss difficult management cases.

Established BWH training programs in lipids and their management, including curriculum for Cardiovascular Fellows rotation.

Founder, Greater Boston Preventive Cardiology Fellows Forum. 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 schools and high schools to give presentations on healthy lifestyles.

Organizer and Co-chair, US/Japan Dialogues on Lipids and Coronary Artery Disease, Harvard Medical School/Brigham and Women's Hospital. Annual symposium between Japanese and BWH academic physicians. Annual program since 1998.

Founder and Director, Lipid Review Course, Harvard Medical School Office of Continuing Medical Education-approved course providing an in-depth review of lipid disorders and treatment.

Diabetes and cardiovascular disease in Hispanic patients. National education series involving development of a slide set, a workbook, and lectures. Dr. Jaime Davidson, Co-Director.

Chair, PPAR Slide Resource, National Diabetes Education Initiative.

## **E. Report of Clinical Activities**

### **1. Description of clinical practice:**

Weekly lipid/prevention clinic, with areas of focus on dyslipidemia, insulin resistance/diabetes mellitus, premature atherosclerosis, HIV-related dyslipidemia, primary prevention. In addition, attending time is spent primarily on the Cardiology Consult service (vascular surgery as well as general cardiology), B team (ward cardiology), and Cardiac Surgery Consult service. All of these activities are performed within the BWH, an academic teaching hospital.

### **2. Patient load:**

Typically 10-12 patients are seen each week in the Lipid/Prevention Clinic. These are often tertiary referrals of complex lipid or prevention cases, referred by other cardiologists or internists. Patients vary from local to national and international.

### **3. Clinical contributions:**

We have contributed substantially to the data and discussion on diabetic atherosclerosis and possible therapeutic options for this major clinical problem, including investigations into PPARs as therapeutic targets for such issues. Our clinical and basic science expertise has also been utilized in evaluating new therapeutics and indications as the only cardiologist on the FDA Endocrine and Metabolism Advisory Committee. We have also helped trained BWH and MGH cardiology fellows on prevention issues, with development of a curriculum regarding lipids and prevention issues.

### **4. Other relevant information about clinical role:**

Service on ACC Prevention Committee, AHA Clinical Lipidology Committee, FDA Endocrine and Metabolism Advisory Committee, extensive educational role translating emerging clinical and scientific issues to clinical groups including nursing associations, fellows, and physicians through multiple formats including CME courses.

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