

**PERSONAL DATA**

Name: Evan Dale Abel  
 Birth Place: Browns Town, Jamaica, West Indies  
 Citizenship: United States

**EDUCATION**

<u>Years</u>	<u>Degree</u>	<u>Institution (Area of Study)</u>
1976 - 1980	PREMED	Wolmers Boys School (Pre-Medicine)
1980 - 1985	MBBS	University of the West Indies (Medicine)
1985 - 1986	INTERN	University of the West Indies (Surgery, Medicine, OBGYN, Peds, ER)
1986 - 1991	PhD	University of Oxford (Physiology)
1988 - 1992	RESIDENT	Northwestern University (Internal Medicine)
1991 - 1992	CHIEF RESIDENT	Northwestern University Medical School (Internal Medicine)
1992 - 1995	FELLOW	Beth Israel Hospital (Endo/Metabolism)

**BOARD CERTIFICATIONS**

09/25/1991 American Board of Internal Medicine (Int Med), Certified  
 11/09/1995 American Board of Internal Medicine (Sub: Endo&Met), Certified

**CURRENT LICENSES/CERTIFICATIONS**

- ECFMG  
 2005-2008 State License (UT)  
 2005-2008 CS (UT)  
 2006-2009 DEA Certificate (UT)

**ACADEMIC HISTORY****Biochemistry**

07/01/2002 Hire, Adjunct Track, Adjunct Assistant Professor  
 07/01/2004 Promotion, Adjunct Associate Professor

**Internal Medicine (Endocrinology and Metabolism)**

09/14/2000 Hire, Tenure Track-Scientist Scholar, Assistant Professor  
 07/01/2004 Tenure  
 07/01/2004 Promotion, Associate Professor

**PROFESSIONAL EXPERIENCE****Full Time Positions**

1991 -1992 Instructor of Clinical Medicine, Northwestern University Medical School, Department of Medicine, Chicago, IL  
 1992 -2000 Assistant in Medicine, McLean Hospital, Belmont, MA  
 1995 -2000 Associate in Medicine, Beth Israel Deaconess Medical Center, Boston, MA  
 1995 -2000 Instructor in Medicine, Harvard Medical School, Boston, MA  
 1995 -2000 Attending Physician, Beth Israel Deaconess Medical Center, Endocrinology and Diabetes, Internal Medicine, Boston, MA  
 1996 -2000 Attending Endocrinologist, Harvard Vanguard Medical Associates, Boston, MA  
 1997 -2000 Associate Physician, Brigham and Women's Hospital, Boston, MA  
 2000 Assistant Professor of Medicine, Harvard Medical School, Boston, MA  
 2000 Investigator, University of Utah School of Medicine, Program in Human Molecular Biology and Genetics, Salt Lake City, UT

2000 Attending Physician, University of Utah Hospitals and Clinics and Salt Lake Veterans Hospital, Salt Lake City, UT

2000 -2004 Assistant Professor of Internal Medicine, University of Utah School of Medicine, Salt Lake City, UT

2001 Visiting Professor, University of the West Indies, Tropical Metabolism Research Institute, Kingston, Jamaica

2001 Staff Physician, University of Utah Hospitals and Clinics, Salt Lake City, UT

2001 Attending Physician, Salt Lake Veterans Hospital, Salt Lake City, UT

2001 -2004 Adjunct Assistant Professor, University of Utah School of Medicine, Department of Biochemistry, Salt Lake City, UT

2004 Associate Professor of Medicine and Biochemistry, University of Utah School of Medicine, Salt Lake City, UT

### **Part Time Positions**

### **Editorial Experience**

2004 - Present Editorial Board for Journal of Biological Chemistry

### **Reviewer Experience**

Referee for Cardiovascular Research

Referee for Diabetes

Referee for Journal of Biological Chemistry

Referee for Endocrinology

Referee for American Journal of Physiology

Referee for Circulation

Referee for Journal of Clinical Investigation

Referee for New England Journal of Medicine

Referee for Nature Medicine

Referee for Proceedings of the National Academy of Sciences

Referee for Diabetologia

### **SCHOLASTIC HONORS**

1980 Jamaica Scholarship

1980 University of the West Indies Open Scholarship

1981 -1982 U.W.I. subject medals for: Anatomy, Physiology, Biochemistry, and Community-Health (First in class)

1982 Walter Harper Prize for Anatomy

1983 May and Baker Prize in Pharmacology

1983 Governor General's Award for Young Scientists (Jamaica Society of Scientists and Technologists)

1984 Wells Elliot Gold Medal for Virology

1985 Bachelor of Medicine, Bachelor of Surgery (MBBS), Honors with Distinction

1985 Alex Henderson Prize for Clinical Medicine

1985 E.V. Ellington Prize for Obstetrics and Gynecology

1985 Ludlow Murcott Moodie Prize for Clinical Medicine

1985 May and Baker Prize in Social and Preventive Medicine

1985 U.W.I. Clinical Medal (First in Clinical Class)

1985 U.W.I. Silver Medal for Surgery

1986 Rhodes Scholarship (Jamaica)

1986 -1988 Rhodes Scholar and Clinical Research Fellow to Professor John G. Ledingham, Nuffield Department of Medicine, University of Oxford, England. Research funded by the British Heart Foundation

1991 Webster Award for best overall performance by a Senior Medical Resident. Northwestern University McGaw Medical Center

1991 Alpha Omega Alpha Honor Medical Society

1992 Robert Wood Johnson Foundation Minority Medical Faculty Development Award

1996 Eleanor and Miles Shore, 50th Anniversary Scholars in Medicine Fellowship - Harvard Medical School

1997 Boston Obesity Nutrition Research Center, Pilot Study Investigator

1997 Endocrine Society Student Research Fellowship (Mentor)  
 1998 American Diabetes Association Travel Award  
 1998 Thyroid Research Advisory Council Award  
 1999 HMS Class of 2002, Excellence in Teaching Award  
 2000 American Diabetes Association Research Award  
 2001 Astra Zeneca David W. Haack Memorial Award in Cardiovascular Research  
 2001 Van Meter Award, American Thyroid Association  
 2002 William Odell Young Investigator Award - Department of Medicine, University of Utah  
 2003 Established Investigator - American Heart Association  
 2003 NHLBI RO1HL73167  
 2004 Heart and Stroke/Richard Lewar Centre of Excellence Distinguished Visiting Professor, University of Toronto  
 2004 (Mentor), American Diabetes Association Physician Scientist Training Program  
 2004 (Mentor), Endocrine Society Student Research Fellowship  
 2004 American Diabetes Association Physician Scientist Training Program (Mentor)  
 2004 Juvenile Diabetes Foundation (JDRF) Post-Doctoral Research Fellowship (Mentor)  
 2004 Member - American Society for Clinical Investigation  
 2004 NHLBI RO1HL70070  
 2005 American Heart Association Post Doctoral Research Fellowship (Mentor)  
 2006 American Heart Association Post Doctoral Research Fellowship (Mentor)  
 2006 Endocrine Society Student Research Fellowship (Mentor)  
 2006 Juvenile Diabetes Foundation Innovative Partnerships and Novel Therapeutics Initiative Awards  
 2006 NHLBI UO1 HL087947  
 2006 NIDDK R21 DK073590  
 2007 Josie Johnson Memorial Endowed Professorship in Molecular Biology

## **ADMINISTRATIVE EXPERIENCE**

### **Administrative Duties**

1991 -1992 Chief Medical Resident, Internal Medicine, VA Lakeside Medical Center, NUMS, Chicago, IL.  
 1996 -2000 Associate Director Endocrine Fellowship Training Program, Beth Israel-Deaconess Medical Center.

### **Professional & Scientific Committees**

1999 - Present Member, American Heart Association, Council on Basic Cardiovascular Sciences  
 2001 - Present Member, National Institutes of Health, Steering Committee, Animal Models of Diabetes Complications Consortium  
 2003 -2006 Member, Endocrine Society, Minority Affairs Committee  
 2004 - Present Co-Chair, National Institute of Diabetes and Digestive and Kidney Diseases, Planning Committee, Network of Minority Research Investigators Workshop  
 2005 - Present Mentor, American Heart Association, Summer Student Research Program  
 2006 - Present Member, Endocrine Society, Research Affairs Committee  
 2007 - Present Board of Directors, Society for Heart and Vascular Metabolism

### **Grant Review Committee/Study Section**

1996 -2000 Scientific Advisory Committee, General Clinical Research Center, Beth Israel Deaconess Medical Center  
 2002 - Present Ad Hoc Member, National Institute of Diabetes and Digestive and Kidney Diseases, Molecular and Cellular Endocrinology Study Section  
 2003 - Present Member, National Institute of Diabetes and Digestive and Kidney Diseases, DDK-B Study Section  
 2004 - Present Reviewer, Swiss National Science Foundation, Health Research Board of Ireland  
 2004 - Present Member, Howard Hughes Medical Institute, Review Panel for Research Training Fellowship for Medical Students Program

### **Symposium/Meeting Chair/Coordinator**

2005 -2006 Chair, National Institute of Diabetes and Digestive and Kidney Diseases, Planning Committee, Network of Minority Investigators Workshop

## **PROFESSIONAL COMMUNITY ACTIVITIES**

### **UNIVERSITY COMMUNITY ACTIVITIES**

#### **Department Level**

2004 - Present Member, Internal Medicine, Tenure Advisory Committee  
2005 - Present Member, Physiology, Search Committee for Chair

#### **Other Internal Level**

1982 -1984 Student Representative, The University of the West Indies, Medical Faculty Executive Committee  
1982 -1984 Member, The University of the West Indies, Curriculum Committee, Participant in the 4th PAHO/WHO Conference on Medical Education, Kingston, Jamaica  
1987 -1988 Chairman, Oxford University, Caribbean Society  
1991 -1992 Member, Northwestern University Medical Center, Medical Executive Committee (Resident's Section), Chicago, IL  
1996 -2000 Member, Beth Israel Deaconess Medical Center, Scientific Advisory Committee, General Clinical Research Center

#### **Program Level**

2004 - Present Member, Molecular Biology and Biological Chemistry Graduate Programs, Joint Recruiting Committee  
2004 -2006 Member, Molecular Biology Graduate Program, Admissions Committee  
2005 - Present Member, Biological Chemistry Graduate Program, Student Advising Committee  
2005 - Present Member, Molecular Biology and Biological Chemistry Graduate Programs, Recruiting and Interviewing MD/PhD Applicants  
2006 - Present Member, Biological Chemistry Graduate Program, Graduate Advisory Committee

#### **University Level**

2004 - Present Member, Funding Incentive Seed Grant Program Committee  
2005 - Present Mentor, LEAP, Under-Represented Minority Pre-Medical Students through the LEAP and UROP

## **CURRENT MEMBERSHIPS IN PROFESSIONAL SOCIETIES**

American Association for the Advancement of Science  
American College of Physicians  
American Diabetes Association  
American Heart Association  
American Society for Clinical Investigation  
Association of American Rhodes Scholars  
Endocrine Society  
General Medical Council - U.K.  
International Society for Heart Research - American Section  
Medical Council of Jamaica  
Society for Heart and Vascular Metabolism

## **FUNDING**

#### **Active Grants**

01/01/03 - 12/31/07 Glucose Transport Fatty Acid Utilization and the Diabetic Cardiomyopathy.  
Direct Costs: \$454,545. Total costs: \$500,000  
American Heart Association  
Role: Principal Investigator

05/01/03 - 04/30/08 NHLBI R01 HL73167  
Insulin Resistance and Cardiac Dysfunction in Obesity.  
Direct Costs: \$1,260,962. Total costs: \$1,666,300  
National Heart, Lung and Blood Institute  
Role: Principal Investigator

12/01/03 - 12/31/07 NHLBI R01 HL070070-01  
 Insulin Signaling & the Heart in Diabetes.  
 Direct Costs: \$978,087. Total costs: \$1,449,290  
 National Heart, Lung and Blood Institute  
 Role: Principal Investigator

07/01/04 - 06/30/07 Fellowship For Brian T. O'Neill: The Role Of Altered P13 Kinase And Akt Signaling In Diabetic  
 Cardiomyopathy.  
 Direct Costs: \$75,000. Total costs: \$75,000  
 American Diabetes Association  
 Role: Mentor

06/07/05 - 06/30/07 Role Of Glut4 Mediated Myocardial Glucose Transport In M  
 Direct Costs: \$39,000. Total costs: \$39,000  
 American Heart Association  
 Role: Mentor

09/01/05 - 04/30/08 Role Of The Molecular Circadian Clock Within The Heart  
 Direct Costs: \$32,987. Total costs: \$49,316  
 Baylor College Of Medicine  
 Role: Sub-Contract

10/01/05 - 09/30/07 NHLBI/NIDDK  
 R21 DK073590-01  
 Targeting Antioxidant Therapy to Cardiac Mitochondria.  
 Direct Costs: \$146,475. Total costs: \$218,980  
 National Institutes of Health  
 Role: Principal Investigator

07/01/06 - 06/30/08 Fellowship for Boudina - Mechanisms for Impaired Cardiac Efficiency in Insulin Resistance and  
 Diabetes  
 Direct Costs: \$92,000. Total costs: \$92,000  
 American Heart Association  
 Role: Mentor

09/01/06 - 08/31/11 Cardiomyopathy And Microangiopathy  
 Direct Costs: \$1,250,000. Total costs: \$1,868,750  
 National Institutes of Health  
 Role: Principal Investigator

08/16/06 - 08/31/08 Diabetes On Mitochondrial Proteome  
 Direct Costs: \$413,636. Total costs: \$440,000  
 Juvenile Diabetes Research Foundation  
 Role: Principal Investigator

09/01/06 - 08/31/08 Microvascular Complications Of T1dm  
 Direct Costs: \$400,000. Total costs: \$429,400  
 Juvenile Diabetes Research Foundation  
 Role: Principal Investigator

**Pending Grants**

07/01/06 - 06/30/08 Insulin Resistant Heart  
 American Heart Association  
 Role: Principal Investigator

07/01/06 - 06/30/08 Cardiovascular Complications In Diabetes  
 American Diabetes Association  
 Role: Mentor

07/01/07 - 06/30/09 Role of GLUT4-Mediated Glucose Utilization in Cardiac Adaptations to Physiological and  
 Pathological Hypertrophy  
 American Heart Assn Wstrn States Afflt  
 Role: Mentor

08/01/07 - 07/31/12 Myocardial Growth By Pi3 Kinease-Akt Signaling  
 National Institutes of Health  
 Role: Principal Investigator

04/01/08 - 03/31/13 Insulin Regulation Of Cell Nutrition  
Boston University  
Role: Sub-Contract

**Past Grants**

01/01/93 - 01/01/96 Tissue Specific Ablation of GLUT4 Using Cre-Recombinase LoxP Mediated Gene Targeting  
Direct Costs: \$315,506. Total costs: \$315,506  
Robert Wood Johnson Foundation  
Role: Principal Investigator

07/01/95 - 06/30/97 Thyroid Hormone Action in the Pituitary  
Direct Costs: \$67,825. Total costs: \$67,825  
National Institute of Diabetes & Digestive & Kidney Diseases  
Role: Co-Investigator

01/01/96 - 01/01/97 In Vivo Analysis of Thyroid Hormone Action  
Direct Costs: \$25,000. Total costs: \$25,000  
ELEANOR & MILES SHORE  
Role: Principal Investigator

01/01/96 - 01/01/98 Analysis of the Impact of Adipose Tissue Glucose Transport on Body Weight, Nutrient  
Partitioning and Glucose Tolerance  
Direct Costs: \$25,000. Total costs: \$25,000  
BOSTON OBESITY NUTRITION RES CENTER  
Role: Principal Investigator

01/01/97 - 12/31/97 Transgenic Analysis of a Naturally Occurring Mutation of the Thyroid Hormone Receptor Which  
Causes Selective Pituitary Resistance to Thyroid Hormone  
Direct Costs: \$2,500. Total costs: \$2,500  
ENDOCRINE SOCIETY  
Role: Mentor

01/01/98 - 01/01/99 Development and Analysis of a Mouse Model of Resistance to Thyroid Hormone  
Direct Costs: \$59,600. Total costs: \$59,600  
THYROID RESEARCH ADVISORY COUNCIL  
Role: Principal Investigator

07/01/98 - 06/30/00 Analysis of the Role of GLUT4 in the Pathogenesis of Diabetic Cardiomyopathy  
Direct Costs: \$400,000. Total costs: \$580,000  
National Heart, Lung and Blood Institute  
Role: Principal Investigator

07/01/99 - 06/30/00 Gender Differences in the Outcome of Myocardial Ischemia in Diabetics: The Role of Cardiac  
Glucose Utilization  
Direct Costs: \$45,000. Total costs: \$45,000  
Harvard Medical School  
Role: Co-Investigator

07/01/00 - 06/30/03 Insulin Signaling And Glucose Metabolism In The Myocardium Of Insulin Resistant Mice.  
Direct Costs: \$246,505. Total costs: \$290,006  
American Diabetes Association  
Role: Principal Investigator

09/01/00 - 08/31/03 Pathophysical Consequence Of Enhanced Glut4 Expression In The Heart.  
Direct Costs: \$111,486. Total costs: \$167,000  
National Institute of Diabetes & Digestive & Kidney Diseases  
Role: Principal Investigator

11/01/00 - 04/30/03 In Vivo Analysis Of Thyroid Hormone Action.  
Direct Costs: \$138,549. Total costs: \$149,632  
National Institute of Diabetes & Digestive & Kidney Diseases  
Role: Principal Investigator

08/15/02 - 07/31/04 Mechanisms Of Regulation Of Glut4 Expression In Vivo.  
Direct Costs: \$16,905. Total costs: \$25,358  
University of Oklahoma  
Role: Sub-Contract

- 02/01/04 - 01/31/06 Mechanisms For Mitochondrial Dysfunction In The Diabetic Heart.  
Direct Costs: \$93,140. Total costs: \$93,140  
Juvenile Diabetes Research Foundation  
Role: Mentor
- 03/22/05 - 03/21/06 Unrestricted Grant To Sponsor Lecture On Type 2 Diabetes  
Glaxosmithkline  
Role: Principal Investigator

**Active Contracts**

**Pending Contracts**

**Past Contracts**

**TEACHING RESPONSIBILITIES/ASSIGNMENTS**

**Course and Curriculum Development**

- 2003 - Present Revised and rewrote the thyroid chapter in the Endocrinology Organ Systems Course.  
2003 - Present Revised and wrote three new problem based modules for the First Year Medical Student Biochemistry Series.

**Courses Directed**

**Course Lectures**

- 1995 -2000 Division of Endocrinology: Beth Israel Deaconess Medical Center, Teaching Attending, Endocrinology Consultation Service: 2 Fellows, 1-2 residents, 1-2 medical students. Contact/preparation time: 30 hours.
- 1996 -2000 Division of Endocrinology: Beth Israel Deaconess Medical Center, Teaching Attending General Endocrinology Clinic: 1 fellow, 4 residents per year. Contact time: 5 hours per week.
- 1996 -2000 Division of Endocrinology: Beth Israel Deaconess Medical Center. Director, Endocrine Grand Rounds Series. Attended by 25-40 persons including, medical students, residents, fellows, post docs faculty. 1 hour per week. 10 hours/yr. in preparation and planning.
- 1996 -2000 Teaching Attending General Endocrinology Clinic: 1 Fellow, 4 residents per year. Contact time 5 hours per week.
- 1997 -1999 Longwood Area Endocrine Fellowship Lecture Series: Lecture - "Thyroid Function Tests."
- 1997 -2000 Department of Medicine: Beth Israel Deaconess Medical Center, Faculty Preceptor, Medical Student Ambulatory block: 4-5 students per year. Contact/preparation time (per student): 12 hours.
- 1997 -2000 Harvard Medical School, Integrated Human Physiology Course (Focused Group Exercise Leader). 15 first year HMS students. Contact time: 3 hours. Preparation time: 3 hours.
- 1997 -2000 Faculty Preceptor, Medical Student Ambulatory block: 4-5 students per year. Contact/Preparation time (per student) 12 hours
- 1998 -2000 Department of Medicine: Beth Israel Deaconess Medical Center, Teaching Attending, General Medicine: 6 residents, 3-4 medical students. Contact/preparation time: 30 hours.
- 1998 -2000 Teaching Attending General Medicine: 6 Residents, 3-4 medical students. Contact/Preparation time 30 hours.
- 1999 Harvard Medical School, Integrated Human Physiology Course (tutor), 7 first year HMS students. Contact time: 15 hours. Preparation time: 10 hours.
- 1999 -2000 Division of Endocrinology: Beth Israel Deaconess Medical Center. Preceptor, Harvard University Summer Honors Undergraduate Research Program. Supervised college undergraduate's summer research project in my laboratory (10 weeks).
- 2001 - Present Preceptor, American Heart Association Western State Affiliate undergraduate summer research program.
- 2003 Course Director - Biological Chemistry Seminar Course, "Regulation of Mitochondrial Function," 6 students. Contact/preparation time 20 hours.
- 2003 - Present Lecture Biochemistry Year 1 Medical Students. 10 students Contact/preparation time 20 hours
- 2003 BIO C 7100(1): Topics-Biochemistry(1) ; 8 student(s)
- 2003 INTMD 6090: Biochemistry - IM: Diabetes: an example of metabolic integration(1)
- 2003 INTMD 7100: Endocrinology OS - Hyperthyroidism(1)
- 2003 INTMD 7100: Endocrinology OS - Hypothyroidism & Thyroid Nodules(1)

2003	INTMD 7100: Endocrinology OS - Thyroid Gland Physiology & Thyroid Function Testing(1)
2003	INTMD 7100: Endocrinology OS - General Review Session(1)
2003	BIO C 7040(17): Lab Resrch Conferences(1) ; 1 student(s)
2003	BIO C 7970(17): Thesis Research-Ph D(6) ; 1 student(s)
2004	BIO C 7040(14): Lab Resrch Conferences(1) ; 1 student(s)
2004	BIO C 7970(14): Thesis Research-Ph D(9) ; 1 student(s)
2004	INTMD 7100: Endocrinology OS - Hyperthyroidism(1)
2004	INTMD 7100: Endocrinology OS - Hypothyroidism & Thyroid Nodules(1)
2004	INTMD 7100: Endocrinology OS - Thyroid Gland Physiology & Thyroid Function Testing(1)
2004	INTMD 6090: Biochemistry - Biochemistry - IM - Clinical Correlation: Diabetes(1)
2004	BIO C 7970(1): Thesis Research-Ph D(6) ; 2 student(s)
2004	BIO C 7040(17): Lab Resrch Conferences(1) ; 2 student(s)
2004	BIO C 7970(17): Thesis Research-Ph D(6.50) ; 2 student(s)
2005 - Present	Lecturer. Regulation of Metabolism Course - Biochemistry Effective offered to students in the Biological Chemistry and Molecular Biology Programs. 14 Students. Contact preparation time 12 hours.
2005	BIO C 7040(14): Lab Resrch Conferences(1) ; 1 student(s)
2005	BIO C 7970(14): Thesis Research-Ph D(6) ; 1 student(s)
2005	INTMD 7100: Endocrinology OS - Diagnositic Testing for Thyorid Disorders(1)
2005	INTMD 7100: Endocrinology OS - Disorders of Thyroid Hormone Production and Action Thyroid Nodules and Neoplasms(1)
2005	INTMD 6070: Physiology - Thyroid Gland Physiology & Thyroid Function Testing(1)
2005	INTMD 7100: Endocrinology OS - Small Groups: Diabetes(2)
2005	INTMD 6090: Biochemistry - Clinical Correlation: Diabetes(1)
2005	BIO C 6970(1): Thesis Research-Masters(6) ; 1 student(s)
2005	BIO C 7970(1): Thesis Research-Ph D(2.50) ; 2 student(s)
2005	BIO C 7970(1): Thesis Research-Ph D(6) ; 2 student(s)
2005	BIO C 6910(1): Research Techniques(7) ; 1 student(s)
2005	BIO C 7040(17): Lab Resrch Conferences(1) ; 3 student(s)
2005	BIO C 7970(17): Thesis Research-Ph D(9.50) ; 2 student(s)
2006	BIO C 7040(14): Lab Resrch Conferences(1) ; 3 student(s)
2006	BIO C 7970(14): Thesis Research-Ph D(9.50) ; 2 student(s)
2006	BIO C 7040(17): Lab Resrch Conferences(1) ; 3 student(s)
2006	BIO C 7970(17): Thesis Research-Ph D(6.30) ; 3 student(s)
2007	BIO C 7040(14): Lab Resrch Conferences(1) ; 2 student(s)
2007	BIO C 7970(14): Thesis Research-Ph D(7.50) ; 2 student(s)

### **Clinical Teaching**

2001 - Present	Teaching Attending, General Medicine: 6 Residents, 3-4 Medical Students. Contact/Preparation time: 30 Hours.
2002 - Present	Teaching Attending, Endocrinology consultation service. 1 Fellow/resident. Contact/preparation time: 30 hours.
2002 - Present	Teaching Attending, General Endocrinology Clinic: 1 Fellow. Contact time: 4 hours on alternate weeks.
2004 - Present	Preceptor, Molecular Biology Program Journal Club. 10 students. Contact/preparation time: 14 hours.

### **Laboratory Teaching**

2003 - Present	Supervise 7 Postdocs and 4 Graduate Students
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### **Small Group Teaching**

2001 - Present	Lecturer and Small Group Preceptor, Endocrine Organ Systems Course. 20 students. Contact/preparation time: 40 hours.
2002	Preceptor, Molecular Biology Program Journal Club. 10 students, contact/preparation time: 14 hours.

### **Students Supervised**

1998 -1999 Mary-Ellen Boers MSc.: Member of Thesis Committee: Biology Department: University of Massachusetts Boston. Ms. Boers conducted her thesis research at the Beth Israel Deaconess as an extern under my supervision. Joined the Biotech industry as a team leader in the company Microbia.

1999 -2000 Sandrine Betuing PhD - Paul Sabatier University, Toulouse France Current position: Assistant Professor, Laboratory of neurobiology, INSERM E 9913 - University of 'Evry Val d'Essone'.

1999 Pierre Michel (undergraduate) who joined my lab under the auspices of HMS SHURP Program. Currently a Ph.D. Student in the Dept. of Biological Chemistry, UCLA.

2000 -2003 Christophe Graveleau PhD - University of Paris Current position: Research Associate CNRS, Montpellier, France.

2000 David Myles (undergraduate) who joined my lab under the auspices of HMS SHURP Program. Currently an MD/ Ph.D. Student at Yale.

2001 -2002 Leanne Swenson M.D., University of Utah School of Medicine. Current position: Clinical Fellow - Endocrinology, University of Utah.

2001 -2006 Pradip K. Mazumder, DVM. Ph.D., Indian Veterinary Research Institute, Izatnagar, India.

2001 Alex Hernandez (undergraduate). Summer Minority Enrichment Program University of Utah. Accepted to University of Utah School of Medicine for 2003.

2001 Arash Mohajer (undergraduate) supported by the bioscience undergraduate research program of the University of Utah. Formerly an MD student at the University of Utah.

2002 -2006 Vlad G. Zaha MD - University of Freiburg, Germany, current Internal Medicine Resident at Indiana University School of Medicine.

2002 Gopa Chakrabarti PhD, University of Hamburg. Current position: Second post-doc, University of Manitoba.

2002 James Hoffman - Medical Student, University of Utah, current Pediatric Resident at Indiana University School of Medicine.

2002 - Present Sihem Boudina Ph.D. - University of Bourdeaux, France.

2003 -2005 Jun Luo, University of Utah LEAP Program, current MD Student, University of Utah.

2003 -2007 Brian O'Neil MD, PhD candidate University of Utah.

2003 Jenny Billy, Undergraduate Fort Lewis College, Colorado. University of Utah Research Opportunity Scholar.

2003 Matthew Roberts, Undergraduate Weber State University, American Heart Association Summer Research Fellowship Grantee, current MD student University of Tennessee.

2003 Michele Richins, Medical Student University of Utah, Anesthesia Resident University of Utah.

2003 Sergio Gonzales, Medical Student University of Utah.

2004 Don Davis Medical Student, University of Utah.

2004 Eric Palfreyman Medical Student, University of Utah.

2004 Jordan Wright Undergraduate, University of Utah, MD, Ph.D. student University of Michigan.

2004 Josie Johnson, Ph.D. Student, Department of Biochemistry, University of Utah (deceased).

2004 Nikhil Banerjee, MD, PhD student, University of Utah.

2004 Ryan Funk Undergraduate Brigham Young University, American Heart Association Summer Research Fellowship Grantee, MD student Washington University.

2004 -2006 Kimberly Fountain Medical Student, University of Utah.

2004 -2006 Justin Carlstrom, Ph.D., University of Utah. Current position- Team Physiologist U.S.A. Olympic Ski Team

2004 - Present Imene Tabbi-Annani, University of Paris.

2004 - Present Sandra Sena, PhD, University of Bordeaux.

2005 Maryam Safaee, Undergraduate, University of Utah. American Heart Association Summer Research Fellowship Grantee.

2005 Alex Nguyen, Undergraduate, Tufts University.

2005 Henry Tran, Undergraduate, University of Utah. BIOURP Grant recipient.

2005 Varissa Benally, Undergraduate, New Mexico. University of Utah Research Opportunity Scholar.

2005 - Present Crystal Sloan, Ph.D. Student, Department of Biochemistry, University of Utah.

2005 - Present Heiko Bugger M.D. University of Freiberg- Post Doc

2006 Curtis Ellis, Medical Student, University of Utah.

2006 Michael Warden, Undergraduate Utah Valley State College, American Heart Association, Summer Research Fellowship Grantee

- 2006 Michelle Tsang, Undergraduate. University of Utah Opportunity Scholar
- 2006 Pilar Caro-Martin, Ph.D. Student, Department of Physiology, Universidad Complutense de Madrid
- 2006 -2007 Renata Pereira, Ph.D. Student, Department of Physiology, State University of Rio de Janeiro
- 2006 - Present Adam R. Wende, Ph.D. Washington University - Post Doc
- 2006 - Present Nicole Wild, Medical Student, University of Utah, American Heart Association, Medical Student Research Award Grantee
- 2006 - Present Olesya Ilkun, Ph.D. Student, Department of Biochemistry
- 2006 - Present Daniel Torba, Undergraduate University of Utah.
- 2006 - Present Ellis B. Jensen, Ph.D. East Carolina University - Post Doc
- 2006 - Present Jaetaek Kim, M.D., Ph.D., Chung An University, Seoul -Post Doc.
- 2006 - Present John Schell, Undergraduate University of Utah

### **Graduate Student Committee**

- 1998 -1999 Mary-Ellen Boers MSc. Member of Thesis Committee: Biology Department: University of Massachusetts Boston. Ms Boers conducted her thesis research at the Beth Israel Deaconess as an extern under my supervision. Joined the Biotech industry as a team leader in the company Microbia.
- 2003 -2007 Christopher Sans - Ph.D. Student Department of Oncological Sciences, University of Utah.
- 2003 -2007 Hani Jouihan - Ph.D. Student Department of Biochemistry, University of Utah.
- 2003 -2007 Jerome Coyne - Ph.D. Student Department of Biochemistry, University of Utah.
- 2003 - Present Charles Langelier - MD/PhD Student Department of Biochemistry, University of Utah
- 2003 - Present Rodrick Taylor - PhD Student Department of Biochemistry, University of Utah
- 2004 -2005 Michael Overfield - Ph.D. Student Department of Oncological Sciences, University of Utah.
- 2004 - Present Karyn Sheaffer - PhD Student Department of Oncological Sciences, University of Utah
- 2005 Teresa A. Hopkins - External Examiner, PhD Thesis Committee, Department of Pharmacology, University of Alberta, Canada
- 2005 - Present Ashley Meager - MD/PhD Student Department of Biochemistry, University of Utah
- 2005 - Present William Holland - PhD Student Department of Biochemistry, University of Utah
- 2005 - Present Yangi Liu - PhD Student Department of Biochemistry, University of Utah
- 2005 - Present Yudi Soesanto - PhD. Student Department of Biochemistry, University of Utah
- 2006 - Present Caleb Cardon - PhD Student Department of Biochemistry, University of Utah

### **Educational Lectures**

#### **Continuing Education**

#### **CE Courses Taught**

- 1995 "Thyroid Disease a Practical Approach." Lecturer
- 2002 "Utah Winter Endocrine Conference." Lecturer
- 2003 "Mitochondrial Dysfunction in the Insulin Resistant Heart." Invited Speaker - Utah Valley Endocrine Annual Winter Conference.
- 2004 "What's New and Promising in Diabetes Research." Utah Diabetes Center, 2nd Annual Professional Symposium.
- 2004 Director, Endocrinology Visiting Lecture Series

### **Education Administration**

#### **Other Educational Activities**

- 2003 - Present Revised and wrote three new problem based modules for the First Year Medical Student Biochemistry Series
- 2003 - Present Revised and rewrote the thyroid chapter in the Endocrinology Organ System Course
- 2004 - Present Metabolism Interest Group - University of Utah
- 2004 - Present Division of Endocrinology Guest Lecture Series

### **PEER-REVIEWED JOURNAL ARTICLES**

1. Ng LL, Harker M, **Abel ED.** (1988). Mechanisms of leucocyte sodium influx in essential hypertension. *Clin Sci (Lond)*, 75(5), 521-6.
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39. Bugger H, Schaffer JE, **Abel ED**. (2006). Insulin Resistance and Increased Fatty Acid Delivery Independently Impair Mitochondrial Function in the Heart [Abstract]. *Circulation*, 112(II), 210.
40. Sena S, Mazumder PK, Hu P, Litwin SE, **Abel ED**. (2006). Insulin Signaling Regulates Cardiac GLUT1 Expression in Response to Pressure Overload Hypertrophy via Sp Factors [Abstract]. *Diabetes*, 55(Supp 1), A302.
41. Wright J, Buchanan J, McKnight RA, Lane RH, **Abel ED**. (2006). Intrauterine Growth Retardation Delays Myocardial Metabolic Maturation in the Rat Heart [Abstract]. *Diabetes*, 55(Supp 1), A342.
42. Boudina S, Zaha VG, Mazumder PK, O'Neill BT, Theobald H, **Abel ED**. (2006). Mitochondrial Adaptations to Chronic Myocardial GLUT4 Deficiency [Abstract]. *Diabetes*, 55(Supp 1), A290.
43. Boudina S, Sena S, O'Neill BT, Aziz S, **Abel ED**. (2006). Mitochondrial Uncoupling in db/db Mouse Hearts is Mediated by the Adenine Nucleotide Translocator (ANT) [Abstract]. *Circulation*, 112(II), 244.
44. O'Neill BT, Izumo S, **Abel ED**. (2006). PI3-Kinase Regulates Myocardial Mitochondrial Mass and Oxidative Capacity via Akt-Independent Signaling Pathways [Abstract]. *Circulation*, 112(II), 245.
45. Tabbi-Anneni I, Hu P, Zaha VG, O'Neill BT, Litwin SE, **Abel ED**. (2006). Partial Cardiac Insulin and IGF1 Resistance Impairs Cardiac Adaptation to Pressure Overload [Abstract]. *Diabetes*, 55(Supp 1), A303.
46. Mazumder PK, Sloan C, Rasmussen I, **Abel ED**. (2006). Vascular Endothelial KO of Insulin Receptors Confirm a Critical Role of Endothelial Signaling in Regulating Myocardial Glucose Utilization [Abstract]. *Circulation* *Circulation*, 112(II), 135.

## **UNPUBLISHED POSTER PRESENTATIONS**

### **ORAL PRESENTATIONS**

#### **Keynote/Plenary Lectures**

##### International

- 1999 Glucose transporters and the heart: Recent insight from transgenic and knockout mice. Plenary presentation. 14th Annual Meeting of the Federation of Experimental Biological Societies of Brasil (FESBE), Caxambu, Brasil.
- 2002 Metabolic and Functional Consequences of Insulin Resistance in the Heart. Plenary Lecture. 2nd International Workshop on Insulin Resistance. San Diego, CA.

##### National

- 1998 Functional consequences of glucose transporter deficiency in the heart. Plenary Presentation. Robert Wood Johnson Foundation, Minority Medical Faculty Development Program, 15th Anniversary Meeting, Princeton, NJ.
- 2001 Van Meter Award Lecture. "Role of Thyroid Hormone Receptor Isoforms in the Regulation of the Hypothalamic Pituitary Thyroid Axis." Plenary Lecture. American Thyroid Association 73rd Annual Meeting, Washington D.C.

##### Local/Regional

- 1998 Thyroid Hormone: Old hormone New Insights. Plenary presentation. Scientific Session 50th Anniversary Symposium University of the West Indies, Kingston Jamaica.

#### **Meeting Presentations (Not Published Abstracts and Not Unpublished Posters)**

##### International

- 1997 Transgenic mice with pituitary resistance to thyroid hormone. Symposium Presentation. Third International Workshop on Resistance to Thyroid Hormone. Aspen, Colorado.
- 1998 GLUT4 and Diabetes: Novel insights from tissue specific knockout mice. Symposium Presentation. International Motor City Diabetes Symposium, Detroit, Michigan.
- 2001 Divergent phenotypes of cardiac insulin resistance: insights from cardiac selective knockout mice. Symposium Presentation. Satellite Symposium of the XVII World Congress of the International Society for Heart Research: "Regulation of Energy Metabolism in the Heart and Vasculature." Banff, Alberta Canada.
- 2004 Myocardial Insulin Resistance Impairs Mitochondrial Function and the Metabolic Adaptation of the Heart to Pressure Overload Hypertrophy. Symposium Lecture. Symposium on Metabolism in Hypertrophic Remodelling of the Stressed Myocardium. XVIII World Congress of the International Society for Heart Research (ISHR). Brisbane, Australia.
- 2004 Insulin Signaling Modulates Mitochondrial Integrity and the Adaptation of the Heart to Ischemia and Hypertrophy in vivo. Symposium Lecture. ISHR Satellite 2004 South Africa - Cellular Injury in Ischemia. Symposium on Energy Metabolism in Cellular Injury and Ischemia. Kruger Park, South Africa.
- 2004 Insulin Signaling, Fatty Acid Utilization and Mitochondrial Biogenesis. Symposium Lecture. Second Annual Meeting: Society for Heart and Vascular Metabolism. Montebello, Quebec, Canada.
- 2004 Mitochondrial Dysfunction and Diabetic Cardiomyopathy. Symposium Lecture. Endocrinology Canada-International Symposium on the Science of Diabetes Complications: Implication for Novel Therapy. Toronto, Canada.

##### National

- 1994 Tissue specific ablation of GLUT4 using loxP Cre-recombinase gene targeting. Symposium Presentation. Robert Wood Johnson Foundation, Minority Medical Faculty Development Program, Annual Meeting, (Princeton NJ).
- 1998 Transgenic models of thyroid hormone resistance. Symposium Presentation. 80th annual meeting of the Endocrine Society, New Orleans, LA.

- 2002 Dissecting metabolic regulation in the heart using conditional gene targeting. Symposium Presentation. 35th annual meeting of the Society for the Study of Reproduction-Minisympodium on "Conditional Gene Disruption in the Mouse: Concepts and Applications." Baltimore, MD.
- 2003 Meet the Professor Session, Ordering and Interpreting Thyroid Function Tests. 85th Annual Meeting of the Endocrine Society, Philadelphia PA.
- 2004 Cardiac Insulin Resistance In Obesity. Symposium Lecture. Symposium on Insulin Signaling, ENDO 2004, 86th Annual Meeting of the Endocrine Society. New Orleans, LA.

#### Local/Regional

- 1997 Isoform specific expression of mutant thyroid hormone receptors in the pituitaries of transgenic mice. Symposium Presentation. 5th Annual meeting of the Boston Area Receptor Society.
- 1998 Targeted disruption of the TRB2 locus in mice. Symposium Presentation. 6th Annual meeting of the Boston Area Receptor Society.
- 1998 Brigham and Women's Hospital, Thorne 13, Cardiovascular Research Seminar. Title: Glucose transporter and the heart.
- 1998 Beth israel Deaconess Medical Center, Cardiovascular Research Seminar. Title: Cardiomyopathy and glucose transporter knockout mice.
- 2001 University of Utah School of Medicine, Biochemistry Research Seminar. Title: Substrate Metabolism and the Regulation of Cardiac Size.
- 2002 University of Utah School of Medicine, Human Molecular Biology and Genetics Research in Progress Series. Title: Modeling the Metabolic Pathogenesis of the Diabetic Cardiomyopathy using Conditional Gene Targeting.
- 2002 University of Utah Cardiology Research Seminar. Title: Insulin Resistance and Cardiac Dysfunction in Diabetes and Obseity.
- 2002 University of Utah Oncological Science Research In Progress Seminar. Title: Coordinate Regulation of Cardiac Size and Metabolism by Insulin Signaling.
- 2002 University of Utah Bioscience Undergraduate Research Program Seminar. Title: Insulin Signaling in the Heart.
- 2003 University of Utah Department of Biochemistry Research in Progress. Title: Sorting out Insulin Signaling in the Heart Using Gene Targeted Mice.
- 2004 University of Utah Department of Biochemistry Research in Progress. Title: Insulin Signaling in the Heart, Novel Mechanisms and Consequences.

#### **Invited/Visiting Professor Presentations**

##### International

- 1999 Elucidation from transgenic mice of the role of glucose tranporters in the heart. Invited Lecture. Post Graduate Seminar in biology. Centro Biomedico, Instituto de Biologia Roberto Alcantara Gomes, Universidade do Estado do Rio de Janeiro. Rio de Janeiro Brasil.
- 1999 Elucidation from transgenic mice of the role of glucose tranporters in the heart. Invited Lecture. Lecture program of the Carlos Chagas Filho Biophysics Institute at the Federal University of Rio de Janeiro, Rio de Janeiro Brasil.
- 2002 Genetic analysis of the contribution of insulin signaling and glucose transporters to the regulation of cardiac size and metabolism. Invited Lecture. Genetics of Cardiovascular and Metabolic Disease Workshop. University of Lausanne, Switzerland.
- 2003 Insulin Resistance Leads to Multiple Mitochondrial Defects in the Mouse Heart. Invited Presentation. First Annual Meeting: Society for Heart and Vascular Metabolism. Freiburg, Germany.
- 2003 Impaired Cardiac Insulin Signaling Leads to Early Cardiac Failure in Response to Pressure Overload Hypertrophy. Invited Presentation. First Annual Meeting: Society for Heart and Vascular Metabolism. Freiburg, Germany.
- 2003 Transcriptional and Metabolic Profiling of GLUT4 Deficient Hearts. Invited Lecture. Research Seminar, University of Oxford, University Laboratory of Physiology, Oxford, U.K..
- 2003 Regulation Mitochondrial Integrity and Metabolic Plasticity in the Heart by Insulin Signaling. Invited Lecture. Research Seminar, Department of Biology, York University, Toronto, Canada.

- 2003 Regulation of cardiac substrate utilization and mitochondrial function by insulin and PI-3 Kinase. Invited Lecture. Research Seminar, Department of Physiology, University of Toronto, Toronto, Canada.
- 2004 Myocardial Insulin Resistance and Cardiac Dysfunction in Obesity and Diabetes. Invited Lecture. Heart and Stroke/Richard Lewar Centre of Excellence Distinguished Visiting Professor, University of Toronto, Toronto, Canada.
- 2004 Mechanism by Which Insulin Resistance Leads to Mitochondrial Dysfunction in Cardiac Muscle. Invited Lecture. Keystone Symposium on Diabetes Mellitus: Molecular Signaling, Genes and Therapeutics. Banff Canada.
- 2004 Metabolic Mechanisms for Cardiac Dysfunction in Diabetes. Invited Symposium Lecture. 6<sup>th</sup> Symposium on the Molecular and Physiological Aspects of Type II Diabetes and Obesity, Nobel Forum, Karolinska Institute, Stockholm Sweden.
- 2004 Altered Myocardial Insulin Signaling and Cardiac Dysfunction in Diabetes and Obesity. Invited Lecture. Department of Physiology, University of Pretoria, Pretoria, South Africa.
- 2004 Myocardial Insulin Resistance, Mechanisms and Consequences. Invited Lecture. Hatter Institute for Cardiology Research, University of Cape Town Faculty of Health Sciences, Cape Town, South Africa.
- 2004 Multiple mechanisms by which insulin resistance impairs the myocardial adaptation to ischemia and hypertrophy. Invited Lecture. Robarts Research Institute, University of Western Ontario, London, Ontario Canada.
- 2005 Mechanisms Responsible for Diabetic Cardiomyopathy. Invited Lecture. CIHR/HSFC New Frontiers program - Cardiovascular Complications of Diabetes. Toronto Canada .
- 2005 Insulin Resistance and Mitochondrial Dysfunction in Cardiac and Skeletal Muscle. Invited Speaker, University of Montreal - Endocrinology Rounds. Montreal Canada.
- 2005 Insulin Signaling – a Key Regulator of Cardiac Mitochondrial Phenotypes and the Metabolic Adaptations to Ischemia and Hypertrophy. Invited Lecture. Montreal Heart Institute - Cardiology Research Rounds. Montreal, Canada
- 2005 .
- 2005 Paracrine Regulation of Cardiac Metabolism by Endothelial Insulin Signaling – Potential Role of the Nitric Oxide/Cyclic -GM- Pathway. Invited Presentation. Third Annual Meeting Society for the Heart and Vascular Metabolism. Oxford. UK
- 2005 .
- 2005 Type 2 Diabetes 20-years later. Invited Lecture. University of the West Indies Class of 1985 Scientific Symposium. Montego Bay Jamaica.
- 2005 Mechanisms of acute and chronic regulation of myocardial substrate utilization by insulin. Invited Lecture. University of Alberta, Cardiovascular Research Group, Department of Pharmacology Research Seminar: Edmonton, Alberta.
- 2006 Regulation of myocardial mitochondrial metabolism by insulin and PI3kinase signaling. Invited Lecture. James Hogg iCAPTURE Center for Pulmonary and Cardiovascular Research. St. Paul's Hospital, University of British Columbia..
- 2006 Regulation of Myocardial Mitochondrial Oxidative Capacity by PI3 Kinase and Akt. Invited Lecture Keystone Symposium on Diabetes Mellitus and the Control of Cellular Energy Metabolism. Vancouver, Canada
- 2006 .
- 2006 The role of Mitochondria in the Pathogenesis of Obesity and Diabetes. Invited Lecture. Endocrinology Grand Rounds. Chung-Ang University Hospital, Seoul South Korea,.
- 2006 Using Knockout Mice to Unravel the Regulation of Vascular Function and Cardiac Metabolism by Insulin. Invited Lecture. Research Conference Department of Cardiology, Severance Hospital Yonsei University School of Medicine. Seoul, South Korea
- 2006 .
- 2006 Heart Disease in Diabetes - A Conspiracy of Insulin Resistance, Mitochondrial Dysfunction and Oxidative Stress. Invited Lecture Severance Hospital Diabetes Center 10th Anniversary International Symposium on Diabetes Mellitus. Yonsei University, Seoul South Korea
- 2006 .

- 2006 PI3-Kinase Regulates Myocardial Mitochondrial Fatty Acid Utilization via Modulation of PGC 1beta Expression. Invited Presentation. International Society for Heart Research - 25th European Section Annual Meeting. Tromso, Norway.
- 2006 Nitric Oxide – Integrating Myocardial Insulin Signaling and Metabolism. Invited Symposium Lecture. 28th Annual International Society for Heart Research, North American Section Meeting, Toronto Canada.
- 2007 Oxidative Stress and Mitochondrial Uncoupling in the Pathogenesis of Obesity and its Cardiovascular Complications. Invited Lecture. Hatter Institute for Cardiology Research, University of Cape Town Faculty of Health Sciences, Cape Town, South Africa,.

#### National

- 2001 Contribution of impaired insulin signaling or reduced glucose utilization to the metabolic abnormalities in the diabetic heart. Invited Lecture. Seventh Annual AstraZeneca Cardiovascular Young Investigators' Forum. Jackson Hole WY.
- 2002 Impaired insulin signaling and reduced glucose utilization in the pathogenesis of cardiac dysfunction in diabetes. Invited Lecture. 8th Annual AstraZeneca Cardiovascular Young Investigators' Forum. San Francisco, CA.
- 2003 Transcriptional and Metabolic Profiles of GLUT4 Deficient Hearts. Invited Lecture. 2003 FASEB Summer Research Conference - Glucose Transporter Biology, Snowmass CO.
- 2003 Insulin Signaling and Mitochondrial Dysfunction in Diabetic Cardiomyopathy. Invited Lecture. 7th Annual Scientific Meeting of the Heart Failure Society of America, Las Vegas, NV.
- 2004 Mitochondrial Dysfunction and Insulin Resistance in the Myocardium in Obesity and Diabetes. Invited Lecture. Scientific Research Seminar, Amylin Pharmaceuticals, Inc. San Diego, CA.
- 2005 New Insights into the Regulation of Mitochondrial Function and Myocardial Substrate Metabolism, by Insulin. **B** Cardiology Research Seminar, University of Texas-Houston.
- 2005 Insulin Signaling in the Heart – Multiple Layers of Metabolic Regulation. Invited Lecture. Columbia University School of Medicine. Research Seminar. Division of Preventative Medicine and Nutrition, Cardiology Grand Rounds, New York, NY
- 2005 Signaling Pathways that mediate or modulate insulin-stimulated glucose utilization in the heart. Invited Lecture. 2005 FASEB Summer Research Conference - Glucose Transporter Biology. Snowmass CO.
- 2005 Diabetes and the heart: a conspiracy of mitochondrial dysfunction, oxidative stress and insulin resistance. Invited Lecture. Sanofi Aventis, 2005 RML Preceptorship, Phoenix Arizona,.
- 2006 Regulation of Mitochondrial Function by Insulin and PI3Kinase. Symposium Lecture. Fourth Annual Meeting: Society for Heart and Vascular Metabolism. Semiahmoo, Washington..
- 2006 Cardiac Dysfunction in Obesity and Diabetes, the Mitochondrial Connection. Invited Lecture. Eli Lilly and Co. Indianapolis, Indiana.
- 2006 Insulin/Akt Signaling in Cardiac Hypertrophy and Failure. Invited Symposium Lecture. American Heart Association 2006 Scientific Sessions –Sunday Morning Program, Symposium on Energetics in Heart Failure, Pathology and Therapies. Chicago, IL,.
- 2007 Integration of myocardial Growth and Metabolism by P13 Kinase. State of the Art Lecture - Western Association for Medical Research, Carmel, CA.
- 2007 Why the Heart Needs Insulin. Invited Lecture. Cardiovascular Club Western Association for Medical Research Carmel, CA,.
- 2007 Myocardial Mitochondrial Dysfunction in the Metabolic Syndrome - Molecular Mechanisms. Keystone Meeting on Metabolic Syndrome and Cardiovascular Risk, Steamboat Springs CO..

#### Local/Regional

- 1998 Thyroid hormone action in the pituitary: Novel insights from transgenic and knockout mice. Invited Lecture. Endocrinology Research Seminar, University of Chicago.
- 1998 Glucose transporters and the heart. Invited Lecture. Endocrinology and Metabolism Research Seminar, Northwestern University School of Medicine.
- 1998 Regulation of the hypothalamic-pituitary-thyroid axis: Novel insight from transgenic and gene-knockout mice. Invited Lecture. Boston University, Department of Biology: Physiology, Endocrinology and Neuroscience seminar.

- 1999 Glucose transporters and their role in cardiac function. Invited Lecture. Research Seminar, Division of Endocrinology and Molecular Medicine, University of Kentucky School of Medicine (Lexington).
- 2000 Phenotypes of cardiac insulin resistance. Invited Lecture. Cardiology Research Seminar, University of Texas-Houston.
- 2001 Phenotypes of cardiac insulin resistance. Invited Lecture. University of Pennsylvania, Diabetes and Endocrinology Research Seminar.
- 2002 Modeling the pathogenesis of metabolic changes in the diabetic heart using conditional gene targeting. Invited Lecture. Department of Cell Biology research Seminar, Brigham Young University.
- 2002 Insulin Resistance in the Heart. Invited Lecture. Research Seminar, Joslin Diabetes Center, Boston MA.
- 2003 Insulin Resistance in the Heart. Invited Lecture. Cardiology Research Seminar, University of Texas-Houston, Houston TX.
- 2003 Cardiac Insulin Resistance Plays a Key Role in the Pathogenesis of Cardiac Dysfunction in Diabetes and Obesity. Invited Lecture Physiology and Pharmacology research Seminar, West Virginia University, Morgantown WV.
- 2003 Insulin Resistance in Cardiac Muscle and Heart Disease in Diabetes and Obesity. Invited Lecture. Morehouse School of Medicine Minority Biomedical Research Support Program Interdisciplinary Seminar Series. Atlanta, GA.
- 2003 Impaired Myocardial Insulin Signaling and Cardiac Dysfunction in Diabetes. Invited Lecture. Cardiovascular Breakfast Club, Department of Pathology, University of Washington, Seattle, WA.
- 2003 Insulin Resistance in the Heart. Invited Lecture. Cardiovascular Research Seminar, Washington University School of Medicine in St. Louis, MO.
- 2004 Glucose Transport and Mitochondrial Maladaptation in Diabetic Cardiomyopathy. Invited Lecture. Department of Physiology, Case Western Reserve University, Cleveland, OH.
- 2004 Insulin Resistance and Mitochondrial Dysfunction in the Heart. Invited Lecture. American Federation for Clinical Research, Western Regional Meeting, Carmel, CA.
- 2004 Myocardial Insulin Resistance and Mitochondrial Dysfunction in obesity and Diabetes. Invited Lecture. Association of Multicultural Students and the Diabetes Research and Training Center, University of Michigan, Ann Arbor MI.
- 2004 The Diabetic Heart - Starvation in the Face of Plenty. Invited Lecture. Cardiovascular Research Institute Seminar Series, Morehouse School of Medicine, Atlanta, GA.
- 2007 Growth Factors and Insulin in the Regulation of Cardiac Growth and Metabolism. Department of Pharmacology Seminar Series. Case Western Reserve University, Cleveland, OH..

### **Grand Rounds Presentations**

- 1996 -2000 Director Endocrine Grand Rounds Series. Attended by 25-20 persons including, medical students, residents, fellows, post docs and faculty. 1 hour per week. 10 hours/year in preparation and planning
- 2001 University of Utah School of Medicine, Internal Medicine Grand Rounds. Title: Metabolic Basis for Diabetic Heart Disease
- 2002 Metabolic Mechanisms for Cardiac Dysfunction in Diabetes and Obesity. Invited Lecture. Endocrine Grand Rounds, Beth Israel Deaconess Medical Center, Boston MA
- 2002 The role of cardiac insulin resistance in the pathogenesis of heart disease in obesity and diabetes. Invited Lecture. Endocrine Grand Rounds, University of California San Diego, San Diego CA
- 2004 Insulin Resistance and Mitochondrial Dysfunction in Cardiac and Skeletal Muscle. Invited Lecture. University of Western Ontario, City Wide Endocrinology Grand Rounds. London, Ontario Canada
- 2005 Insulin Resistance and Mitochondrial Dysfunction in the Heart, Invited Lecture, Endocrinology Grand Rounds, University of Virginia, Charlottesville, VA February 2005
- 2005 Insulin Signaling: A Key Regulator of Cardiac Mitochondrial Phenotypes and the Metabolic Adaptations to Ischemia and Hypertrophy. Invited Lecture Yale University School of Medicine, Cardiology, Grand Rounds. New Haven, CT
- 2006 The role of Mitochondria in the Pathogenesis of Obesity and Diabetes. Invited Lecture. Endocrinology Grand Rounds. Chung-Ang University Hospital, Seoul South Korea

2007 Mitochondria at the Cross Roads of Obesity, Diabetes and Cardiovascular Disease, Invited Lecture.  
Pat Usher Memorial Lecture - Endocrinology Grand Rounds, Division of Endocrinology  
Metabolism and Diabetes, Beth Israel Deaconess Medical Center, Harvard Medical School.

**Industrial Presentations**

2005 Sanofi Aventis. Diabetes and the heart; a conspiracy of mitochondrial dysfunction, Oxidative stress  
and insulin resistance, Invited Lecture, RML Preceptorship, Phoenix, AZ  
2006 Eli Lilly National. Cardiac Dysfunction in Obesity and Diabetes, the Mitochondrial Connection,  
Invited Lecture, Indianapolis, IN

**Outreach Presentations**

**OTHER SCHOLARLY ACTIVITY**