

Joon Young Kim, Ph.D.

Assistant Professor
Department of Exercise Science, School of Education
Syracuse University

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Education

Doctor of Philosophy 08/2009 - 05/2015

Kinesiology program (Concentration - Exercise Physiology),

School of Nutrition and Health Promotion, Arizona State University, Tempe, AZ

Committee chair: Gabriel Q. Shaibi

Committee members: Lawrence J. Mandarino, Dawn K. Coletta, and Elena A. De Filippis

Dissertation title: Novel Biomarkers and Genetic Variants for Type 2 Diabetes in Latinos

Bachelor of Science 03/2002 - 08/2008

Department of Physical Education, College of Sciences in Education, Yonsei

University, Seoul, Korea

Mentor: Han J. Lee

Professional Positions

Assistant Professor 08/2019 – present

Department of Exercise Science, School of Education, Syracuse University,
Syracuse, NY

NIH/NIDDK T32 Postdoctoral Scholar 07/2017 - 06/2019

Center for Pediatric Research in Obesity and Metabolism, UPMC Children's Hospital
of Pittsburgh Department of Medicine, Division of Endocrinology and Metabolism,

University of Pittsburgh School of Medicine, University of Pittsburgh, Pittsburgh, PA

Primary mentor: Silva Arslanian

Co-mentors: Frederico Toledo, Robert O'Doherty, and Erin Kershaw

Postdoctoral Associate

06/2015 - 06/2017

Department of Pediatrics, School of Medicine, University of Pittsburgh, Division of Weight Management and Wellness, UPMC Children's Hospital of Pittsburgh, Pittsburgh, PA

Mentor: Silva Arslanian

Graduate Research Assistant

08/2009 - 05/2015

Kinesiology program (Concentration - Exercise Physiology), School of Nutrition and Health Promotion, Arizona State University, Tempe, AZ

Exercise Physiologist

08/2008 - 05/2009

Myongii Hospital and Kwandong University Medical Center, South Korea

Publications

(* Denotes Visiting scholar/Fellow/Trainee whom I co-mentored)

Peer-Reviewed Publications:

1. **Kim JY**, Tfayli H, Bacha F, Lee S, Michaliszyn SF, Yousuf S*, Gebara N*, Arslanian S. β -cell Function, Incretin Response, and Insulin Sensitivity of Glucose and Fat Metabolism in Obese Youth: Relationship to OGTT Time to Glucose Peak. *Pediatr Diabetes*. 2019; Nov. [Epub ahead of print] [PMID: 31677208]
2. **Kim JY**, Bacha F, Tfayli H, Michaliszyn SF, Yousuf S*, Arslanian S. Adipose Tissue Insulin Resistance in Youth on the Spectrum From Normal Weight to Obese and From Normal Glucose Tolerance to Impaired Glucose Tolerance to Type 2 Diabetes. *Diabetes Care*. 2019;42(2):265-272. [PMID: 30455334] [PMC6341282]
3. TODAY (Treatment Options for Type 2 Diabetes in Adolescents and Youth) Study Group. Arslanian S, El Ghormli L, **Kim JY**, Chan C, Bacha F, Ismail H, Tryggstad J, Katz L, Levitsky L, White N. The Shape of the Glucose Response Curve during an Oral Glucose Tolerance Test: Forerunner of Heightened Glycemic Failure Rates and Accelerated Decline in β -cell Function in TODAY. *Diabetes Care*. 2019;42:164-172. [PMID: 30455329] [PMC6300703]
4. Hwang J, **Kim JY**[#]. Nonalcoholic Fatty Liver Disease and Abdominal Fat Accumulation According to Vitamin D Status in Patients with Type 2 Diabetes (J Obes Metab Syndr 2018;27:53-60). *J Obes Metab Syndr*. 2018;27:125-127. [PMID: 31089552] [PMC6489453] [#]**Corresponding author**

5. Arslanian S[§], **Kim JY**[§], Nasr A*, Bacha F, Tfayli H, Lee S, Toledo F.G.S. Insulin Sensitivity Across the Lifespan from Obese Adolescents to Obese Adults with Impaired Glucose Tolerance: Who is Worse Off? *Pediatr Diabetes*. 2018;19(2):205-211. [PMID: 28726334] [§]**Co-first authors**
6. **Kim JY**, Tfayli H, Michaliszyn SF, Arslanian S. Impaired Lipolysis, Diminished Fat Oxidation and Metabolic Inflexibility in Obese Girls with Polycystic Ovary Syndrome. *J Clin Endocrinol Metab*. 2018;103(2):546-554. [PMID: 29220530] [PMC5800835]
7. **Kim JY**, Nasr A*, Tfayli H, Bacha F, Michaliszyn SF, Arslanian S. Increased Lipolysis, Diminished Adipose Tissue Insulin Sensitivity and Impaired β -cell Function Relative to Adipose Tissue Insulin Sensitivity in Obese Youth with Impaired Glucose Tolerance (IGT). *Diabetes*. 2017;66(12):3085-3090. [PMID: 28887312] [PMC5697947]
8. **Kim JY**, Tfayli H, Michaliszyn SF, Lee S, Nasr A*, Arslanian S. Anti-Mullerian Hormone in Obese Adolescent Girls with Polycystic Ovary Syndrome. *J Adolesc Health*. 2017;60(3):333-339. [PMID: 27998701] [PMC5326592]
9. Day SE, Coletta RL, **Kim JY**, Garcia LA, Campbell LE, Benjamin TR, Roust LR, De Filippis EA, Mandarino LJ, Coletta DK. Potential Epigenetic Biomarkers of Obesity Related Insulin Resistance in Human Whole Blood. *Epigenetics*. 2017;12(4):254-263. [PMID: 28106509] [PMC5398771]
10. **Kim JY**, Michaliszyn SF, Nasr A*, Lee S, Tfayli H, Tamara S. Hannon KS, Fida B, Arslanian S. The Shape of the Glucose Response Curve during an Oral Glucose Tolerance Test Heralds Biomarkers of Type 2 Diabetes Risk in Obese Youth. *Diabetes Care*. 2016;39(8):1431-1439. [PMID: 27293201] [PMC4955931]
11. Day SE, Coletta RL, **Kim JY**, Campbell LE, Benjamin TR, Roust LR, De Filippis EA, Dinu V, Shaibi GQ, Mandarino LJ, Coletta DK. Next Generation Sequencing Methylation Profiling of Subjects with Obesity Identifies Novel Gene Changes. *Clin Epigenetics*. 2016;8:77. [PMID: 27437034] [PMC4950754]
12. **Kim JY**, Tfayli H, Michaliszyn SF, Lee S, Arslanian S. Distinguishing Characteristics of Metabolically Healthy Versus Metabolically Unhealthy Obese Adolescent Girls with Polycystic Ovary Syndrome. *Fertil Steril*. 2016;105(6):1603-1611. [PMID: 26921624] [PMC4893886]

13. **Kim JY**, DeMenna JT*, Puppala S, Chittoor G, Schneider J, Duggirala R, Mandarino LJ, Shaibi GQ, Coletta DK. Physical Activity and FTO Genotype by Physical Activity Interactive Influences on Obesity. *BMC Genet.* 2016; 17:47. [PMID: 26908368] [PMC4765034]
14. **Kim JY**, Goran MI, Toledo-Corral CM, Weigensberg MJ, Shaibi GQ. Comparing Glycemic Indicators of Prediabetes: A prospective study of obese Latino Youth. *Pediatr Diabetes.* 2015;16(8):640-643. [PMID: 25385555]
15. **Kim JY**, Campbell LE, Shaibi GQ, Coletta DK. Gene Expression Profiling and Association of Circulating Lactoferrin Level and Obesity-related Phenotypes in Latino Youth. *Pediatr Obes.* 2015;10(5):338-344. [PMID: 25394788]
16. Shaibi GQ, Ryder JR, **Kim JY**, Barraza E. Exercise for Obese Youth: Refocusing attention from weight loss to health gains. *Exerc Sport Sci Rev.* 2015;43(1):41-47. [PMID: 25390295] [PMC4317400]
17. DeMenna JT, Puppala S, Chittoor G, Schneider J, **Kim JY**, Shaibi GQ, Duggirala R, Mandarino LJ, Coletta DK. Association of Common Genetic Variants with Diabetes and Metabolic Syndrome Related Traits in the Arizona Insulin Resistance Registry: A Focus on Mexican American Families in the Southwest. *Human Heredity.* 2014;78(1):47-58. [PMID: 25060389] [PMC4910511]
18. **Kim JY**, Goran MI, Toledo-Corral CM, Weigensberg MJ, Choi M, Shaibi GQ. One Hour Glucose during an Oral Glucose Challenge Prospectively Predicts β -cell Deterioration and Prediabetes in Obese Hispanic Youth. *Diabetes Care.* 2013;36(6):1681-1686. [PMID: 23315601] [PMC3661793]
19. **Kim JY**, Coletta DK, Mandarino LJ, Shaibi GQ. Glucose Response Curve and Type 2 Diabetes Risk in Latino Adolescents. *Diabetes Care.* 2012;35(9):1925-1930. [PMID: 22751962] [PMC3424993]
20. Jekal Y, Lee MK, Park S, Lee SH, **Kim JY**, Kang JU, Naruse M, Kim SH, Kim SH, Chu SH, Suh SH, Jeon JY. Association between Obesity and Physical Fitness, and Hemoglobin A1c Level and Metabolic Syndrome in Korean Adults. *Korean Diabetes J.* 2010;34(3):182-190. [PMID: 20617079] [PMC2898932]

[Complete List of Published Work in my Bibliography](#)

Manuscripts Under-Review

1. Saleh M*, **Kim JY**, March C, Gebara NY*, Arslanian S. Youth Type 2 Diabetes: Risk factors and Prevalence of Dysglycemia. (Diabetes Care)

Manuscripts Under-Development

1. **Kim JY**, Gebara NY*, Bacha F, Tfayli H, Michaliszyn SF, Arslanian S. The Shape of the Glucose Response Curve during an Oral Glucose Tolerance Test in Obese Youth with Diabetes.
2. Gebara NY*, Kim JY, Tapanainen JS, Morin-Papunen LC, Arslanian S. Metabolic Inflexibility in Obese versus Lean Women with Polycystic Ovary Syndrome (PCOS): Is PCOS Status or Adiposity the Critical Factor?

Published/Presented Abstracts

1. **Kim JY**, Gebara NY*, Tfayli H, Bacha F, Arslanian S. Degree of β -cell impairment and its translation to clinically meaningful alterations in glycemia in obese youth from normal glucose tolerance (NGT) to prediabetes to type 2 diabetes (T2D). Oral Presentation at the ISPAD (International Society for Pediatric and Adolescent Diabetes), Boston, MA. 2019.
2. **Kim JY**, Gebara NY*, Tfayli H, Bacha F, Arslanian S. OGTT-Glucose-response-curve (GRC) in Islet Cell Antibody-Positive (Ab+) vs. -Negative (Ab-) Obese Youth Clinically Diagnosed with Type 2 Diabetes (CDX-T2D). Presented at the American Diabetes Association, 79th Scientific Sessions, San Francisco, CA. Diabetes 2019 Jun; 68 (Suppl 1): 1331-P, 2019.
3. Gebara NY*, **Kim JY**, Tapanainen JS, Morin-Papunen, Arslanian S. Metabolic Inflexibility in Obese versus Lean Women with Polycystic Ovary Syndrome (PCOS): Is PCOS Status or Adiposity the Critical Factor? Oral Presentation at the Endocrine Society, 101st Annual Meeting and Expo, New Orleans, LA. 2019.
4. **Kim JY**, Tfayli H, Bacha F, Michaliszyn SF, Arslanian S. Adipocyte Insulin Resistance Index in Youth Along the Span of Glycemia from Normal Glucose Tolerance (NGT) to Impaired Glucose Tolerance (IGT) to Type 2 diabetes (T2D). Oral Presentation at the American Diabetes Association, 78th Scientific Sessions, Orlando, FL. Diabetes 67 (Supp 1): A90(338-OR), 2018.

5. **Kim JY**, Tfayli H, Bacha F, Michaliszyn SF, Arslanian S. Time to Glucose Peak during Oral Glucose Tolerance Test (OGTT) and Pathophysiological Biomarkers of Type 2 Diabetes in Obese Youth. Presented at the American Diabetes Association, 78th Scientific Sessions, Orlando, FL. Diabetes 67 (Supp 1): A358(1335-P), 2018.
6. Saleh M*, **Kim JY**, March C, Yousuf S*, Arslanian S. Risk factors of Youth Type 2 Diabetes (Y-T2DM) and Prevalence of Dysglycemia (DG). Oral Presentation at the American Diabetes Association, 78th Scientific Sessions, Orlando, FL. Diabetes 67 (Supp 1): A91(343-OR), 2018.
7. **Kim JY**, Tfayli H, Michaliszyn SF, Arslanian S. Metabolic Inflexibility, Impaired Lipolysis and Diminished Fat Oxidation in Obese Girls with Polycystic Ovary Syndrome (PCOS). Oral Presentation at the Endocrine Society, 100th Annual Meeting and Expo, Chicago, IL. 2018. [Endocrine Society Outstanding Abstract Award]
8. Arslanian S, **Kim JY**, Nasr A*, Bacha F, Tfayli H, Lee S, Toledo F.G.S. Insulin sensitivity in obese adolescents versus obese adults with prediabetes: who fares worse? Presented at the 43rd Annual Conference of the International Society for Pediatric and Adolescent Diabetes, Innsbruck, Austria, 2017.
9. Arslanian S, **Kim JY**, Nasr A*, Bacha F, Tfayli H, Lee S, Toledo F.G.S. Insulin Sensitivity Across the Lifespan from Obese Adolescents to Obese Adults with Impaired Glucose Tolerance (IGT): Who is Worse Off? Late Breaking Abstract at the American Diabetes Association, 77th Scientific Sessions, San Diego, CA. (183-LB), 2017.
10. **Kim JY**, Nasr A*, Tfayli H, Bacha F, Michaliszyn SF, Arslanian S. Beta-cell Function (BCF) Relative to Adipose Tissue Insulin Sensitivity (ATIS) Across the Spectrum of Glucose Tolerance in Obese Youth. Presented at the American Diabetes Association, 77th Scientific Sessions, San Diego, CA. Diabetes 66 (Supp 1): A364(1360-P), 2017.
11. Michaliszyn SF, Kerns L, Tfayli H, Bacha F, **Kim JY**, Arslanian S. Visceral Adiposity Index (VAI) in Youth: A Biomarker of Metabolic Syndrome and Type 2 Diabetes (T2D). Presented at the American Diabetes Association, 77th Scientific Sessions, San Diego, CA. Diabetes 66 (Supp 1): A369(1379-P), 2017.

12. TODAY (Treatment Options for Type 2 Diabetes in Adolescents and Youth) Study Group. Arslanian S, **Kim JY**, El ghormli L, Chan C, Bacha F, Ismail H, Tryggestad J, Katz L, Levitsky L, White N. The Shape of the Glucose Response Curve during an Oral Glucose Tolerance Test (OGTT) Heralds Accelerated Decline in β -cell Function and Heightened Glycemic Failure Rates in TODAY. Presented at the American Diabetes Association, 77th Scientific Sessions, San Diego, CA. Diabetes 66 (Supp 1): A365(1362-P), 2017.
13. **Kim JY**, Lee S, Tfayli H, Fida B, Michaliszyn SF, Arslanian S. The Shape of the Glucose Response Curve during Oral Glucose Tolerance Test (OGTT) and Biomarkers of Type 2 Diabetes Risk in Obese Youth. Oral Presentation at the American Diabetes Association, 76th Scientific Sessions, New Orleans, LA. Diabetes 65: Supp (1) A66 (249-OR), 2016.
14. Day SE, Coletta RL, **Kim JY**, DeMenna JT, Campbell LE, Benjamin TR, Roust LR, De Filippis EA, Mandarino LJ, Coletta DK. Next Generation Sequencing Methylation Profiling in Lean and Obese with a Single Bout of Exercise. Presented at the American Diabetes Association, 76th Scientific Sessions, New Orleans, LA. Diabetes 65: Supp (1) A4 (13-OR), 2016.
15. **Kim JY**, Tfayli H, Michaliszyn SF, Lee S, Arslanian S. Distinguishing Characteristics of Metabolically Healthy Versus Metabolically Unhealthy Obese Adolescent Girls with Polycystic Ovary Syndrome (PCOS). Oral Presentation at the Endocrine Society, 98th Annual Meeting and Expo, Boston, MA. OR32-3, 2016.
16. **Kim JY**, Tfayli H, Michaliszyn SF, Lee S, Nasr A*, Arslanian S. Anti-Mullerian Hormone (AMH) in Obese Adolescent Girls with Polycystic Ovary Syndrome (PCOS): Cross-Sectional and Treatment-Associated Longitudinal Changes. Oral Presentation at the Endocrine Society, 98th Annual Meeting and Expo, Boston, MA. OR21-3, 2016.
17. **Kim JY**, Tfayli H, Michaliszyn SF, Lee S, Arslanian S. Characteristics of Metabolically Healthy (MHO) Versus Unhealthy Obese (MUHO) Adolescent Girls with Polycystic Ovary Syndrome (PCOS). Presented at the Androgen Excess & PCOS Society 13th Annual Meeting, Siracusa, Sicily, Italy, 2015.
18. Day SE, **Kim JY**, Coletta RL, Campbell LE, Roust LR, Dinu V, Mandarino LJ, Coletta DK. Next Generation Sequencing Methylation Profiling Interactions with Genetic Variation from Lean and Obese Subjects. Presented at the American Diabetes Association, 75th Scientific Sessions, Boston, MA. Diabetes 64: Supp (1) A465 (1794-P), 2015.

19. Campbell LE, Langlais PR, Day SE, **Kim JY**, Benjamin TR, De Filippis EA, Mandarino LJ, Madura II JA, Roust LR, Coletta DK. Weight Loss after Gastric Bypass Surgery in Human Obesity Reveals Novel Changes in Skeletal Muscle Proteome. Presented at the American Diabetes Association, 75th Scientific Sessions, Boston, MA. 2015.
20. **Kim JY**, Tangen SE, Campbell LE, DeMenna JT, Linan MK, Roust LR, Shaibi GQ, Mandarino LJ, Coletta DK. Acute Exercise Alters DNA Methylation in Human Skeletal Muscle. Presented at the TOS' Annual Meeting, ObesityWeekSM, Boston, MA. 2014.
21. **Kim JY**, Goran MI, Toledo-Corral CM, Weigensberg MJ, Choi M, Shaibi GQ. Predicting Progression to Prediabetes in Obese Latino Youth. Presented at the American Diabetes Association, 73th Scientific Session, Chicago, IL. Diabetes 62: Supp (1) A340 (1299-P), 2013.
22. **Kim JY**, Ryder JR, DeMenna JT, Coletta DK, Shaibi GQ. Physical Activity Moderates The Effect of FTO on Obesity. Oral Presentation at the American College of Sports Medicine, 60th Annual Meeting and 4th World Congress on Exercise is Medicine, Indianapolis, IN. Medicine & Science in Sports & Exercise, 45(5S): 527-528, 2013.
23. Brito E, Ortega R, Ryder JR, Miranda DN, **Kim JY**, Shaibi GQ. The Effect of a Community-Based Diabetes Prevention Program on Weight-Specific Quality of Life in Latino Adolescents. Presented at the American Association for the Advancement of Science Annual Meeting, Boston, MA. 2013.
24. Ryder JR, Vega-López S, **Kim JY**, Crespo N, Djejos C, Shaibi GQ. Insulin resistance independently predicts oxidized low-density lipoprotein in Latino youth. Presented at the American Heart Association Nutrition, Physical Activity and Metabolism / Cardiovascular Disease Epidemiology and Prevention Scientific Sessions, New Orleans, LA. Circulation, Mar 2013;127(Suppl 12):AP251, 2013.
25. Ryder JR, Vega-López S, **Kim JY**, Djejos C, Shaibi GQ. Association between insulin sensitivity and LDL particle size and cholesterol distribution in Latino youth. Presented at the 10th Annual World Congress on Insulin Resistance, Diabetes & Cardiovascular Disease, Los Angeles, CA. Endocrine Practice, Jan 2013; 19(1):14A, 2012.

26. **Kim JY**, Goran MI, Toledo-Corral CM, Weigensberg MJ, Choi M, Shaibi GQ. One Hour Glucose during an Oral Glucose Challenge Prospectively Predicts β -cell Deterioration and Prediabetes in Youth. Oral Presentation at the American Diabetes Association, 72th Scientific Sessions, Philadelphia, PA. Diabetes 61: Supp (1) A60 (227-OR), 2012.
27. **Kim JY**, Ryder JR, Ortega R, Burks H, Shaibi GQ. The Utility of a Simple Physical Activity Screener to Differentiate Cardiometabolic Risk in Latino Youth. Presented at the American College of Sports Medicine 59th Annual Meeting and 3rd World Congress on Exercise is Medicine, San Francisco, CA. Medicine & Science in Sports & Exercise, 44(5S): 644, 2012.
28. Shaibi GQ, Konopken Y, Ortega R, Hoppin E, **Kim JY**, Ertl J, Meyers J, Keller C, Castro FG. Effects of a Community-Based Diabetes Prevention Program for Overweight Latino Youth. Presented at the American Diabetes Association, 71st Scientific Sessions, San Diego, CA. Diabetes 60: Supp (1) A331 (1203-P), 2011.
29. **Kim JY**, Coletta DK, Vital V, Mandarino LJ, Shaibi GQ. Shape of Plasma Glucose Curve During an Oral Glucose Challenge is Associated with Diabetes Risk Factors in Youth. Presented at the American Diabetes Association, 71st Scientific Sessions, San Diego, CA. Diabetes 60: Supp (1) A346 (1259-P), 2011.

Research

Funded Grants

5 T32 DK 7052-43

07/2017 - 06/2019

(PI: Robert M O'Doherty; Awardee/Trainee: Joon Young Kim; Primary Mentor: Silva Arslanian)

Title: Investigating potential mechanisms responsible for the heightened insulin resistance in youth vs. adults.

The goal of this training grant is to support project/grant proposal that will investigate the contrast between adolescents and adults with respect to the key pathophysiological components of type 2 diabetes.

ASU Graduate Research Support program

11/2014 - 04/2015

(PI: Joon Young Kim)

Title: Candidate Single Nucleotide Polymorphisms Study

The goal of this research grant was to test genetic determinants of emerging clinical biomarkers of type 2 diabetes risk in Latinos. The responsibility of principal investigator was to set up and execute the genetic experiments and to analyze the data.

Not-Funded Grants**NIH/NIDDK K99/R00 Pathway to Independence Award**

02/2019

(PI: Joon Young Kim)

Title: Understanding The Mechanisms of Insulin Resistance in Obese Youth versus Adults with Impaired Glucose Tolerance [Impact Score: 40]

I, as a PI, propose to apply state-of-the-art in vivo metabolic studies, using stable isotopes and clamp experiments, together with fat biopsies and in vitro human adipocyte epigenetic studies to examine the underpinnings of developmental differences in the severe insulin resistance characteristic of obese youth with prediabetes compared with adults.

NIH/NIDDK R21: Pilot and Feasibility Clinical Trials in Diabetes, and Endocrine and Metabolic Disease

10/2016

(PI: Silva Arslanian, Postdoc: Joon Young Kim)

Title: Pancreatic Volume and Functional Beta-Cell Mass in Obese Youth Across the Spectrum of Glucose Tolerance

Ongoing Research Projects**Writing Group Member, NIH-funded Multicenter Clinical Trial, RISE (Restoring Insulin SEcretion)**

02/2019 – present

Contribution: Manuscript design, data analyses and interpretation, and manuscript development.

(co)Chairs: Dr. Silva Arslanian and Dr. Joon Young Kim

- Purpose: To provide head-to-head comparisons of the OGTT-glucose-response-curve between youth and adults with prediabetes or newly-onset type 2 diabetes, and to investigate its prospective utility for diabetes improvement or deterioration.
- 1st Title: Glucose Response Curves and Biomarkers of Pre-diabetes and Type 2 Diabetes in RISE: Youth-Adult Contrast (RISE P & P approved number: B05RC)
- 2nd Title: Glucose Response Curves in RISE: Longitudinal Patterns and Response to Beta Cell Preservation Interventions (RISE P & P approved number: E13RC)

Childhood Insulin Resistance

07/2015 - present

- Contribution: Study design, data analyses and interpretation, manuscript development.
- PI: Dr. Silva Arslanian (NICHD K24-HD01357 and R01-HD27503)
- Purpose: To understand pathophysiology of youth-onset prediabetes and type 2 diabetes, to investigate physical and metabolic characteristic of polycystic ovary syndrome in obese adolescent girls, and to identify novel biomarkers of diabetes risk in obese youth.

Completed Research Projects

Understanding The Mechanisms of Insulin Resistance in Obese Youth versus Adults with Impaired Glucose tolerance

07/2017 - 06/2019

- Contribution: Collect preliminary data (i.e., clamp-measured in vivo insulin sensitivity and inflammatory markers in obese youth vs. adults with prediabetes).
- PI: Robert M O'Doherty (5 T32 DK 7052-43)
- Awardee: Joon Young Kim
- Purpose: To submit an extramural grant (K99/R00 submitted in Feb, 2019, but not funded; Impact score: 40).

**Writing Group Member, NIH-funded Multicenter Clinical Trial, TODAY
(Treatment Options for Type 2 Diabetes in Adolescents and Youth)**

02/2016 - 11/2018

Contribution: Manuscript design, data analyses and interpretation, and manuscript development. Development of an automatic calculation tool to define various types of OGTT-glucose-response-curve.

Purpose: To test the utility of OGTT-glucose-response curve in obese youth with newly-onset type 2 diabetes.

Epigenetics and the Origin of Muscle Insulin Resistance in Humans

09/2012 - 05/2015

PI: Dawn K. Coletta (R01-DK094013)

Contribution: Development/management of the REDCap database, receiving muscle biopsies, extraction of DNA & RNA, and data analysis.

Purpose: To investigate epigenetic contributions (DNA methylation) to the molecular and clinical changes observed in obese insulin resistant individuals, and to examine the role of epigenetic factors in response to a single bout of aerobic exercise.

Study of Latino Adolescents at Risk (SOLAR) project

09/2011 - 12/2014

PI: Michael I. Goran (R01-DK59211)

Contribution: Secondary data analysis in relation to type 2 diabetes risk in Latino children and adolescents.

Purpose: To understand the natural history of type 2 diabetes in high-risk youth.

Arizona Insulin Resistance Registry

09/2011 - 05/2015

PI: Lawrence J. Mandarino (Health Research Alliance Arizona and the Center for Metabolic Biology at Arizona State University)

Contribution: Collection of bio-specimens; performance of biochemical assays (glucose and insulin concentrations during the standard 2-hr oral glucose tolerance test); data management (REDCap); generate ancillary study (Association between Genetic Variants and Cardiometabolic Risk); genotyping of SNPs; data analyses.

Purpose: To develop a community-based registry and biorepository to provide the research infrastructure that would encourage transdisciplinary research regarding the biocultural mechanisms of obesity-related health disparities in the Latino community of Phoenix, Arizona.

Association of Obesity, Cardiopulmonary Fitness and Muscular Endurance with HbA1c Level and Metabolic Syndrome Risk Factors

12/2008 - 03/2009

PI: Justin Y. Jeon (Yonsei University, Myongji Hospital, Kwandong University)

Contribution: Work as an exercise physiologist (physical fitness measurements).

Teaching

Assistant Professor, Syracuse University 08/2019 – Present

PPE 500: Pediatric Obesity - This course covers a variety of aspects related to pediatric obesity including the causes and consequences in terms of physiologic, genetic, psychosocial, environmental, and economic.

Graduate Teaching Associate, Arizona State University 08/2010 - 05/2015

KIN 494: Pediatric Obesity

KIN 340: Physiology of Exercise

KIN 334: Functional Anatomy/Kinesiology

Graduate Teaching Assistant, Arizona State University 08/2009 - 07/2010

KIN 101: Introduction to Kinesiology

KIN 494: Kinesiology Laboratory

Teaching Assistant, Yonsei University (South Korea) 08/2008 - 07/2009

UCL1101-09 & UCL1122-01: Tennis for international students

Teaching Internship; Bundang High School (South Korea) 04/2008 - 05/2008

Mentoring

Syracuse University

09/2019 – Present Jeremy Park, Undergraduate student (Department of Exercise Science)
Honors Capstone Project: The Role of Cannabidiol In Exercise Recovery

UPMC Children's Hospital of Pittsburgh (Primary Mentor: Silva Arslanian)

09/2018 – Present Nour Gebara, M.D., Visiting Research Scholar, Center for Pediatric Research in Obesity and Metabolism, UPMC Children's Hospital of Pittsburgh

01/2017 - 06/2019 Mohamed Saleh, M.D., Assistant Professor, Division of Pediatric Endocrinology, Metabolism and Diabetes Mellitus, UPMC Children's Hospital of Pittsburgh

01/2017 - 12/2018 Shahwar Yousuf, M.D., Visiting Research Scholar, Department of Pediatrics, University of Pittsburgh School of Medicine

01/2015 - 12/2017 Alexis Nasr, M.D., Visiting Research Scholar, Department of Pediatrics, University of Pittsburgh School of Medicine

Arizona State University (Primary Mentor: Dawn Coletta)

08/2013 - 05/2015 Jacob DeMenna (Honors student), Scholarly Project, University of Arizona College of Medicine – Phoenix. Project: Genotype Associations with Cardiometabolic Syndrome Related Traits in Mexican Americans

08/2012 - 05/2013 Jacqueline Cako (Honors student), ASU, School of Life Sciences

08/2011 - 05/2013 Micah Rappazzo, ASU, Biochemistry and Chemistry

06/2011 - 05/2012 Samantha Tangen, ASU, School of Life Sciences

Invited Presentations

1. Emerging Biomarkers of Type 2 Diabetes in Youth. Arizona State University. December 7th, 2019.
2. Lifestyle Intervention on Biomarkers of Type 2 Diabetes in Obese Youth. Presented at the Mid-Atlantic Regional Chapter of American College of Sport Medicine. November 1st-2nd 2019.
3. Association of Genetic Variants with Novel Glycemic Indicators in Latino Population. Presented at the GPSA Interdisciplinary Research Symposium, Arizona State University, Tempe, AZ, March 2015.
4. Acute Exercise Alters DNA Methylation in Human Skeletal Muscle. Presented at the Mayo/NIDDK/ASU Retreat, Mayo Clinic. Scottsdale, AZ, January 2015.
5. Candidate SNPs Study and FTO-PA Interaction. Presented at the Intra-Departmental Seminar Series. University of Arizona, College of Medicine-Phoenix, Phoenix, AZ, May 2014.
6. Glycemic Response to An Oral Glucose Challenge Can Be A Good Indicator of Risk for Diabetes in Youth. Presented at the 3rd Annual Center for Improving Health Outcomes in Children, Teens and Families Scholarship Forum. Arizona State University, Tempe, AZ, February 2011.

Service

2018 - Present Editorial Board Member, Journal of Obesity and Metabolic Syndrome

2015 - Present Invited Guest Reviewer of Manuscripts

- Obesity Reviews
- PLOS ONE
- Obesity
- Journal of Physical Activity and Health

2015 – 2019 Mentored (Dr. Silva Arslanian) Peer Reviewer of Manuscripts

- Diabetes Care
- Pediatric Diabetes

- Acta Diabetologica
- Fertility and Sterility
- Diabetes, Obesity and Metabolism

2012 – 2014 Travel Grant & Jump Start Research Grant Reviewer

- Graduate and Professional Student Association, Arizona State University

Scholarship, Awards, Honors

10/2019 ISPAD (International Society for Pediatric and Adolescent Diabetes) General Travel Grant

04/2018 Endocrine Society Outstanding Abstract Award for ENDO 2018

09/2014 Travel Grant for the TOS' Annual Meeting, Arizona State University

04/2013 Travel Grant for ADA 73th Scientific Session, Arizona State University

03/2013 Travel Grant for ACSM 60th Annual Meeting, Arizona State University

08/2012 - 07/2013 Doctoral Recruiting Fellowship, Arizona State University

08/2009 - 07/2012 University Graduate Fellowship, Arizona State University

12/2007 Scholarship for the BEST academic excellence, Yonsei University

03/2002 - 08/2008 Scholarship for Yonsei Family, Yonsei University

Professional Development

05/2013 Training of Sequential Oligogenic Linkage Analysis Routines, Texas Biomedical Research Institute

08/2012 - 05/2013 Preparing Future Faculty (Exploratory Phase), Arizona State University

01/2010 - 06/2010 International Teaching Assistant Training (Fully Certified), Arizona State University

08/2008 Teacher Certificate (Ministry of Education, Science & Technology, Korea)

Professional Memberships

2019 - present	American Diabetes Association
2019 - present	International Society of Pediatric and Adolescent Diabetes
2016 - present	Endocrine Society
2011 - present	American College of Sports Medicine
2010 - present	The Obesity Society