CURRICULUM VITAE

Christos S. Katsanos, Ph.D.

Center for Metabolic and Vascular Biology
School of Life Sciences
Arizona State University/Mayo Clinic in Arizona
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EDUCATION

Ph.D., December 2001.
Department of Nutrition, Food and Exercise Sciences
Florida State University, Tallahassee, FL

M. S., May 1998.
Department of Health Promotion and Physical Education
University of Louisville, Louisville, KY

B. S., August 1992.
Department of Physical Education
Democritus University of Thrace, Komotini, Greece

POSITIONS

Associate Professor, August 2014 to present.
School of Life Sciences and Center for Metabolic and Vascular Biology
Arizona State University, Tempe, AZ

Adjunct Assistant Professor of Physiology, December 2011 to present.
Mayo Clinic College of Medicine
Mayo Clinic in Arizona, Scottsdale, AZ

Assistant Professor, May 2010 to August 2014
School of Life Sciences and Center for Metabolic and Vascular Biology
Arizona State University, Tempe, AZ

Assistant Professor, August 2006 to May 2010.
Department of Kinesiology
Arizona State University, Tempe, AZ

Research Scientist, November 2005 to August 2006.
Department of Surgery/Metabolism Unit

University of Texas Medical Branch, Galveston, TX

Postdoctoral Research Fellow, November 2001 to October 2005.
Department of Surgery/Metabolism Unit
University of Texas Medical Branch, Galveston, TX

Lecturer, July 2004 to June 2005.
Department of Kinesiology
Rice University, Houston, TX

HONORS AND AWARDS

Mead Johnson Young Investigator Award
XXXV International Congress of Physiological Sciences, San Diego, CA, 2005.

Environmental and Exercise Physiology Recognition Award
Experimental Biology Meeting, Orlando, FL, 2001.

Scholarship for Graduate Studies: January, 1996 to December, 1998
State Scholarships Foundation, Athens, Greece

PUBLICATIONS *(selected publications)*

Tran L, Hanavan PD, Campbell LE, De Filippis E, Lake DF, Coletta DK, Roust LR, Mandarino LJ, Carroll CC, **Katsanos CS**. "Prolonged Exposure of Primary Human Muscle Cells to Plasma Fatty Acids Associated with Obese Phenotype Induces Persistent Suppression of Muscle Mitochondrial ATP Synthase β Subunit". PLoS One 11(8):e0160057. doi: 10.1371/journal.pone.0160057, 2016.

Everman S, Meyer C, Tran L, Hoffman N, Carroll CC, Dedmon WL, **Katsanos CS**. "Insulin does not stimulate muscle protein synthesis during increased plasma branched-chain amino acids alone but still decreases whole body proteolysis in humans". Am J Physiol Endocrinol Metab 311(4):E671-E677, 2016.

Kras KA, Willis WT, Barker N, Czyzyk T, Langlais PR, **Katsanos CS**." Subsarcolemmal mitochondria isolated with the proteolytic enzyme nagarse exhibit greater protein specific activities and functional coupling". Biochem Biophys Rep 6:101-107, 2016.

Tran L, Masters H, Roust LR, **Katsanos CS**. "A new method to measure muscle protein synthesis in humans by endogenously introduced d9-leucine and using blood for precursor enrichment determination". Physiol Rep Aug;3(8). pii: e12479. doi: 10.14814/phy2.12479, 2015.

Everman S, Mandarino LJ, Carroll CC, **Katsanos CS**. " Effects of acute exposure to increased plasma branched-chain amino acid concentrations on insulin-mediated plasma glucose turnover in healthy young subjects". PLoS One 10(3):e 0120049. doi: 10.1371/journal.pone. 0120049, 2015.

Puga GM, Meyer C, Mandarino LJ, **Katsanos CS**. "Increased plasma availability of L-arginine in the postprandial period decreases the postprandial lipemia in older adults". Nutrition 29(1):81-88, 2013.

Puga GM, Meyer C, Mandarino LJ, **Katsanos CS**. "Postprandial spillover of dietary lipid into plasma is increased with moderate amounts of ingested fat and is inversely related to adiposity in healthy older men". J Nutr 142(10):1806-1811, 2012.

Everman S, Yi Z, Langlais P, Mandarino LJ, Luo M, Roberts C, **Katsanos CS**. "Reproducibility of an HPLC-ESI-MS/MS method for the measurement of stable-isotope enrichment of *in vivo*-labeled muscle ATP synthase beta subunit". PLoS One 6(10):e26171. doi:10.1371/journal.pone.0026171, 2011.

Puga GM, Meyer C, Everman S, Mandarino LJ, **Katsanos CS**. "Postprandial lipemia in the elderly involves increased incorporation of ingested lipid in plasma free fatty acids and small (Sf 20-400) triglyceride-rich lipoproteins". Am J Physiol Endocrinol Metab 301(2):E356-E361, 2011.

Katsanos CS, Aarsland A, Cree MG, Wolfe RR. "Muscle protein synthesis and balance responsiveness to essential amino acids ingestion in the presence of elevated plasma free fatty acid concentrations". J Clin Endocrinol Metab 94(8):2984-2990, 2009.

Katsanos CS, Chinkes DL, Paddon-Jones D, Zhang XJ, Aarsland A, Wolfe RR. "Whey protein ingestion in elderly persons results in greater muscle protein accrual than ingestion of its constituent essential amino acid content". Nutr Res 28(10):651-658, 2008.

Katsanos CS, Kobayashi H, Sheffield-Moore M, Aarsland A, Wolfe RR. "A high proportion of leucine is required for optimal stimulation of the rate of muscle protein synthesis by essential amino acids in the elderly". Am J Physiol Endocrinol Metab 291(2):E381-E387, 2006.

Katsanos CS, Kobayashi H, Sheffield-Moore M, Aarsland A, Wolfe RR. "Aging is associated with diminished accretion of muscle proteins after the ingestion of a small bolus of essential amino acids". Am J Clin Nutr 82(5):1065-1073, 2005.

Katsanos CS, Grandjean PW, Moffatt RJ. "Effects of low and moderate exercise intensity on postprandial lipemia and postheparin plasma lipoprotein lipase activity in physically active men". J Appl Physiol 96(1):181-188, 2004.

RECENT PRESENTATIONS AT PROFESSIONAL MEETINGS *(last three years)*

Kras K, Willis W, De Filippis E, Roust L, Hoffman N, **Katsanos CS**. " A single bout of aerobic exercise increases citrate synthase specific activity and ATP production rate in isolated mitochondria from human skeletal muscle". The Integrative Biology of Exercise VII meeting, Phoenix, AZ, 2016.

Katsanos C, Kras K, Langlais P, Willis W, Mandarino L, De Filippis E, Roust L. "Differential enrichment of sub-sarcolemmal mitochondria with individual proteins between lean and obese, insulin-resistant subjects". The Integrative Biology of Exercise VII meeting, Phoenix, AZ, 2016.

Kras K, Willis W, Hoffman N, Tran L, Roust L, **Katsanos CS**. "Infusion of amino acids increases complex I ATP production in isolated mitochondria from human skeletal muscle". Annual Meeting of the Arizona Physiological Society, Tucson, AZ, 2016.

Ravichandran J, Hoffman N, Roust L, De Filippis E, **Katsanos CS**. "Obese humans demonstrate increased expression of the muscle cell fusion protein Syncytin-1". Annual Meeting of the Arizona Physiological Society, Tucson, AZ, 2016.

Tran L, Langlais P, De Filippis EA, Benjamin TR, Roust LR, Carroll CC, Mandarino LJ, **Katsanos CS**. "Multifactorial regulation of skeletal muscle β-F1-ATPase in human obesity". American Diabetes Association's 76th Scientific Sessions, New Orleans, LA, 2016.

Katsanos CS, Everman S, Tran L, Hoffman N, Dedmon WL, Carroll CC. "Effects of increased plasma branched-chain amino acids and insulin on muscle protein metabolism". Annual Meeting of the American College of Sports Medicine, Boston, MA, 2016.

Hoffman N, Tran L, Carroll C, Eldon E, Patel, **Katsanos CS**. "Plasma free fatty acid and amino acid responses to glucose-induced insulinemia in insulin-resistant subjects". Annual Meeting of the Arizona Physiological Society, Glendale, AZ, 2015.

De Leon N, Tran L, **Katsanos CS**. "Do increased plasma amino acids concentrations stimulate skeletal muscle protein synthesis in obese humans?". Annual Meeting of the Arizona Physiological Society, Glendale, AZ, 2015.

Kras K, Willis W, Barker N, Czyzyk T, Langlais P, **Katsanos CS**. "The enzyme nagarse improves purity and functional coupling of skeletal muscle subsarcolemmal mitochondria preperations". Annual Meeting of the Arizona Physiological Society, Glendale, AZ, 2015.

Ravichandran J, Kras K, **Katsanos CS.** "Measuring mitochondrial function in cultured myotubes versus muscle from human biopsy: preliminary studies". Annual Meeting of the Arizona Physiological Society, Glendale, AZ, 2015.

Katsanos CS, Tran L, Hoffman N, Dedmon WL, Carroll C. "Effects of increased plasma branched-chain amino acids and insulin on muscle protein metabolism". Annual Meeting of the Arizona Physiological Society, Glendale, AZ, 2015.

Katsanos CS, Tran L, Mandarino LJ, DeFilippis E, Miles JM, Roust L. "Insulin acutely suppresses plasma triglyceride breakdown in muscle in young healthy subjects". American Diabetes Association's 75th Scientific Sessions, Boston, MA, 2015.

Kras K, Willis W, Tran L, DeFilippis E, Roust L, **Katsanos CS**. "Greater yield of subsarcolemmal mitochondria from skeletal muscle of obese subjects with no change in intrinsic mitochondrial function". Annual Experimental Biology Meeting, Boston, MA, 2015.

Tran L, De Filippis EA, Lake DF, Mandarino LJ, **Katsanos CS**. "Dyslipidemia induces independent mechanisms regulating skeletal muscle protein metabolism and glucose balance in human obesity". Annual Experimental Biology Meeting, Boston, MA, 2015.

Tran L, Campbell LE, Coletta DK, Mandarino LJ, **Katsanos CS**. "Skeletal muscle β-F1-ATPase translation is inhibited by hyperlipidemia-induced miR-127-5p expression in human obesity". Annual Experimental Biology Meeting, Boston, MA, 2015.

INVITED PRESENTATIONS

Southwest Chapter of the American College of Sports Medicine, Annual Meeting – "The Impact of Obesity on Muscle Protein Metabolism". Los Angeles, CA; October, 2014.

Arizona State University, School of Nutrition and Health Promotion – "Muscle Protein Metabolism and Function in Obesity". Phoenix, AZ; May, 2014.

Brazilian Physiological Society Annual Meeting – "Lipid Metabolism and Cardiometabolic Diseases: Effects of Diet". Gramado, Brazil; September, 2012.

Universidade Estadual Paulista (UNESP)-Rio Claro – "Exploring Macronutrient Metabolism in Humans with the Use of Stable Isotope Tracers". Rio Claro, Brazil; August, 2012.

Mayo Clinic in Arizona, Science of Medicine Research Lecture Series – "Postprandial Lipid Metabolism in Elderly". Scottsdale, AZ; November 2011.

TM's 1st World Cardiovascular, Diabetes, and Obesity – "Age-related Changes in Postprandial Lipid Metabolism". Online conference; August, 2011.

Arizona Physiological Society Annual Meeting – Symposium Chairman: "Insulin Resistance and Diabetes: Mechanisms and Clinical Aspects". Tucson, Arizona; November, 2009.

Catholic University of Brasilia, II International Congress of Physical Education and Life Quality – "Lipids, Lipoproteins and Physical Exercise". Brasilia, Brazil; April, 2009.

Penn State University – "Stable Isotopes in Metabolic Research with Reference to Protein and Fat Metabolism". State College, PA; March, 2006.

University of Kentucky – "Role of Dietary Protein in the Prevention of Sarcopenia in the Eldelry". Lexington, KY; February, 2005.

REVIEWER

Professional Journals

Ad Hoc Reviewer *(representative*): Obesity; American Journal of Physiology - Endocrinology and Metabolism; Journal of Science and Medicine in Sport; Journal of Nutrition; Applied

Physiology, Nutrition, and Metabolism; Nutrition; Journal of Clinical Endocrinology and Metabolism; Diabetes; Journal of the Academy of Nutrition and Dietetics; BMJ Open Diabetes Research & Care.

Organizations/Foundations/Societies

Grant Review Committees:

American Diabetes Association (2016 – present)

Associate Editor:

Motriz. Journal of Physical Education (2016 – present)

GRANTS

Funded/in progress:

2012 – 2018	NIH – NIDDK
R01 DK094062	"Regulation of muscle ATP synthase beta subunit metabolism in obesity" Role: PI

Funded/completed:

2016	American Diabetes Association
1-16-MUI-08	Minority Undergraduate Internship Award in association with the award entitled "Regulation of the plasma triglyceride extraction in muscle in insulin resistance" Role: Mentor
2012 – 2016	American Diabetes Association
7-12-CT-40	"Regulation of the plasma triglyceride extraction in muscle in insulin resistance" Role: PI
2009 – 2011	NIH – NIDDK
R21 DK082820	"Adipocyte mitochondrial dysfunction in insulin resistance" Role: Co-PI; PI: Christian Meyer, M.D.
2007 – 2008	Milheim Foundation
No. 2007-16	"Muscle protein metabolism in patients with cancer cachexia" Role: PI

PATENTS

"Amino Acid-containing Composition for Preventing or Remedying Decrease in the Skeletal Muscle of Aged People". Inventors: Hisamine Kobayashi, Hiromi Suzuki, Robert R. Wolfe, Christos S. Katsanos, PCT/US2006/011325, 2006.

TEACHING AND MENTORING

Arizona State University
BIO 182 – General Biology II (Fall 2017)
BIO 181 – General Biology I (Spring 2012, Fall 2014, Fall 2015, Fall 2016)
BIO 494/598 – Special Topics: Obesity: Physiology, to Pathophysiology, to Treatment (Fall 2013, Fall 2014, Fall 2015, Fall 2016, Fall 2017)
BIO 189 – Life Sciences Career Paths (Recitation Sections; Fall 2013, Fall 2016)
BIO 495 – Undergraduate Research (various semesters)
BCH 392 – Introduction to Research Techniques (Fall 2013)
BIO 360 – Animal Physiology (Summer 2012, Spring 2013, Fall 2013)
BIO 189 – Life Sciences Career Paths (Fall 2011, Fall, 2013)
BIO 494/598 – Special Topics: Nutrition, Exercise, Chronic Diseases, and Society (Fall 2012)
KIN 494/598 – Special Topics: Advanced Topics in Clinical Exercise Physiology (2007 – 2011)
KIN 340 – Physiology of Exercise (2007 – 2010)

Rice University (2004 – 2005)
KINE 300 – Human Anatomy
KINE 341 – Exercise Management of Chronic Diseases
KINE 421 – Advanced Exercise Physiology
KINE 498 – Sports Nutrition

Postdoctoral Fellow
Lee Tran, PhD, Postdoctoral Fellow, February 2013 – March, 2016.

Research Fellow
Guilherme Puga, MS, Research Fellow, January, 2008 – July 2009.

Doctoral Students
Andrew D'Lugos – Committee Member, School of Nutrition and Health Promotion, Arizona State University, 2016 – present.
Samantha Day – Committee Co-chair – School of Life Sciences, Arizona State University, 2015 – 2017.
Jayachandran Ravichandran – Committee Chair, School of Life Sciences, Arizona State University, 2014 – present.
Katon Kras – Committee Chair, School of Life Sciences, Arizona State University, 2012 – present.
Justin Ryder – Committee Member, School of Nutrition and Health Promotion, Arizona State University, 2012 – 2014.
Sarah Everman – Committee Co-Chair – Department of Kinesiology, Arizona State University, 2006 – 2010 (currently an Assistant Professor at A.T. Still University, Mesa, AZ).

Undergraduate Honors Theses
Lindsey Macias – Committee Member (Thesis title: Veganism and its Effects on the Human Body and Mind), School of Nutrition and Health Promotion, Arizona State University, May 2016 – May 2017.
Clint Lowery – Committee Member (Thesis title: Gene Expression Profiling in Skeletal Muscle of Patients at Risk for NODAT), School of Life Sciences, Arizona State University, Sep 2013 – Mar 2014.

Micah Rappazzo – Committee Member (Thesis title: Next-generation sequencing for DNA methylation profiling in blood and skeletal muscle), School of Life Sciences, Arizona State University, Feb 2013 – Nov 2013.

John Kline – Committee Chair (Thesis title: Differences in blood gene expression between trained and untrained individuals; Mr. Kline received the "*Douglas L. Conley Memorial Scholarship*" for this research work), Kinesiology Program, Arizona State University, May 2010 – May 2012.

Nathan Coury – Committee Chair (Thesis title: Fat oxidation efficiency as a performance indicator for ultramarathon foot races), Kinesiology Program, Arizona State University, Feb 2010 – May 2011.

PROFESSIONAL SOCIETY MEMBERSHIPS

American Physiological Society (1998 – present)
American College of Sports Medicine (1997 – present)
American Society for Nutrition (2004 – present)
American Diabetes Association (2012 – present)
Arizona Physiological Society (2008 – present)