

JOHN W. CARBONE, Ph.D., R.D.

PROFESSOR ~ DIETETICS & HUMAN NUTRITION ~ EASTERN MICHIGAN UNIVERSITY
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EDUCATION

UNIVERSITY OF CONNECTICUT (UConn), Storrs, CT **AUGUST 2005 – MAY 2009**

Doctor of Philosophy, Nutritional Sciences

Doctoral Dissertation: The Ubiquitin-Proteasome Pathway in Healthy, Active Adults: The Effects of Energy Balance, Endurance Exercise, Dietary Leucine Intake and Intravenous Leucine Infusion on Skeletal Muscle Protein Breakdown (Laboratory of Nancy R. Rodriguez, PhD, RD, CSSD, FACSM)

Areas of Concentration: Educational Psychology, Molecular and Cellular Biology

Dietetic Internship, Allied Health Sciences **August 2007 – May 2008**

Clinical Rotations: Cardiac ICU – Medical ICU – Neurology ICU – Cardiac Floor – Surgical/Medical Floor – Neurology Floor, Hartford Hospital, Hartford, CT

Outpatient Rotations: Diabetes Life Care – Oncology – Bariatric Medicine – Dialysis, Hartford Hospital

Long-Term Care Rotation: Hebrew Home & Rehabilitation Center, West Hartford, CT

Community Nutrition Rotation: Hartford Public Schools, Hartford, CT

Food Service Rotation: Department of Food and Nutrition, Hartford Hospital, Hartford, CT

Scored in the 99th percentile on the Registered Dietitian Examination

UNION COLLEGE, Schenectady, NY **SEPTEMBER 1995 – JUNE 1999**

Bachelor of Science, Biochemistry

Summa Cum Laude and Biochemistry Departmental Honors

Honors Thesis: Characterization of Self-Splicing Activity of Selected Group I Introns from the Mitochondrial Genome of *Podospora anserina*

PROFESSIONAL EXPERIENCE

PROFESSOR **SEPTEMBER 2019 - PRESENT**

ASSOCIATE PROFESSOR **SEPTEMBER 2014 – AUGUST 2019**

ASSISTANT PROFESSOR **SEPTEMBER 2009 – AUGUST 2014**

Dietetics & Human Nutrition Program

School of Health Sciences, College of Health & Human Services

Eastern Michigan University (EMU), Ypsilanti, MI

- Research Focus: Examining the effects of energy restriction and dietary protein intake on mechanisms regulating skeletal muscle protein breakdown.
- Teach variety of classroom-based and online undergraduate and graduate courses in the dietetics and human nutrition discipline, including Macronutrient Metabolism, Nutrition for Health Professionals, Sports Nutrition, Research Design and Methods, Seminar in Dietetics, and Advanced Topics in Nutrition

GRADUATE RESEARCH ASSISTANT **AUGUST 2005 – MAY 2009**

UConn, Storrs, CT

Laboratory of Nancy R. Rodriguez, PhD, RD, Nutritional Sciences

RESEARCH ASSISTANT II **NOVEMBER 2002 – AUGUST 2005**

Harvard Medical School, Boston, MA

Laboratory of Donald M. Coen, PhD, Biological Chemistry and Molecular Pharmacology

RESEARCH ASSISTANT **JUNE 1998 – SEPTEMBER 1998**

University of Florida's Whitney Laboratory, Research Experience for Undergraduates, St. Augustine, FL

Laboratory of Barbara-Anne Battelle, PhD, Neuroscience and Zoology

PUBLICATIONS

BOOK CHAPTER

Carbone JW, Margolis LM, Pasiakos SM. Cellular and molecular mechanisms of protein synthesis among tissues. In: Dardevet D, editor. *The Molecular Nutrition of Amino Acids and Proteins*. Boston: Academic Press - Elsevier; 2016. pp. 39-47.

MANUSCRIPTS

Gwin JA, Church DD, Hatch-McChesney A, Howard EE, Carrigan CT, Murphy NE, Wilson MA, Margolis LM, **Carbone JW**, Wolfe RR, Ferrando AA, Pasiakos SM. Effects of high versus standard essential amino acid intakes on whole-body protein turnover and mixed muscle protein synthesis during energy deficit: A randomized, crossover study. *Clin Nutr*. 2020: S0261-5614(20)30384-8.

Carbone JW and Pasiakos SM. Dietary Protein and Muscle Mass: Translating Science to Application and Health Benefit. *Nutrients*. 2019; 11(5) pii: E1136.

Carbone JW, McClung JP, Pasiakos SM. Recent advances in the characterization of skeletal muscle and whole-body protein responses to dietary protein and exercise during negative energy balance. *Adv Nutr*. 2019; 10(1):70-79

Margolis LM, Berryman CE, Murphy NE, Carrigan CT, Young AJ, **Carbone JW**, Pasiakos SM. PI3K-AKT-FOXO1 signaling is targeted by skeletal muscle microRNA to suppress proteolytic gene expression in response to carbohydrate ingestion during aerobic exercise. *Physiol Rep*. 2018; 6(23):e13931.

Young AJ, Berryman CE, Kenefick RW, Derosier AN, Margolis LM, Wilson MA, Carrigan CT, Murphy NE, **Carbone JW**, Rood JC, Pasiakos SM. Altitude acclimatization alleviates the hypoxia-induced suppression of exogenous glucose oxidation during steady-state aerobic exercise. *Front Physiol*. 2018; 9:830.

Pasiakos SM, Berryman CE, **Carbone JW**, Murphy NE, Carrigan CT, Bamman MM, Ferrando AA, Young AJ, Margolis LM. Muscle Fn14 gene expression is associated with fat-free mass retention during energy deficit at high altitude. *Physiol Rep*. 2018; 6(14):e13801.

Margolis LM*, **Carbone JW***, Berryman CE, Carrigan CT, Murphy NE, Ferrando AA, Young AJ, Pasiakos SM. Severe energy deficit at high-altitude inhibits skeletal muscle mTORC1-mediated anabolic signaling without increased ubiquitin proteasome activity. *FASEB J*. 2018 Jun 7:fj201800163RR. [*co-first authors, LMM & JWC contributed equally]

Karl JP, Cole RE, Berryman CE, Finlayson GS, Radcliffe PN, Kominsky MT, Murphy NE, Margolis LM, **Carbone JW**, Rood JC, Young AJ, Pasiakos SM. Appetite suppression and altered food preferences coincide with changes in appetite-mediating hormones during energy deficit at high altitude, but are not affected by protein intake. *High Alt Med Biol*. 2018; 19(2):156-169.

Berryman CE, Young AJ, Karl JP, Kenefick RW, Margolis LM, Cole RE, **Carbone JW**, Lieberman HR, Kim I-Y, Ferrando AA, Pasiakos SM. Severe negative energy balance during 21 d at high altitude decreases fat-free mass regardless of dietary protein intake: a randomized controlled trial. *FASEB J*. 2018; 32(2):894-905.

Pasiakos SM, Berryman CE, Carrigan CT, Young AJ, **Carbone JW**. Muscle Protein Turnover and the Molecular Regulation of Muscle Mass during Hypoxia. *Med Sci Sports Exerc*. 2017; 49(7):1340-1350.

Pastore RL, Brooks JT, **Carbone JW**. Paleolithic nutrition improves plasma lipid concentrations of hypercholesterolemic adults to a greater extent than traditional heart-healthy dietary recommendations. *Nutr Res*. 2015 Jun;35(6):474-9.

Pasiakos SM and **Carbone JW**. Assessment of skeletal muscle proteolysis and the regulatory response to nutrition and exercise. *IUBMB Life*. 2014; 66(7):478-84.

- Carbone JW**, Pasiakos SM, Vislocky LM, Anderson JM, Rodriguez NR. Effects of short-term energy deficit on muscle protein breakdown and intramuscular proteolysis in normal-weight young adults. *Appl Physiol Nutr Metab*. 2014; 39(8):960-8.
- Carbone JW**, Margolis LM, McClung JP, Cao JJ, Murphy NE, Sauter ER, Combs GF, Young AJ, Pasiakos SM. Effects of energy deficit, dietary protein, and feeding on intracellular regulators of skeletal muscle proteolysis. *FASEB J*. 2013; 27(12):5104-11.
- Pasiakos SM, Cao JJ, Margolis LM, Sauter ER, Whigham LD, McClung JP, Rood JC, **Carbone JW**, Combs GF Jr, Young AJ. Effects of high-protein diets on fat-free mass and muscle protein synthesis following weight loss: a randomized controlled trial. *FASEB J*. 2013; 27(9):3837-47.
- Lunn WR, Pasiakos SM, Colletto MR, Karfonta KE, **Carbone JW**, Anderson JM, Rodriguez NR. Chocolate milk and endurance exercise recovery: protein balance, glycogen, and performance. *Med Sci Sports Exerc*. 2012; 44(4):682-91.
- Carbone JW**, McClung JP, Pasiakos SM. Skeletal muscle responses to negative energy balance: Effects of dietary protein. *Adv Nutr*. 2012; 3:119-126.
- Pasiakos SM, Vislocky LM, **Carbone JW**, Altieri N, Konopelski K, Freake HC, Anderson JM, Ferrando AA, Wolfe RR, Rodriguez NR. Acute energy deprivation affects skeletal muscle protein synthesis and associated intracellular signaling proteins in physically active adults. *J Nutr*. 2010; 140(4):745-51.
- ABSTRACTS (POSTER PRESENTATIONS, UNLESS OTHERWISE NOTED)**
- Gwin JA, Church DD, Hatch-McChesney A, Howard EE, Carrigan CT, Murphy NE, Wilson MA, Margolis LM, **Carbone JW**, Wolfe RR, Ferrando AA, Pasiakos SM. High and Standard Free-form EAA Intake Equally Stimulate Muscle Protein Synthesis During Moderate Energy Deficit. *Prepared for American College of Sports Medicine Annual Meeting. Delivered virtually due to COVID-19 meeting cancellation.*
- Johnson PA and **Carbone JW**. Relationship of glutamine, arginine, and the area postrema: a protective anorectic mechanism in critical illness? *Curr Dev Nutr*. 2019; 3(S1):nzz035.P12-031-19.
- Carbone JW**, Margolis LM, Berryman CE, Carrigan CT, Murphy NE, Ferrando AA, Young AJ, Pasiakos SM. Muscle proteolysis is largely unaffected by severe energy deficit during high-altitude acclimatization. *Curr Dev Nutr*. 2018; 2(11):P10-020.
- Pasiakos SM, Margolis LM, Berryman CE, Carrigan CT, Murphy NE, **Carbone JW**, Bamman MM, Ferrando AA, Young AJ. Muscle Inflammation Is Upregulated during Energy Deficit at High Altitude and Associated with Increased Myogenesis and Decreased Fat-Free Mass Loss. *Curr Dev Nutr*. 2018; 2(11):OR42-03. [selected for oral presentation]
- Margolis LM, Berryman CE, Murphy NE, Carrigan CT, Young AJ, **Carbone JW**, Pasiakos SM. Protein and carbohydrate supplementation modulate skeletal muscle microRNA following aerobic exercise. *Curr Dev Nutr*. 2018; 2(11):OR09-05.
- Margolis LM, Berryman CE, **Carbone JW**, Carrigan CT, Murphy NE, Ferrando AA, Young AJ, Pasiakos SM. Anabolic signaling responses to exercise and recovery whey protein are suppressed at high altitude. *FASEB J*. April 2018;32(1S):909.6.
- Ramsey JL, Burley J, Levine S, **Carbone JW**, Moore RW. Bilateral Deficit: A Comparison Of Maximal Strength Between The Bilateral And Unilateral Leg Press Exercise. *Med Sci Sports Exerc*. 2018; 50(5S):666-667.
- Burley J, Ramsey JL, Levine S, **Carbone JW**, Moore RW. Using vertical shoulder press to find occurrences of the bilateral deficit in recreationally trained participants. *Med Sci Sports Exerc*. 2018; 50(5S):410.

Moelter S, **Carbone JW**, Kret LA, Rainville AJ. Dietetic Internship Directors' and Preceptors' Views on Preceptor Recruitment and Retention. *J Acad Nutr Diet.* 2017; 117(9) Suppl 1: A-53.

Berryman CE, Karl JP, Cole RE, Kenefick RW, Margolis LM, **Carbone JW**, Ferrando AA, Lieberman HR, Young AJ, Pasiakos SM. Prolonged high altitude exposure exacerbates fat-free mass and fat mass loss during negative energy balance regardless of dietary protein intake. *FASEB J.* 2017; 31:841.17.

Carbone JW, Braun EM, Kraker KA, Percy SA, Fassezke BL, Briolat KN. Preliminary Assessment of a Raspberry Ketone Supplement as a Weight-Loss Aid. *FASEB J.* 2016; 30:1165.1

Carbone JW, Margolis LM, McClung JP, Cao JJ, Young AJ, Pasiakos SM. Energy intake modulates intramuscular mTORC1 signaling and ubiquitin-mediated proteolysis during energy deficit independent of dietary protein variations. *FASEB J.* 2013; 27:631.1.

Mouch EM, Walz AM, Tomaj L, **Carbone JW**. A randomized, crossover comparison of the effects of high fructose corn syrup versus sucrose intake on basic physiologic measures. *FASEB J.* 2013; 27:1074.7.

Carbone JW, Margolis LM, Cao JJ, McClung JP, Young AJ, Pasiakos SM. Acute nutrient consumption attenuates intramuscular 26S proteasome activity during energy deficit. *FASEB J.* 2012; 26:1b299.

Carbone JW, Pasiakos SM, Vislocky LM, Anderson JM, Rodriguez NR. Moderate energy deprivation increases caspase-3 activity and fractional breakdown rate in human skeletal muscle. *FASEB J.* 2010; 24:740.19.

Lunn WR, Colletto MR, Karfonta KE, Anderson JM, **Carbone JW**, Rodriguez NR. Chocolate milk consumption during recovery from endurance exercise affects intracellular events of skeletal muscle protein synthesis and proteolysis. *FASEB J.* 2010; 24:97.1. [selected for oral presentation]

Carbone JW, Pasiakos SM, Vislocky LM, Anderson JM, Giardina C, Bruno RS, Rodriguez NR. Moderate energy deprivation increases ubiquitin proteasome activity in physically active adults following endurance exercise. *FASEB J.* 2009; 23:720.1.

Pasiakos SM, Vislocky LM, **Carbone JW**, Freake HC, Anderson JM, Ferrando AA, Wolfe RR, Rodriguez NR. Energy-induced changes in skeletal muscle protein synthesis and molecular signaling in physically active adults. *FASEB J.* 2009; 23:541.2.

Vislocky LM, Pasiakos SM, **Carbone JW**, Freake HC, Anderson JM, Ferrando AA, Wolfe RR, Rodriguez NR. Post-exercise skeletal muscle protein synthesis and intracellular signals during negative energy balance in active adults. *Med Sci Sports Exerc.* 2009; 41(5):Suppl.

Pasiakos SM, Konopelski KL, Vislocky LM, **Carbone JW**, Altieri NA, Anderson JM, Rodriguez, NR. The effect of acute energy deprivation on metabolic measures during exercise and at rest in physically active adults. *Med Sci Sports Exerc.* 2008; 40(5):S472.

Pesola JM, Jahns CJ, **Carbone JW**, Kramer MF, Coen DM. Late genes display unexpected RNA expression profiles in the presence of acyclovir during reactivation of HSV-1 from latency. *International Herpesvirus Workshop*, Asheville, NC. 2007. [selected for oral presentation]

SCIENTIFIC PRESENTATIONS

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|-------------------------------------------------------------------------------------------------------------------------------|-------------|
| AMERICAN SOCIETY FOR NUTRITION NATIONAL MTG | 2018 |
| Poster Presentation: "Muscle proteolysis is largely unaffected by severe energy deficit during high-altitude acclimatization" | |
| FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (EB) NATIONAL MTG | 2017 |
| Symposium Chair: "Protein Intake and Health Implications" | |
| FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (EB) NATIONAL MTG | 2016 |
| Poster Presentation: "Preliminary Assessment of a Raspberry Ketone Supplement as a Weight-Loss Aid" | |

FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (EB) NATIONAL MTG	2015
Symposium Chair: "Energy Balance, Macronutrients and Weight Management"	
FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (EB) NATIONAL MTG	2014
Symposium Co-Chair: "Energy Balance, Macronutrients and Weight Management"	
AMERICAN COLLEGE OF SPORTS MEDICINE 60TH ANNUAL MEETING AND 4TH WORLD CONGRESS ON EXERCISE IS MEDICINE	2013
Invited Speaker: "Integrated Effects of Nutrition and Exercise on the Endocrine Regulation of Skeletal Muscle Proteolysis: An Evidentiary Analysis"	
FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (EB) NATIONAL MTG	2013
Poster Presentation: "Energy intake modulates intramuscular mTORC1 signaling and ubiquitin-mediated proteolysis during energy deficit independent of dietary protein variations"	
FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (EB) NATIONAL MTG	2012
Poster Presentation: "Acute nutrient consumption attenuates intramuscular 26S proteasome activity during energy deficit"	
MICHIGAN STATE UNIVERSITY FOOD SCIENCE AND HUMAN NUTRITION DEPARTMENT SEMINAR	2010
Invited Speaker: "The Role of Diet and Exercise in Modulating the Ubiquitin Proteasome Pathway"	
FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (EB) NATIONAL MTG	2010
Poster Presentation: "Moderate energy deprivation increases caspase-3 activity and fractional breakdown rate in human skeletal muscle"	
UNIVERSITY OF FLORIDA'S WHITNEY LABORATORY	2009
Invited Speaker: "The Ubiquitin-Proteasome Pathway in Healthy, Active Adults: The Effects of Energy Balance, Exercise, Leucine Intake, and Intravenous Leucine Infusion on Skeletal Muscle Breakdown"	
FEDERATION OF AMERICAN SOCIETIES FOR EXPERIMENTAL BIOLOGY (EB) NATIONAL MTG	2009
Poster Presentation: "Moderate energy deprivation increases ubiquitin proteasome activity in physically active adults following endurance exercise"	
NATIONAL CONFERENCES ON UNDERGRADUATE RESEARCH, ROCHESTER, NY	1999
Poster Presentation: "Characterization of Self-Splicing Activity of Selected Group I Introns from the Mitochondrial Genome of <i>Podospora anserina</i> "	
UNIVERSITY OF FLORIDA'S WHITNEY LABORATORY	1998
Oral Presentation: "Characterization of Clock-Regulated Phosphoproteins of a <i>Limulus polyphemus</i> "	

PROFESSIONAL ACTIVITIES

AMERICAN SOCIETY FOR NUTRITION

- Academic Member At-Large, Energy and Macronutrient Metabolism Research Interest Section Advisory Committee (2015-16)
- Chair, Energy and Macronutrient Metabolism Research Interest Section - Protein Intake and Health Implications (2017)
- Co-Chair/Chair, Energy and Macronutrient Metabolism Research Interest Section – Energy Balance, Macronutrients, and Weight Management (2013-15)
- Membership Sponsor (2011 – Present)
- Member (2007 – Present)

PEER/EXTERNAL REVIEWER

- *Advances in Nutrition*
- *Ageing Research Reviews*
- *British Journal of Nutrition*
- *Cell Stress and Chaperones*
- *Comparative Biochemistry and Physiology*
- *Expert Review of Endocrinology & Metabolism*
- *The FASEB Journal*
- *Journal of Cachexia, Sarcopenia and Muscle*
- *Journal of Child Nutrition & Management*
- *Journal of Nutrition*
- *Nutrients*
- *Nutrition Research*

- *Nutrition Reviews*
- *Scandinavian Journal of Medicine and Science in Sports*

EMU COLLEGE OF HEALTH AND HUMAN SERVICES FACULTY ADVISORY COUNCIL

- Chair (2014-17)
- School of Health Sciences Representative (2013-17)

EMU FACULTY SENATE

- Faculty Senate Executive Board (2012-13)
- School of Health Sciences Representative (2010-13)

EMU-AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS (AAUP) ELECTIONS AND NOMINATIONS COMMITTEE

- Chair (2014 – 2019)
- School of Health Sciences Representative (2013 – 2019)

EMU RADIATION SAFETY COMMITTEE (2012 – Present)

EMU ACADEMIC CALENDAR COMMITTEE (2016 – Present)

GAMMA SIGMA DELTA AGRICULTURAL HONOR SOCIETY (2007 – Present)

SIGMA XI RESEARCH SOCIETY (1999 – Present)

PHI BETA KAPPA HONOR SOCIETY (1999 – Present)

AWARDS & HONORS

- Ronald W. Collins Distinguished Faculty Award, Research II (2019)
- Everett L. Marshall Award for Faculty Excellence in Scholarly Activity (2013, 2019)
- Oak Ridge Institute for Science and Education Faculty Research Fellowship (2016, 2017)
- Everett L. Marshall Award for Faculty Excellence in Teaching (2014)
- Kirvin L. Knox Excellence in Research Scholarship (2009)
- UConn Doctoral Dissertation Fellowship Award (2009)
- UConn Outstanding Scholar Fellowship Award (2006-2009)
- Hamilton D. Eaton Graduate Fellowship in Nutrition (2006-2007)
- Union Crew Captain's Award (1999)
- American Chemical Society Award for Outstanding Achievement in Organic Chemistry (1997)
- Eagle Scout Award (1993)