

Curriculum Vitae

TRACY GAUTSCH ANTHONY

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EDUCATION

Ph.D.	1998	Nutritional Sciences, University of Illinois, Urbana, IL
M.S.	1995	Nutritional Sciences, University of Illinois, Urbana, IL
B.S.	1993	Human Nutrition and Foods—Science of Food Virginia Tech University, Blacksburg, VA

PROFESSIONAL EXPERIENCE

2012-present	Associate Professor, Department of Nutritional Sciences, School of Environmental and Biological Sciences, Rutgers, The State University of New Jersey, New Brunswick, NJ.
2011-2012	Associate Professor, Department of Biochemistry and Molecular Biology, Indiana University School of Medicine-Evansville, Evansville, IN.
2005-2011	Assistant Professor, Department of Biochemistry and Molecular Biology, Indiana University School of Medicine-Evansville, Evansville, IN.
2001-2005	Assistant Scientist/Assistant Research Professor, Department of Biochemistry and Molecular Biology, Indiana University School of Medicine-Evansville Center for Medical Education, Evansville, IN.
1998-2001	American Diabetes Association Post-doctoral Research Fellow, Department of Cellular and Molecular Physiology, Pennsylvania State University, College of Medicine, Hershey, PA.
1993-1998	Graduate Research Assistant, Division of Nutritional Sciences, University of Illinois, Urbana, IL.
1992-1993	Undergraduate Research Assistant, Department of Human Nutrition and Foods, Virginia Tech University, Blacksburg, VA.

RESEARCH INTERESTS: Nutritional control of protein homeostasis, amino acid sensing and signaling; endoplasmic reticulum stress and the unfolded protein response; nutrition and exercise.

HONORS AND AWARDS

- 2014 *Fellow*, Dannon Institute Academic Mid-Career Nutrition Leadership Institute
- 2013-2017 *Standing Member*, Integrative Nutrition and Metabolic Processes Study Section, Center for Scientific Review, National Institutes of Health
- 2010 Research article [J Nutr. 2010 Nov;140(11):2020-7] selected as “Editor’s Pick”.
- 2010 *Trustees Teaching Award*, Indiana University School of Medicine
- 2006 *Fellow*, Leadership in Academic Medicine program at IUSM
- 2006 *AFLAC Cancer Center Visiting Professorship*, Emory School of Medicine, May 3-4.
- 2003 *American Society for Nutrition Peter J. Reeds Young Investigator Award* - National recognition of research which focuses on the regulation of somatic growth and the unique roles of amino acids in protein metabolism.
- 2000 *Travel Award*, NIH Conference/Workshop on Bioavailability of Dietary Supplements, Bethesda, MD. Jan 5-6.
- 1997 *Margin of Excellence Research Award*, Division of Nutritional Sciences, University of Illinois
- 1997 *Included on “Incomplete List of Teachers Ranked as Excellent by Students”* for Contemporary Nutrition (FSHN 120), University of Illinois
- 1997, 1995 *First Place Research Presentation*, University of Illinois Nutrition Symposium
- 1996 *Second Place Research Presentation*, University of Illinois Nutrition Symposium
- 1994, 96-98 *Travel Award*, Division of Nutritional Sciences, University of Illinois

CONSULTANTSHIPS AND ADVISORY BOARDS

- Scientific Advisory Board Member*, Hershey Foods, 2010-2012.
- Consultant*, Hershey Foods, 2009-2010
- Consultant*, Ono Pharmaceuticals, 2012
- Consultant*, Keller and Heckman LLP, 2014
- Consultant*, Innophos, Inc., 2015
- Consultant*, Williams & Connolly LLP, 2016

TEACHING AND MENTORING

Rutgers Courses

- 11:709:481 Seminar in Nutrition (2013, 2014, 2015, 2016)
- 11:709:401 Advanced Nutrition II (2013, 2014, 2015, 2016)
- 16:709:553 Nutrition: A Biochemical and Physiological Basis II (2012, 2013)
- 11:709:400 Advanced Nutrition I (2012, 2013)
- 16:709:552 Nutrition: A Biochemical and Physiological Basis I (2013, 2014, 2015, 2016)
- 16:709:601 Graduate Seminar in Nutrition (2014, 2015, 2016)

IUSM Courses and Competencies

- B800 Medical Biochemistry (2002-2011)
- Competency IV – Life-Long Learning Director for IUSM-E (2005-2012)
- BIOL 434 Macromolecules & Metabolism, University of Southern Indiana (2003)

Penn State College of Medicine Courses and Programs

- PHSIO 502 Advanced Physiology, Penn State College of Medicine (2001)
- Center for Science and Health Education, Penn State College of Medicine (1998-2001)

University of Illinois Courses

- FSHN 120 Contemporary Nutrition, University of Illinois (1997)

NURSCI 2026, Nutrition section, University of Illinois (1997)

MENTORING AT RUTGERS

Research Faculty:

1. Pengxiang She, Ph.D. August 2012-August 2013
2. Yongping Wang, Ph.D., June 2014- present

Postdoctoral Scholars:

1. Gabriel Wilson, Ph.D. February 2012-December 2013
2. Inna Nikonorova, Ph.D. August 2014-present
3. Ashley Pettit, Ph.D. INSPIRE Fellow, September 2014-present

Graduate Students:

1. Lindsey Phillipson-Weiner, M.S. in Nutritional Sciences, 2015
2. Rana Al-Baghdadi, Ph.D. in Endocrinology and Animal Biosciences, October 2016
3. Dylan Klein, PhD student in Nutritional Sciences, 2015-present

Graduate Thesis Committees

1. Marc Tuazon, PhD in Exercise Science, 2015
2. Peter Kim, M.S. in Molecular Biosciences, 2014

Undergraduate Students

1. Brittany Lennox, Independent Study in Biochemistry, Rutgers University, Jan 2013-Dec 2013
2. Dean Marella, Independent Study in Biochemistry, Rutgers University, Aug 2013-Feb 2014
3. Wesley Hodges, Truman State University, RiSE Program, summer 2013, ****Winner of Poster Competition at ABRCMS National Meeting****
4. Chris DeOliviera, volunteer and paid technical support, Rutgers University, Jan-Jul 2013
5. Albert Bargoud, Independent Study in Biochemistry, Rutgers University, ****Aresty Research Fellow 2014****; August 2013-May 2014
6. Berish Weinstein, Independent Study in Biochemistry, US Air Force Veteran, 2014
7. Toni Coleman, RiSE Program, summer 2014
8. Matthew Solowsky, volunteer, US Navy Veteran, Fall 2014-present
9. Erica Steele, APS STEP-UP Fellow, summer 2015
10. Kidus Feleke, RiSE at Rutgers Fellow, summer 2015
11. Michael Goudie, Aresty Research Assistant, 2015-present
12. Robert Kamil, Aresty Research Assistant, fall 2015
13. Marylou Fernandes, volunteer, Fall 2015-present
14. Cora Kerber, RiSE at Rutgers Fellow, summer 2016
15. Karol Hetig, Independent Study in Nutritional Sciences, summer 2016

Undergraduate Honors Thesis Committees

1. Jesse Liou, George H Cook Honors Program, "Effects of trans-Fatty Acids on Sarcopenia in SAMP8 Mice", April 2013
2. Monica B. Boulos, George H Cook Honors Program, "Influence of Lactocrine Signaling on the Neonatal Porcine Cervix", April 2013
3. Noor Shah, Senior Honors Thesis, "Differences in Umami Taste Perception Between Adults who were Breast-fed versus those who were Formula-fed", April 2013
4. Tamar Denby, G.H. Cook Honors Thesis, April 2014-present
5. Albert Bargoud, ****MBB Senior Thesis Highest Honors; Henry Rutgers Scholar Award ****; May 2014-May 2015

6. Berish Wetstein, George H Cook Honors Program, "Regulation of mTORC1 signaling by BCAA catabolism", Spring 2016-present
7. Eugenia Saiegh, GHC Honors Program, Spring 2016-present

Undergraduate International Exchange Student Program

1. William Jonsson, hosted in lab for Senior Thesis at Karolinska Institute ****thesis received highest honors****, Jan 2014-May 2014

High School Students

1. Umay Mughal, Summer 2013, ****NIDDK STEP-UP Fellow****,
2. Claire Kim, Summer 2013, ****Siemens Science Competition Regional Finalist****
3. Shawn Ohazuruike, 2016 ****NIDDK STEP-UP Fellow****

MENTORING AT IUSM

Postdoctoral Scholars:

1. Piyawan Bunpo, Ph.D. January 2006 to December 2009.
 2007 Received American Association of University Women International Fellowship. One of 63 awardees from 987 applicants.
 2007 Recipient of American Society for Nutrition Diet and Cancer Research Interest Section Poster Competition - Second Place Award.
 2010 Accepted faculty position at Chiang Mai University, Chiang Mai, Thailand

External Graduate Student Mentoring:

1. Jamie Baum, University of Illinois Ph.D. student. Hosted in lab summer of 2003.
2. Layne Norton, University of Illinois Ph.D. student. Hosted in lab summer of 2006 and 2007.

Medical Students:

1. Danielle Brueck, IUSM Medical Student Summer Research Program.

Undergraduate Students

1. Summer Undergraduate Research Experience (SURE) Program at IUSM
 - 2002 Carson Penkava, Washington and Lee University
 - 2002 David Utley, University of Southern Indiana
 - 2003 Rachel Byerley, University of Southern Indiana. Finalist in APS David L. Bruce Undergraduate Research Competition at Experimental Biology 2004.
 - 2004 L. Morgan Oberle, University of Evansville
 - 2005 Lauren Fultz, University of Southern Indiana
 - 2005 Kyle Harry, Wabash University
 - 2006 Betty Murray, Angelo State University
 - 2007 Allison Dudley, Indiana University-Southeast
 - 2007 Kendall Stocke, Kentucky Wesleyan University
 - 2008 Aaron Stoltz, Indiana University
 - 2008 Ross Deppe, Butler University
 - 2008 Olusina Akunde, Indiana University School of Medicine

2. Other undergraduates mentored in lab at IUSM:

1. Rachel Byerley (University of Southern Indiana), 2002-2005
2. Janice Esker (University of Southern Indiana), spring 2003
3. Peter Knoll (Notre Dame University), summers 2003 and 2004

4. Megan Wiley (University of Southern Indiana), spring 2004 to fall 2005
5. Sheiphali Ghandi (University of Southern Indiana), fall 2004 to spring 2006
6. Ria DeCamp (University of Southern Indiana), fall 2004
7. Amanda Stevens (University of Southern Indiana), 2005-2006
8. Todd Capes (Depauw University), Fall 2006
9. Lauren Ellspermann (Purdue University), Summer 2007
10. Meral El Ramahi (University of Southern Indiana), Spring 2010
11. Whitney Wood (Taylor University), Summer 2011
12. Allison McDaniel (University of Southern Indiana), May 2011 to April 2012
13. Phillip Behrens (University of Southern Indiana), May 2011 to April 2012

High School Students

1. Emma Brizius (Signature School), Summer 2006
2. Abhi Seetharamaiah (Signature School), Summer 2009
3. Jason Heo (Castle High School), Summer 2009 and 2010

PROFESSIONAL MEMBERSHIPS

American Society for Nutrition – 1994 to present

American Physiological Society – 1997 to present

American Society for Biochemistry and Molecular Biology – 2004 to present

American Diabetes Association – 2002-2005

PROFESSIONAL SERVICE

Service to the Discipline

- A. *Organizer and Chair*, FASEB Summer Research Conference “Nutrient Sensing and Metabolic Signaling”, Big Sky, MT August 10-15, 2014.
- B. *Standing Member*, INMP Study Section, NIH, 2014-present
- C. American Society for Nutrition
 1. Editorial Board, *Advances in Nutrition*, 2015-present
 2. *Member At Large/Molecular Nutrition Representative*, American Society for Nutrition Nutritional Sciences Council, 2014-2016
 3. *Member*, FASEB Excellence in Science Award Committee, July 1, 2012-June 30, 2015
 4. *Co-chair*, ASN “Translational and Transformational Concepts in Amino Acid Sensing”; Experimental Biology 2015
 5. Editorial Board, *Journal of Nutrition*, 2006-2012
 6. Nutrient-Gene Interactions Research Interest Section
 - a. Chair-Elect, 2008-2009
 - b. Chair, 2009-2010
 7. Energy and Macronutrient Metabolism Research Interest Section
 - a. Steering Committee Member 2002-2004
 - b. Chair-Elect, 2004-2005
 - c. Chair, 2005-2006
 - d. Past-Chair, 2006-2007
 3. *Co-chair*, ASN “Obesity and Inflammation” mini-symposium, Experimental Biology 2012
 4. *Co-chair*, ASN Symposium: “Metabolic Regulation by Amino Acids for Optimal Health” at Experimental Biology 2012

5. *Co-chair*, ASN Symposium: “Present and Emerging Clinical Applications of Amino Acids” at Experimental Biology 2010
6. *Chair*, “Nutrient Sensing Mechanisms” mini-symposium, Experimental Biology 2008,209,2010
7. *Co-chair*, ASN “Protein and Amino Acid Metabolism” mini-symposium, Experimental Biology 2003, 2004, 2007
8. *Co-chair*, ASN Symposium, “Protein Metabolism and Sarcopenia in the Elderly”, Experimental Biology 2007
9. *Organizer and Chair*, ASN Controversy Session, ““Therapeutic Potential of the Branched-Chain Amino Acid Leucine: Lots of Trees but where’s the Forest?””, Experimental Biology 2006
10. *Member*, Selection committee for 2008 Centrum Center for Nutrition Science Award
11. *Member*, Nominating Committee of the American Society for Nutrition, 2007-2008
12. *Member*, Selection committee for 2006 ASN Conrad A. Elvehjem Public Service Award

B. American Physiological Society

1. Editorial Board Member, *American Journal of Physiology Endocrinology and Metabolism*, 2010-present
2. *Organizer and Chair*, American Physiological Society 2013 Symposium: “Branched-chain Amino Acids in Obesity and Insulin-Resistance: Friend or Foe?” at Experimental Biology 2013
3. Membership Committee Member, January 1, 2009-December 31, 2012
4. Endocrinology and Metabolism Research Section Member

C. Ad-Hoc Manuscript Reviewer

- 1) *Advances in Nutrition*
- 2) *American Journal of Physiology family of journals*
- 3) *American Journal of Clinical Nutrition*
- 4) *Applied Physiology, Nutrition and Metabolism*
- 5) *Biochimica Biophysica Acta*
- 6) *Current Opinion in Clinical Nutrition and Metabolic Care*
- 7) *Journal of Applied Physiology*
- 8) *Society for Experimental Biology and Medicine*
- 9) *Journal of Animal Science*
- 10) *Journal of Animal Science and Biotechnology*
- 11) *Journal of Cellular Physiology*
- 12) *Journal of Biological Chemistry*
- 13) *Journal of Nutrition*
- 14) *Journal of Hepatology*
- 15) *Molecular Cancer Research*
- 16) *Journal of the American College of Nutrition*
- 17) *Cell Metabolism*
- 18) *Cell Reports*
- 19) *Clinical and Experimental Immunology*
- 20) *Clinical Nutrition*
- 21) *EMBO Reports*
- 22) *Journal of the International Society of Sports Nutrition*
- 23) *Pediatric Research*
- 24) *PLoS Biology*
- 25) *British Journal of Nutrition*
- 26) *Nature Communications*
- 27) *Nutrients*

- 28) *Journal of Animal Science and Biotechnology*
- 29) *Scientific Reports*
- 30) *Trends in Endocrinology and Metabolism*

D. Ad-Hoc Grant Reviewer

- a. NIH – INMP February 2012, June 2012; October 2012; February 2013
- b. NIH – SBIR/STTR October 2014
- c. The Wellcome Trust/ DBT India Alliance, 2014
- d. French National Research Agency, 2012
- e. The Wellcome Trust, 2004, 2005, 2008
- f. BARD proposal, 2004 and 2005
- g. National Science Foundation CAREER program, 2005
- h. Neurological Foundation of New Zealand, 2006

Service to Rutgers University

1. *Chair*, Department of Nutritional Sciences Faculty Search Committee, 2015-2016
2. *Chair*, Department of Nutritional Sciences Seminar Committee, 2015-present
3. *Member*, School of Environmental and Biological Sciences (SEBS) Biological Sciences Area Committee, 2016-present
4. *Member*, Cancer Institute of New Jersey CDSS, 2012-current
5. *Member*, Curriculum Development Committee, Department of Nutritional Sciences, 2012-current
6. *Member*, Admissions Committee, Nutritional Sciences Graduate Program, 2013-current
7. *Member*, Academic Standards Committee, Endocrinology and Animal Biosciences Graduate Program, 2015-current
8. *Ad-hoc Member*, Curriculum Committee, Nutritional Sciences Graduate Program, August 2013
9. *Fellow*, OASIS Leadership & Professional Development Program, Office for the Promotion of Women in Science, Engineering and Mathematics, Rutgers University, Sept-Dec 2012.

Service to Indiana University

1. *Chair*, IUSM-E Seminar Series, 2008-2011
2. *Member*, IUSM-E Director Search Committee, 2007-2010
3. *Member*, IUSM-E Microbiology Search Committee, 2004-2006
4. *Member*, IUSM-E Research committee, 2003-2011
5. *Organizer*, IUSM-E Faculty Journal Club, 2006-2011
6. *Member*, Corcoran Lecture committee, 2004 (hosted Dr. Virginia Stallings) and 2008 (hosted Dr. Lawrence Einhorn)

Service to the Community

- A. *Co-Chair*, Women's Fund of Vanderburgh County. Raised \$125,000 in 2009-2010 for local charities that serve the needs of women and children.
- B. *Board of Directors*, Women's Fund of Vanderburgh County, July 1, 2009-June 30, 2012
- C. *Board of Directors*, Girl Scouts of Southwest Indiana, 2011-2012
- D. *Girl Scout Troop Leader*, East River Troops #253, Oct 2007 to Sept 2011
- E. *Girl Scout Troop Leader*, East River Troop #214, Oct 2009 to Sept 2011
- F. *Judge*, Helfrich Park Middle School science fair, February 26, 2010
- G. *Judge*, Pott Foundation Tri-State Science and Engineering Fair, University of Southern Indiana, Spring 2008, 2009, 2010

Other Professional Activities:

1. *Editorial Board Member*, Annual Review of Nutrition Editorial Board, 2016-2021
2. *Invited Participant*, Annual Review of Nutrition Editorial Board Meeting, New York City 2014, 2015, 2016
3. *Invited Panelist and Speaker*, Protein Summit 2.0: Evaluating the Role of Protein on Public Health, Washington DC, Oct 2-3, 2013
4. *Chairperson*, NSGSA Nutrition Symposium Committee, 1996
5. *Secretary*, Nutritional Sciences Graduate Student Association, 1996-97
6. *Editor*, University of Illinois Division of Nutritional Sciences Alumni Newsletter, 1995-1997
7. *Member*, NSGSA Nutrition Symposium Committee, 1994-97

INVITED TALKS

- 2001 Indiana University School of Medicine-Indianapolis, Department of Biochemistry and Molecular Biology; "Translational Control of Protein Synthesis by Amino Acids", August 15.
- 2002 Indiana University School of Medicine Evansville Center for Medical Education; "Translational Control of Protein Synthesis by Amino Acids", January 25.
- 2003 University of Southern Indiana, Biology Department; "Regulation of Protein Synthesis by Nutrition and Exercise: Role of the Eukaryotic Initiation Factors", February 28.
- 2003 University of Southern Indiana, Biology Department; "Regulation of Gene Expression by Amino Acids", Dec 2.
- 2004 Indiana University School of Medicine-Indianapolis, Department of Biochemistry and Molecular Biology; "Regulation of Protein Synthesis by Amino Acid Deprivation: It's Amino World Without Them!", March 29.
- 2004 Indiana University School of Medicine-Northwest; "Mechanisms of Nutrient Stress by the Anti-Cancer Drug Asparaginase", December 3.
- 2005 University of Southern Indiana, Biology Department, Evansville, IN; "Mechanisms of Nutrient Stress by the Anti-Cancer Drug Asparaginase", January 21.
- 2006 Wabash College, Crawfordsville, IN; "Role of Glutamine Depletion in the Cellular Stress Response to Asparaginase", April 18.
- 2006 Emory School of Medicine, Atlanta, GA; "Looking Beyond Asparagine Synthetase: Tissue-specific Nutrient Stress Responses to Asparaginase", AFLAC Cancer Center, May 3-4.
- 2007 Wake Forest University School of Medicine, Department of Biochemistry; "Cellular Stress Responses to Amino Acid Starvation", Jan 7-9.
- 2007 Indiana University School of Medicine-Bloomington; "Starving to Death: Mechanisms of Cytotoxicity by the Anti-Cancer Drug, Asparaginase", Nov 19.
- 2008 Penn State University, Department of Nutritional Sciences, "GCN2: It's Amino World without It", March 25.
- 2008 FASEB Summer Research Conference, Carefree, AZ, "Is it all in my head?: functional consequences of GCN2 deficiency", July 22.
- 2008 University of Michigan, Department of Physiology, "GCN2: It's Amino World without It", November 14.
- 2009 Virginia Tech University, Department of Animal Sciences, "GCN2: It's Amino World without It", February 2009.
- 2009 Indiana University School of Medicine-Indianapolis, Department of Microbiology and Immunology, "GCN2: It's Amino World without It", March 16.

- 2009 Hershey Foods, Hershey, PA, "Role of Dietary Protein in Sports and Exercise: From Metabolic Advantage to Enhanced Performance", April 2009.
- 2009 Mead Johnson Nutrition, Evansville, IN, "Regulation of mammary gland development and lactogenesis by docosahexaenoic acid (DHA) in female mice fed a high fat diet." April 29, 2009.
- 2010 Indiana University School of Medicine-Indianapolis, Department of Pharmacology and Toxicology, "Central Role of Eukaryotic Initiation Factor 2 (eIF2) in Managing Cellular Stress by Chemicals and Drugs", February 16.
- 2010 Owensboro Medical Health System, Owensboro Cancer Research Program, "Central Role of Eukaryotic Initiation Factor 2 (eIF2) in Managing Cellular Stress", April 19.
- 2011 FASEB Summer Research Conference, Steamboat Springs, CO. "Amino Acid Stress Responses and Early Postnatal Brain Development", August 7-12
- 2011 Department of Nutritional Sciences, Rutgers University, "Amino Acid Deprivation: Mechanisms, Utility and Consequences", September 1
- 2011 Indiana State University Biology Seminar Series, "Starving to death: how amino acid depletion kills cancer", September 27
- 2012 Department of Animal Sciences, Rutgers University, "Stress Responses to Amino Acid Starvation", March 2
- 2012 Keynote Address at the 66th Annual Meeting of Japan Society of Nutrition and Food Science, "Amino Acid Nutrition and the Integrated Stress Response", Tohoku University, Sendai, Japan, on May 20, 2012
- 2012 Annual Retreat on Cancer Research in New Jersey, Public Forum on Kids and Cancer: "The Obesity Connection, "Dietary Macronutrients and Their Influence on Appetite and Weight Control". May 24
- 2012 Energy Balance and Protein Utilization: Implications for Weight Management Symposium: "Role of Energy Balance in the Regulation of Protein Synthesis and Breakdown", ACSM 59th Annual Meeting, May 30, 2012
- 2012 KON Induction Ceremony, October 18, 2012
- 2012 Cancer Institute of New Jersey CDSS, "Starving to Death: Sensing of Amino Acid Depletion by GCN2"; Dec 21
- 2013 Department of Nutritional Sciences, Rutgers University, "Amino Acid Sensing in Health and Disease", February 21.
- 2013 LSU Health Sciences Stanley S Scott Cancer Center, "Sensing of Amino Acid Depletion by Asparaginase", March 21
- 2013 Nissen Symposium, "Adaptation of the Immune System to Amino Acid Deprivation", Iowa State University, May 17.
- 2013 "GCN2 and the Amino Acid Stress Response in Health and Disease", University of Florida, Gainesville, FL, Nov 14
- 2013 "GCN2 and the Amino Acid Stress Response", Pennington Biomedical Research Center, Baton Rouge, LA, Dec 5
- 2014 "The Amino Acid Stress Response in Health and Disease", Columbia University, January 29.
- 2014 "Role of dietary protein in sports and exercise: from metabolic advantage to enhanced performance"; International Society for Sports Nutrition/NJ Institute for Food, Nutrition & Health Human Performance Conference, Rutgers University, March 29.
- 2014 "Dietary Methionine Restriction and Body Composition", Russell Nutrition Symposium, October 23, 2014
- 2015 "Amino Acid Control of Cell Signaling", Experimental Biology, Boston, MA March 31

- 2015 “Homeostatic Responses to Amino Acid Insufficiency”, China Engineering and Technology Forum—Animal Nutrition and Breeding Environment Control, Chungsha, China.
- 2015 “Regulation of Protein Balance in Skeletal Muscle” 8th International congress on Farm Animal Endocrinology, Billund, Denmark August 27-29
- 2015 “Mechanisms of Metabolic Toxicities by the Anti-Leukemia Agent Asparaginase”, CINJ Nov 5.
- 2015 “Amino Acid Sensing and Signaling in Health and Disease”, NORC at the University of Alabama at Birmingham, Nov 10.
- 2016 “Amino acid deprivation and nutritional stress” Experimental Biology 2016 APS President's Symposium Series, Physiological Mechanisms Responsive to Behavioral and Environmental Challenges; Symposium 2: Dietary Influences on Physiological Control Mechanisms — How Much, When and What. Monday, April 4.
- 2016 “Homeostatic Responses to Amino Acid Insufficiency”, University of Missouri Nutrition and Exercise Physiology Seminar Series, September 1
- 2016 “Homeostatic Responses to Amino Acid Insufficiency”, Virginia Tech Nutrition and Exercise Seminar Series, September 19

LAY MEDIA

- 2005 Featured on the local NBC News Affiliate, Channel 14 WFIE in a Health article highlighting my work published in the journal Science on how the brain senses dietary amino acid deprivation. Shown on the evening news and complimented with a web-based article. 03/17/05
- 2005 Interviewed and quoted in the October/November Evansville Business Living magazine on the role of dietary fat in mental alertness.
- 2007 Featured on the local NBC News Affiliate, Channel 14 WFIE in a Health article highlighting my work published in the Journal of Nutrition on soy protein consumption after exercise. Shown on evening news and complimented with a web-based article. 02/26/07
- 2007 Research highlighted by nutraingredients.com as ‘Breaking News on Supplements & Nutrition’ 02/09/2007
- 2007 Interviewed for an article on soy protein and exercise published in “Real Fighter” magazine. 03/29/07
- 2007 Interviewed and research highlighted on the Indiana University Life Science Initiative web site (<http://lifesciences.iu.edu/research/protein.shtml>) 04/05/07
- 2007 Interviewed for an article on the future of nutrition education in the Evansville Courier and Press.
- 2008 Research highlighted in “New Varieties of Protein” article in Food Product Design magazine (January issue, p. 55).
- 2013 Interviewed on “Take Two”, a news show on 89.3 KPCC public radio about SoyLent. Web article found at: <http://www.scpr.org/programs/take-two/2013/06/18/32304/is-soylent-the-food-of-the-future/>

PUBLICATIONS

Peer-reviewed Original Research

1. TA Gautsch, JC Anthony, SR Kimball, DK Layman, LS Jefferson (1998) Availability of eIF4E regulates skeletal muscle protein synthesis during recovery from exercise. *Am. J. Physiol.* 274: C406-C414.

2. **TA Gautsch**, SM Kandl, SM Donovan, DK Layman (1998) Response of the IGF-I system to prolonged undernutrition and its involvement in somatic and skeletal muscle growth retardation in rats. *Growth Develop. Aging* 62:13-25.
3. **TA Gautsch**, SM Kandl, SM Donovan, DK Layman (1999) Growth hormone promotes somatic and skeletal muscle growth recovery in rats following chronic protein-energy malnutrition. *J. Nutr.* 129:828-837.
4. JC Anthony, **TG Anthony**, DK Layman (1999) Leucine supplementation enhances skeletal muscle recovery in rats following exercise. *J. Nutr.* 129:1102-1106.
5. JC Anthony, **TG Anthony**, SR Kimball, TC Vary, LS Jefferson (2000) Orally administered leucine stimulates protein synthesis in skeletal muscle of post-absorptive rats in association with increased eIF4F formation. *J. Nutr.* 130: 139-145.
6. **TG Anthony**, JR Fabian, SR Kimball, LS Jefferson (2000) Identification of domains within eIF2B epsilon that are necessary for full guanine nucleotide exchange activity as well as binding the β -subunit of its substrate, eIF2. *Biochim. Biophys. Acta* 1492: 56-62.
7. JC Anthony, F. Yoshizawa, **TG Anthony**, SR Kimball, LS Jefferson (2000) Leucine stimulates translation initiation in skeletal muscle of postabsorptive rats via a rapamycin-sensitive pathway. *J. Nutr.* 130:2413-2419.
8. **TG Anthony**, JC Anthony, MS Lewitt, SM Donovan, DK Layman (2001) Time course changes in IGFBP-1 following treadmill exercise and post-exercise food intake in rats. *Am. J. Physiol.* 280:E650-E656.
9. **TG Anthony**, JC Anthony, F. Yoshizawa, SR Kimball, LS Jefferson (2001) Oral administration of leucine stimulates ribosomal protein mRNA translation but not global rates of protein synthesis in the liver of rats. *J. Nutr.* 131:1171-1176.
10. **TG Anthony**, AK Reiter, JC Anthony, SR Kimball, LS Jefferson (2001) Deficiency of essential dietary amino acids preferentially inhibits mRNA translation of ribosomal proteins in the liver of meal-fed rats. *Am. J. Physiol.* 281(3):E430-439.
11. JC Anthony, AK Reiter, **TG Anthony**, SJ Crozier, CH Lang, DA MacLean, SR Kimball, LS Jefferson (2002) Orally administered leucine enhances protein synthesis in skeletal muscle of diabetic rats in the absence of increases in 4E-BP1 or S6K1 phosphorylation. *Diabetes* 51(4):928-936.
12. JC Anthony, CH Lang, SJ Crozier, **TG Anthony**, DA MacLean, SR Kimball, LS Jefferson (2002) Contribution of insulin to the translational control of protein synthesis in skeletal muscle by leucine. *Am. J. Physiol.* 282(5):E1092-101.
13. H Kobayashi, E Børsheim, **TG Anthony**, DL Traber, J Badalamenti, SR Kimball, LS Jefferson, RR Wolfe (2003) Reduced amino acid availability inhibits muscle protein synthesis and decreases activity of initiation factor eIF2B. *Am. J. Physiol.* 284:E488-98.

14. SR Crozier, JC Anthony, CM Schworer, AK Reiter, **TG Anthony**, SR Kimball, LS Jefferson (2003) Tissue-specific regulation of protein synthesis by insulin and free fatty acids. *Am. J. Physiol.* 285:E754-62.
15. AK Reiter, **TG Anthony**, JC Anthony, SR Kimball, LS Jefferson (2004) The mTOR signaling pathway mediates control of ribosomal protein mRNA translation in rat liver. *Intl. J. Biochem. Cell Biol.* 36:2169-2179.
16. **TG Anthony**, BJ McDaniel, RL Byerley, BC McGrath, DR Cavener, MA McNurlan, RC Wek (2004) Preservation of liver protein synthesis during dietary leucine deprivation occurs at the expense of skeletal muscle mass in mice deleted for eIF2 kinase GCN2. *J. Biol. Chem.* 279:36553-36561.
17. JI Baum, JC O'Connor, JE Seyler, **TG Anthony**, GG Freund, DK Layman (2005) Leucine reduces the duration of insulin-induced PI3-kinase activity in rat skeletal muscle. *Am. J. Physiol.* 288:E86-91.
18. S Hao, CM. Ross, JB Rudell, BJ McDaniel, **TG Anthony**, RC. Wek, DR Cavener, BC McGrath, TJ Koehnle, JW Sharp, DW Gietzen (2005) Uncharged tRNA and Sensing of Amino Acid Deficiency in Mammalian Piriform Cortex. *Science.* 307:1776-1778.
19. Reinert RB, Oberle LM, Wek SA, Bunpo P, Wang XP, Mileva I, Goodwin LO, Aldrich CJ, Durden DL, McNurlan MA, Wek RC, **TG Anthony** (2006) Role of glutamine depletion in directing tissue-specific stress responses to asparaginase. *J Biol Chem.* Oct 20;281(42):31222-33.
20. **TG Anthony**, BJ McDaniel, P Knoll, P Bunpo, GL Paul, MA McNurlan (2007) Feeding meals containing soy or whey protein after exercise stimulates protein synthesis and translation initiation in the skeletal muscle of male rats. *J Nutr.* 137: Feb;137(2):357-62.
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30. P Bunpo, B Murray, J Cundiff, E Brizius, CJ Aldrich, **TG Anthony** (2007) Dietary glutamine modifies the effect of asparaginase on lymphocyte populations in mice. FASEB J. ****Second Place Award at the ASN Diet and Cancer RIS Poster Competition.**

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38. EP Plaisance, N Van, M Orgeron, AN McDaniel, PH Behrens, TW Gettys, **TG Anthony** (2012) Role of General Control Nonderepressible Kinase 2 (GCN2) kinase in mediating responses to dietary methionine restriction. FASEB J. Experimental Biology 2012 San Diego, CA ***Winner of ASN EMM RIS Abstract Competition***
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41. RJT Al-Baghdadi, ET Mirek, L Phillipson-Weiner, RC Wek, WJ Belden, **TG Anthony** (2015) Loss of Activating Transcription Factor 4 (ATF4) Alters the Homeostatic Amino Acid Response (AAR) in the Liver of Mice Treated with Asparaginase. FASEB J. Experimental Biology 2015 Boston, MA

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43. Ashley P. Pettit, Albert Bargoud, Emily T. Mirek, Tracy G. Anthony (2016) General Control Nonderepressible 2 (GCN2) Kinase Regulates Body Composition and Antioxidant Defenses during Dietary Methionine Restriction. Experimental Biology 2016
44. Inna A. Nikonorova, Emily Mirek, Yongping Wang, Joseph Dixon, Tracy G. Anthony (2016) Obesity intensifies hepatotoxicity by asparaginase in mice deleted for GCN2 but not ATF4. Experimental Biology 2016

Electronic Pubcasts

1. "The eIF2 kinase GCN2 is essential for the murine immune system to adapt to amino acid deprivation by asparaginase" found at <http://www.scivee.tv/node/24910>. Published on October 26, 2010.

Professional Service Publications

- A. Authored the quarterly update for the Energy and Macronutrient Metabolism Research Interest Section of the ASN. Published in Nutrition Notes, the official publication of the American Society for Nutrition, in the following issues:
 1. 2005 Volume 41, number 3
 2. 2005 Volume 41, number 4
 3. 2006 Volume 42, number 1
 4. 2006 Volume 42, number 2
 5. 2006 Volume 42, number 3
 6. 2006 Volume 42, number 4
- B. Authored the quarterly update for the Nutrient Gene Interactions Research Interest Section of the ASN. Published in Nutrition Notes, the official publication of the American Society for Nutrition, in the following issues:
 1. 2009 Volume 45, number 3
 2. 2009 Volume 45, number 4
 3. 2010 Volume 46, number 1
 4. 2010 Volume 46, number 2

Active Grant Awards:

1R01 DK109714-01 NIH National Institute of Diabetes, Digestive and Kidney Diseases
Homeostatic Responses to Amino Acid Insufficiency
09/20/2016 - 06/30/21

This proposal aims to detail early molecular responses to dietary amino acid insufficiency and identify novel targets that alter disease outcomes and improve health span.

Role: Primary PI (MPI: R. Wek)

1R01HD070487-01 NICHD
Molecular Mechanisms of Adverse Metabolic Events by Asparaginase
July 22, 2011 – April 30, 2016 (NCE through April 30, 2017)
PI: Anthony

USDA Multistate /NJ Agriculture Experiment Station
October 15, 2015-September 30, 2020
Mechanisms of Skeletal Muscle Growth and Differentiation
Role: PI

1R01 DK105032 NIH National Institute of Diabetes, Digestive and Kidney Diseases
FGF21 is an Endocrine Signal of Protein Restriction
01/01/16 – 12/31/20
proposal addresses This mechanism by which FGF21 directs metabolic responses to protein undernutrition. The subcontract will test the effect of dietary protein restriction on energy expenditure, food intake and growth in mice deleted for GCN2 and PERK in the liver.
Principal Investigator: Dr. Christopher Morrison
Role: Subcontract PI for Aim 1