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# JACOB M. ALLEN, PHD

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## UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

ASSISTANT PROFESSOR  
KINESIOLOGY AND COMMUNITY HEALTH

FACULTY MEMBER  
MICROBIAL SYSTEMS INITIATIVE  
DIVISION OF NUTRITIONAL SCIENCES  
MICROBIOME METABOLIC ENGINEERING

jmallen5@illinos.edu

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## EDUCATION & TRAINING

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2017-2020	POSTDOCTORAL SCIENTIST, Nationwide Children's Hospital <b>Microbiology</b> ; Area of study: <i>Effects of stress and nutrition on microbiome-host interactions</i>
2013-2017	DOCTOR OF PHILOSOPHY, University of Illinois at Urbana-Champaign <b>Kinesiology</b> ; Area of Study: <i>Effects of exercise and nutrition on the gut microbiome</i>
2011-2013	MASTER OF ARTS, University of North Carolina at Chapel Hill <b>Exercise Physiology</b> ; Area of study: <i>Effects of exercise on the innate immune system in breast cancer survivors</i>
2009-2011	BACHELOR OF ARTS, University of North Carolina at Chapel Hill Major: Exercise Physiology; Minor: Biology
2007-2009	BACHELOR OF SCIENCE, University of North Carolina at Wilmington Major: Biology; Transferred to University of North Carolina at Chapel Hill

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## POSITIONS AND EMPLOYMENT

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2020-Current	ASSISTANT PROFESSOR, Department of Kinesiology and Community Health, University of Illinois at Urbana-Champaign, Urbana, IL
2020-Current	FACULTY MEMBER, Division of Nutritional Sciences (DNS). University of Illinois, Urbana-Champaign
2020-Current	FACULTY MEMBER, Institute for Genomic Biology (IGB), Microbiome and Metabolic Engineering (MME) theme. University of Illinois, Urbana-Champaign
2017-2020	POSTDOCTORAL SCIENTIST, Center for Microbial Pathogenesis Nationwide Children's Hospital (NCH), Columbus, OH
2013-2017	GRADUATE RESEARCH AND TEACHING ASSISTANT University of Illinois, Urbana-Champaign, IL
2011-2013	GRADUATE RESEARCH AND TEACHING ASSISTANT University of North Carolina, Chapel Hill, NC

## HONORS AND AWARDS

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- 2022 **American Society for Nutrition (ASN) - Peter J. Reeds Young Investigator Award.** Award is given for outstanding research in macronutrient metabolism accomplished within 5 years of receiving a Ph.D. degree or completing residency training.
- 2020 **Postdoctoral Fellow Award for Outstanding Oral Presentation.** The Ohio State's College of Dentistry Research Day, Columbus, OH.
- 2019 **J.B. Russell Young Scientist Award for Best Oral Presentation.** The Congress on Gastrointestinal Function, Chicago, IL.
- 2016 **Mayo Center for Individualized Medicine Conference Outstanding Paper Award.** Mayo-UIUC Alliance, Rochester, MN
- 2015 **Mayo-UIUC Individualizing Medicine Conference Scholarship.** Mayo-UIUC Alliance, Urbana, IL and Rochester, MN.
- 2014 **Roger Morse Most Promising Graduate Student Award.** University of Illinois, Urbana-Champaign, IL.

## INVITED LECTURES

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- 2022 **International Society of Exercise and Immunology (ISEI) Symposium.** *Exercise Immunology Gets Personal – Precision Prescriptions for the Prevention and Management of Infections and Chronic Diseases.* Tucson, Arizona.
- 2022 **National Institute on Aging Virtual Workshop:** Understanding Heterogeneity of Responses to, and Optimizing Clinical Efficacy of, Exercise Training in Older Adults. Online Format.
- 2021 **Pathways in Biological Sciences (PIBS) at UCSD.** *Biological Stress: From 'Cells to Societies' Symposium* at the University of California at San Diego (UCSD).
- 2020 **1<sup>st</sup> Inaugural Virtual Microbiome Summit.** Online Format.
- 2020 **(Keynote) 2020 2<sup>nd</sup> Annual Danone Nutrition Forum-**sponsored by the Mexican Danone Institute. Mexico City, Mexico.
- 2019 **Infectious Disease Research Symposium** at Nationwide Children's Hospital, Columbus, OH.
- 2018 **(Keynote) German Olympic Congress for Sports Medicine Specialists.** Conference Symposium: *Exercise and the Microbiome.* Hamburg, Germany.
- 2016 **PsychoNeuroImmunology Research Society Conference (PNIRS).** Conference Symposium: *Behavior and the Microbiome.* Brighton, England.
- 2014 **Integrative Physiology and Exercise Conference,** Symposium: *Guts, Hearts and Smarts.* Miami, FL.

## CURRENT RESEARCH SUPPORT

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July 31, 2022- May 31, 2027

**RO1 DK131133- National Institutes of Health (NIH)**

Allen, Jacob (PI)

**National Institutes of Diabetes and Digestive and Kidney Diseases (NIDDK)**

**Title:** Role of epithelial ROS signaling in mediating psychological stress-induced mucosal dysfunction and colitis predisposition

The purpose of this grant is to unravel the how psychological stress modifies gut epithelial-microbiome interactions at the mucosal interface and the subsequent impacts on inflammatory bowel disease.

Status: Awarded

Role: Principal Investigator

Award Amount: \$3,284,062

Feb 1, 2023- Jan 31, 2026

**AFRI-2023-67017-39053**

Allen, Jacob (PI)

**United States Department of Agriculture- Food and Human Health**

Title: *Optimizing bioactive metabolites in fermented foods to improve human immune function*

The primary goal of this project is to determine if specific microbial-derived metabolites derived from aromatic amino acids (Aryl-Lactates) can be optimized in a whole food matrix to promote anti-inflammatory activity in humans.

Status: Awarded

Role: Principal Investigator

Award Amount: \$637,850

August 1, 2022- July 31, 2024

**Personalized Nutrition Initiative- UIUC**

Allen, Jacob (PI)

Title: *Optimizing bioactive metabolites in fermented foods*

Status: Awarded

Role: Principal Investigator

Award Amount: \$50,000

July 1, 2021-June 31, 2023

**Center for Healthy Aging and Disability- UIUC**

Allen, Jacob (PI)

Title: Gastrointestinal and Metabolic Effects from a Prebiotic, Lifting and Aerobic Intervention

Status: Awarded

Role: Principal Investigator

Award Amount: \$30,000

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## RESEARCH SUPPORT COMPLETED DURING LAST THREE YEARS

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Sept 30, 2020- Sept 21, 2022

**R56-AG068747- National Institutes of Health (NIA)**

Buford (PI)

Title: Age-Related Gut Dysbiosis and Physical Resilience

The purpose of this grant is to understand how the ageing gut microbiome modifies physical resilience. We will specifically examine how shifts in microbial metabolites mediate changes to muscle cachexia and physical frailty associated with ageing.

Status: Completed

Role: Co-Investigator, on-Site Principal Investigator (PI) at UIUC

Award Amount: \$289,424

Sep 1, 2020- Aug 31, 2021

**Metabolic Technologies, Inc**

Allen, Jacob (PI)

Title: Independent and combined effects of resistance exercise training and beta-hydroxy beta-methylbutyrate plus vitamin D3 on body composition and skeletal muscle health

Status: Completed

Role: Principal Investigator

Award Amount: \$232,700

Jan 4, 2019 – March 30, 2020

**T32 - Ruth L. Kirschstein National Research Service Award**

Allen, Jacob (PI)

NIDCR Comprehensive Training in Oral and Craniofacial Sciences Fellowship at The Ohio State University.  
Title: Stress and Gut Tryptophan Metabolism: Pathways of Disruption and Potential Avenues for Intervention  
The purpose of this grant was to unravel the how the stress modulates tryptophan metabolism within the the gut microbiota and the subsequent interactions between microbial tryptophan metabolites and host immunity  
Status: Completed  
Role: Principal Investigator/Fellow

## PUBLICATIONS

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\* = Corresponding Author

**H Index=15; Total Citations: 1983**

### SELECTED PUBLICATIONS

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**Allen J.M.\***, Mackos AR, Jagers RM, Brewster PC, Webb M, Lin CH, Ladaika C, Davies R, White P, Loman BR, Bailey MT. Psychological stress disrupts intestinal epithelial cell function and mucosal integrity through microbe and host-directed processes. *Gut Microbes*. 2022 Jan-Dec;14(1):2035661. doi: 10.1080/19490976.2022.2035661. PMID: 35184677.

Kasperek, M. C., Mailing, L., Piccolo, B. D., Moody, B., Lan, R., Gao, X., . . . **Allen, J. M.**^ (2023). Exercise training modifies xenometabolites in gut and circulation of lean and obese adults. *Physiol Rep*, 11(6), e15638. doi:10.14814/phy2.15638

**Allen J.M.**, Jagers R.M., Solden L.M., Loman B.R., Davies R.H., Mackos A.R. ... Bailey M.T. (2019). Dietary Oligosaccharides Attenuate Stress-Induced Disruptions in Immune Reactivity and Microbial B-Vitamin Metabolism. *Front Immunol*. doi:10.3389/fimmu.2019.01774.

**Allen J.M.**, Mailing L.J., Niemi G.M., Moore R., Cook M.D., White B.A. ... Woods J.A. (2018). Exercise Alters Gut Microbiota Composition and Function in Lean and Obese Humans. *Med Sci Sports Exerc*. doi: 10.1249/MSS.0000000000001495.

**Allen J.M.**, Mailing L.J., Cohrs J., Salmonson C., Fryer J.D., Nehra V., . . . Woods J.A. (2017). Exercise training-induced modification of the gut microbiota persists after microbiota colonization and attenuates the response to chemically-induced colitis in gnotobiotic mice. *Gut Microbes*. doi: 10.1080/19490976.2017.1372077.

**Allen J.M.**, Berg Miller M.E., Pence B.D., Whitlock K., Nehra V., Gaskins H.R. . . . Woods J.A. (2015). Voluntary and forced exercise differentially alters the gut microbiome in C57BL/6J mice. *J Appl Physiol*. doi: 10.1152/jappphysiol.01077.2014.

Erickson, M. L., **Allen, J. M.**, Beavers, D. P., Collins, L. M., Davidson, K. W., Erickson, K. I., . . . Sparks, L. M. (2023). Understanding heterogeneity of responses to, and optimizing clinical efficacy of, exercise training in older adults: NIH NIA Workshop summary. *Geroscience*, 45(1), 569-589. doi:10.1007/s11357-022-00668-3

Fairfield, W. D., Minton, D. M., Elliehausen, C. J., Nichol, A. D., Cook, T. L., Rathmacher, J. A., . . . **Allen J.M.**, Konopka A. R. (2022). Small-Scale Randomized Controlled Trial to Explore the Impact of beta-Hydroxy-beta-Methylbutyrate Plus Vitamin D(3) on Skeletal Muscle Health in Middle Aged Women. *Nutrients*, 14(21). doi:10.3390/nu14214674

Shelby, R. D., Mar, P., Janzow, G. E., Mashburn-Warren, L., Tengberg, N., Navarro, J. B., **Allen J.M.** . . . Besner, G. E. (2022). Antibacterial and anti-inflammatory effects of *Lactobacillus reuteri* in its biofilm state contribute to its beneficial effects in a rat model of experimental necrotizing enterocolitis. *J Pediatr Surg*, 57(7), 1382-1390. doi:10.1016/j.jpedsurg.2021.09.001

Fairfield, W. D., Minton, D. M., Elliehausen, C. J., Nichol, A. D., Cook, T. L., Rathmacher, J. A., . . . **Allen J.M.**, Konopka A. R. (2022). Small-Scale Randomized Controlled Trial to Explore the Impact of beta-Hydroxy-beta-Methylbutyrate Plus Vitamin D(3) on Skeletal Muscle Health in Middle Aged Women. *Nutrients*, 14(21). doi:10.3390/nu14214674

- Jaggers R.M., DiSabato D.J., Loman B.R., Kontic D, Spencer K..D, **Allen J.M.**, Godbout J.P., Quan N, Gur T.L., Bailey M.T.(2022) Stressor-Induced Reduction in Cognitive Behavior is Associated with Impaired Colonic Mucus Layer Integrity and is Dependent Upon the LPS-Binding Protein Receptor CD14. *J Inflamm Res.* 2022 Mar 3;15:1617-1635. doi: 10.2147/JIR.S332793.
- Biruete A, Cross TL, **Allen J.M.**, Kistler BM, de Loor H, Evenepoel P, Fahey GC Jr, Bauer L, Swanson KS, Wilund KR. Effect of Dietary Inulin Supplementation on the Gut Microbiota Composition and Derived Metabolites of Individuals Undergoing Hemodialysis: A Pilot Study. *J Ren Nutr.* 2021 Sep;31(5):512-522. doi: 10.1053/j.jrn.2020.10.003. Epub 2021 Jun 11. PMID: 34120835; PMCID: PMC8403151.
- Mackos A.R., **Allen J.M.**, Kim E., Ladaika C.A., Gharaibeh R.Z., Moore C., Parry N.M., Boyaka P.N., Bailey M.T. (2019). Mice deficient in epithelial or myeloid cell IkkB have distinct microbiomes and increased resistance to *Citrobacter rodentium* infection. *Front Immunol.* doi: 10.3389/fimmu.2019.02062.
- Dettmer A.M., **Allen J.M.**, Jaggers R.M., & Bailey M.T. (2019). A descriptive analysis of gut microbiota composition in differentially reared infant rhesus monkeys (*Macaca mulatta*) across the first 6 months of life. *Am J Primatol.* doi: 10.1002/ajp.22969.
- Mailing L.J., **Allen J.M.**, Pence B.D., Rytych J., Sun Y., Bhattacharya T.K., ... Woods J.A. (2019). Behavioral response to fiber feedings cohort-dependent and associated with gut microbiota composition in mice. *Behav Brain Res.* doi: 10.1016/j.bbr.2018.09.012.
- Mailing L.J., **Allen J.M.**, Buford T.W., Fields C.J., Woods J.A., (2019). Exercise and the Gut Microbiome: A Review of the Evidence, Potential Mechanisms, and Implications for Human Health. *Exerc Sport Sci Rev.* doi: 10.1249/JES.000000000000183.
- Biruete A., **Allen J.M.**, Kistler B.M., Jeong J.H., Fitschen P.J., Swanson K.S., Wilund K.R. (2019). Gut microbiota and cardiometabolic risk factors in hemodialysis patients: A pilot study. *Top Clin Nutr.* doi: 10.1097/TIN.000000000000170.
- Gur T.L., Palkar A.V., Rajasekera T., **Allen J.M.**, Niraula A., Godbout J., & Bailey M.T. (2018). Prenatal stress disrupts social behavior, cortical neurobiology and commensal microbes in adult male offspring. *Behav Brain Res.* doi: 10.1016/j.bbr.2018.06.025.
- Niemiro G.M., **Allen J.M.**, Mailing L.J., Khan N.A., Holscher H.D., Woods J.A., & De Lisio M. (2018). Effects of endurance exercise training on inflammatory circulating progenitor cell content in lean and obese adults. *J Physiol.* doi: 10.1113/JP276023.
- Matt S.M., **Allen J.M.**, Lawson M.A., Mailing L.J., Woods J.A., & Johnson R.W. (2018). Butyrate and Dietary Soluble Fiber Improve Neuroinflammation Associated With Aging in Mice. *Front Immunol.* doi: 10.3389/fimmu.2018.01832.
- Olson J.K., Navarro J.B., **Allen J.M.**, McCulloh C.J., Mashburn-Warren L., Wang Y., . . . Besner G.E. (2018). An enhanced *Lactobacillus reuteri* biofilm formulation that increases protection against experimental necrotizing enterocolitis. *Am J Physiol Gastrointest Liver Physiol.* doi: 10.1152/ajpgi.00078.2018.
- Nehra V., **Allen J.M.**, Mailing L.J., Kashyap P.C., Woods J.A. (2016). Gut microbiota: modulation of host physiology in obesity. *Physiology.* doi: 10.1152/physiol.00005.2016.
- Cook M.D., **Allen J. M.**, Pence B.D., Wallig M.A., Gaskins H.R., White B.A., & Woods J.A. (2016). Exercise and gut immune function: evidence of alterations in colon immune cell homeostasis and microbiome characteristics with exercise training. *Immunol Cell Biol.* doi: 10.1038/icb.2015.108.
- Panasevich M.R., **Allen J.M.**, Wallig M.A., Woods J.A., Dilger R.N. (2015). Moderately fermentable potato fiber attenuates signs and inflammation associated with experimental colitis in mice. *J Nutr.* doi: 10.3945/jn.115.218578.

## BOOK CHAPTERS

- Allen J.M.**, Sun Y., Woods J.A. (2015). Chapter Fourteen: Exercise and the Regulation of Inflammatory Responses. *Prog Mol Biol Transl Sci.* doi: 10.1016/bs.pmbts.2015.07.003.

## SELECTED ABSTRACTS (1<sup>ST</sup> AUTHOR OR SENIOR AUTHOR)

- Kasperek M.C, Velasquez-Galeas A, Miller M.J, **Allen J.M.** (2022) *Optimizing bioactive metabolites in fermented foods that have the potential to improve human immune function.* Personalized Nutrition Initiative. University of Illinois at Urbana-Champaign.
- Webb M.C, Piccolo B, Woods J, Adams S.H, **Allen J.M.** (2022) *Exercise training modifies gut and serum xenometabolites with immunomodulatory potential.* International Society of Exercise and Immunology. Tucson, AZ.
- Webb M.C, Resendiz-Moctezuma C, Miller M.J, **Allen J.M.** (2022) *Fermented foods as a source of microbial-derived immunomodulatory xenometabolites*” Nutrition Symposium. University of Illinois at Urbana-Champaign. Best Student Poster in Microbiology.
- Webb M.C., Resendiz-Moctezuma C, Miller M.J, **Allen J.M.** (2022) *Fermented foods as a source of immunomodulatory microbial-derived metabolites: indole-3-lactic acid and 4-hydroxyphenyllactic acid*” Microbial Early-Career Researchers Association (MicroERA) Research Symposium. University of Illinois at Urbana-Champaign.
- Allen J.M.\***, Pence B.D., Lin CH. (2022) Exercise-sensitive gut microbiota metabolites modify inflammatory signaling and cellular energy status in human monocytes. Psychoneuroimmunology Research Society Conference. Zurich, Switzerland.
- Lin C.H. and **Allen J.M.** (2022). Microbial-derived aromatic amino acid metabolites modify inflammatory signaling and cellular energy status in a human monocyte cell line. University of Illinois MicroEra Symposium.
- Webb M.C., Piccolo B., Mailing L., Moody B., Woods J., Adams S, **Allen J.M.** (2021), *Exercise training modifies the gut and serum xeno-metabolome of lean and obese adult humans.* Personalized Nutrition Initiative: Inter-Individual Differences in Nutrition Responses Symposium. University of Illinois, Urbana-Champaign IL.
- Allen J.M.\***, Mackos A.R., Dokhanchi, Jagers RM., Loman B.R., Bailey M.T. (2021). Psychological stress disrupts intestinal epithelial cell function through microbe and host-directed processes. *Keystone Symposium: Neuroimmune interactions.*
- Allen J.M.**, Mackos A.R., Jagers R.M. Bailey M.T. (2020). Stress initiates a pro-inflammatory transcriptional response in intestinal epithelial cells dependent on the gut microbiota. *College of Dentistry Research Day, The Ohio State University.*
- Allen J.M.**, Jagers R.M., Solden L.M., Loman B.R., Mackos A.R., Ladaika C.A., Berg B.M., Chichlowski M., Bailey M.T. (2019). Dietary oligosaccharides attenuate stress-induced disruptions in immune reactivity and microbial B-vitamin metabolism. *Psychoneuroimmunology Research Society Annual Meeting.*
- Allen. J.M.**, Ladaika C.A., Navarro J.B., Goodman S.D., Besner G.E., Bailey M.T. (2018). A single dose of *Lactobacillus reuteri* induces rapid and transient accumulation of CD4+ intraepithelial lymphocytes in the mouse small intestine following antibiotic exposure. *Nationwide Children’s Hospital Research Retreat.*
- Allen J.M.**, Olson J.K., Navarro J.B., McCulloh C.J., Mashburn-Warren L., Varaljay V.A., Bailey M.T., Goodman S.D., Besner G.E. (2018). *Lactobacillus reuteri* adhered to dextranomer microsphere alters the gut microbiome and limits disease severity during experimental Necrotizing Enterocolitis in rats. *Keystone Symposia on the Gut Microbiota.*
- Allen J.M.**, Kashyap P., Salmonson C., Fryer J., Nehra V., White B., Woods J.A. (2016). Exercise-induced changes in gut microbiota alters response to colitis in mice: Clinical scores and body weight differences. *Midwest Brain Behavior and Immunity Meeting.*
- Allen J.M.**, Panasevich M.R., Pence B.D., Sun Y., Dilger R.N., Woods J.A. (2015). Acute exercise increases short chain fatty acid concentrations in the mouse cecum. *American College of Sports Medicine Conference.*
- Allen J.M.**, Panasevich M.R., Pence B.D., Sun Y., Dilger R.N., Woods J.A. (2015). Acute exercise increases short chain fatty acid concentrations in the mouse cecum. *Midwest Brain Behavior and Immunity Meeting.* Invited speaker.

- Allen J.M.**, Mailing L., Holscher H., Swanson K., Boardman L., Murray J., Jensen M., Nehra V., Woods J.A. (2015). Utilizing the gut microbiota to predict weight loss from a volumetric diet and exercise program in obese adults. *Mayo Clinic Individualizing Medicine Conference*.
- Allen J.M.**, Berg-Miller M.E., Pence B.D., Whitlock K., Nehra N., Gaskins R., Fryer J.D., White B.A., Woods J.A. (2014). Forced and voluntary exercise differentially alters the microbiome in the feces and cecum of C57Bl/6J mice. *Mayo Clinic Individualizing Medicine Conference*.
- Allen J.M.**, Wang J., Pence B.D., Cook M.D., Whitlock K., Molitor M., Woods J.A. (2014). Short bouts of voluntary wheel running reduce the inflammatory insult of ulcerative colitis in C57Bl/6J. *Psychoneuroimmunology Research Society Meeting*.
- Allen J.M.**, Kang S.S., Jeraldo P.R., Kurti A., Berg-Miller M.E., Cook M.D., Whitlock K., Goldenfeld N., Woods J.A., White B.A., Chia N., Fryer J.D. (2014). High fat diet and exercise orthogonally alter the gut microbiome and reveal independent associations with anxiety and cognition. *University of Illinois Nutritional Sciences Symposium*.
- Allen J.M.**, Pearson C., VanBruggen M., Battaglini C., Hackney A.C. (2013). Association between serum and salivary cortisol responses to varying exercise in endurance trained males. *Southeastern American College of Sports Medicine Conference*.

### SELECTED ABSTRACTS (CO-AUTHOR)

- Eliehausen C.J., Fairfield W.D., Minton D.M., Nichol A.D., Ratchmacher J.A., Pitchford L.M., Paluska S.A., **Allen J.M.**, Konopka A.R. (2022). Impact of  $\beta$ -Hydroxy- $\beta$ -methylbutyrate plus Vitamin D<sub>3</sub> Supplementation on Skeletal Muscle Size, Function and Quality in Sedentary and Resistance Exercise Trained Women. Experimental Biology Conference. Philadelphia, PA.
- Talavera M., **Allen J.M.**, Pool C., Liu Y., Nelin L., Bailey M.T. (2019). Mkp-1 deficiency shapes microbial intestinal diversity in neonatal mice. *Pediatric Academic Societies Meeting*.
- Mailing L.J., **Allen J.M.**, Wang S.S., Kashyap P., White B.A., Woods J.A. (2019). Effects of transplanting an exercised or sedentary microbiota into gnotobiotic mice on global gene expression in gut, muscle, and brain tissue. *FASEB Journal*, doi: 10.1096/fasebj.2019.33.1\_supplement.lb293.
- Shelby R., Tengberg N., Conces M., Navarro J., **Allen J.M.**, Wang Y., Bailey M., Goodman S.D., Besner G.E. (2018). A novel probiotic platform therapy for the treatment of clostridium difficile colitis. *Podium presentation at the Annual Presidential Symposium of the Columbus Surgical Society*.
- Kurti S.P., **Allen J.M.**, Abella J., Mailing L.J., Woods J.A., Rosenkranz S.K., Harms C.A. (2018). The Impact of Physical Activity Level on the Oral Microbiome: A Cross-Sectional Investigation. *Medicine and Science in Sports and Exercise*. doi: 10.1249/01.mss.0000536380.91457.7d.
- Pence B.D., Bhattacharya T.K., Rytych J.L., Park P., **Allen J.M.**, Sun Y., McCusker R.H., Kelley K.W., Johnson R.W., Rhodes J.S., Woods J.A. (2016). Effects of dietary fiber and exercise on cognition, muscle function, and SCFA in young mice. *Medicine and Science in Sports and Exercise*. doi: 10.1249/01.mss.0000486569.15440.e0.
- Pence B.D., Bhattacharya T.K., Rytych J.L., Park P., **Allen J.M.**, Sun Y., McCusker R.H., Kelley K.W., Johnson R.W., Rhodes J.S., Woods J.A. (2016). Dietary fiber and exercise: Effects on muscle function, cognition, and short-chain fatty acids in mice. *FASEB Journal*, doi: 10.1096/fasebj.30.1\_supplement.1287.5.
- Pence B.D., Bhattacharya T.K., Rytych J.L., Park P., **Allen J.M.**, Sun Y., McCusker R.H., Kelley K.W., Johnson R.W., Rhodes J.S., Woods J.A. (2016). EGCG decreases mortality in a dose-dependent fashion but does not improve cognition in mice. *FASEB Journal*, doi: 10.1096/fasebj.30.1\_supplement.407.1.
- Biruete A., **Allen J.M.**, Kistler B.M., Jeong J.H., Fitschen P.J., Swanson K.S., Wilund K.R. (2016). Gut microbiome and clinical risk factors in maintenance hemodialysis patients. *Nephrol Dial Transplant*.
- Woods J.A., **Allen J.M.**, Miller M.B., White B.A., Gaskins H., Nehra V. (2015). Exercise alters the gut microbiome and microbial metabolites: Implications for colorectal cancer and inflammatory bowel disease. *Midwest Brain*

### *Behavior and Immunity Meeting.*

Panasevich M.R., **Allen J.M.**, Woods J.A., Dilger R.N. (2015). Moderately fermentable potato fiber attenuates symptoms during experimental colitis. *FASEB Journal*, doi: 10.1096/fasebj.29.1\_supplement.265.2.

Pence B.D., Bhattacharya T.K., Park P., Sun Y., Rytych J.L., **Allen J.M.**, McCusker R.H., Kelley K.W., Johnson R.W., Rhodes J.S., Woods J.A. (2015). A Diet Containing EGCG and Beta-Alanine Decreases Mortality and Improves Balance in Aged Mice, but Does Not Affect Cognitive Function. *FASEB Journal*, doi: 10.1096/fasebj.29.1\_supplement.392.4.

Graff R.G., **Allen J.M.**, Battaglini C.L., Mills R.C., Evans E.S., Ryan E.R., Hackney A.C. (2014). Leukocyte, leukocyte subsets and inflammatory cytokine responses to resistance exercise in breast cancer survivors. *Southeast American College of Sports Medicine Annual Meeting.*

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## TEACHING EXPERIENCE AND MENTORING

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### TEACHING POSITIONS

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2020-Pres	Lead Instructor: Kinesiology 352: Bioenergetics of Human Movement, University of Illinois at Urbana-Champaign.
2020-Pres	Lead Instructor- 470: Endocrinology, University of Illinois at Urbana-Champaign.
2020-Pres	Lead Instructor- 557: Stress Immunology, University of Illinois at Urbana-Champaign.
2020-Pres	Mentor for Undergraduate Research: Kinesiology 385: Experience in Kinesiology Research. University of Illinois at Urbana-Champaign.
2013-2017	Graduate Teaching Assistant University of Illinois at Urbana-Champaign: Bioenergetics.
2015	James Scholar Project Mentor, University of Illinois at Urbana-Champaign.
2013	Guest Lecturer, University of North Carolina at Chapel Hill: Endocrinology.
2011-2013	Graduate Teaching Assistant, University of North Carolina at Chapel Hill: Exercise Biochemistry.
2019	Primary Mentor for the Medical Student Research Scholarship at The Ohio State University Medical School. Mentee: Dante Pezzutti. Title: "The Effects of Stressor-Induced Hormones—Norepinephrine and Epinephrine—on the Immune Response to Bacterial Challenge within the Gastrointestinal Niche".
2015	James Scholar Project Mentor, University of Illinois at Urbana-Champaign.
2013	Guest Lecturer, University of North Carolina at Chapel Hill: Endocrinology.
2011-2013	Graduate Teaching Assistant, University of North Carolina at Chapel Hill: Exercise Biochemistry.

### POSTDOCTORAL MENTORSHIP

Name of Fellow	Role	Position	Dates
Elisa Caetano-Silva	Advisor	Postdoctoral Fellow	Feb 1, 2023- Present

### DISSERTATION AND THESIS SUPERVISION

Name of Student	Role	Degree Sought; Research title	Date of Defense
Chia-Hao Lin	Primary Advisor	MS in Exercise Physiology	Spring 2023 (expected)



		Dissertation title: <i>Effects of microbial-derived aryl-lactates on monocyte physiology</i>	
Mikaela Webb	Primary Advisor	PhD in Nutritional Sciences Dissertation title: <i>Optimizing Bioactive metabolites in fermented foods</i>	Spring 2025 (expected)
Akriti Shrestha	Primary Advisor	PhD in Nutritional Sciences Dissertation title: <i>TBD</i>	Spring 2026 (expected)
Kevin Paulussen	Dissertation Committee member	PhD in Kinesiology in Exercise Physiology Dissertation title: <i>The effect of food matrix modulations on human protein metabolism</i>	Spring 2022
Jade Hamman	Thesis Committee member	MS in Nutritional Sciences Thesis title: <i>Relationship between diet quality and molecular health mediators of muscle health</i>	Spring 2022
Andy Askow	Dissertation Committee member	PhD in Kinesiology; Exercise Physiology Dissertation title: <i>TBD</i>	Spring 2023 (expected)
Noah Hutchinson	Dissertation Committee member	PhD in Kinesiology; Exercise Physiology Dissertation title: <i>TBD</i>	Spring 2024 (expected)
Richard Kesler	Dissertation Committee member	PhD in Kinesiology; Exercise Physiology Dissertation title: <i>TBD</i>	Spring 2023 (expected)
Alex Baldeon	Dissertation Committee member	PhD in Nutritional Sciences Dissertation title: <i>TBD</i>	Spring 2024 (expected)
Max Deutz	Dissertation Committee member	PhD in Nutritional Sciences Dissertation title: <i>TBD</i>	Spring 2025 (expected)
Takeshi Barnes	Dissertation Committee member	PhD in Nutritional Sciences Dissertation title: <i>TBD</i>	Spring 2025 (expected)
Ben Levine	Dissertation Committee member	PhD in Nutritional Sciences Dissertation title: <i>TBD</i>	Spring 2026 (expected)
Abrory Pramana	Dissertation Committee member	PhD in Nutritional Sciences Dissertation title: <i>TBD</i>	Spring 2026 (expected)

## UNDERGRADUATE RESEARCH SUPERVISION

Student	Role	Research focus	Semesters in Lab
Alex Ladan	Primary Advisor	Kinesiology 385*	Fall 2020- Spring 2021
Allison Morretini	Primary Advisor	Kinesiology 385	Fall 2020- Spring 2021
Casey Lim	Primary Advisor	Kinesiology 385	Fall 2022- Current
Josh Schauer	Primary Advisor	Molecular and Cellular Biology 290*	Spring 2021-Fall 2022
Po-Kang Chen	Primary Advisor	Molecular and Cellular Biology 290	Spring 2021-Current
Clodagh Kenny	Primary Advisor	Molecular and Cellular Biology 290	Fall 2022-Current
Sri Medakkar	Primary Advisor	Molecular and Cellular Biology 290	Fall 2022-Current
Ivan Valishnev	Primary Advisor	Integrative Biology 290*	Fall 2022-Current
Bart Stefanik	Primary Advisor	Integrative Biology 290	Fall 2022-Current

\*Presented at Undergraduate Research Symposium

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## SERVICE

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### CAMPUS LEADERSHIP AND COMMITTEES

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- 2022-Pres **Executive Committee for the Division of Nutritional Sciences.** This committee serves as the primary advisory committee to the Director of the Division of Nutritional Sciences at UIUC. The committee consists of faculty members from the Urbana-Champaign and Chicago campuses that are elected by the Division membership.
- 2022-Pres **Diversity Equity and Inclusion (DEI) Task Force- Institute for Genomic Biology- Microbiome Metabolic Engineering.** My role on this committee is to investigate strategies to improve IGB-MME focus on community engagement to promote DEI initiatives.
- 2021-Pres **Advisory Board for the Rodent Gnotobiotic Facility.** This committee is working with Office of Vice Chancellor for Research (OVCRI) to provide technical expertise to DAR operations while brainstorming new ways to expand on the gnotobiotic animal facility to best serve our research community.
- 2021-Pres **Faculty Advisory Board for the Roy J. Carver Biotechnology Center (CBC).** This faculty committee serves to guide the CBC in decisions for refining and improving 'omics technologies that would benefit the University of Illinois research community.

### DEPARTMENT AND COLLEGE SERVICE

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- 2021-Pres **Co-Coordinator,** Trainee Joint Journal Club with Loman, Allen, and Hernandez-Saavedra Labs
- 2023 –Pres **Search Committee Member,** Tenure-Track Faculty Position in Cardiovascular Physiology
- 2022-Pres **Travel Award Review Committee,** Graduate Travel Awards for Kinesiology and Community Health Department, UIUC.
- 2021-Pres **Strategic Planning Implementation Committee,** 2020-2025 Strategic Plan for Kinesiology and Community Health Department, UIUC.

### GRANT AND FELLOWSHIP REVIEWER

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- 2023 Fellowship Review Panel: UIUC Division of Nutritional Sciences Margin of Excellence Award
- 2022-23 Grant Review Panel: Mayo- UIUC Surf Program Selection Committee
- 2022 Fellowship Review Panel: International Human Frontier Science Program- Long-term Postdoctoral Fellowship
- 2022 Grant Review Panel: American Heart Association- TPA Basic Science Committee.
- 2021 Grant Review Panel: NASA- TRISH Program
- 2021-23 Grant Review Panel: UIUC Research Board

### PUBLIC ENGAGEMENT

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- 2022 **Invited Presenter-** *MicroERA Microbial Systems Initiative Student Organization.* Title: Life in Academica: Opportunities and Challenges. October 2022.

- 2021-22 **Master of Ceremony and Presentation Judge**. NSGSA Nutrition Symposium.
- 2021 **Invited Speaker** to panel discussion. Title: *Question and Answer with Students*. Pathways in Biological Sciences training program at the University of California at San Diego.
- 2020 **Invited Panelist** to the APC Ireland Microbiome Postdoc Association panel discussion: 'How to land a job in Academia'.
- 2019 **Poster Judge**, Ohio State Science Fair.
- 2018-2019 **Poster Judge**, Undergraduate/Medical Student Research Day, Nationwide Children's Hospital.
- 2018-2019 **Magic School Bus Learning Program**, Nationwide Children's Hospital Outreach.
- 2017-2019 **21<sup>st</sup> Century After-School Program**, Nationwide Children's Hospital Outreach.
- 2012-2013 **Get Real and Heel Breast Cancer Program**, University of North Carolina at Chapel Hill.
- 2010-2011 **Carolina Covenant Gives Back**, University of North Carolina at Chapel Hill

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JOURNAL REVIEWER

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*Cell Host and Microbe*

*Cell Reports*

*Gut Microbes*

*Journal of Physiology*

*Journal of Applied Physiology*

*Brain Behavior and Immunity*

*Medicine and Science in Sports and Exercise (MSSE)*

*Plos One*

*FASEB*

*Scientific Reports*

*mSystems*

*Cellular Immunology*

*Nutritional Neurosciences*

*Journal of Gerontology*