

Lucy Mailing, B.A.

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Division of Nutritional Sciences & University of Illinois College of Medicine
University of Illinois at Urbana-Champaign
906 South Goodwin Avenue, Urbana, IL 61801

EDUCATION



University of Illinois, Medical Scholars Program (2015-2023)

Ph.D., Nutritional Sciences, Urbana-Champaign campus (expected 2019)

- Exercise Immunology Laboratory (Jeffrey Woods, PI)
- University Medical Student Council
- Medical Scholars Program Advisory Committee

M.D., Chicago campus (expected 2023)



Kalamazoo College (2012-2015)

B.A. in Biology with Neuroscience concentration and Psychology minor
GPA 3.96, graduated in 3 years, summa cum laude

- Senior Research Thesis: "Effects of bacterial metabolite butyrate and fiber-free diet on allergic phenotype in a murine model of peanut allergy."

CAREER PROFILE

Research Objective: The gut is home to trillions of microbes that play a crucial role in host physiology and pathophysiology. An altered gut microbiome is associated with a wide range of chronic health conditions. My research seeks to understand how lifestyle factors like diet and exercise can influence gut microbial communities with potential implications for human health.

Career Goals: I seek to make a significant impact on the greater scientific and medical community through both outstanding clinical practice and novel academic research. I intend to take my research expertise in the gut microbiome, nutrition, and exercise science, combine this with a medical background in integrative family medicine, and ultimately change the way we approach the prevention and treatment of chronic disease.

JOURNAL PUBLICATIONS

7. **Mailing, LJ**, Allen JM, Buford TW, Fields CJ, Woods JA. Exercise and the gut microbiome: a review of the evidence, potential mechanisms, and implications for human health. *Exercise & Sport Sciences Reviews* (in review).

6. **Mailing, LJ**, Allen JM, Rytch J, Sun Y, Pence BD, Bhattacharya TK, Park P, Liu TW, Swanson K, Fahey GC, Rhodes JS, Kelley KW, Johnson RW, Woods JA. Behavioral response to fiber

feeding is cohort-dependent and related to gut microbiota composition in mice. *Behavioural Brain Research* (2018)

5. Matt SM, Allen JM, Lawson Ma, **Mailing LJ**, Woods JA, Johnson, RW. Butyrate and dietary soluble fiber improve neuroinflammation associated with aging in mice. *Frontiers in Immunology* (2018).
 4. Niemiro GM, Allen JM, **Mailing LJ**, Khan NA, Holscher HD, Woods JA, De Lisio M. Exercise alters inflammatory circulating progenitor cell content in lean and obese adults. *Journal of Physiology* (2018).
 3. Allen JM, **Mailing LJ**, Niemiro GM, Moore R, Cook MD, White BA, Holscher HD, Woods JA. Exercise Alters Gut Microbiota Composition and Function in Lean and Obese Humans. *Medicine & Science in Sports & Exercise* (2017).
 2. Allen JM, **Mailing LJ**, Cohrs J, Salmonson C, Fryer J, Nehra V, Kashyap P, White BA, Woods JA. Exercise training-induced modifications of the gut microbiota can mediate host response to microbial colonization and colitis insult in gnotobiotic mice. *Gut Microbes* (2017).
 1. Nehra, V, Allen, JM, **Mailing, LJ**, Kashyap, PC, Woods, JA. Gut Microbiota: Modulation of Host Physiology in Obesity. *Physiology* (2016).
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PREVIOUS RESEARCH EXPERIENCE



Research Associate, Department of Biology, Kalamazoo College (2013-2015)

- Studied proteins implicated in Alzheimer's Disease from an evolutionary perspective using molecular techniques
- Worked as sole research associate under the direction of Dr. Jim Langeland, Professor of Biology



Research Intern, Department of Physiology, University of Michigan (2013)

- Studied synaptic plasticity in hippocampal cell culture using molecular techniques and high-resolution confocal imaging
- Worked under Dr. Michael Sutton, Associate Professor of Molecular & Integrative Physiology



Research Intern, Department of Pathology, University of Chicago (2014)

- Studied the interactions between dietary fiber and the gut microbiota in a mouse model of peanut allergy
 - Worked under the direction of Dr. Cathryn Nagler, Bunning Food Allergy Professor; wrote up results as a senior thesis for Kalamazoo College
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HONORS AND AWARDS

Graduate College Dissertation Completion Fellowship	2018
American Society for Nutrition Emerging Leaders in Nutrition Science Award	2017
UIUC Annual Nutrition Symposium Poster Competition Award	2017
Division of Nutritional Sciences Margin of Excellence Travel Award	2016, 2017
Gamma Sigma Delta Honors Society	2016
American Society for Nutrition Emerging Leaders in Nutrition Science Finalist	2016
Jonathan Baldwin Turner Graduate Fellowship	2015 - 2018
Kalamazoo College William E. Praeger Prize in Biology	2015
Kalamazoo College Phi Beta Kappa	2015
Chi Alpha Sigma National College Athlete Honors Society	2015
NCAA Division III Soccer Academic All-American	2014
Kalamazoo College Winifred Peake Jones Prize in Biology	2013
Kalamazoo College Physical Education Prize	2013
NMSP National Merit Finalist	2012
Michigan Intercollegiate Athletic Association Academic Honor Roll	2013 – 2015
Alpha Lambda Delta National Scholastic Honor Society	2013 – 2015
Kalamazoo College Lux Esto Scholarship	2012 –2015
Cengage Learning & Birmingham SCHOLAR Scholarships	2012 –2015

PROFESSIONAL PRESENTATIONS

8. **Mailing, LJ**, Allen JM, Niemiro G, Cohrs J, Holscher H, De Lisio M, Woods JA. Six weeks of aerobic exercise improves markers of insulin sensitivity and metabolic endotoxemia: correlations with the gut microbiota. Poster presentation, *American College of Sports Medicine Conference* (2018).
7. **Mailing, LJ**, Allen JM, Niemiro G, Cohrs J, Holscher H, De Lisio M, Woods JA. Effects of a six week aerobic exercise intervention on the composition of oral and skin microbiota: a pilot study. Poster presentation, *Experimental Biology* (2018).

6. **Mailing, LJ**, Allen JM, Niemiro G, Cohrs J, Holscher H, De Lisio M, Woods JA. Effects of a 6 week aerobic exercise intervention on gut bacterial metabolites in lean and obese adults. Oral presentation, *American College of Sports Medicine Conference* (2017).
5. **Mailing, LJ**, Allen JM, Niemiro G, Cohrs J, Holscher H, De Lisio M, Woods JA. Effects of a 6 week aerobic exercise intervention on gut bacterial metabolites in lean and obese adults. Poster presentation, *Experimental Biology* (2017).
4. **Mailing, LJ**, Allen JM, Nehra V, Holscher H, VanDyke C, Eden K, Swanson K, Boardman L, Murray J, Jensen M, Woods JA. Utilizing the gut microbiota to predict weight loss from a volumetric diet and exercise program in obese adults. Poster presentation, *Conference for Individualizing Medicine* (2016).
3. **Mailing, LJ**, Allen JM, Liu TW, Bhattacharya TK, Park P, Pence BD, Johnson RW, Fahey GC, Swanson K, Rhodes JS, and Woods JA. Pectin feeding for 16 Weeks improves learning and memory in young C57Bl/6J Mice: a relationship to the gut microbiota? Poster presentation, *Experimental Biology* (2016).
2. **Mailing LJ**, Feehley T, Nagler C. Effects of bacterial metabolite butyrate and fiber-free diet on allergic phenotype in a murine model of peanut allergy. Senior thesis & poster presentation, *Kalamazoo College Diebold Symposium* (2015).
1. **Mailing, LJ**, Henry FE, Sutton MA. Homeostatic changes in synaptic plasticity driven by phosphatidic acid mediated mTORC1 signaling. Oral presentation, *University of Michigan Summer Undergraduate Research Symposium* (2013).

RESEARCH OUTREACH / WEB-BASED WRITING



NextGen Medicine, Founder & Writer (Aug 2017 – present)

Write blog articles distilling complex scientific and medical literature on gut and skin health into practical, evidence-based information for the educated lay person.

www.NGmedicine.com



Kresser Institute, Senior Research Associate & Writer (Feb 2015 – present)

Distill scientific and medical literature in a variety of research areas into evidence-based blog articles intended for a general audience

www.kresserinstitute.com
