

Grace Niemi, BS

Freer Hall
University of Illinois at Urbana-Champaign
906 S. Goodwin
Urbana, IL 61801
Phone: (630)-207-1547
Email: niemi1@illinois.edu

Education

- Anticipated Grad. 2018 **PhD, Kinesiology and Community Health**, University of Illinois at Urbana-Champaign, Champaign, IL
- **Advisors:** Michael De Lisio, Ph.D., University of Ottawa (Canada)
Naiman Khan, Ph.D., RD, University of Illinois at Urbana-Champaign
- 2014 **BS, Chemistry**, University of Illinois at Urbana-Champaign, Champaign, IL

Research Experience

- 2016- **Graduate Research Assistant**, Body Composition and Nutritional Neuroscience Laboratory
University of Illinois at Urbana-Champaign
- **Advisors:** Naiman Khan, Ph.D., R.D., Michael De Lisio, Ph.D. (University of Ottawa, Canada)
 - **General Research Focus:** To integrate knowledge in the disciplines of dietetics, body composition, and cognitive neuroscience to understand the interactions between lifestyle behaviors, adiposity, and cognitive and brain health in the pediatric and adult population.
 - **Specific Research Focus:** Influence of obesity and exercise on hematopoietic stem and progenitor cells in circulation and their function in response to these factors.
- 2014-2016 **Graduate Research Assistant**, Exercise and Stem Cell Physiology Laboratory
University of Illinois at Urbana-Champaign
- **Advisor:** Michael De Lisio, Ph.D.
 - **General Research Focus:** Hematopoietic stem and progenitor cell (HSPC) mobilization due to exercise and obesity. Amino acid transport expression on skeletal muscle satellite stem cells. HSPC regulation by the bone marrow niche.
 - **Specific Research Focus:** Influence of obesity and exercise on hematopoietic stem and progenitor cells in circulation and their function in response to these factors.
- 2013-2014 **Undergraduate Research Assistant, Volunteer**, Exercise and Stem Cell Physiology Laboratory
Champaign, IL
-

Awards and Recognition

- Spring 2016 **List of Teachers Ranked As Excellent By Their Students**, University of Illinois at Urbana-Champaign, T.A. for KIN 352
- 2016 **Egg Nutrition Center Young Investigator Research Award**, Egg Nutrition Center. "Examining the pro-inflammatory effects of a high carbohydrate meal versus eggs in lean, overweight, and obese children. (\$20000)

Publications and Presentations

Publications

1. **Grace Niemi**, Lauren B. Raine, Naiman A. Khan, Russell Emmons, Jonathan Little, Arthur F. Kramer, Charles H. Hillman, and Michael De Lisio. Circulating Progenitor Cells are Positively Associated with Cognitive Function Among Overweight/Obese Children. *Brain, Behavior, and Immunity*, 57:47-52 (2016)
2. **Grace M Niemi**, Justin Parel, Joseph Beals, Stephan van Vliet, Daniel R. Moore, Nicholas A. Burd, and Michael De Lisio. Kinetics of circulating progenitor cell mobilization during submaximal exercise. *Journal of Applied Physiology*, (2017)
3. Robert W. Motl, **Grace M. Niemi**, Michael De Lisio, Sarah Sommer, Emily Mcloughlin, and Barry J. Riskin. Placebo-controlled, assessor-blinded, randomized controlled pilot trial of ultraviolet B phototherapy and serum vitamin D in multiple sclerosis. *In preparation*
4. Russell Emmons, **Grace M. Niemi**, and Michael De Lisio. Hematopoiesis with Obesity and Exercise: Role of the Bone Marrow Niche. *Exercise Immunology Reviews (Accepted 11/14/2016)*
5. Russell Emmons, **Grace Niemi**, Olatomide Owolabi, and Michael De Lisio. Acute Exercise Mobilizes Hematopoietic Stem and Progenitor Cells and Alters the Mesenchymal Stromal Cell Secretome. *Journal of Applied Physiology*, 1522-1601 (2016)
6. Russell Emmons, **Grace M Niemi**, and Michael De Lisio. Exercise as an adjuvant therapy for hematopoietic stem cell transplant. *Stem Cells International* (2016)

Presentations

1. **Grace M Niemi**¹, Justin Parel, Joseph Beals, Stephan van Vliet, Daniel R. Moore, Nicholas A. Burd, and Michael De Lisio. (June 3, 2016) Time course of progenitor cell mobilization during exercise in endurance trained men. *American College of Sports Medicine Annual Meeting 2016*

2. **Grace Niemi**¹ (October 30, 2015). The relationship between circulating progenitor cells and cognitive function in overweight/obese children. *Department of Kinesiology Exercise Physiology Graduate Seminar, University of Illinois at Urbana-Champaign*
3. Russell Emmons¹, **Grace Niemi**, & Michael De Lisio. (October 15, 2015) Acute Exercise Stimulates Bone Marrow Stem/Progenitor Mobilization Proliferation. *Canadian Society for Exercise Physiology Annual Meeting 2015*
4. **Grace Niemi**¹, Lauren Raine, Naiman Khan, Russell Emmons, Jonathan Little, Arthur F. Kramer, Charles Hillman, and Michael De Lisio. (October 15, 2015) The Relationship between Circulating Progenitor Cells and Cognitive Function in Overweight/Obese Children. *Canadian Society for Exercise Physiology Annual Meeting 2015*
5. **Grace Niemi**¹ (October 31, 2014). Hematopoietic Progenitor Cells and Inflammatory Monocytes Increase in Circulation in Overweight Children. *Department of Kinesiology Exercise Physiology Graduate Seminar, University of Illinois at Urbana-Champaign.*

¹Presenter

Posters/Abstracts

1. **Grace M Niemi**¹, Jacob M Allen, Lucy J Mailing, Hannah D. Holscher, Jeffrey A Woods, and Michael De Lisio. Circulating Progenitor Cell Quantity and Colony-Forming Capacity in Lean and Obese Adults. *Experimental Biology Annual Meeting 2017 (Submitted)*
2. Michael De Lisio¹, **Grace M. Niemi**, Thomas Edwards, J.P. Barfield, Joseph W. Beals, Elizabeth Borad, Robert W. Motl, Laura Newsome, Nicholas A. Burd, and Lara Pilutti. Progenitor Cell Mobilization Following a Half-Marathon in Elite Wheelchair Athletes. *American College of Sports Medicine Annual Meeting 2017 (submitted)*
3. Lucy J Mailing¹, Jacob M Allen, **Grace M Niemi**, Josh Cohrs, Hannah D. Holscher, Michael De Lisio, and Jeffrey A. Woods. Effects of aerobic exercise on fecal microbial-derived metabolites in lean and obese men and women. *American College of Sports Medicine Annual Meeting 2017 (Submitted)*
4. Michael De Lisio¹, Julian Nallabelli, **Grace Niemi**, Russell Emmons, and Nicole Korp. Differential Expression of Amino Acid Transporters During *In Vitro* Myogenesis. *Advances in Skeletal Muscle Biology in Health and Disease Conference 2016*
5. Yi Sun¹, Brandt D. Pence, Koyal Garg, Svyatoslav V. Dvoretzky, **Grace M. Niemi**, Jacob M. Allen, Michael De Lisio, Marni D. Boppart, Jeffrey A. Woods. Acute Eccentric Exercise Does Not Improve Primary Antibody Responses to Ovalbumin Vaccination in Mice. *American College of Sports Medicine Annual Meeting 2016*
6. Olatomide Owolabi¹, Russell Emmons, **Grace Niemi**, and Michael De Lisio. (2015). Hematopoietic stem/progenitor cell mobilization and skeletal muscle chemo-attraction follow acute exercise. *American Physiological Society Short-Term Research Experience for Underrepresented Persons Research Symposium 2015*

7. Julian Nallabelli¹, **Grace Niemi**, Nicole Korp, and Michael De Lisio. (2015). The Importance of L-Type Amino Acid Transporter 1 on Myoblasts. *Department of Kinesiology and Community Health Honors and Awards Ceremony, University of Illinois at Urbana-Champaign*
8. **Grace Niemi**¹, Lauren Raine, Russell Emmons, Jonathan Little, Charles Hillman, and Michael De Lisio. Hematopoietic Progenitor Cells and Inflammatory Monocytes Increases in Circulation in Overweight Children. *American College of Sports Medicine Annual Meeting 2015*

¹Presenter

Teaching Experience

1. **Guest Lecturer**, October 26, 2016. Kinesiology 352 Bioenergetics of Human Movement
 - a. Protein Metabolism Lecture
2. **Graduate Teaching Assistant**, August 2015 – December 2015. Kinesiology 352 Bioenergetics of Human Movement
3. **Graduate Teaching Assistant**, January 2016 – May 2016. Kinesiology 352 Bioenergetics of Human Movement

Professional Memberships

2014- American College of Sports Medicine
 2015- Canadian Society of Exercise Physiology
 2016- American Physiological Society

Undergraduate Student Supervision

2014-2016	Abigail Freeman, Undergraduate Research Volunteer
2015	Nicole Korp, Undergraduate Research Volunteer
2015-2016	Zak Woods, Undergraduate Research Volunteer
2015-2016	Brent Olson, Undergraduate Research Volunteer
2015-	Shaunak Pal, Undergraduate Research Volunteer
2015-2016	Madeline Lallanilla, Undergraduate Research Volunteer
2015-2016	Ellen Rohan, Undergraduate Research Volunteer
2015-2017	Lauren Feld, Undergraduate Research Volunteer

Skills and Techniques

- **Flow Cytometry**
 - Analyzed over 200 human peripheral blood samples
 - Analyzed 30 mouse bone marrow samples
 - Sorted 20 human peripheral blood samples
- **Phlebotomy Certified**
 - Performed over 500 successful blood draws for multiple projects
- **Cell Culture**
 - General Cell Culture
- **Colony Forming Unit Assay**
 - CFU Assay of human peripheral blood
- **Western Blots**