

Jeffrey A. Woods, Ph.D.

Mottier Family Professor
Department of Kinesiology and Community Health
Associate Dean for Research, College of Applied Health Sciences
Director, Center on Health, Aging, and Disability

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Education:

Post-doctoral Fellow in Neuroimmunology **1992-94**
Minneapolis Medical Research Foundation
Mentors: Burt Sharp and Nahid Shahabi

Ph.D. Exercise Science **1987-92**
University of South Carolina at Columbia
Advisors: J. Mark Davis and Russ Pate

M.S. Exercise Physiology/Cardiac Rehabilitation **1984-87**
Springfield College (MA)
Advisor: Steve Siconolfi

B.S. Exercise Science **1980-84**
University of Massachusetts at Amherst
3 Sport Varsity Athlete (Cross-country, Indoor & Outdoor Track)

Professional Experience:

Inaugural Faculty Member **2017-**
Carle-Illinois College of Medicine
Co-Director Musculoskeletal course

Associate Dean for Research **2016-**
College of Applied Health Sciences

Director, Center on Health, Aging and Disability **2014-**
College of Applied Health Sciences
University of Illinois at Urbana-Champaign

Professor **2008-**
Department of Kinesiology and Community Health
College of Applied Health Sciences
University of Illinois @ Urbana-Champaign

Other Affiliations

- Center on Health, Aging, and Disability
- Integrative Immunology and Behavior Group
- Division of Nutritional Sciences
- Discovery Partners Institute

Associate Professor

2000-08

Department of Kinesiology and Community Health
University of Illinois @ Urbana-Champaign

Assistant Professor

1994-00

Department of Kinesiology
University of Illinois @ Urbana-Champaign

Post-doctoral Fellow Neuroimmunology

1992-94

Minneapolis Medical Research Foundation

Conducted research involving the effects of opiate peptides (enkephalin, β -endorphin, etc.) on cells of the immune system. Techniques learned include; 1) detection of opiate receptors on immune cells using radioreceptor assay (Scatchard analysis) and labeling peptides via iodination, 2) detection of cytokine and opiate peptide mRNA via in situ and solution hybridization and Northern gel analysis, 3) in vitro assays determining the effects of opiate peptides and antagonists on immune cell functions, and 4) measurement of immune cell adenylate cyclase activity in response to opiate peptides. In addition, I conducted work on detection of IL-6 messenger RNA in various tissues of animals in response to exercise and endotoxin challenge. Worked under the direction of Nahid A. Shahabi Ph.D. and Burt M. Sharp M.D.

Practicum Instructor and Lecturer, American College

1990-92

Of Sports Medicine (ACSM) Health Fitness Instructor's Workshop.

Responsible for organizing and teaching laboratory experiences in the area of upper body muscular strength and endurance and teaching the use of ACSM's metabolic equations in lecture format.

Graduate Research and Teaching Assistant,

1987-92

Dept. of Exercise Science, University of South Carolina, Columbia, SC.

Responsible for organizing, teaching, and evaluating students in undergraduate and graduate level exercise physiology laboratories (1-3 cr. hr). Areas and techniques covered included: blood substrate analysis, radioimmunoassay, metabolic assessment during rest and exercise, body composition assessment, electromyography, ergometry, muscle enzyme analysis, exercise rehabilitation and prescription, and spectrophotometry. Research responsibilities included: supervising collection and analysis of data from human studies involving children (strength research funded by Campbell's Health Fitness Institute, R.R. Pate, P.I.) and elite and recreational athletes (Fluid replenishment research funded by Quaker Oats Gatorade Division, J.M. Davis, P.I.; Training manipulations in runners funded by the United States Olympic Committee, R.R. Pate and J.M. Davis, Co-P.I.'s).

Internship Cardiac Rehabilitation and Diagnostics, Baystate Medical Center, Springfield, MA.

1986

Responsible for instruction and exercise supervision of cardiac patients at all levels of recovery (Phase I-III) from infarct, angioplasty, and bypass. Also worked in Exercise Diagnostics

Laboratory performing graded exercise and thallium stress testing, and EKG and echocardiographic assessment in cardiac and high-risk patients. Worked under the supervision of Christopher Higgins M.S. and Steven Siconolfi Ph.D.

**Graduate Teaching Asst., Dept. of Chemistry,
Springfield College, Springfield, MA.**

1984-86

Responsible for organizing, teaching, and evaluating undergraduate students in general chemistry (Fr/So) and biochemistry (Jr/Sr) laboratories (1-3 cr. hr). Areas included: thin layer chromatography, gas chromatography, stoichiometry, acid/base, blood chemistry, distillation reactions. Worked under the direction of Frank Torre Ph.D.

Research Focus:

The broad goal of my research program is to generate a public health message regarding the effects of exercise and targeted dietary supplementation on immune function and susceptibility to disease. Current data indicate that moderate exercise enhances immune function, whereas intense, prolonged exercise suppresses it. Specifically, our experiments are designed to (1) describe the effects of different doses of exercise on immune functioning, (2) determine the mechanisms responsible for exercise-induced changes in immunity, (3) define the physiological significance of exercise-induced changes in immunity in relation to disease susceptibility and progression (inflammatory bowel disease, cancer, obesity related comorbidities and infection), and (4) explore the use of appropriate forms of exercise as adjunct therapy for those with deranged immune systems (e.g. elderly, obese). We use both humans and animal models in our research. We have found that exercise can protect mice from death due to influenza, speed wound healing, reduce inflammation and blood vessel density in growing tumors and attenuate colitis. We have shown that regular exercise can improve immune responses to vaccination in older adults. We hypothesize that exercise improves health by reducing acute and chronic inflammation. We also explore the additive and synergistic effects of exercise and targeted dietary supplementation on inflammation and cognitive dysfunction in aging. A recent focus has been on the effects of exercise on the gut microbiome and its role in mediating the beneficial effects of exercise where we have found that exercise exerts influence, independent of diet. Our laboratory is fully equipped with state-of-the-art tissue culture facilities, equipment for biochemical measurements, animal telemetry, molecular biology and clinical exercise and body composition testing. We enjoy collaborations with investigators in diverse fields such as veterinary medicine, psychology, molecular virology, immunology, animal sciences as well as kinesiology.

Administrative Highlights:

Director, Center on Health, Aging and Disability

- Mentor junior faculty on their research programs
- Facilitate grant, contract, and gift proposal submissions (~130 year)
- Developed and supported a successful interdisciplinary research theme (started in 2017) entitled "Collaborations in Health, Technology and Aging", directed by Wendy Rogers
- Developed and supported a successful interdisciplinary research theme (started in 2023) entitled "Collaborations in Advancing Research on Disability", directed by John Kosciulek and Laura Rice
- Hired Proposal Development and Community Outreach Coordinator in response to faculty need

- Implemented and maintain seed funding programs in health, aging and disability
- Instituted and implemented *Grant Proposal Pipeline* for college faculty
- Implemented and maintain college faculty travel grant program
- Supervised multiple staff members (1/2 time administrative aide; full-time Assistant Director for Strategic Innovation and Research Relations, full-time proposal development and outreach coordinator; full-time Visiting Research Specialist, full-time Grant Proposal Specialist, full-time research biostatistician; 25% time Associate Director)
- Work with other campus entities to enable grantsmanship training for college faculty
- Developed and participated in CHAD's Research and Faculty Development Academy which mentored faculty on all things research
- Submitted successful college-wide equipment grant proposals to campus
- Work with clinics and service providers to recruit participants for research studies
- Organized and lead Age-Friendly Champaign-Urbana community improvement effort
- Sought a position and hired a Visiting Research Specialist for CHAD to assist with supporting veteran's related health research
- Established the Center on Health, Aging, and Disability as a permanent center at UIUC
- Active in fundraising efforts including giving a presentation at Illini Days alumni event (2/13/20)
- Received Chancellor's Team Award for Excellence in Public Engagement for Age-Friendly Champaign-Urbana

Associate Dean for Research, College of Applied Health Sciences

- Oversee research activities for college (~70 faculty, ~\$4-10 million annual research expenditures)
- Develop and implement research activity procedures and policies
- Developed and deliver 'research best practices' to college faculty
- Work with college faculty to troubleshoot research-associated problems (participant recruitment, procurement, equipment access and malfunctions)
- Established and document research productivity metrics for assessing performance
- Work with Associate Deans for Research across campus to represent the college's interests and develop collaborative research activities
- Spearhead strategic planning for health technology research interactions
- Created partnership with College of Engineering and was awarded faculty hires in area of health, technology, and aging
- Identified and recruited senior faculty hire to lead health, technology, and aging theme for our college and campus

- Assisted Associate Dean for Administration with decisions involving procurement and renovation of research space including a \$22 million-dollar renovation of Freer Hall
- Act as a liaison between college faculty and the college Business Office
- Assisted with a \$200K funded gift from Microsoft® for a 'Digital Accessibility Lighthouse' effort resulting in a Graduate Fellow Program
- Act in the capacity of Corporate Relations contact for our college
- Work with Director of College Office of Information, Security and Technology in acquiring technologies to meet faculty research needs
- Work with Department Heads on hiring plans and developed a 'best practices' document for search committees regarding policies and procedures of successful faculty searches
- Was lead author of a campus Investment for Growth Proposal entitled "Technology for Health and Independence" that was funded at \$2,000,000 to institute a joint Master's of Science in Health Technology degree and certificate program jointly with the College of Engineering
- Worked to establish a new, revenue-generating professional master's degree program (M.S. Health Technology) in KCH/AHS
- Prioritized and chaired an AHS Corporate Relations Strategic Planning Committee to make recommendations to the Dean to increase corporate relations and obtainment of corporate funding for research
- Was co-author (with College of Fine and Applied Arts) on a campus Investment for Growth Proposal entitled "New Programs in Environmental Design and Health" that was funded at \$574,000 to develop new educational programs in Architecture and Applied Health Sciences around the built environment and health
- Worked on design, funding, and building of the Living in Interactive Future Environments (LIFE) Home research laboratory facility (~\$3 million, 6,000ft² facility) for the College of Applied Health Sciences
- UI campus lead (2018-2020) on health & wellness working group to chart course of UI system-wide Discovery Partners Institute and Illinois Innovation Network, supported by \$500 million from Illinois state government
- Devised and implemented a proposal cost-share request process
- Communicated with faculty and implemented procedures for re-start of college research activities during COVID-19 pandemic
- Co-lead on a successful cluster hire proposal to central campus entitled "Artificial Intelligence for Community Health", resulting in 2 AHS and 2 engineering positions

Grant and Contract Activity (awarded only)

- **Awarded, ~\$5 million as PI; >\$21 million as co-I**

2020-22 National Institutes of Health (R56 AG068747) Site Principal-Investigator (TW Buford UAB, PI; **Woods UIUC site-PI), "Age-related dysbiosis and physical resilience", \$459,000; sub-award to UIUC \$289,424.**

- 2020-22 College of ACES Future Interdisciplinary Research Explorations (FIRE) Grant, Co-Principal Investigator** (Steelman Co-PI, lead), "Lifestyle strategies to reduce disease pathogenesis of SARS-CoV", \$60,000
- 2020-25 National Institutes of Health (T35 OD-011145), Preceptor** (Hoyer and Flaws, PIs), "Summer training in translational biomedical research", \$398,520
- 2020 Interdisciplinary Health Sciences Institute, University of Illinois, Principal Investigator,** "Role of microbes in endurance exercise adaptations, \$5,000
- 2019-21 UIUC Campus Research Board, Principal Investigator,** "Mechanistic role for gut microbes in the beneficial adaptation to endurance exercise", \$27,333. Selected as *Arnold O. Beckman Award* as distinguished proposal.
- 2018-23 United States Department of Agriculture, National Institute of Food and Agriculture, Co-Investigator/Preceptor** (Johnson, Donovan, Swanson PIs), "Nutrition and the gut-brain axis: Implications for development and healthy aging", training grant. \$238,500.
- 2018-20 Greenburg Digestive Health Institute, Carle Hospital, Co-Principal Investigator** (with Simon Crass, MD), "Potential for exercise to beneficially impact ulcerative colitis patients through changes in the gut microbiota", \$20,753.
- 2018-23 National Institutes of Health (R01 AG-059622), Co-Investigator** (RW Johnson PI), "The gut-brain axis and age-related microglial dysfunction", \$1,898,866.
- 2015-20 National Institutes of Health (T35 OD-11145), Preceptor** (Hoyer and Flaws, PIs), "Summer training in translational biomedical research", \$300,105
- 2015-17 Mayo-University of Illinois Alliance for Technology Based Healthcare, Center for Individualized Medicine Microbiome Program, Germ-free Mouse Utilization. Principal Investigator** (with V Nehra, J Fryer and B White, Co-I's), "Running your microbiota to improve GI health: Can exercise-induced microbial changes attenuate the effects of ulcerative colitis", \$37,500.
- 2014-15 Abbott Nutrition-UIUC Grand Challenge, Principal Investigator** (Rhodes, Johnson, Kelley, Swanson, Fahey Co-I's), "Impact of dietary fiber on the gut microbiome, EGCG metabolism and cognition in mice", \$95,989.
- 2013-16 Mayo-University of Illinois Alliance for Technology Based Healthcare, Center for Individualized Medicine Microbiome Program Clinical Trial Grant, Principal Investigator** (with V Nehra Co-PI, M Jensen, J Murray, L

Boardman, K Swanson, H Holscher Co-I's), "Understanding predictors of success in a comprehensive lifestyle treatment program for obesity: The fecal microbiome", \$100,000.

- 2013-16 National Institutes of Health (R15 AG-42109), Collaborating Investigator** (Anderson-Hanley, PI; Union College), "Cognitive benefits of interactive mental and physical exercise for mild cognitive impairment", \$329,593
- 2012-14 Division of Nutritional Sciences Vision 20/20 Grant, Principal Investigator** (Gaskins, White Co-I), "Beneficial and deleterious effects of exercise on experimental colitis in mice: Potential role of the gut microbiome", \$20,000.
- 2012-16 Abbott Nutrition-UIUC Grand Challenge, Principal Investigator** (Rhodes, Johnson, Kelley Co-I's), "Enhancing learning and memory in the aged: Interactions between dietary supplementation and exercise", \$1,480,542.
- 2012-16 Abbott Nutrition-UIUC Grand Challenge, Co-Investigator** (Kramer PI, McAuley, Fahey), "Synergistic effects of exercise and nutrition on cognition and brain health of older adults: A randomized controlled trial", \$2,495,272.
- 2010-15 National Institutes of Health, Institutional Training Grant (T35 OD-11145), Preceptor**, (Hoyer and Flaws, PIs), 'Summer training in translational biomedical research', \$285,525.
- 2010-13 Department of Homeland Security, Federal Emergency Management Agency, Assistance to Firefighters Grant Program, Co-Investigator** (G. Horn, B. Fernhall, D. Smith PI's), "Effect of aspirin on hemostatic and vascular function after live fire fighting", \$999,802.
- 2010-13 National Institutes of Health (supplement AG-29573S1), Co-Principal Investigator**, (KW Kelley co-PI) "Exercise as a means to attenuate exaggerated inflammation in the aged" supplement to "Neuroimmune mechanisms of depressive-like behavior in the aged", \$626,905.
- 2009-11 National Institutes of Health (R01 HL-93249), Co-Investigator** (Fernhall PI), "Vascular and Neuroinflammatory Effects of Endurance Exercise Training in African Americans", \$1,510,154.
- 2008-13 National Space Biomedical Research Institute, Co-Investigator** (G. Freund PI of UIUC subcontract from University of Pennsylvania, A. Kennedy PI), "Acute radiation biological effects resulting from exposure to galactic cosmic rays and protons from solar particle events", \$410,435.
- 2008-10 Department of Homeland Security, Federal Emergency Management Agency, Assistance to Firefighters Grant Program, Co-Investigator**

(D. Smith PI), "Changes in Cardiovascular Function as a Result of Prolonged Firefighting", \$985,661.

- 2008-13 National Institutes of Health (T32 DK-59802), Preceptor** (1 of 8), Institutional National Research Service Award, "Training in Inflammation and Nutritional Dysfunction", \$419,610.
- 2009-10 UIUC Research Board, Co-Principal Investigator** (with Tracy Baynard), "Temporal development and the effects of exercise training on adipose tissue hypoxia and inflammation in mice fed a high fat diet" \$15,000.
- 2006-10 National Institutes of Health (R01 MH-79829), Co-Investigator** (R. Dantzer PI), "AIDS, Immune Activation and Mental Health" \$1,774,727.
- 2008-09 Abbott Laboratories, Principal Investigator** "Impact of yeast β -glucan on the development of primary and secondary immune responses to influenza vaccination in mice" \$119,555
- 2007-09 Mary Jane Neer Grant on Disability and Health, Principal Investigator** (with Co-I's Broglio, Dantzer, Kelley), "Effects of mild traumatic brain injury on neuroinflammation, cognition, and depression" \$14,902.
- 2006-07 UIUC Research Board, Co-Principal Investigator** (with Ellen Evans), "Magnetic Resonance Imaging of Fat in Mice: A Pilot Study" \$11,775.
- 2005-10 National Institutes of Health (R37 AG25667), Co-Investigator** (A. Kramer PI), "Influence of Fitness on Brain and Cognition: The Healthy Active Living Trial (HALT)" \$3,463,730.
- 2004-09 National Institutes of Health (R01 AG-23580), Co-Investigator** (Rod Johnson, PI), "Neuroimmune Control of Biobehavioral Processes" \$1,177,138.
- 2003-06 National Institutes of Health (R01 ES-11590), Co-Investigator** (Paul Cooke, PI), "Genistein induces thymic atrophy: A health concern?" \$739,342.
- 2003-05 National Institutes of Health (supplement AG-18861), Principal Investigator**, "Research Supplement for Under-represented Minority: Effects of Exercise on the Primary Immune Response in Older Adults" \$60,717.
- 2003-04 University of Illinois Research Board, Principal Investigator**, "Effects of Exercise on Influenza Infection and Influenza Vaccine Efficacy" \$23,644.
- 2002-07 National Institutes of Health (R01 AG-18861), Principal Investigator**, "Physical Activity, Aging and Immune Function" \$1,622,326.

- 2002-07 National Institutes of Health (supplement AG-18661S1), Principal Investigator**, "Physical Activity, Aging and Immune Function – Supplement" \$27,626.
- 2002-06 National Institutes of Health (T32 DK-59802), Preceptor** (1 of 7), Institutional National Research Service Award, "Training in Inflammation and Nutritional Dysfunction" \$629,048.
- 2001-03 University of Illinois Council on Food and Agricultural Research Grant, Co-Investigator** (Paul Cooke, PI), "Genistein induces thymic atrophy: a potential human health risk?" \$142,760.
- 2000-04 American Heart Association, Co-Investigator** (Greg Freund PI), "Hyperinsulinemia-induced cytokine resistance: A new mechanism in atherogenesis" \$300,000.
- 1998 National Institutes of Health, Co-Investigator** (one of 7) on Shared Instrument Grant (SIG) for the UIUC Biotech Center entitled "Cell Sorting and Multi-Laser Flow Cytometry" \$334,000.
- 1997-01 National Institutes of Health (R-29 AG-13928), Principal Investigator**, "Exercise as a means of enhancing immunity in the aged" \$569,005.
- 1996-97 University of Illinois Research Board, Principal Investigator**, "Chronic moderate aerobic exercise as a means of enhancing immunity in the elderly" \$18,000.
- 1995-97 American College of Sports Medicine, Principal Investigator**, "The effects of exercise on interleukin-6 and inflammation" \$30,000.
- 1994-95 University of Illinois Research Board, Principal Investigator**, "The effects of exercise on interleukin-6: A needed animal model" \$25,000.
- 1992-94 National Research Service Award (T32 DA-07239)**, (Burt Sharp, PI), National Institute for Drug Abuse, "Psychoneuroimmunology and Substance Abuse" Awarded Post-doctoral Fellowship.
- 1991-93 American College of Sports Medicine, Co-Principal Investigator** with J. Mark Davis (advisor) "The effects of exercise on macrophage tumoricidal function" \$24,000.
- 1990 United States Olympic Committee, Co-Principal Investigator** with J. Mark Davis (advisor) and R.R. Pate, "The effects of increased and decreased training on potential markers of overtraining in competitive runners" \$25,000.

- 1990 American Cancer Society Institutional Grant, Co-Principal Investigator** with J. Mark Davis (advisor) Univ. of South Carolina, "The effects of exercise on *in vitro* macrophage and natural killer cell tumoricidal activity and *in vivo* fibrosarcoma challenge" \$7,360.
- 1990 Research and Productive Scholarship Grant, Co-Principal Investigator** with J. Mark Davis (advisor) Univ. of South Carolina, "The effects of exercise on murine macrophages and resistance to infection" \$1,500.

Published Journal Articles

- **Google Scholar H-index = 64, i10 index = 117, 20,967 citations; Web of Science H-index = 53, 11,922 citations; 22 first author; 56 senior corresponding author; underline indicates student mentee; *indicates corresponding author; citations below from Scopus/Web of Science as of 4/21/23**
 - https://www.ncbi.nlm.nih.gov/myncbi/1ju52niX_auQk/bibliography/public/
 - **Orchid ID:** 0000-0002-1770-806X
138. Hutchinson NT, Wang S, Rund LA, Caetano-Silva EM, Allen JM, Johnson RW, Woods JA. Effects of an inulin fiber diet on the gut microbiome, colon, and inflammatory biomarkers in aged mice. *Expt Gerontol*, 176:1112164, 2023. PMID: 37011713. DOI: [10.1016/j.exger.2023.112164](https://doi.org/10.1016/j.exger.2023.112164)
137. Kasperek MC, Mailing LJ, Piccolo BD, Moody B, Lan R, Gao X, Hernandez-Saavedra D, **Woods JA**, Adams SH, Allen JM. Exercise training modifies xenometabolites in gut and circulation of lean and obese adults. *Physiol Reports*, 11: e15638, 2023. PMID: 36945966 DOI: <https://doi.org/10.14814/phy2.15638>
136. Caetano-Silva ME, Rund L, Hutchinson NT, **Woods JA**, Steelman AJ, Johnson RW. Inhibition of inflammatory microglia by dietary fiber and short-chain fatty acids. *Sci Reports*, 13: 2819, 2023. PMID: 36797287; DOI: <https://doi.org/10.1038/s41598-022-27086-x>
135. Hutchinson NT, Wang SS, Dokhanchi J, Johnson RW, Allen JM, Buford TW, **Woods JA**. Effects of broad-spectrum antibiotic treatment or germ-free status on endurance performance and exercise adaptations in mice. *Med Sci Spt Exerc*, 55(2): 225-234, 2023. PMID: 36170555; DOI: [10.1249/MSS.0000000000003051](https://doi.org/10.1249/MSS.0000000000003051)
134. Vailati-Riboni M, Rund L, Caetano-Silva ME, Hutchinson NT, Wang SS, Soto-Diaz K, **Woods JA**, Steelman AJ, Johnson RW. Dietary fiber as a counterbalance to age-related microglia cell dysfunction. *Frontiers in Nutr*, 9: 835824, 2022. 4 citations. PMID: 35360677; DOI: <https://doi.org/10.3389/fnut.2022.835824>

133. Hutchinson NT, Steelman A, **Woods JA***. Behavioral strategies to prevent and mitigate COVID-19 infection. *Spts Med Health Sci*, 2: 115-125, 2020. 4 citations. PMID: 34189481; <https://doi.org/10.1016/j.smhs.2020.09.001>
132. **Woods JA**, Hutchinson NT, Powers SK, Roberts WO, Gomez-Cabrera MC, Radak Z, Berkes I, Boros A, Boldogh I, Leeuwenburgh C, Coelho-Junior HJ, Marzetti E, Cheng Y, Liu J, Durstine JL, Ji LL. The COVID-19 pandemic and physical activity. *Spts Med Health Sci*, 2: 55-64, 2020. 255 citations. PMID: 34189484; <https://doi.org/10.1016/j.smhs.2020.05.006>
RECOGNIZED AS PAPER OF THE YEAR FOR 2020 FOR THIS JOURNAL.
131. Sun Y, Pence BD, Wang SS, **Woods JA***. Effects of exercise on stress-induced attenuation of vaccination responses in mice. *Med Sci Spt Exerc*, 51(8): 1635-41, 2019. 1 citation. PMID: 30829964; doi: [10.1249/MSS.0000000000001971](https://doi.org/10.1249/MSS.0000000000001971)
130. Smith DL, Friedman N, Bloom SI, Armario WL, Pence BD, Cook MD, Fernhall B, Horn GP, **Woods JA**. Firefighting induces acute inflammatory responses that are not relieved by aspirin in older firefighters. *J Occup Environ Med*, 61(7): 617-22, 2019. 11 citations. PMID: 31090673; doi: [10.1097/JOM.0000000000001626](https://doi.org/10.1097/JOM.0000000000001626)
129. 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. *Exerc Spt Sci Rev*, 47(2): 75-85, 2019. 194 citations. PMID: 30883471; doi: [10.1249/JES.0000000000000183](https://doi.org/10.1249/JES.0000000000000183)
RECOGNIZED AS PAPER OF THE YEAR FOR 2019 FOR THIS JOURNAL.
128. Mailing LJ, Allen JM, Pence BD, Rytych J, Sun Y, Bhattacharya TK, Park P, Cross T-W, McCusker RH, Swanson KS, Fahey GC, Rhodes JS, Kelley KW, Johnson RW, **Woods JA***. Behavioral response to fiber feeding is cohort-dependent and associated with gut microbiota composition in mice. *Behav Brain Res*, 359: 731-736, 2019. 7 citations. PMID: 30243767; doi: [10.1016/j.bbr.2018.09.012](https://doi.org/10.1016/j.bbr.2018.09.012)
127. Matt SM, Allen JM, Lawson MA, Mailing LJ, **Woods JA**, Johnson RW. Butyrate and dietary soluble fiber improve neuroinflammation associated with aging in mice. *Front Immunol*, 9; 1832, 2018. 140 citations. PMID: 3015478; doi: [10.3389/fimmu.2018.01832](https://doi.org/10.3389/fimmu.2018.01832)
126. Niemi GM, Allen JM, Mailing LJ, Khan NA, Holscher HD, **Woods JA**, De Lisio M. Effects of exercise training on inflammatory circulating progenitor cell content in lean and obese adults. *J Physiol*, 596(14): 2811-2822, 2018. 18 citations. PMID: 29923191; doi: [10.1113/JP276023](https://doi.org/10.1113/JP276023)
125. Munoz Pedrogo DA, Jensen MD, Van Dyke CT, Murray JA, **Woods JA**, Kashyap PC, Nehra V. Gut microbial carbohydrate metabolism hinders weight loss in

overweight adults undergoing lifestyle intervention with a volumetric diet. *Mayo Clin Proc*, 93(8): 1104-1110, 2018. 50 citations. PMID: 30077203; doi: [10.1016/j.mayocp.2018.02.019](https://doi.org/10.1016/j.mayocp.2018.02.019)

124. Pence BD, Ryerson MR, Bravo Cruz AG, **Woods JA**, Shisler JL. Voluntary wheel running does not alter mortality to or immunogenicity of vaccinia virus in mice: A pilot study. *Front Physiol*, 8: 1123, 2018. 1 citations. PMID: 29354074; doi: [10.3389/fphys.2017.01123](https://doi.org/10.3389/fphys.2017.01123)
123. Allen JM, Mailing LJ, Moore R, Cook MD, White BA, Holscher HD, **Woods JA***. Exercise alters gut microbiota composition and function in lean and obese humans. *Med Sci Spt Exerc*, 50 (4): 747-757, 2018. 371 citations. PMID: 29166320. doi: [10.1249/MSS.0000000000001495](https://doi.org/10.1249/MSS.0000000000001495)
122. Allen JM, Mailing LJ, Cohrs J, Salmonson C, Fryer J, Nehra V, Hale VL, Kashyap P, White BA, **Woods JA***. 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*, 9(2): 115-130, 2018. 75 citations. PMID: 28862530. doi: [10.1080/19490976.2017.1372077](https://doi.org/10.1080/19490976.2017.1372077)
121. Pence BD, Bhattacharya TK, Park P, Rytych JL, Allen JM, Sun Y, McCusker RH, Kelley KW, Johnson RW, Rhodes JS, **Woods JA***. Long-term supplementation with EGCG and beta-alanine decreases mortality but does not affect cognitive or muscle function in aged mice. *Exptl Gerontol*, 98: 22-29, 2017. 10 citations. PMID: 28818411. doi: [10.1016/j.exger.2017.08.020](https://doi.org/10.1016/j.exger.2017.08.020)
120. Pence BD, Bhattacharya TK, Park P, Rytych JL, Allen JM, Sun Y, McCusker RH, Kelley KW, Johnson RW, Rhodes JS, **Woods JA***. Dose-dependent decrease in mortality with no cognitive or muscle function improvements due to dietary EGCG supplementation in aged mice. *App Physiol Nutr Metab*, 42(5): 495-502, 2017. 4 citations. PMID: 28177724. doi: [10.1139/apnm-2016-0530](https://doi.org/10.1139/apnm-2016-0530)
119. Yan H, Ranadive SM, Lane-Cordova AD, Kappus RM, Behun MA, Cook MD, **Woods JA**, Wilund KR, Baynard T, Halliwill JR, Fernhall B. The effect of acute aerobic exercise and histamine receptor blockade on arterial stiffness in African-Americans and Caucasians. *J Appl Physiol*, 122(2): 386-395, 2017. 7 citations. PMID: 27979988. doi: [10.1152/jappphysiol.01115.2015](https://doi.org/10.1152/jappphysiol.01115.2015)
118. Chung HR, Vakil M, Munroe M, Parikh A, Meador BM, Wu PT, Jeong JH, **Woods JA**, Wilund KR, Boppart MD. The impact of exercise on statin-associated skeletal muscle myopathy. *PLoS One*, 11(12): e0168065, 2016. 21 citations. PMID: 27936249. doi: [10.1371/journal.pone.0168065](https://doi.org/10.1371/journal.pone.0168065)
117. Lane-Cordova AD, Ranadive SM, Kappus RM, Cook MD, Phillips SA, **Woods JA**, Wilund KR, Baynard T, Fernhall B. Aging, not age-associated inflammation, determines blood pressure and endothelial responses to acute inflammation.

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17. Ceddia MA, Price EA, Kohlmeier CK, Evans JK, Lu Q, McAuley E, **Woods, JA***. Differential leukocytosis and lymphocyte response to acute maximal exercise in the young and old. *Med Sci Spt Exerc* 31(6): 829-836, 1999. 55 citations. PMID 10378910
16. Lu Q, Ceddia MA, Price EA, **Woods JA***. Chronic exercise increases macrophage-mediated anti-tumor cytolytic function in young and old mice. *Am J Physiol* 276(2): R482-R489, 1999. 60 citations. PMID 99500928
15. **Woods JA***, Davis JM, Smith JA, Nieman DC. Exercise and cellular innate immune function. *Med Sci Spt Exerc* 31: 57-66, 1999. 168 citations. PMID 9927011
14. **Woods JA***. Exercise and resistance to neoplasia. *Can J Physiol Pharmacol* 76: 1-8, 1998. 34 citations. PMID 9839085
13. **Woods JA***, Evans JK, Wolters BW, Ceddia MA, McAuley E. Effects of maximal exercise on natural killer (NK) cell activity and responsiveness to interferon- α in the young and old. *J Gerontol: Biol Sci* 53: B430-B437, 1998. 25 citations. PMID 9823739
12. **Woods JA***, Ceddia MA, Kozak C, Wolters BW. Effects of exercise on the macrophage MHC II response to inflammation. *Intl J Spt Med* 18: 483-488, 1997. 21 citations. PMID 9351697
11. Finck BN, Dantzer R, Kelley KW, **Woods JA**, Johnson, RW. Central lipopolysaccharide elevates plasma IL-6 concentration by a α -adrenoreceptor-mediated mechanism. *Am J Physiol* 272: R1880-R1887, 1997. 24 citations. PMID 9227603
10. **Woods JA**, Shahabi NS, Sharp BM. Characterization of a naloxone-resistant β -endorphin receptor on murine peritoneal macrophages. *Life Sci* 60(9): 573-586, 1997. 26 citations. PMID 9048961
9. **Woods JA**, Kohut ML, Davis JM, Ghaffar A, Mayer EP. Effects of exercise on the immune response to cancer. *Med Sci Spt Exerc* 26(9): 1109-1115, 1994. 55 citations. PMID 7808244
8. **Woods JA**, Davis JM. Exercise, monocyte/macrophage function, and cancer. *Med Sci Spt Exerc* 26(2): 147-156, 1994. 51 citations. PMID 8164531
7. **Woods JA**, Davis JM, Mayer EP, Ghaffar A, Pate, RR. Effects of exercise on macrophage activation for anti-tumor cytotoxicity. *J Appl Physiol* 76(5): 2177-2185, 1994. 60 citations. PMID 8063684
6. Pate RR. Burgess ML, **Woods JA**, Ross JG, Baumgartner TA. Validity of field tests of upper body muscular strength. *Res Quart Exerc Sci Spt*, 64(1): 17-24, 1993. 54 citations. PMID 8541529;

5. **Woods JA**, Davis JM, Mayer EP, Ghaffar A, Pate RR. Exercise increases inflammatory macrophage anti-tumor cytotoxicity. *J Appl Physiol* 75: 879-886, 1993. 59 citations. PMID 8226494
4. Davis JM, Bailey SP, **Woods JA**, Galiano FG, Hamilton MT, Bartoli WP. Effects of carbohydrate feedings on plasma free tryptophan and branched-chain amino acids during prolonged cycling. *Eur J Appl Physiol* 65: 513-519, 1992. 155 citations. PMID 1483439
3. **Woods JA**, Pate RR, Burgess ML. Correlates to performance on field tests of muscular strength. *Pediatr Exerc Sci* 4(4): 302-311, 1992.
2. Macera CA, Pate RR, Davis DR, Jackson KL, **Woods, JA**. Postrace morbidity among runners. *Am J PrevMed* 7(4): 194-98, 1991. 23 citations. PMID 1756054
1. Burgess WA, Davis JM, Bartoli WP, **Woods JA**. Failure of low dose carbohydrate feeding to attenuate the glucoregulatory hormone responses and improve cycling performance. *Intl J Spt Nutr* 1(4): 38-52, 1991. 18 citations. PMID 1668907

Honors, Awards, and Recognition

- **2021**, source for article in Time Health about exercise and gut health
- **2021-24**, *Elected as President 2022-23* (President-elect 2021-22, Past-President 2023-24) of the **PsychoNeuroImmunology Research Society** (PNIRS, <https://www.pnirs.org/>). This international organization of ~400 members focuses on the interactions between the nervous and immune systems, and the relationship between behavior and health. An important goal is to conduct basic research that can be translated into clinically relevant health applications.
- **2021**, Awarded *Journal of Sports Medicine and Health Science*, Paper of the Year for “The COVID-19 pandemic and physical activity”
- **2020**, *Chancellor’s Campus Team Award for Excellence in Public Engagement*
- **2020**, feature in Champaign-Urbana News Gazette; https://www.news-gazette.com/blogs/jodi-heckel-sacrificing-physical-health-could-increase-pandemics-effects/article_44da09b7-4e6e-5cc1-9dc5-c0690c6ba897.html
- **2019**, ACSM’S *Exercise and Sport Sciences Review*, Paper of the Year, for “Exercise and the gut microbiome: a review of the evidence, potential mechanisms, and implications for human health”
- **2019**, named Mottier Family Professor
- **2018**, Research featured in New York Times
- **2018**, Participated in Hilliard Discussion, Texas A&M University

- **2017-18** chosen to participate as a *Fellow* in the Big Ten Academic Alliance's *Academic Leadership Program*
- **2014** Albert G. Hogan Memorial Lecturer, University of Missouri – Columbia
- **2013** Elected to Fellowship status in the National Academy of Kinesiology. Fellow #533 in the 90-year history of the organization.
- **2009** King James McCristal Distinguished Scholar Award, College of Applied Health Sciences, University of Illinois at Urbana-Champaign
- **2007-08** Awarded UIUC Campus Award for Excellence in Guiding Undergraduate Research (Campus-wide award for excellence in instruction).
- Chancellor's Incomplete List of Instructor's Ranked as Excellent: Spring 2002 (Kin 450), Spring 2006 (Kin 450), Spring 2007 (Kin 450 & 557), Spring 2009 (Kin 450 & 557), Fall 2010 (Kin 352), Fall 2011 (Kin 352), Spring 2012 (Kin 352), Spring 2012 (Kin 450), Spring 2013 (Kin 557).
- Research from my laboratory featured in "Medical News and Perspectives" (M.J. Friedrich, Exercise may boost aging immune system, *Journal of the American Medical Association*, January 9/16, 299(2): 160-161, 2008.
- **2003** Research featured on ABC News Channel 7 (Chicago) in Healthbeat "Turning Back the Clock". A ½ hour TV show focused on anti-aging medicine.
- **2004** (November) Research featured on NBC Nightly News with Tom Brokaw.
- **2004** Research featured on CBSNews.com, Austin Statesman, San Antonio News.
- **2003-05** President of the International Society of Exercise and Immunology.
- **2000** Fellow in the American College of Sports Medicine.
- **2000** University of Illinois Academic Excellence Recognition.
- **1999** University of Illinois Academic Excellence Recognition.
- **1999** PsychoNeuroImmunology Young Investigator Award.
- **1998** American College of Sports Medicine National New Investigator Award in Basic Science.
- **1998** Selected to participate in The Brookdale Foundation/National Institute on Aging's Summer Institute on Aging Research in Airlie, VA.
- **1998** University of Illinois Academic Excellence Recognition.

- **1992-94** Awarded NIH post-doctoral fellowship in Psychoneuroimmunology

Book Chapters

Allen J, Sun Y, **Woods JA**. "Exercise and the regulation of inflammatory responses", Chapter 14, pp. 337-354. In Molecular and Cellular Regulation of Adaptation to Exercise, *Progress in Molecular Biology and Translational Science* (PBMTS), C. Bouchard Editor, Academic Press, 2015.

Huey KA, Vieira V, **Woods, JA**. "Heat shock proteins, exercise and aging", in Heat Shock Proteins and Whole Body Physiology. A. Asea and B.K. Pedersen, Springer Publishing, 2008.

Woods, J.A., "Cancer, nutrition and exercise immunology", in Nutrition and Exercise Immunology, CRC Press., Eds. D.C. Nieman and B.K. Pedersen, pp. 155-173, 2000.

Woods, J.A. "Immune responses to acute exercise: Practical applications for exercise prescription", in Lifestyle Medicine, Blackwell Science, Inc., Malden, MA, Ed. J.M. Rippe, pp. 1125-1139, 1999.

Book Reviews:

Woods, J.A. Psychoneuroimmunology (4th Ed.), R. Ader, R. Dantzer, R. Glaser, C. Heijnen, M. Irwin, D. Padgett, J. Sheridan (Eds.), *Psychoneuroendocrinology* 32: 306, 2007.

Editorships

- **Editor** for a supplement issue of the *International Journal of Sports Medicine*, volume 21(Suppl. 1), 2000.
- **Editorial Board Member** (appointed) for *Brain, Behavior and Immunity*, 2002-present.
- **Editorial Board Member** (appointed) for *Exercise Immunology Reviews* (Human Kinetics Publishing, Champaign, IL).
- **Editor** for a supplement issue of the *Brain, Behavior and Immunity*, volume 19, 2005.
- **Editorial Board Member** (appointed) for *Medicine and Science in Sports and Exercise*, 2009-2010.
- **Associate Editor-in-Chief** (appointed) *Frontiers in Exercise Physiology*, 2010-14
- **Associate Editor-in-Chief** (appointed) *Medicine and Science in Sports and Exercise*, 2010-2013.
- **Editorial Board Member** (appointed) for *Medicine and Science in Sports and Exercise*, 2013-2014 (new Editor-in-Chief).
- **Editorial Board Member** (appointed) for *Sports Medicine and Health Science*, 2018-2021 (2nd English language journal in China)

Teaching Responsibilities

- Kinesiology 450 **Biochemistry of Exercise** - an upper level undergrad/grad level course focused on the cellular and sub-cellular responses/adaptations to acute and chronic exercise.
- Kinesiology 352 **Bioenergetics of Human Movement** - an upper level undergraduate exercise physiology course required of all Kinesiology majors.
- Kinesiology 452 **Clinical and Applied Exercise Physiology** - an upper level undergrad/grad level course focused on clinical applications of exercise testing and prescription.
- Kinesiology 557 **Stress Immunology** - a graduate class that concentrates on the bi-directional communication between the immune system and neuroendocrine systems.
- Kinesiology 551 **Scientific Foundations of Human Movement** - a graduate level class involving experience in performance measurement.
- Nutritional Science 510 **Current Topics in Nutritional Research** - a graduate level survey of exercise and nutrition research.

Professional Service

Peer-review:

- Member of NIH study section (ZRG5-CFS) Microbiological and Immunological Special Emphasis Panel on chronic fatigue syndrome (1997-1999).
- Member of special RFA study section on fibromyalgia (AR-98-006, NIAMS, 12/98).
- Ad hoc reviewer for Oral Biology (OBM-1) study section 2/00.
- Ad hoc reviewer for Integrative, Functional, and Cognitive Neuroscience (IFCN-2) study section 2/00, 2/01.
- Ad hoc reviewer for Geriatrics and Rehabilitative Medicine (GRM) study section 11/00.
- Ad hoc reviewer for Aging Systems and Geriatrics (ASG) study section 6/07, 2/08.
- Reviewer for the following journals: *Journal of Applied Physiology*, *American Journal of Physiology*, *Brain, Behavior and Immunity*, *Journal of Gerontology*, *International Journal of Sports Medicine*, *Journal of Aging and Physical Activity*, *Exercise and Sports Science Reviews*, *Medicine and Science in Sports and Exercise*, *Journal of Leukocyte Biology*, *Cytokine*, *Psychoneuroendocrinology*, *Carcinogenesis*, *Mechanisms of Ageing and Development*, *American Journal of Lifestyle Medicine*, *Physiology and Behavior*, *Exercise Immunology Reviews*, *Canadian Journal of Physiology*, *Age, Metabolism*, *Journal of Immunological Methods*, *Experimental Gerontology*, *Physiology and Behavior*, *Vaccine*, *Brazilian Journal of Medical and Biological Research*, *Applied Physiology*, *Nutrition and Metabolism*, *Biomed Central Immunology*, *Cancer Prevention*, *Annals of Behavioral Medicine*, *Immunity and Aging*, *Nature Communications*, *Journal of Neuroscience*, *Neuroscience Letters*, *PLOSOne*, *Frontiers in Exercise Physiology*, and many more.
- Ad hoc reviewer American College of Sports Medicine Research Foundation (2000).

- Ad hoc reviewer NSERC 2007
- Ad hoc reviewer University of Illinois Research Board (1998, 2000, 2004, 2007, 2011, 2013, 2018, 2019).
- Member (appointed) of the American College of Sports Medicine Research Review Committee, 2003-2006.
- Member (re-appointed) of the American College of Sports Medicine Research Review Committee, 2007-2009.
- Member (appointed) of the American College of Sports Medicine's Immunology, Genetics and Endocrinology Topical Area Review Subcommittee, 2003-2006.
- **Chair** (appointed) of the American College of Sports Medicine's Immunology, Genetics and Endocrinology Topical Area Review Subcommittee, 2007-2009.
- Ad Hoc member Neuroendocrinology, Neuroimmunology and Behavior (NNB) Study Section, 6/06.
- Invited Consultant, National Multiple Sclerosis Society research strategy meeting in Fort Worth TX, November, 2014.
- Ad hoc member, National Cancer Institute, Special Emphasis Panel in response to CA13-016 NCI's provocative questions, 11/14.
- **Chair**, NIH NIA Special Emphasis Panel ZAG1 ZIJ-9 Contract for "Objective measurement of activity after retirement in REGARDS study participants", 10/16
- Ad Hoc member Veteran's Administration MERIT Grant Review Panel, 6/17
- **Chair**, UIUC Veteran's Health Grant Proposal Review Committee 2019, 2020
- Ad hoc reviewer, USARIEM contract, 2023

University Search Committees:

- Kinesiology Department Head (1998-99)
- Division of Nutritional Sciences Director (1998-1999)
- **Chair**, Kinesiology Department Faculty Exercise Physiologist (2000-2001)
- Kinesiology Department Research Engineer (2002)
- **Chair** Kinesiology Department Faculty Athletic Training (2004-2005)
- **Co-Chair** Kinesiology Department Faculty Athletic Training (2005-2006)
- Division of Nutritional Sciences Director (2009)
- College Grants and Contracts Specialist (2002)
- **Chair** Kinesiology Department Faculty Exercise Physiologist (2002-2003)
- Visiting Research Specialist (2010)
- **Chair**, Kinesiology Department Faculty Exercise Physiologist (2011-2012)
- Department of Animal Science Faculty (2011-2012)
- Department of Animal Science 'Excellence' Faculty Search (2012-2013)
- **Chair**, Kinesiology Department Faculty Exercise Physiologist (2012-2013)
- **Chair**, Multi-Unit (AHS, Social Work, Human and Family Development) Excellence Hire (2012-2013)

- UIUC Biology Coordinating Committee/Illinois Health Science Working Group Faculty Hire Sub-Committee (2013)
- **Chair**, Visiting Research Specialist (2012)
- Department of Animal Science Faculty (2013-2014)
- Department of Speech and Hearing Science Faculty (2014-15)
- **Chair**, College of Applied Health Sciences 'Excellence' Search for Health, Technology and Aging (2015-2016)
- Department of Industrial Systems Engineering, 'Excellence' Search for Health, Technology and Aging (2015-2016)
- College of Applied Health Sciences Dean (2015-16)
- Department of Industrial Systems Engineering, 'Excellence' Search for Health, Technology and Aging (2016-2017)
- Department of Speech and Hearing Sciences Faculty (2016-2017)
- Department of Kinesiology and Community Health Faculty Exercise Physiology (2016-2017)
- Department of Animal Sciences Head (2017-18)
- Department of Industrial Systems Engineering, 'Excellence' Search for Health, Technology and Aging (2017-2018)
- **Chair**, Assistant Director Technology for Health and Independence educational program (2017)
- **Chair**, Associate Dean for Administration, College of Applied Health Sciences (2018)
- **Co-Chair**, Director of the Masters of Public Health Program, College of Applied Health Sciences (2021)

University Selection Committees:

- Kinesiology Athletic Training Selection Committee (1995-1997)
- University of Illinois Division of Biomedical Sciences Review Committee (2008)
- College of Applied Health Sciences, Mary Jane Neer Research Review Committee (2008)
- **Chair**, King McCristal Distinguished Scholar Award Committee (2010-2012)
- Divisional of Nutritional Sciences Fellowship Selection Committee (2013-2014)
- Division of Nutritional Sciences Fellowship Selection Committee (2014-2016), Chair 2015
- UIUC campus review committee for large equipment proposals (2014)
- Summer Undergraduate Research Fellow Selection Committee, Mayo Clinic UIUC Alliance (2015-)
- UIUC Graduate Student Leadership Award Selection Committee (2020)
- **Chair**, Kraft Heinz Endowed Professorship Selection Committee (2021)

Unit Advisory/Policy Committees:

- Kinesiology Educational Policy Committee (1995-97, 1999)
- Division of Nutritional Sciences Executive Committee (1999–2002)
- UIUC Campus-wide Laboratory Animal Care and Use Committee (2000-2003)
- Kinesiology Department Space Allocation Committee (2000-2002)
- College of Applied Life Studies Educational Policy Committee (2001-2003)
- Evaluation Committee for Director of Nutritional Sciences (2003-2004)
- Flow Cytometry Facility Advisory Board (2003-2004)
- Campus-wide Committee on Pathobiology (2004)
- Kinesiology and Community Health Student Outcomes and Assessment Committee (2008)
- Division of Nutritional Sciences Executive Committee (2008-2011)
- UIUC Vice-Chancellor’s Campus Compliance Advisory Committee (2009-2012)
- Center for Health, Aging and Disability Senior Faculty Committee (2009-2010)
- UIUC Campus Budget Review Project Team: Initiatives and Centers (2010)
- UIUC Interdisciplinary Health Sciences Initiative Committee (2010-2012)
- **Chair**, Center for Health, Aging and Disability Senior Faculty Committee (2010-2014)
- Elected to the College of Applied Health Sciences Executive Committee (2011-2013, 2014-ex officio)
- UIUC Biology Coordinating Committee (2011-2014)
- **Chair**, UIUC Biology Coordinating Committee Curriculum Subcommittee (2012-present)
- University Chancellor/Provost Consultation Committee (2012-2015)
- Elected to the College of Applied Health Sciences Executive Committee (2013-2015)
- Academic Program Review Council to assist Provost with evaluation of UIUC campus units (2013-14)
- UIUC Office of Technology Management Advisory Committee (2015-2016)
- UIUC Campus Research Policy Committee (2015-2017), (2017-2019)
- UIUC Corporate Relations Visioning Group (2017)
- UIUC Social and Social Behavioral Sciences Working Group (2014-2015)
- UIUC Office of Technology Management Advisory Committee (2015-2016)
- UIUC Campus Research Policy Committee (2015-2017), (2017-2019)
- Division of Nutritional Sciences Executive Committee (2016-19)
- UIUC Corporate Relations Teamwork Group (2017-20)
- UIUC Health Sciences Strategic Task Force (2017-18)
- Illinois Health Science Institute Advisory Group (2017-2019)

- **Campus lead**, Discovery Partners Institute/Illinois Innovation Network Health and Wellness Working Group (2018-)
- Chancellor's Advisory Committee on The Discovery Partners Institute/Illinois Innovation Network (2018-)
- UIUC Facilities Planning Committee (2018, temporary member)
- UIUC Microbial Systems Initiative Advisory Committee (2019-)
- UIUC Rodent Gnotobiotic Advisory Committee (2019-2021)
- Carle-Illinois College of Medicine Admissions Committee (2019-2021)
- UIUC Graduate Student Leadership Award Committee (2020)
- UIUC Personalized Nutrition Initiative Steering Committee (2021-22)
- Chair, Review Committee for UIUC Institute for Genomic Biology's Microbiome Metabolic Engineering theme (2022)
- UIUC Promotion and Tenure Appeal Committee (2022)
- Member, Initiative to Democratize Drug Discovery (D3I) Committee (2022)

Promotion & Tenure Committees:

- Kinesiology and Community Health Promotion and Tenure Committee (2007-2009)
- College of AHS Promotion and Tenure Committee (2011, 2012), Chair 2012
- College of AHS Promotion and Tenure Committee (2013-2015)

External Disciplinary Service:

- Program Committee for the 1999 International Society for Exercise Immunology meetings in Rome, Italy.
- **Program Chair** for the 2001 International Society for Exercise Immunology meeting in Baltimore, Maryland.
- Program Committee Psychoneuroimmunology Research Society Annual Meeting (2005-2008).
- Psychoneuroimmunology Research Society Membership Committee 1999-2001
- Invited to participate in the National Cancer Institute's Roundtable Discussion on Biobehavioral Research and Psychoneuroimmunology in Madison WI, May 2002
- Consultant for the CALERIE Trial of the effects of human caloric restriction on immune function markers, September 2005
- American College of Sports Medicine Program Committee 2005-2009
- Session Chair Exercise Immunology, ACSM Annual Meetings 2005, 2006, 2009, 2013.
- PNIRS Membership Committee 2009-2010
- **Chair** American College of Sports Medicine Research Review Committee (2009-2011)
- **Chair** American College of Sports Medicine Research Review Committee (2012-2014)

- PNIRS Board of Directors 2009-2012
- PNIRS Training Committee 2010-2011
- PNIRS Scientific Affairs Committee 2010-2011
- PNIRS Financial Committee 2012-2013
- Invited participant, National Multiple Sclerosis Society, Wellness Strategy Meeting (November 6-7, 2014)
- Invited participant, National Institutes for Health/NIAMS/NIA/NIDDK, NIH webinar exploring research needs and opportunities related to molecular mechanisms whereby physical activity prevents disease and improves health outcomes. October 16, 2014.
- Program-Scientific Affairs Committee PsychoNeuroImmunology Research Society 2017-2018
- American College of Sports Medicine, Science and Integrative Leadership Committee (2014-present)
- Grant reviewer for Huffines Institute (Texas A & M University)
- Tenure Evaluation University of Colorado @ Boulder, Emory University School of Medicine, Tufts University, Rutgers University, Miami University (Ohio), Colorado State University, University of Delaware, Iowa State University, University of Massachusetts Boston, University of South Carolina, Lynchburg University, University of Houston, University of Colorado at Denver, University of Arizona,
- National Academy of Kinesiology, Standing Committee on Membership (2019, 2020)
- National Academy of Kinesiology, **Chair**, Standing Committee on Membership (2021)
- PsychNeuroImmunology Research Society, **Chair**, Committee on Membership (2021-22)
- PsychNeuroImmunology Research Society, **Chair**, Scientific Affairs/Program Committee (2022-23)
- PsychNeuroImmunology Research Society, **Chair**, Executive Committee (2022-23)
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Offices Held:

- **President-Elect** of the PsychoNeuroImmunology Research Society (2021-22)
- **President** of the PsychoNeuroImmunology Research Society (2022-23)
- **Past-President** of the PsychoNeuroImmunology Research Society (2023-24)
- **President-Elect** International Society for Exercise and Immunology (2001-2003)
- **President** International Society for Exercise and Immunology (2003-2005)
- **Past-President** International Society for Exercise and Immunology (2005-2007)
- Elected Scientific Council Member PsychoNeuroImmunology Research Society (2009-2012)
- Local conference lead organizer PsychoNeuroImmunology Research Society, Chicago (2011)

- **Acting Director**, Center for Health, Aging and Disability, University of Illinois at Urbana-Champaign (February – May 2013)
- **Acting Director**, Center for Health, Aging and Disability, University of Illinois at Urbana-Champaign (February 2014– February 2015)
- **Director**, Center for Health, Aging and Disability, University of Illinois at Urbana-Champaign (February 2015– present)

Mentorship

- **Major Advisor: (4 visiting scholars, 19 MS students, 11 PhD students, 2 post-docs)**

Visiting Research Scholars (hosted at UIUC, 4):

- Peggy Horn (Australia)
- Hiromi Yano (Japan)
- Kijin Kim (Korea)
- Jie Long Wang (China)

Post-Doctoral (2):

Tracy Baynard, Post-doctoral Fellow (2007-2008)

Status: Associate Professor, University of Illinois Chicago, IL

Brandt Pence, Post-doctoral Fellow Kinesiology (2012-2016)

Status: Assistant Professor, University of Memphis, Memphis, TN

Doctoral (11):

Mike Ceddia, PhD Kinesiology (1994-99)

Dissertation: "Exercise and macrophage antigen presentation: Intracellular mechanisms"

Awards: Free Communication Award, Midwest American College of Sports Medicine, 1995; Heulster Award 1999

Status: Post-doctoral fellow at UC-Irvine; Vice-president of Research, Mead-Johnson; Vice president Research & Development, Scotts Miracle-Gro Company

Tom Lowder, MS/PhD Kinesiology (1999-2006)

Thesis/Dissertation: "Exercise oxygen uptake in mice of different ages"/"Effects of exercise on susceptibility and response to influenza"

Awards: ACSM student research grant (2005)

Status: Post-doctoral fellow University of Alabama-Birmingham; Assistant Professor University of Houston; Assistant Professor, University of Central Arkansas

Todd Keylock, PhD Kinesiology (2000-2007)

Thesis: "Effects of exercise on wound healing in mice of different ages"

Awards: UIUC Doolen Campus Fellowship Award; Massey Award; Cureton Award

Status: Associate Professor, Bowling Green State University, OH

Victoria (Vieira)-Potter, PhD Kinesiology (2004-2009)

Dissertation: "Effects of exercise on heightened inflammation in adipose tissue of obese mice"

Status: Post-doctoral fellow, Jean Mayer Human Nutrition Research Center, Tufts University, Boston, MA; Associate Professor, University of Missouri, Columbia, MO

Brandt Pence, PhD Kinesiology (2007-2012)

Dissertation: "Effects of exercise on wound healing in diabetic mice"

Status: Post-doctoral fellow at UIUC with Jeff Woods; Assistant Professor, University of Memphis, Memphis, TN

Stephen Martin, PhD Kinesiology (2008-2013)

Dissertation: "Effects of voluntary wheel running and forced treadmill running on inflammation-induced behavioral abnormalities in young and old mice"

Status: Post-doctoral fellow University of Wisconsin Madison, WI

Marc Cook, PhD Kinesiology (2009-2013)

Thesis: "Effects of exercise training on DSS-induced colitis in mice"

Status: Assistant Professor, North Carolina A & T, Greensboro, NC

Jacob Allen, PhD Kinesiology (2013-2017)

Dissertation: "Effects of exercise training on the gut microbiota, microbial metabolites and microbial-host interactions in mice and humans"

Status: Post-doctoral fellow, Nationwide Children's Hospital, Columbus OH; currently Assistant Professor, University of Illinois at Urbana-Champaign

Yi Sun, PhD Kinesiology (2013-2018)

Dissertation: "Effects of exercise on vaccine responses in an animal model"

Status: Post-doctoral fellow, University of Alabama-Birmingham, AL

Lucy Mailing, PhD/MD Kinesiology (2015-2019)

Dissertation: "Diet and exercise modulate the gut microbiome with implications for health and disease"

Status: Medical student at University of Illinois at Chicago, IL

Noah Hutchinson, PhD Nutritional Sciences (2019-2023)

Dissertation: Effects of the gut microbiota and dietary inulin on age-associated inflammation, endurance training adaptations, and voluntary wheel running motivation.

Status: Post-doctoral fellow, University of Michigan

Master's (19):

Brett Wolters, MS Kinesiology (1995-97)

Thesis: "Effects of exercise on the generation of anti-EL-4 cytolytic T cells"

Awards: 'runner up' best abstract at the 1997 International Society for Exercise Immunology meeting

Status: orthopedic surgeon at Memorial Medical in Springfield Illinois

Joella (Evans) Galetti, MS Kinesiology (1995-98)

Thesis: "Effects of acute exercise on natural killer cells in young and old subjects"

Status: Heart Disease Prevention Clinic, Carle Hospital, Urbana IL

Mike Chludzinski, MS Kinesiology (1995-98)

Thesis: "Effects of firefighting stress on immunocompetence"

Qin Lu, MS Nutritional Sciences (1997-1998)

Thesis: "Exercise training effects on macrophage function in mice of different ages"

Status: Software engineer, Seibel Systems, San Francisco CA

Mark Zack, MS Kinesiology (1999-2000)

Thesis: "Exercise and immune response to allogeneic tumor"

Status: Research Associate, Monsanto Inc., St. Louis MO

Mark Zielinski, MS Kinesiology (2001-2003)

Thesis: "Exercise delays allogeneic tumor growth and reduces intra-tumoral inflammation and vascularization"

Status: PhD University of South Carolina; Postdoctoral Fellow Northwestern University; Assistant Professor of Psychiatry, Harvard Medical School

Peter Zappola, MS Kinesiology (2000-2002)

Thesis: "Effects of glucocorticoid antagonism on the exercise-induced suppression of macrophage antigen presentation"

Status: Officer in the US Army

Patrick Yoon, MS Kinesiology (2000-2003)

Thesis: "Macrophage hypo-responsiveness to IFN- γ in aged mice is associated with impaired signaling through Jak-STAT"

Status: PhD Northwestern University

Kurt Leifheit, MS Kinesiology (2002-2004)

Thesis: "Relationship between cardiovascular fitness and in vitro response to influenza vaccine in older adults"

Status: Vice-President, Corporate Counsel, Carle Foundation Hospital, Urbana, IL

Marc Cook, MS Kinesiology (2001-2004)

Thesis: "Relationship between cardiovascular fitness and in vitro response to tetanus vaccine in older adults"

Status: Assistant Professor, North Carolina A & T, Greensboro, NC

Kristine (Ross) Carpenter, MS Kinesiology (2002-2004)

Thesis: "Relationship between cardiovascular fitness and natural killer cell activity in older adults"

Status: MD, Family Medicine, Obstetrics & Gynecology, Carle Foundation Hospital, Urbana, IL

Kristin (Lyons) Potter, MS Kinesiology (2003-2005)

Thesis: "Effects of moderate exercise on the growth and histology of an allogeneic tumor in mice"

Status: Research Technician, Harlan Inc., IN

Kim Colantuano, MS Kinesiology (2004-2006)

Thesis: "Effects of glucocorticoid blockade on exercise-induced changes in response to an allogeneic tumor"

Status:

Rachel Mariani, MS Kinesiology (2003-2005)

Thesis: "Effects of exercise training on the primary immune response to KLH in previously sedentary older adult"

Awards: NIH Minority Fellowship

Status: MD, Pathology, Nationwide Children's Hospital, Columbus, OH

William Zelkovich, MS Kinesiology (2004-2008)

Thesis: "Effects of exercise training on the naïve to memory T lymphocyte ratio in older adults"

Status: MD, Radiology, Advocate Christ Medical Center, Oak Lawn, IL

Sara Dumich, MS Kinesiology (2004-2005)

Thesis: "Effects of exercise on LPS-induced sickness behavior"

Status: MD, Sports Medicine, Carle Hospital, Urbana IL

Matt Cady, MS Kinesiology (2007-2010)

Dissertation: "Effects of exercise and diet on adipose tissue hypoxia in obese mice"

Status: PhD Nutritional Sciences, Penn State University, PA

Ryan Greene, MS Kinesiology (2009-2011)

Thesis: "Mild traumatic brain injury: Effects on behavior and neuroinflammation"

Status: Physician, Sportsfit Physical Therapy Corporation

Lisa Erickson, MS Kinesiology (2011-2013)

Thesis: "Can Oral Contraceptives Prevent Stress Fractures? A look at female distance runners and bone health"

Status: Athletic trainer, Adams State University

Committee Member (52):

Christian Leeuwenburgh, PhD Kinesiology (1995, L. Ji advisor)

Dissertation: "Glutathione regulation during exercise: Effect of fasting-refeeding, glutathione depletion and supplementation"

Status: Professor and Chief, Division of Biology of Aging, University of Florida, FL

Heidi Mae Talbot, MS Kinesiology (1997, E. McAuley advisor)

Thesis: "Self-efficacy and hypothalamic-pituitary-adrenal responses to maximal exercise in older adults"

Status: unknown

Tracy (Gautsch) Anthony, PhD Nutritional Sciences (1998, D. Layman advisor)

Dissertation: "Metabolic responses during recovery from prolonged exercise: Role of nutrition and hormones"

Status: Professor, Nutritional Sciences, Rutgers University, NJ

Brian Finck, MS Immunophysiology (1996, R. Johnson advisor)

Thesis: "Peripheral endocrine and metabolic effects of pro-inflammatory cytokines and lipopolysaccharide in the brain"

Status: Research Associate Professor, Washington University, St. Louis, MO

Greg Gannon, PhD Exercise Physiology, University of Toronto (1998, R. Shephard advisor)

Dissertation: "Peripheral blood lymphocyte trafficking and natural killer cell cytolytic activity during prolonged exhaustive aerobic exercise: A focus on cell adhesion molecules and β -endorphin"

Status: Post-doctoral fellow at Defense and Civil Institute of Environmental Medicine (Toronto, CAN)

Carl Sather, MS Nutritional Sciences (2001, D. Layman advisor)

Dissertation: "The need for and implications of increased branched-chain amino acids in a higher protein diet"

Status: MD, Adult Medicine/Pediatrics, Carle Hospital, Urbana IL

Sri Yellayi, PhD Veterinary Pathobiology (2002, P. Cooke advisor)

Dissertation: "The phytoestrogen genistein induces thymic and immune changes: A human health concern?"

Status: Pathologist, NIAID, NIH

Angelo Pascale, MS Kinesiology (2001, D. Boileau advisor)

Dissertation: "Regional fat distribution, physical activity and hormonal factors in adults with type 2 diabetes"

Status: Senior Manager, Financial Forecasting and Analysis, Tracfone Wireless

Antonio Galvan, MS Kinesiology (2004, E. Evans advisor)

Thesis: "The effect of training mode on balance and gait in older individuals"

Status: Wellness Manager, Monarch Landing, Chicago, IL

Wen Hong Shen, PhD Immunophysiology (2003, K. Kelley advisor)

Dissertation: "Mechanisms of cytokine-induced IGF-1 insensitivity in cancer cells"

Status: Professor, Weill Cornell College of Medicine

Eric Deszo, PhD Immunophysiology (2003, G. Freund advisor)

Dissertation: "CD45 Negatively Regulates Monocytic Cell Differentiation by Inhibiting Phorbol 12-Myristate 13-Acetate-dependent Activation and Tyrosine Phosphorylation of Protein Kinase C δ "

Status: Systems Integration Specialist, Abbott Laboratories, IL

Jason O'Connor, PhD Immunophysiology (2004, G. Freund advisor)

Dissertation: "Type 2 diabetes impairs interleukin-4 function in macrophages and amplifies the brain-based neuroimmune response"

Status: Associate Professor, University of Texas at San Antonio, TX

Dan Johnson, PhD Immunophysiology (2007, G. Freund advisor)

Dissertation: "Psychoneuroimmune implications of non-infectious neuroimmune system activation and the impact of Type 2 diabetes"

Status: Post-doctoral Fellow, University of Arkansas

Kevin Heffernan, PhD Kinesiology (2009, B. Fernhall advisor)

Dissertation: "Effects of resistance training on vascular function in African-American males"

Status: Associate Professor, Syracuse University

Amanda Nelson, PhD Kinesiology (2007, G. Iwamoto advisor)

Dissertation: "Neuroplastic adaptations to exercise training and detraining"

Status: Associate Dean, University of Wisconsin – Green Bay

Mark Misic, PhD Kinesiology (2007, E. Evans advisor)

Dissertation: "Relationship of body composition, strength, and asymmetry to lower extremity physical function in women: Impact of age and physical activity level"

Status: Department of Operations Management and Information Systems, Northern Illinois University

Mina Mojtahedi, PhD Kinesiology (2010, E. Evans advisor)

Dissertation: "Effects of a higher protein weight loss supplement on body composition, metabolic disease risk and physical function in postmenopausal women"

Status: International Disability Rights Expert, Helsinki Finland

Cara Krzyszton, MS Immunophysiology (2008, R. Johnson advisor)

Thesis: "Aging and neuroinflammation are associated with fatigue and motor deficits in a murine model"

Status: Veterinarian, Wauconda IL

Jayne Abraham, PhD Immunophysiology (2009, R. Johnson advisor)

Dissertation: "Neuroinflammation and cognitive impairment in the aged: Implications for nutritional intervention"

Status: Scientific and Strategic Lead, Patient Centered Endpoints Solutions at IQVIA

Heidi Jurgens, PhD Immunophysiology (2012, R. Johnson advisor)

Dissertation: "Effects of influenza virus infection on cognitive behavior and neuroinflammation"

Status: Senior Associate Director, Northwestern University Foundation Relations

Sushant Ranadive, PhD Kinesiology (2012, B. Fernhall advisor)

Dissertation: "Protective effects of acute moderate exercise on vaccination-induced inflammation, arterial function and vaccine efficacy"

Status: Assistant Professor, University of Maryland

Rudy Valentine, PhD Kinesiology (2011, E. Evans advisor)

Dissertation: "The influence of body composition and physical activity on inflammation, fatigue and function in older adults"

Status: Assistant Professor, Iowa State University

Min Jung Park, PhD Immunophysiology (2010, G. Freund advisor)

Dissertation: "Adrenergic regulation of hypoglycemia"

Status: Post-doctoral Fellow, Johns Hopkins School of Medicine

Peter Clark, PhD Psychology (2011, J. Rhodes advisor)

Dissertation: "Evaluating the regulation and function of adult mouse hippocampal neurogenesis induced from running"

Status: Assistant Professor, Iowa State University

Jill Shunk, MS Nutritional Sciences (2012, S. Donovan advisor)

Thesis: "Effect of bovine lactoferrin on T lymphocyte cell phenotype and function and the response to vaccination in the neonatal piglet"

Status: Nutritional Counselor, Carle Hospital, IL

Shannon (Thorum) Cope, MS Nutritional Sciences (2011, S. Donovan advisor)

Dissertation: "Effect of novel nutritional ingredients on piglet responses to vaccination"

Status: Dietician, Truality Healthcare, Portland OR

Shelly Hester, PhD Nutritional Sciences (2012, S. Donovan advisor)

Dissertation: "Impact of formula additives on immune and gastrointestinal development in the piglet"

Status: Post-doctoral Fellow, IUPUI

Michael Burton, PhD Immunophysiology (2012, R. Johnson advisor)

Dissertation: "Role of IL-6 trans-signaling in age-related cognitive dysfunction"

Status: Assistant Professor, University of Texas at Richardson, TX

Claire Scavuzzo, PhD Psychology (2014, D. Korol advisor)

Dissertation: "Use it and boost it: Prior physical and cognitive activity modulate subsequent cognition via mBDNF signaling"

Status: Senior Lecturer, University of Alberta, CAN

Neha Gothe, PhD Kinesiology (2013, E. McAuley advisor)

Dissertation: "The effects of an 8 week yoga intervention on cognition and functional fitness in older adults"

Status: Assistant Professor, University of Illinois at Urbana, IL

Hae-Rye Chung, PhD Kinesiology (2015, K. Wilund advisor)

Dissertation: "The impact of hypercholesterolemia and physical activity on statin-associated skeletal muscle myopathy"

Status: Assistant Professor, Clayton State University, GA

Heather Huntsman, PhD Kinesiology (2014, M. Boppart advisor)

Dissertation: "Preconditioned muscle derived mesenchymal stem cells revitalized growth and function in aged skeletal muscle"

Status: Professorial Lecturer, George Washington University

Gabe Chiu, PhD Nutritional Sciences (2014, G. Freund advisor)

Dissertation: "Extracellular adenosine as a novel neuroimmune regulator"

Status:

Jennifer Joesting, MS Nutritional Sciences (2013, G. Freund advisor)

Dissertation: "The effect of fasting on anti-inflammatory mediators, IL1RA and IL-1R2, and their role in resistance to sickness behavior"

Status: Instructor, Parkland College, IL

Abbi Lane, PhD Kinesiology UIC (2013, B. Fernhall advisor)

Dissertation: "Effects of aging and physical activity on cardiovascular responses to acute, induced inflammation"

Status: Assistant Professor, University of South Carolina, SC

Peter Fitschen, PhD Kinesiology (2015, K. Wilund advisor)

Dissertation: "Efficacy of beta-hydroxy-beta-methylbutyrate supplementation in hemodialysis patients"

Status: Entrepreneur, Fitbody & Physique LLC

Madeline Weikert, MS Kinesiology (2011, R. Motl advisor)

Dissertation: "Associations among physical activity, perception of stress, and relapse recurrences in multiple sclerosis"

Status: Associate Acquisitions Editor, Human Kinetics Publishing, IL

Kai Zou, PhD Kinesiology (2013, M. Boppart advisor)

Dissertation: "Development of novel strategies to improve skeletal muscle repair and adaptation following eccentric exercise"

Status: Assistant Professor, University of Massachusetts at Boston, MA

Huimin Yan, PhD Kinesiology (2014, B. Fernhall advisor)

Dissertation: "Racial differences in cardiovascular responses following an acute bout of aerobic exercise"

Status: Assistant Professor, University of Massachusetts at Boston, MA

Trisha Gibbons, MS Immunophysiology (2014, R. Johnson advisor)

Thesis: "Voluntary wheel running, but not a diet containing EGCG and beta-alanine, improve learning, memory and neurogenesis in aged mice"

Status: Physician's Assistant

Daniel Kougias, PhD Neuroscience (2018, J. Juraska advisor)

Dissertation: "Effects of HMB on cognitive performance in middle and old aged"

Status: Health Scientist, Cardno ChemRisk

Jin Hee Jeong, PhD Kinesiology (2016, K. Wilund advisor)

Dissertation: "The effect of acute intradialytic exercise on cardiovascular responses in hemodialysis patients"

Status:

Stephan van Vliet, PhD Kinesiology (2017, N. Burd advisor)

Dissertation: "The effect of acute intradialytic exercise on cardiovascular responses in hemodialysis patients"

Status: Post-doctoral Fellow, Washington University, St. Louis, MO

Annabelle Biruete, PhD Kinesiology (2017, K. Wilund advisor)

Dissertation: "Effects of inulin supplementation on markers of mineral and bone metabolism and the gut microbiota in hemodialysis patients"

Status: Post-doctoral Fellow, Indiana University, IN

Ziad Mahmassani, PhD Kinesiology (2017, M. Boppart advisor)

Dissertation: "alpha 7 beta 1 integrin regulation of growth in response to mechanical stimulation"

Status: Post-doctoral Fellow, University of Utah

Russell Emmons, PhD Kinesiology (2017, M. DeLisio advisor)

Dissertation: "Influence of exercise training on the bone marrow microenvironment in obesity and cancer"

Status:

Grace Niemi, PhD Kinesiology (2018, M. DeLisio advisor)

Dissertation: "Lifestyle and exercise effects on circulating progenitor cells in children and adults"

Status: Post-doctoral Fellow, University of Arizona

Michael Monroe, PhD Kinesiology (2018, M. Boppart advisor)

Dissertation: "Development of a stem cell-based therapy for the recovery of skeletal muscle mass following immobilization"

Status: Post-doctoral Fellow, Washington University, St. Louis, MO

Joe Beals, PhD Kinesiology (2018, N. Burd advisor)

Dissertation: "Human obesity and its influence on muscle protein synthesis"

Status: Post-doctoral Fellow, Washington University, St. Louis, MO

Kevin Stebbings, PhD Neuroscience (2018, D. Llano advisor)

Dissertation: "Quantifying effects of aging across structures of the mouse auditory system, with in vitro brain slice preparations"

Slav Dvoretzkiy, PhD Kinesiology (2019, M. Boppart advisor)

Dissertation: "Development of a pericyte-derived exosome therapy for the recovery of skeletal muscle mass following immobilization"

Arden McNath, PhD Nutritional Science (2023, N. Khan advisor)

Dissertation:

Collaborators:

- Eddie McAuley, Kinesiology UIUC
- Art Kramer, Beckman Institute UIUC
- Keith Kelley, Animal Sciences UIUC
- Robert Dantzer, Animal Sciences UIUC
- Greg Freund, Medicine UIUC
- Rod Johnson, Animal Sciences UIUC
- Matt Wallig, Veterinary Pathobiology UIUC
- Bo Fernhall, Kinesiology UIUC
- Ken Wilund, Kinesiology UIUC
- H. Rex Gaskins UIUC
- Donna Murasko, Microbiology/Immunology, MCP Hahnemann Medical School
- Moni Fleshner, Applied Physiology, University of Colorado – Boulder
- Hiromi Yano, Kawasaki University, Japan
- Luisa DiPietro, University of Illinois Chicago
- Kijin Kim, Keimjung University, South Korea
- Rickie Simpson, University of Houston
- Gavin Horn, UIUC
- Denise Smith, Skidmore College
- John Fryer, Mayo Clinic, Jacksonville FL
- Vandana Nehra, Mayo Clinic, Rochester MN
- Kelly Swanson, UIUC
- Tom Buford, UAB
- Chris Fields, UIUC
- Mike Bailey, Nationwide Children’s Hospital
- Jacob Allen, UIUC

Professional Memberships:

- American College of Sports Medicine (ACSM) (Fellow status)
- International Society of Exercise and Immunology (past President)
- Psychoneuroimmunology Research Society (past President)
- National Academy of Kinesiology (NAK)(Fellow status)
- Gerontological Society of America
- American Physiological Society (APS)

Professional Presentations (95, *invited):

- 2023** *Psychoneuroimmunology Research Society (invited). "Exercise in psychoneuroimmunology". Boulder, CO.
- 2022** *International Society for Exercise Immunology (Invited Keynote). "Exercise immunology in the age of pandemics". Tucson, AZ.
- 2021** *York University Muscle Health Awareness Symposium (Invited Symposium Speaker). "Your microbes and exercise: Are microbes involved in endurance exercise adaptations?". Virtual presentation.
- 2021** *University of South Carolina Health Law Society (Invited talk). "Federal research compliance regulations".
- 2021** *American College of Sports Medicine (Invited Symposium Speaker). "Exercise and the gut microbiome: implications for immunity" Virtual presentation.
- 2020** *International Life Sciences Institute (Invited Webinar). "Exercise, diet, and the gut brain axis". Virtual presentation.
- 2020** *UIUC Alumni College, "Ask not what your microbes can do for you, ask what you can do for your microbes", Ritz-Carlton, Naples. FL.
- 2020** Three other invited talks cancelled due to SARS-CoV2 pandemic
- 2018** *Hilliard Discussion 8 (invited TED-like talk), "The power of poop: Exercise and the gut microbiota", Huffines Institute for Sports Medicine and Human Performance, Texas A & M University, College Station, TX.
- 2018** *Integrated Physiology of Exercise Meeting (invited keynote) "Impact of exercise on the gut microbiome: Implications for cancer risk", San Diego, CA.
- 2018** *Loyola University Medical Center Grand Rounds (invited talk), "Is exercise medicine for your gut?"
- 2018** *Carle Foundation Hospital, Digestive Health Institute Speaker Series, (invited), "Is exercise medicine for the gut?" Urbana, IL
- 2017** *University of Alabama-Birmingham, Center for Exercise Medicine, (Invited, Special Distinguished Lecture Series), "Is exercise medicine for the gut?" Birmingham, AL
- 2017** *Mid-Atlantic American College of Sports Medicine (Invited Keynote Speaker). "Can you exercise train your gut microbes?" Harrisburg, PA.
- 2017** *American College of Sports Medicine (Invited Symposium Speaker). "Can you exercise train your gut microbes?" Denver, CO.
- 2017** *American College of Sports Medicine (Invited Tutorial Lecture). "How the immune system talks to the brain" Denver CO.
- 2017** *Psychoneuroimmunology Annual Meeting (Invited Symposium Speaker). "Exercise alters the gut microbiome and microbial metabolites: Implications for aging and cognition". Galveston, TX.
- 2015** *Psychoneuroimmunology Annual Meeting (Invited free communication). "Exercise alters the gut microbiome and microbial metabolites: Implications for colorectal cancer and inflammatory bowel disease". Seattle WA.
- 2015** *American College of Sports Medicine (Invited Talk). "Exercise, Colitis and the Microbiome". In Exercise Immunology: Implications from Bench to Bedside. San Diego CA.
- 2015** *American College of Sports Medicine (Invited Symposium Chair). Exercise Immunology: Implications from Bench to Bedside. San Diego CA.

- 2015** *Southeast American College of Sports Medicine Annual Meeting Keynote Luncheon Lecture (invited seminar) "No Guts, No Glory: A Role for Exercise in Inflammatory Bowel Disease and Dysbiosis" Jacksonville FL.
- 2014** *Integrated Physiology of Exercise Meeting (invited Chair of symposium) "Guts, Smarts and Heart: Effects of exercise dosage on inflammation in the gut, brain and cardiovascular system", title of my talk "Impact of exercise on the gut and its microbiota", South Beach Miami, FL.
- 2014** *National Academy of Kinesiology Annual Meeting (invited seminar) "Physical Activity and Immune Function", Austin TX.
- 2014** *University of Georgia (invited seminar) "No Guts, No Glory: A Role for Exercise in Inflammatory Bowel Disease and Dysbiosis".
- 2014** *Division of Nutritional Sciences Symposium, University of Illinois (Invited Lecture). "Effects of exercise and targeted dietary supplementation on age-related cognitive loss".
- 2014** *University of Missouri at Columbia (Invited Keynote at Nutrition and Exercise Research Day; Hogan Lecture Award), Columbia MO. "No Guts, No Glory: A Role for Exercise in Inflammatory Bowel Disease and Dysbiosis".
- 2014** *University of Massachusetts (invited seminar) "No Guts, No Glory: A Role for Exercise in Inflammatory Bowel Disease and Dysbiosis", Amherst MA.
- 2014** *Texas Chapter of the American College of Sports Medicine (Invited Keynote), "No Guts, No Glory: A Role for Exercise in Inflammatory Bowel Disease and Dysbiosis", Fort Worth, TX.
- 2013** University of Illinois Integrative Immunology and Behavior Seminar, "Effects of exercise on ulcerative colitis"
- 2013** *American College of Sports Medicine (Invited Tutorial), Indianapolis IN. "Brain, Behavior and Immunity: How the Immune System Talks to the Brain".
- 2013** *American College of Sports Medicine (Symposium Chair), Indianapolis IN. Exercise and Immune Dysregulation in the Aged.
- 2011** *International Society for Exercise Immunology Biannual Symposium, OXFORD, UNITED KINGDOM (Invited Lecture). "Potential Beneficial Mechanisms of Exercise in Cancer Incidence and Progression".
- 2011** *Division of Nutritional Sciences Symposium, University of Illinois (Invited Lecture). "A primer on how the immune system says 'hello' to the brain".
- 2009** *International Society for Exercise Immunology Biannual Symposium, TUBINGEN, GERMANY (Invited Lecture). "Potential Beneficial Mechanisms of Exercise in Cancer Incidence and Progression".
- 2009** *College of Applied Health Sciences King McCristal Award Lecture, Champaign, IL "Can Exercise Improve Dysregulated Immune Responses?"
- 2009** *Midwest Region of the Psychoneuroimmunology Research Society, Chicago, IL (Invited Lecture). "Anti-inflammatory effects of Exercise".
- 2009** *Keynote ACSM Featured Science Session "Exercise and Dysregulated Immunity and Inflammation", Seattle WA.
- 2009** *3rd Annual Nutrition and Wellness Research Center Symposium: "Vaccines, Immunity and Well-Being", Iowa State University Immunology, Ames, IA (Invited Lecture). "Exercise-induced improvements in vaccine responses in older adults".
- 2008** *European Congress of Sports Science, Pre-Conference Workshop, ESTORIL, PORTUGAL (Invited Lectures). "Exercise, inflammation and cardiovascular

disease: Does exercise reduce inflammation?", "Neural-immune interactions: Implications for inflammation and health".

- 2007** College of Applied Health Sciences seminar on grantsmanship
- 2007** *International Society for Exercise Immunology Biannual Symposium, SENDAI, JAPAN (Invited Lecture). "Exercise as a means of reducing acute and chronic inflammation and its consequences".
- 2007** *Tufts University Friedman School Symposium Boston MA (Invited Keynote Lecture), "Exercise, Physical Activity and Immune Function: Can exercise improve immune response to vaccination in the aged?"
- 2007** Psychoneuroimmunology Research Society (free communication), ARCACHON, FRANCE. "Effects of 1-methyltryptophan on LPS-induced sickness behavior in mice"
- 2007** *The Ohio State University (Invited Lecture). "Can exercise improve immune responses in the elderly?"
- 2007** *Tufts University, Boston MA (Invited Lecture). "Influence of exercise on the immune response to vaccination: A randomized controlled trial"
- 2006** *Psychoneuroimmunology Research Society, Miami FL (Invited Lecture). "Anti-inflammatory and Th2 skew effects of exercise: Implications for influenza infection and cancer"
- 2006** *American College of Sports Medicine, Denver CO (Invited Lecture). "Anti-inflammatory and Th2 skew effects of exercise: Implications for influenza infection and cancer"
- 2006** Experimental Biology, San Francisco, CA (free communication). "Moderate exercise reduces blood vessel density in allogeneic tumors.
- 2005** *International Society for Exercise Immunology Biannual Symposium, MONACO (Invited oral communication). "Moderate Exercise Protects Mice From Death due to Influenza Virus Infection and Alters Cytokine Gene Expression at the Site of Infection".
- 2005** *University of Illinois @ Chicago, Chicago, IL (Invited Lecture, Department of Kinesiology). "Exercise and Tumor Growth".
- 2004** *American Physiological Society Integrative Physiology of Exercise Conference, Austin, TX, (Invited Lecture).
- 2004** *Purdue University, West Lafayette, IN, "Physical Activity, Aging and Immune Function" (Invited Lecture, Department of Health and Kinesiology).
- 2003** *University of Alabama, Birmingham, AL, "Can Exercise Improve Immune Function in the Aged?" (Invited Lecture, Dept. Physiology and Biophysics Seminar Series).
- 2003** *UIUC Nutritional Sciences Seminar Series, "Physical Activity, Aging, and Immune Function: The Immune Function Intervention Trial" (Invited Lecture).
- 2003** *UIUC Initiative on Aging 2003 Summer Conference, Urbana, IL "Can Exercise Improve Immune Function in the Aged?" (Invited Lecture).
- 2002** *Appalachian State University, Boone, NC, "Physical Activity, Aging and Immune Function" (Invited Lecture at the Department of Health, Leisure and Exercise Science)

- 2002** *Wake Forest University, Winston-Salem, NC, "Physical Activity, Aging and Immune Function" (Invited Lecture at the Department of Exercise Science)
- 2002** Wake Forest University, Winston-Salem, NC, "Physical Activity, Aging and Immune Function" (Grand Rounds Invited Lecture at Wake Forest University Baptist Medical Center, Sticht Center on Aging)
- 2002** *National Athletic Trainers Association, Dallas, TX, "Overtraining and immune consequences" (Invited Lecture)
- 2002** *International Conference on Immunology and Aging, Washington, DC, "Physical Activity and Immune Function in the Aged" (Invited Lecture)
- 2001** *International Society of Biomedical Gerontology, VANCOUVER, CA, "Can Exercise Improve Immune Function in the Aged?" (Invited Lecture).
- 2001** *National American College of Sports Medicine, Baltimore, MD, "Exercise and macrophage function in aged populations" (Invited Lecture).
- 2000** *Physical Activity and Cancer, Dallas, TX, "Physical activity, immune function and cancer" (Invited Lecture).
- 2000** Biochemistry of Exercise XI, Little Rock, AK, "Exercise training increases the naive to memory T lymphocyte ratio in old mice". (Poster).
- 1999** Experimental Biology (FASEB), Washington D.C., "Exercise training increases macrophage responsiveness in mice of different ages." (Poster)
- 1999** Psychoneuroimmunology Research Society, Galveston, TX, "Effects of exercise training on T lymphocyte subsets in young and old mice." (Poster).
- 1999** National American College of Sports Medicine, Seattle, WA, "Effects of 6 months of moderate exercise training on immune function in the elderly" (Free Communication).
- 1999** *International Society for Exercise Immunology Biyearly Symposium, ROME, ITALY, "Exercise Immunology: Neuroendocrine regulation of macrophage function" (Invited Lecture).
- 1999** *International Society for Exercise Immunology Biannual Symposium, ROME, ITALY, "Mechanisms and kinetics of exercise training-induced increases in macrophage tumor killing in young and old mice." (Invited Free Communication).
- 1998** Psychoneuroimmunology Research Society, BRISTOL, UNITED KINGDOM, "Effects of acute and chronic exercise on natural killer cell number and function in young and old."(Poster).
- 1998** National American College of Sports Medicine, Orlando, FL, "Chronic exercise increases macrophage tumor cytolysis in young and old mice." (Poster).
- 1998** *University of Colorado, Boulder, CO, "Can exercise improve immune function in old age?" (Invited Lecture).
- 1998** *University of Wisconsin, Madison, WI, "Can exercise improve immune function in old age?" (Invited Lecture).
- 1998** *University of Illinois, Urbana, IL, Department of Physiology "Can exercise improve immune function in old age?" (Invited Lecture).

- 1997** *Indiana State University Student Lecture, Terre Haute, IN, "Exercise as a Means of Enhancing Immunity in the Aged." (Invited lecture).
- 1997** National American College of Sports Medicine, Denver, CO, "Effects of maximal exercise on natural killer (NK) cell activity and responsiveness to interferon- γ in young and old." (Free communication).
- 1997** *Defense and Civil Institute of Environmental Medicine's Symposium, "Immune responses to inflammation and trauma: A physical training model" TORONTO, CAN, "Exercise and resistance to neoplasia" (Invited Speaker).
- 1997** International Society for Exercise Immunology Biannual Symposium, PADERBORN, GERMANY, "Effects of chronic exercise on anti-EL-4 cytolytic T lymphocyte generation" (Invited Free Communication).
- 1996** Psychoneuroimmunology Research Society, Santa Monica, CA, "Exhaustive exercise suppresses macrophage class II MHC expression and elevates plasma interleukin-6." (Poster).
- 1996** *Northern Illinois University Graduate Colloquium, DeKalb, IL, "Exercise as a Means of Enhancing Immunity in the Aged." (Invited lecture).
- 1996** *Northern Illinois University Graduate Colloquium, DeKalb, IL, "Exercise and Immune Function: Is There a Dose-Response Relationship?" (Invited lecture).
- 1996** National American College of Sports Medicine, Cincinnati, OH, "Effects of different doses of exercise on the macrophage MHC II response to inflammation." (Free communication).
- 1996** *National American College of Sports Medicine, Cincinnati, OH, "Exercise and immune function: Potential role in infection and cancer" (Chaired Symposium).
- 1996** *Midwest American College of Sports Medicine, St. Charles, IL, "Exercise Immunology: Research and Practical Applications" (Chaired Symposium).
- 1994** National American College of Sports Medicine, Seattle, WA, "Effects of exhaustive exercise on IL-6 gene expression" (Free communication).
- 1993** National American College of Sports Medicine, Seattle, WA, "Mechanisms involved in exercise-induced increases in macrophage anti-tumor cytotoxicity" (Free communication).
- 1993** Substance Abuse and the Brain-Immune Axis, Current Problems in Drug Dependency, TORONTO, CAN. "Lipopolysaccharide enhances naloxone-insensitive β -endorphin binding to cultured peritoneal exudate cells" (Poster).
- 1992** Southeast American College of Sports Medicine, Auburn, AL, "Exercise, the immune system and cancer" (Tutorial Lecture).
- 1992** National American College of Sports Medicine, Dallas, TX, "Exercise and the immune response to cancer" (Free communication).
- 1991** National American College of Sports Medicine, Orlando, FL, "The effects of exercise on macrophage tumoricidal activity and lipopolysaccharide sensitivity" (Free communication).

- 1990** Southeast American College of Sports Medicine, Columbia, SC, "Effects of exercise on murine macrophage phagocytosis" (Free communication).
- 1990** National American College of Sports Medicine, Salt Lake City, "Failure of low dose carbohydrate feeding to effect the plasma glucose and stress hormone response to prolonged cycling exercise" (Free communication).
- 1990** North and South Carolina American Society for Microbiology, Myrtle Beach, SC, "The effects of exercise on macrophage tumoricidal activity" (Free communication).
- 1989** Southeast American College of Sports Medicine, Atlanta, GA, "Correlates to performance on field and laboratory strength tests in 9-11 year old boys and girls" (Poster).
- 1989** National American College of Sports Medicine, Baltimore, MD, "Validity of field tests of upper body strength in children" (Free communication).