

## ◇ Jeffrey A. Woods, Ph.D. ◇

---

[woods1@illinois.edu](mailto:woods1@illinois.edu)

Professor

Department of Kinesiology and Community Health

Division of Nutritional Sciences

College of Applied Health Sciences

University of Illinois @ Urbana-Champaign

348 Louise Freer Hall

906 South Goodwin Avenue

Urbana, IL 61801

(217) 244-8815, FAX (217) 244-7322

Web homepage: <http://www.kines.uiuc.edu/faculty/woods.html>

Lab homepage: <http://www.kines.uiuc.edu/eximmuno/>

### Education:



University of South Carolina (1987-1992)

- ◆ Ph.D. Exercise Science
- ◆ GPA - 3.8



Springfield College (1984-1988)

- ◆ M.S. Exercise Physiology/Cardiac Rehabilitation
- ◆ GPA - 3.8



University of Massachusetts (1980-1984)

- ◆ B.S. Exercise Science
- ◆ GPA - 2.99

### Professional Appointments:

**2014-** **Director, Center on Health, Aging and Disability**  
College of Applied Health Sciences

**2008-** **Professor**  
Department of Kinesiology and Community Health  
College of Applied Health Sciences  
*Affiliations:* Center on Health, Aging and Disability; Integrative Immunology and Behavior Group; Division of Nutritional Sciences; Department of Pathology, College of Medicine; Neuroscience Program, Beckman Institute  
University of Illinois @ Urbana-Champaign

**2000-2008** **Associate Professor**  
University of Illinois @ Urbana-Champaign.

**1994-2000** **Assistant Professor**  
University of Illinois @ Urbana-Champaign.

**1992-1994** **Post-doctoral Fellow (NIH National Research Service Award) in Psychoneuroimmunology,**  
Minneapolis Medical Research Foundation. Conducted research involving the effects of opiate

peptides (enkephalin,  $\beta$ -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.

**1987-1992 Practicum Instructor and Lecturer, American College 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.

**1987-1992 Graduate Research and Teaching Assistant, 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).

**1985-1986 Internship Cardiac Rehabilitation and Diagnostics, Baystate Medical Center, Springfield, MA.** 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.

**1984-1986 Graduate Teaching Asst., Dept. of Chemistry, Springfield College, Springfield, MA.** 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 on immune function as it relates to disease susceptibility and sickness behavior. The current belief is that moderate exercise enhances immune function, whereas intense, prolonged exercise suppresses it. Specifically, my research is designed to; (1) describe the effects of different doses of exercise on immune responses, (2) determine the mechanisms (central nervous, endocrine, cellular, intracellular) responsible for exercise-induced changes in immunity, (3) define the physiological significance of exercise-induced changes in immunity in relation to disease susceptibility (influenza infection, cancer, wound healing, colitis) and changes in behavior (fatigue, reduced locomotion, reduced food intake, depression, cognition), and (4) explore the use of appropriate forms of exercise and dietary supplementation as therapy for those with dysregulated immune systems (elderly, obese, cancer patients).

**Grant and Contract Activity (Awarded, ~5 million as PI; >16 million as co-I):**

- 2015-20** National Institutes of Health (T35 OD-11145), **Preceptor** (Hoyer and Flaws, PIs), “Summer training in translational biomedical research”, \$300,105
- 2014-15** 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.
- 2013-15** 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**, ‘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  $\beta$ -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” \$7360.
- 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” \$1500.

**Published Journal Articles:** (H-index 37, 21 first author, 37 senior author)

109. Pence BD, Gibbons TE, Bhattacharya TK, Mach HC, Ossyra JM, Petr G, Martin SA, McCusker RH, Kelley KW, Rhodes JS, Johnson RW, **Woods JA**. Effects of exercise and dietary EGCG and  $\beta$ -alanine on skeletal muscle in aged mice. *Appl Physiol Nutr Metab*, in press, 2015.
108. Panasevich MR, Allen JM, Wallig MA, **Woods JA**, Dilger RN. Moderately-fermentable potato fiber attenuates symptoms and inflammation associated with experimental colitis. *J Nutr*, in press, 2015. PMID: 26491118
107. Ranadive SM, Yan H, Lane A, Kappus RM, Cook MD, Sun P, Harvey I, Ploutz-Snyder R, **Woods JA**, Wilund KR, Fernhall B. Aerobic exercise training and arterial changes in African-American versus Caucasians. *Med Sci Spt Exerc*, in press, 2015. PMID: 26225767
106. Allen JM, Sun Y, **Woods JA**. Exercise and the regulation of inflammatory responses. *Prog Mol Transl Sci* 135: 337-354, 2015. PMID: 26477921
105. Bhattacharya TK, Pence BD, Ossyra JM, Gibbons TE, Perez S, McCusker RH, Kelley KW, Johnson RW, **Woods JA**, Rhodes JS. Exercise but not (-)-Epigallocatechin-3-gallate or  $\beta$ -Alanine enhances physical fitness, brain plasticity, and behavioral performance in mice. *Physiol Behav* 145: 29-37, 2015. PMID: 25797079
104. Allen JM, Berg Miller ME, Pence BD, Whitlock K, Nehra V, Gaskins RH, Fryer JD, White BA, **Woods JA**. Voluntary and forced exercise differentially alter the gut microbiome in C57Bl/6J mice. *J Appl Physiol*, 118: 1059-1066, 2015. PMID: 25678701
103. Lane A, Kappus R, Bunsawat K, Ranadive S, Yan H, Phillips S, Baynard T, **Woods JA**, Motl R, Fernhall B. Age-related ventricular-vascular coupling during acute inflammation in humans: Effect of physical activity. *Eur J Prev Cardiol*, 22(7): 904-911, 2015. PMID: 24996847
102. **Woods JA**, Pence BD. Physical activity, exercise and immune function. *Kines Rev*, 4: 118-125, 2015.
101. Leckie RL, Oberlin LE, Voss MW, Prakash RS, Szabo-Reed A, Chaddock-Heyman L, Phillips SM, Gothe NP, Mailey E, Vieira-Potter VJ, Martin SA, Pence BD, Lin M, Parasuraman R, Greenwood PM, Fryxell KJ, **Woods JA**, McAuley E, Kramer AF, Erickson KI. Brain-derived neurotrophic factor mediates improvements in executive function following a 1 year exercise intervention. *Front Human Neurosci*, 8, 985, 2014. PMID: 25566019
100. Smith DL, Horn GP, Petruzzello SJ, Freund GG, **Woods JA**, Cook MD, Goldstein E, Fernhall B. Effect of obesity on acute hemostatic responses to live-fire training drills. *Am J Cardiol* 114:1768-1771, 2014. PMID: 25306554
99. Lane A, Yan H, Randive SM, Kappus RM, Sun P, Cook MD, Harvey I, **Woods JA**, Wilund K, Fernhall B. Sex differences in ventricular-vascular coupling following endurance training. *Eur J Appl Physiol*, 114(12): 2597-2606, 2014. PMID: 25142819
98. Kang SS, Jeraldo PR, Kurti A, Berg Miller ME, Cook MD, Whitlock K, Goldenfeld N, **Woods JA**, White BA, Chia N, Fryer JD. Diet and exercise orthogonally alter the gut microbiome and reveal independent associations with anxiety and cognition. *Molecular Neurodegen* 9(1): 36, 2014. PMID: 25217888

97. Klaren RE, Motl RW, **Woods JA**, Miller SD. Effects of exercise in experimental autoimmune encephalomyelitis (an animal model of Multiple Sclerosis). *J Neuroimmunol* 274(1-2): 14-19, 2014. PMID: 24999244
96. Linden MA, Pincu Y, Martin SA, **Woods JA**, Baynard T. Moderate exercise training provides modest protection against adipose tissue inflammatory gene expression in response to high-fat feeding. *Physiol Reports*, 16(2): 7, 2014. PMID: 25347855
95. Gibbons TE, Pence BD, Petr G, Ossyra JM, Mach HC, Battacharya TK, Perez S, Martin SA, McCusker RH, Kelley KW, Rhodes JS, Johnson RW, **Woods JA**. Voluntary wheel running, but not a diet containing (-)-epigallocatechin-3-gallate and  $\beta$ -alanine, improves learning, memory and hippocampal neurogenesis in aged mice. *Behav Brain Res* 272: 131-140, 2014. PMID: 25004447
94. Ranadive SM, Kappus RM, Cook MD, Yan H, Lane AD, **Woods JA**, Wilund KR, Iwamoto G, Vanar V, Tandon R, Fernhall B. Effect of acute moderate exercise on induced inflammation and arterial function in older adults. *Exptl Physiol* 99(4): 729-739, 2014. PMID: 24465022
93. Lee B, Benyajati S, **Woods JA**, Jan YK. Effect of local cooling on pro-inflammatory cytokines and blood flow to the skin under surface pressure in rats: feasibility study. *J Tissue Viability* 23: 69-77, 2014. PMID: 24513091
92. Yan H, Ranadive S, Heffernan K, Lane A, Kappus R, Cook MD, Wu PT, Sun P, Harvey I, **Woods JA**, Wilund KR, Fernhall B. Hemodynamic and arterial stiffness differences between African-Americans and Caucasians following maximal exercise. *Am J Physiol Heart Circ Physiol*, 306(1): H60-68, 2014. PMID 24186094
91. Martin SA, Dantzer R, Kelley KW, **Woods JA**. Voluntary wheel running does not affect lipopolysaccharide-induced depressive-like behavior in young adult and aged mice. *Neuroimmunomod* 21:52-63, 2014. PMID: 24281669
90. Pence BD, **Woods JA**. Exercise, obesity, and cutaneous wound healing. *Adv Wound Care* 3(1): 71-79, 2014. PMID: 24761347
89. Smith DL, Horn GP, Petruzello SJ, Fahey G, **Woods JA**, Fernhall B. Clotting and fibrinolytic changes after firefighting activities. *Med Sci Spt Exerc* 46(3): 448-454, 2014. PMID: 23924919
88. Ranadive SM, Cook MD, Kappus RM, Yan H, Lane AD, **Woods JA**, Wilund KR, Iwamoto G, Vanar V, Tandon R, Fernhall B. Effect of acute aerobic exercise on vaccine efficacy in older adults. *Med Sci Spt Exerc* 46(3): 455-461, 2014. PMID 23924918
87. Cook MD, Martin SA, Williams C, Whitlock K, Wallig MA, Pence BA, **Woods JA**. Forced treadmill running exacerbates inflammation and causes mortality while voluntary wheel training is protective in a mouse model of colitis. *Brain Behav Immun* 33: 46-56, 2013. PMID 23707215.
86. Jan YK, Crane BA, Liao F, **Woods JA**, Ennis WJ. Comparison of muscle and skin perfusion at the ischial tuberosities in response to wheelchair tilt-in-space and recline angles in people with spinal cord injury. *Arch Phys Med Rehab* 94: 1990-96, 2013. PMID 23602880

85. Thorum S, Comstock S, Davidson, Siegel MH, Pence BD, **Woods JA**, Donovan SA. Dietary (1,3/1,6)  $\beta$ -glucan decrease TGF- $\beta$  expression in the lung of the neonatal piglet. *Nutr Res* 33: 322-331, 2013. PMID 23602250
84. Jan YK, Liao F, Rice LA, **Woods JA**. Using reactive hyperemia to assess the efficacy of local cooling on reducing skin ischemia under surface pressure in people with spinal cord injury: a preliminary report. *Arch Phys Med Rehab* 94: 1982-89, 2013. PMID 23583346
83. Lane AD, Ranadive SM, Yan H, Kappus RM, Cook MD, Sun P, **Woods JA**, Wilund K, Fernhall B. Sex affects ventricular effort after maximal exercise. *Int J Sport Med*, 34(9): 770-776, 2013. PMID 23526590
82. Kaczmarczyk, MM, Machaj AS, Lawson MA, York JM, Meling DD, Martin SA, **Woods JA**, Kelley KW, Wang Y, Miller MJ, Freund GG. Methylphenidate prevents high-fat diet (HFD)-induced learning/memory impairment in juvenile mice in press, *Psychoneuroendo* 38(9): 1553-1564, 2013. PMID 23411461
81. Baynard T, Vieira-Potter V, Valentine R, **Woods JA**. Exercise training effects on inflammatory gene expression in white adipose tissue of young mice. *Med Inflamm*, 2012: 767953. PMID 23319832
80. Martin SA, Pence BD, Greene RM, Johnson SJ, Dantzer R, Kelley KW, **Woods JA**. Effects of voluntary wheel running on LPS-induced sickness behavior in aged mice. *Brain Behav Immun* 29: 113-123, 2013. PMID 23277090
79. Cook MD, Heffernan KS, Ranadive S, **Woods JA**, Fernhall B. Effect of resistance training on biomarkers of vascular function and oxidative stress in young African-American and Caucasian men. *J Human Hypertension* 27(6): 388-392, 2013. PMID 23172026
78. Voss MW, Erickson KI, Prakash RS, Chaddock LC, Kim JS, Alves H, Szabo A, White SM, Wójcicki TR, Mailey EL, Olson EA, Gothe N, Potter VV, Martin SA, Pence BD, Cook MD, **Woods JA**, McAuley E, & Kramer AF. Neurobiological markers of exercise-related brain plasticity in older adults. *Brain Behav Immun* 28: 90-99, 2013. PMID 23123199
77. Kappus RM, Ranadive SM, Yan H, Lane AD, Cook MD, Hall G, Harvey IS, Wilund KR, **Woods JA**, Fernhall B. Validity of predicting left ventricular end systolic pressure changes following an acute bout of exercise. *J Sci Med Sport* 16(1): 71-75, 2013. PMID 22721862
76. Hester S, Comstock S, Thorum S, Monaco M, Pence BD, **Woods JA**, Donovan SM. Intestinal and systemic immune development and response to vaccination are unaffected by dietary (1,3/1,6)- $\beta$ -D-glucan supplementation of neonatal piglets. *Clin Vacc Immunol* 19(9): 1499-1508, 2012. PMID 22815151
75. Pence BD, Lowder TW, Keylock KT, Potter Vieira VJ, Cook MD, McAuley E, **Woods JA**. Relationship between systemic inflammation and delayed-type hypersensitivity response in older adults. *PLOS One*, 7(5): e36403, 2012. PMID 22567155
74. Pence BD, DiPietro LA, **Woods JA**. Exercise speeds cutaneous wound healing in high-fat diet-induced obese mice. *Med Sci Sport Exerc*, 44(10): 1846-1854, 2012. PMID 225543735
73. **Woods JA**, Wilund KR, Martin SA, Kistler BM. Exercise, inflammation and aging. *Aging and Disease* 2(1): 130-140, 2012. PMID 22500274



72. Anderson-Hanley C, Arciero PJ, Brickman AM, Nimon BS, Okuma N, Westen SC, Merz ME, Pence BD, **Woods JA**, Kramer AF, Zimmerman EA. Exergaming and older adult cognition: A cluster randomized clinical trial. *Am J Prev Med*, 42(2): 109-119, 2012. PMID 22261206
71. Pence BD, Hester SN, Donovan SM, **Woods JA**. Dietary yeast beta-(1->3)-D-glucan has no effect on the antibody or cell-mediated immune responses to influenza virus vaccine in mice. *Immunol Invest* 41(3): 275-289, 2012. PMID 22149961
70. Bigley AB, Lowder TW, Spielmann G, Rector JL, Pircher H, **Woods JA**, Simpson RJ. NK-cells have an impaired response to acute exercise and a lower expression of the inhibitory receptors KLRG1 and CD158a in humans with latent cytomegalovirus infection. *Brain Behav Immun*, 26(1): 177-186, 2012. PMID 21933704
69. Valentine RJ, **Woods JA**, McAuley E, Dantzer R, Evans EM. The associations of adiposity, physical activity and inflammation with fatigue in older adults. *Brain Behav Immun* 25: 1482-1490, 2011. PMID 21693185
68. Pence BD, Martin SA, **Woods JA**. Exercise training and immunosenescence, *Am J Lifestyle Med* 5(3): 238-246, 2011.
67. Walsh NP, Gleeson M, Shephard RJ, Gleeson M, **Woods JA**, Bishop NC, Fleshner M, Green C, Pedersen BK, Hoffman-Goetz L, Rogers CJ, Northoff N, Abbasi A, Simon P. Position Statement Part One: Immune function and exercise. *Exerc Immunol Rev* 17, 6-63, 2011. PMID 21446352
66. Erickson KI, Voss MW, Prakesh RS, Basak C, Szabo A, Chaddock L, Heo S, Alves H, White SM, Wojcicki TR, Mailey E, Vieira VJ, Martin SA, Pence BD, **Woods JA**, McAuley E, Kramer AF. Exercise training increases size of the hippocampus and improves memory. *Proc Natl Acad Sci* 108(7): 3017-3022, 2011. PMID 21282661
65. Erickson KI, Prakash R, Voss M, Chaddock L, Heo S, McLaren M, Pence B, Martin S, Vieira V, **Woods JA**, Kramer A. BDNF is associated with age-related decline in hippocampal volume. *J Neurosci* 30(15): 5368-5375, 2010. PMID 20392958
64. **Woods JA**, Keylock KT, Lowder TW, Vieira VJ, Zelkovich W, Dumich S, Colantuano K, Lyons K, Leifheit K, Chapman-Novakofski KM, McAuley E. Cardiovascular exercise training extends influenza vaccine seroprotection in previously sedentary, healthy older adults: The Immune Function Intervention Trial (ImFIT). *J Am Geriatr Soc*, 57: 2183-2191, 2009. PMID 20121985
63. Martin SA, Pence BD, **Woods JA**. Exercise and respiratory viral infections. *Exerc Spts Sci Rev* 37(4): 157-164, 2009. PMID 19955864
62. Wilund KR, Rosenblat M, Chung HR, Volkova N, Kaplan M, **Woods JA**, Aviram M. Macrophages from the pro-inflammatory alpha 7 nicotinic acetylcholine receptor knockout ( $\alpha 7nAchr^{-/-}$ ) mice demonstrate increased cholesterol accumulation and decreased cellular PON2 expression: a possible link between the nervous system and atherosclerosis development. *Biochem Biophys Res Comm*, 390(1): 148-154, 2009. PMID 19785985
61. Misic MM, Valentine RJ, Rosengren KS, **Woods JA**, Evans EM. Impact of training modality on strength and lower extremity physical function in older adults. *Gerontology*, 55(4): 411-416, 2009. PMID 19590159

60. Vieira V, Hu L, Valentine RJ, McAuley E, Evans EM, Baynard T, **Woods JA**. Reduction in trunk fat predicts cardiovascular exercise training-related reductions in C-reactive protein. *Brain Behav Immun*, 23: 485-491, 2009. PMID 19486651
59. Valentine RJ, Misic M, Rosengren KS, **Woods JA**, Evans EM. Sex impacts the relation between body composition and physical function in older adults. *Menopause*, 16(3): 518-523, 2009. PMID 19423997
58. Heffernan KS, Fahs CA, Iwamoto GA, Jae SY, Wilund KR, **Woods JA**, Fernhall B. Resistance exercise training reduces central blood pressure and improves microvascular function in African American and white men. *Atherosclerosis*, 207(1): 220-226, 2009. PMID 19410255
57. **Woods JA**, Vieira VJ, Keylock KT. Exercise, Inflammation, and innate immunity. *Immunol Allerg Clin North Am* 29(2): 381-393, 2009. PMID 19389588
56. Vieira V, Valentine R, Wilund KR, **Woods JA**. Effects of diet and exercise on metabolic disturbances in high fat diet-fed mice. *Cytokine*, 46: 339-345, 2009. PMID 19362852
55. Vieira VJ, Valentine RJ, Wilund KR, Antao N, Baynard T, **Woods JA**. Effects of exercise and low-fat diet on adipose tissue inflammation and metabolic complications in obese mice. *Am J Physiol: Endocrinol Metab* 296(5): E1164-1171, 2009. PMID 19276393
54. Matsumoto T, Shiva D, Kawanishi N, Kato Y, **Woods JA**, Yano H. Salmonella administration induces a reduction of wheel running activity via a TLR5, but not a TLR 4-, dependent pathway. *Exerc Immunol Rev* 14: 38-50, 2008. PMID 19203083
53. Heffernan KS, Jae SY, Vieira VJ, Iwamoto GA, Wilund KW, **Woods JA**, Fernhall B. C-reactive protein and cardiac vagal activity following resistance exercise training in young African American and white men. *Am J Physiol: Reg Integr Comp Physiol* 296(4): R1098-1105, 2009. PMID 19193941
52. Heffernan KS, Sosnoff JJ, Ofori E, Jae SY, Baynard T, Collier SR, Goulopoulou S, Figueroa A, **Woods JA**, Pitetti KH, Fernhall B. Complexity of force output during static exercise in individuals with Down Syndrome. *J Appl Physiol*, 106(4): 1227-1233, 2009. PMID 19164775
51. Valentine RJ, Evans EM, Vieira VJ, Baynard T, Hu L, McAuley E, **Woods JA**. Sex differences in the relationship between obesity, C-reactive protein, physical activity, sleep quality and fatigue in older adults. *Brain Behav Immun*, 23: 643-648, 2009. PMID 19133324
50. Heffernan K, Jae SY, Wilund K, **Woods JA**, Fernhall B. Racial differences in central blood pressure and vascular function in young men. *Am J Physiol: Heart Circulatory Physiol*, 295(6): H2380-2387, 2008. PMID 18849329
49. Valentine RJ, Vieira VJ, **Woods JA**, Evans EM. Stronger relationship between central adiposity and C-reactive protein in older women than men. *Menopause*, 16(1): 84-89, 2009. PMID 18791482
48. Yang Y, Verkuilen J, Rosengren KS, Mariani RA, Reed M, Grubisich SA, **Woods JA**, Schlagal B. Effects of a traditional Taiji/Qigong curriculum on older adults' immune response to influenza vaccine. *Med Sport Sci* 52: 64-76, 2008. PMID 18487887

47. Moreau M, Andre C, O'Connor JC, Dumich SA, **Woods JA**, Kelley KW, Dantzer R, Lestage J, Castanon N. Inoculation of Bacillus Calmette-Guerin to mice induces an acute episode of sickness behavior followed by chronic depressive-like behavior. *Brain Behav Immun*, 22: 1087-1095, 2008. PMID 18479887
46. Krzyszton CP, Sparkman NL, Grant RW, Buchanan JB, Broussard SR, **Woods JA**, Johnson RW. Exacerbated fatigue and motor deficits in interleukin-10 deficient mice after peripheral immune stimulation. *Am J Physiol Reg Integr Comp Physiol* 295: R1109-1114, 2008. PMID 18650318
45. Grant R, Mariani RA, Vieira V, Fleshner M, Smith T, Keylock KT, Lowder T, McAuley E, **Woods JA**. Exercise intervention improves the primary antibody response to keyhole limpet hemocyanin in previously sedentary older adults. *Brain Behav Immun*, 22: 923-932, 2008. PMID 18295445
44. Heffernan KS, Jae SY, Lee M, **Woods JA**, Fernhall B. Arterial wave reflection and vascular autonomic modulation in young and older men. *Aging Clin Exp Res*, 20(1): 1-7, 2008. PMID 18283221
43. Keylock KT, Vieira V, Wallig MA, Dipietro LA, Schrementi M, **Woods JA**. Exercise accelerates wound healing and decreases wound inflammation in old mice. *Am J Physiol Reg Integr Comp Physiol* 294: R179-184, 2008. PMID 18003791
42. Wardell R, Chapman-Novakofski K, Herrel S, **Woods JA**. Nutrient intake and immune function of elderly subjects. *J Am Dietetic Assoc* 108: 2005-1012, 2008.
41. Kitamura H, Shiva D, **Woods JA**, Yano H. Beta-adrenergic receptor blockade attenuates the exercise-induced suppression of TNF- $\alpha$  in response to lipopolysaccharide in rats. *Neuroimmunomod*, 14: 91-96, 2007. PMID 17713356
40. Yang Y, Mariani RA, Reed M, Lyons K, Rosengren K, **Woods JA**. Effects of Taiji and Qigong intervention on the antibody response to influenza vaccine in the elderly. *Am J Chinese Med* 35(4): 597-607, 2007. PMID 17708626
39. Vieira V, Keylock KT, Lowder T, McAuley E, **Woods JA**. Relationship between recovery heart rate and C reactive protein in older adults. *J Am Geriatr Soc* 55: 747-751, 2007. PMID 17493195
38. Misic M, Rosengren KS, **Woods JA**, Evans, EM. Muscle quality, aerobic fitness and fat mass predict lower extremity physical function in community-dwelling adults. *Gerontol* 53: 260-266, 2007. PMID 17446711
37. Jae SY, Heffernan KS, **Woods JA**, Ahn AS, Lee M-K, Park WH, Fernhall B. Relation of heart rate recovery after exercise to C-reactive protein and white blood cell count. *Am J Cardiol* 99(5): 707-710, 2007. PMID 17317377
36. Lowder T, Padgett D, **Woods JA**. Moderate exercise early after influenza virus infection reduces the Th1 immune response in lungs of mice. *Exerc Immunol Rev* 12: 97-111, 2006. PMID 17201075
35. Keylock KT, Lowder T, Leifheit K, Cook M, Mariani R, Ross K, Kim, K, McAuley E, **Woods JA**. Higher antibody, but not cell-mediated, responses to vaccination in high physically fit elderly. *J Appl Physiol* 102: 1090-1098, 2007. PMID 17095638
34. **Woods JA**, Vieira V, Keylock TK. Exercise, inflammation, and innate immunity. *Neurol Clinics*, 24(3):585-599, 2006. PMID 16877125

33. Lowder T, Lankford D, Padgett D, **Woods JA**. Moderate exercise protects mice from death due to influenza. *Brain Behav Immun*, 19: 377-380, 2005. PMID 15922557
32. **Woods JA**. Physical activity, exercise and immune function. *Brain Behav Immun*, 19: 369-370, 2005. PMID 15908178
31. Smith DL, Petruzzello SJ, Chludzinski MA, Reed JJ, **Woods JA**. Selected hormonal and immunological responses to strenuous live-fire firefighting drills. *Ergonomics*, 48(1): 55-65, 2005. PMID 15764306
30. Yoon P, Keylock KT, Hartman ME, Freund GG, **Woods JA**. Macrophage hypo-responsiveness to interferon- $\gamma$  in aged mice is associated with impaired signaling through Jak-STAT. *Mech Age Dev* 125: 137-143, 2004. PMID 15037019
29. Zielinski MR, Wallig MA, Horn P, Muenchow M, **Woods JA**. Exercise delays allogeneic tumor growth and reduces intra-tumoral inflammation and blood vessels. *J Appl Physiol* 96: 2249-2256, 2004. PMID 15020578
28. **Woods JA**, Ceddia MA, Zack M, Lowder T, Lu Q. Exercise training restores the naïve to memory T lymphocyte ratio in old mice. *Brain Behav Immun*, 17: 384-392, 2003. PMID 12946660
27. Yellayi S, Naaz A, Szewczykowski MA, Sato T, **Woods JA**, Chang J, Segre M, Helferich WG, Cooke PS. The phytoestrogen genistein induces thymic and immune changes: a human health concern? *Proc Natl Acad Sci* 99 (11): 7616-7621, 2002. PMID 12032332
26. **Woods JA**, Lowder T, Keylock KT. Can exercise training improve immune function in the aged? *Ann Ny Acad Sci*, 959: 117-127, 2002. PMID 11976191
25. Pedersen BK, **Woods JA**, Nieman, DC. Exercise-induced immune changes - an influence on metabolism? *Trends Immunol* 22(9): 473-475, 2001. PMID 11556321
24. Smith DL, Petruzzello SJ, Chludzinski MA, Reed JJ, **Woods JA**. Effect of strenuous live-fire firefighting drills on hematological and blood chemistry measures. *J Thermal Biol* 26(4-5): 375-379, 2001.
23. Yellayi S, Teuscher C, **Woods JA**, Welsh T, Tung KS, Rosenfeld C, Lubahn DB, Cooke PS. Role of estrogen receptor alpha (ER $\alpha$ ) in the development and function of the thymus in male mice. *Endocrine* 12(3): 207-213, 2000. PMID 10960309
22. **Woods JA**, Lu Q, Ceddia MA, Lowder, T. Exercise induced modulation of macrophage function. *J Immunol Cell Biol* 78: 545-553, 2000. PMID 10893021
21. **Woods JA**. Exercise and neuroendocrine modulation of macrophage function, *Intl J Sports Med* 21: S24-S30, 2000.
20. Ceddia MA, Voss EW, **Woods, JA**. Intracellular mechanisms responsible for the exhaustive exercise-induced suppression of macrophage antigen presentation. *J Appl Physiol* 88(2): 804, 2000, \*selected as a highlighted article. PMID 10658054
19. Ceddia MA, **Woods JA**. Exercise suppresses macrophage antigen presentation. *J Appl Physiol* 87(6): 2253-2258, 1999. PMID 10601175

18. **Woods JA**, Ceddia MA, Evans JK, Price EA, Wolters BW, Lu Q, McAuley E. Effects of chronic endurance exercise on immune function in the elderly. *Mech Age Dev* 109(1):1-19, 1999. PMID 10405985
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. 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. 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. PMID 9927011
14. **Woods JA**. Exercise and resistance to neoplasia. *Can J Physiol Pharmacol* 76: 1-8, 1998. 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- $\alpha$  in the young and old. *J Gerontol: Biol Sci* 53: B430-B437, 1998. 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. 9351697
11. Finck BN, Dantzer R, Kelley KW, **Woods JA**, Johnson, RW. Central lipopolysaccharide elevates plasma IL-6 concentration by a  $\alpha$ -adrenoreceptor-mediated mechanism. *Am J Physiol* 272: R1880-R1887, 1997. PMID 9227603
10. **Woods JA**, Shahabi NS, Sharp BM. Characterization of a naloxone-resistant  $\beta$ -endorphin receptor on murine peritoneal macrophages. *Life Sci* 60(9): 573-586, 1997. 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. PMID 7808244
8. **Woods JA**, Davis JM. Exercise, monocyte/macrophage function, and cancer. *Med Sci Spt Exerc* 26(2): 147-156, 1994. 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. 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. 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. 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. 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. 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. PMID 1668907

### **Honors, Awards and Recognition:**

- 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 83 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
- Selected to participate in UIUC's Senior Leadership Retreat (2015)

### **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 (4<sup>th</sup> 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-
- **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).

### **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.*
- 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).
- 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 Forth Worth TX, November, 2014.
- Ad hoc member, National Cancer Institute, Special Emphasis Panel in response to CA13-016 NCI's provocative questions, 11/14.

**Committee work:**

**University:**

- Kinesiology Department Head Search Committee (1998-99)
- Division of Nutritional Sciences Director Search Committee (1998-1999)
- Division of Nutritional Sciences Executive Committee (1999–2002)
- Kinesiology Athletic Training Selection Committee (1995-1997)
- Kinesiology Educational Policy Committee (1995-97, 1999)
- UIUC Campus-wide Laboratory Animal Care and Use Committee (2000-2003)
- Kinesiology Department Space Allocation Committee (2000-2002)
- **Chair** Kinesiology Department Faculty Search for Exercise Physiologist (2000-2001)
- College of Applied Life Studies Educational Policy Committee (2001-2003)
- Kinesiology Department Search Committee for Research Engineer (2002)
- College Grants and Contracts Specialist Search Committee (2002)
- **Chair** Kinesiology Department Faculty Search for Exercise Physiologist (2002-2003)
- Evaluation Committee for Director of Nutritional Sciences (2003-2004)
- Flow Cytometry Facility Advisory Board (2003-2004)
- Campus-wide Committee on Pathobiology (2004)
- **Chair** Kinesiology Department Faculty Search for Athletic Training (2004-2005)
- **Co-Chair** Kinesiology Department Faculty Search for Athletic Training (2005-2006)
- Kinesiology and Community Health Promotion and Tenure Committee (2007-2010)
- Kinesiology and Community Health Student Outcomes and Assessment Committee (2008)
- Division of Nutritional Sciences Executive Committee (2008-2011)
- University of Illinois Division of Biomedical Sciences Review Committee (2008)
- College of Applied Health Sciences, Mary Jane Neer Research Review Committee (2008)
- Division of Nutritional Sciences Director Search Committee (2009)
- 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** King McCristal Distinguished Scholar Award Committee (2010-2012)
- Search committee for Visiting Research Specialist (2010)
- **Chair** Kinesiology and Community Health Promotion and Tenure Committee (2010, 2012)
- **Chair** Center for Health, Aging and Disability Senior Faculty Committee (2010-2014)
- **Chair**, Kinesiology Department Faculty Search for Exercise Physiologist (2011-2012)
- Elected to the College of Applied Health Sciences Executive Committee (2011-2013, 2014-ex officio)

- Search Committee Member, Department of Animal Science (2011-2012)
- Member, UIUC Biology Coordinating Committee (2011- present)
- **Chair**, UIUC Biology Coordinating Committee Curriculum Subcommittee (2012-present)
- **Member**, UIUC Biology Coordinating Committee/Illinois Health Science Working Group Faculty Hire Sub-Committee (2013)
- Elected, College of AHS Promotion and Tenure Committee (2011-2012)
- Divisional of Nutritional Sciences Fellowship Selection Committee (2012-2014)
- Search Committee Member, Excellence Hire, Department of Animal Science (2012-2013)  
“Immunophysiologist”
- **Chair** Kinesiology Department Faculty Search for Exercise Physiologist (2012-2013)
- **Chair**, Multi-Unit (AHS, Social Work, Human and Family Development) Excellence Hire Search Committee (2012-2013).
- Member, University Chancellor/Provost Consultation Committee (2012-2015)
- **Chair**, Search Committee for Visiting Research Specialist (2012)
- **Member/Chair (2015)**, Division of Nutritional Sciences Fellowship Selection Committee (2013-2016)
- Elected to the College of Applied Health Sciences Executive Committee (2013-2015)
- Elected, College of AHS Promotion and Tenure Committee (2013-2015)
- Appointed to Academic Program Review Council to assist Provost with evaluation of UIUC campus units (2013-14)
- Appointed Campus Social and Social Behavioral Sciences Working Group (2014-2015)
- Search Committee Member, Department of Animal Science (2013-2014) “Immunophysiologist”
- Search Committee Member, Department of Speech and Hearing Science (2014-15) “Neurological basis of communication”
- Member, UIUC campus review committee for large equipment proposals (2014)
- Selection Committee, Summer Undergraduate Research Fellows, Mayo Clinic UIUC Alliance (2015)
- **Chair**, College of Applied Health Sciences, search for health, technology and aging senior faculty member (2015-2016)
- Search Committee Member, Department of Industrial Systems Engineering, search for health, technology and aging senior faculty member (2015-2016)
- Member, UIUC Office of Technology Management Advisory Committee (2015-2016)
- Member, UIUC Campus Research Policy Committee (2015-2017)

**External:**

- Member of 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.
- Tenure Evaluation Committee (to Associate Professor with tenure) University of Colorado @ Boulder (2004)
- Tenure Evaluation Committee (to Associate Professor with tenure) Emory University School of Medicine (2005)
- Tenure Evaluation Committee (to Associate Professor with tenure) Tufts University (2006)

- Program Committee Member 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.
- Appointed to the American College of Sports Medicine Program Committee (2006-2009)
- Appointed to the American College of Sports Medicine Research Review Committee (2005-2009)
- Session Chair Exercise Immunology, ACSM Annual Meeting 2005, 2006, 2009, 2013.
- Tenure Evaluation Committee (to Professor) University of Colorado @ Boulder
- Tenure Evaluation Committee (to Associate Professor with tenure) University of Houston
- Tenure Evaluation Committee (to Associate Professor with tenure) Lynchburg College
- Tenure Evaluation Committee Colorado State University
- Tenure Evaluation Committee University of South Carolina
- Tenure Evaluation Committee Tufts University
- Tenure Evaluation Committee Iowa State University
- Tenure Evaluation Committee Emory University
- Tenure Evaluation Committee UMass Boston
- Member of the PNIRS Membership Committee (2009-2010).
- Appointed **Chair** American College of Sports Medicine Research Review Committee (2009-2011)
- Re-Appointed **Chair** American College of Sports Medicine Research Review Committee (2012-2014)
- Member, PNIRS Finance Committee (2011-2016)
- 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.
- Tenure Evaluation Committee University of Delaware
- Tenure Evaluation Committee Colorado State University

**Offices Held:**

- **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 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)

## Mentorship

**Major Advisor: (21 MS students, 9 PhD students, 2 post-docs)**

<b>Student (degree)</b>	<b>Research Title/awards</b>	<b>Current/Last Known Position</b>
Brett Wolters (M.S. 1995-1997)	“Effects of exercise on the generation of anti-EL-4 cytolytic T cells” Runner-up ‘best abstract’ at ISEI convention 1997	M.D. Orthopedic Surgeon, Memorial Medical, Springfield IL
Joella Galetti (Evans) (M.S. 1995-1998)	“Effects of acute exercise on natural killer cells in young and old subjects”	Heart Disease Prevention Clinic, Carle Foundation Hospital, Urbana, IL
Michael Chludzinski (M.S. 1995-1998)	“Effects of fire fighting stress on immunocompetent fighters”	Dietetics student at University of Illinois Chicago
Michael Ceddia (Ph.D. 1994-1999)	“Exercise and macrophage antigen presentation: intracellular mechanisms” Free Communication award MWACSM 1995; Heulster Award 1999; Massey Research award 1998	Post-doctoral fellow at University of California-Davis (2000); Senior Principal Scientist Mead Johnson Nutritionals; currently Vice-President Of Research and Development, Kemin Health, Des Moines, IA
Tom Lowder (M.S./Ph.D. 1999-2006)	“Exercise oxygen uptake in mice of different ages” “Effects of exercise on susceptibility and response to influenza” Awarded 2005 ACSM student research grant.	-Post-doctoral Fellow Univ. Alabama-Birmingham; -Assistant Professor, University of Houston
Eric Price (M.S. 1999)		Research Biochemist Department of Alzheimer's Research Merck Research Labs-West Point, NY
Mark Zack (M.S. 1999-2000)	“Exercise and immune response to allogeneic tumor” College of Applied Life Studies research award	Research associate at Monsanto Inc., St. Louis, MO
Qin Lu (Nutritional Sciences) (M.S. 1997-1998)	“Exercise training effects of macrophage function in mice of different ages” Nutritional Sciences Graduate Student Assistance Award.	Software Engineer, Siebel Communications, San Francisco
Mark Zielinski (M.S. 2001-2003)	“Exercise delays allogeneic tumor growth and reduces intra-tumoral inflammation and vascularization”	Post-doctoral fellow, Northwestern University
Peter Zappola (M.S. 2000-2002)	“Effects of glucocorticoid antagonism on the exercise-induced suppression of macrophage antigen presentation”	Currently an officer in the US Army
Patrick Yoon (M.S. 2000-2003)	“Macrophage hypo-responsiveness to IFN- $\gamma$ in aged mice is associated with impaired signaling through Jak-STAT”	Ph.D. candidate in cancer biology, Northwestern University, Chicago IL
Todd Keylock (Ph.D. 2000-2007)	“Effects of exercise on wound healing in mice of different ages” Received 2 yr. campus aging fellowship; Massey Award; Cureton Award	Associate Professor, Bowling Green State University, OH
Kurt Leifheit (M.S. 2002-2004)	“Relationship between cardiovascular fitness and in vitro response to influenza vaccine in older adults”	Corporate Health Care Attorney, Hinshaw and Culbertson LLC, Chicago IL
Marc Cook (M.S. 2001-2004)	“Relationship between cardiovascular fitness and in vitro response to tetanus vaccine in older adults”	Research Technician at Cleveland Clinic
Kristine Ross (M.S. 2002-2004)	“Relationship between cardiovascular fitness and natural killer cell activity in older adults”	-Medical Student, SUNY, Albany NY -MD, Dept Family Medicine, University of North Carolina, Chapel Hill
Kristin Lyons	“Effects of moderate exercise on the growth and	Research Technician, Harlan Inc. IN

(M.S. 2003-2005)	histology of an allogeneic tumor in mice”	
Kim Colantuono (M.S. 2004-2006)	“Effects of glucocorticoid blockade on exercise-induced changes in response to an allogeneic tumor”	Academic Advisor, University of Illinois, Urbana, IL
Rachel Mariani (M.S. 2003-2005)	“Effects of exercise training on the primary immune response to KLH in previously sedentary older adults”  Awarded NIH minority fellowship	Medical student at University of Illinois at Chicago
Bill Zelkovich (M.S. 2004-2008)	“Effects of exercise training on the naïve to memory T lymphocyte ratio in older adults”	-Medical student at University of Illinois Urbana-Champaign, IL  -MD, Internal Medicine, University of Illinois School of Medicine, Springfield IL
Victoria Vieira (Nutritional Sciences) (Ph.D. 2004-2009)	“Effects of exercise on heightened inflammation in adipose tissue of obese mice”	-Post-doctoral fellow, Tufts University, Jean Mayer Human Nutrition Research Center, Boston MA  -Assistant Professor, University of Missouri @ Columbia
Sara Dumich (M.S. 2005- did not complete degree)	“Effects of exercise on LPS-induced sickness behavior”	Enrolled in medical school
Brandt Pence (Ph.D. 2007-2012)	“Effects of exercise on wound healing in diabetic mice”	Post-doctoral research associate UIUC
Tracy Baynard (post-doctoral fellow 2007-2008)	“Exercise attenuates inflammation induced by high fat feeding”	Assistant Professor, Department of Kinesiology, University of Illinois at Chicago
Stephen Martin (Ph.D. 2008-2013)	“Effects of voluntary wheel running and forced treadmill running on inflammation-induced behavioral abnormalities in young and old mice”	-post-doctoral fellow University of Wisconsin at Madison
Matt Cady (M.S. 2007-2010)	“Effects of exercise and diet on adipose tissue hypoxia in obese mice”	Graduated, attending MPH degree
Ryan Greene (M.S. 2009-2011)	“Mild traumatic brain injury: Effects on behavior and neuroinflammation”	Enrolled in medical school in Colorado
Lisa Erickson (M.S. 2011-2013)	“Can Oral Contraceptives Prevent Stress Fractures? A look at female distance runners and bone health”	Adams State University Asst Athletic Trainer
Marc Cook (Ph.D. 2009-2013)	“Effects of exercise training on DSS-induced colitis in mice”	Post-doctoral research fellow University of Illinois at Chicago (Mike Brown mentor)
Brandt Pence (post-doctoral fellow 2012-present)	“Effects of exercise, EGCG, and b-alanine on cognitive and muscle function in old age”	
Jacob Allen (Ph.D. 2013-present)	“Effects of exercise on the gut microbiota”	-enrolled
Yi Sun (Ph.D. 2013-present)	“Effects of exercise on vaccine responses in an animal model”	-enrolled
Lucy Mailing (MD/PhD 2015- present)		-enrolled

**Committee Member:**

<b>Student (degree)</b>	<b>Research Title/awards</b>	<b>Current/Last Known Position</b>
Christian Leeuwenburgh (Kinesiology, Li Li Ji) (Ph.D. 1995)	“Glutathione regulation during exercise: Effect of fasting-refeeding, glutathione depletion and supplementation”	Professor, University of Florida
Heidi Mae Talbot (Kinesiology, Eddie McAuley) (M.S. 1997)	“Self-efficacy and hypothalamic-pituitary-adrenal responses to maximal exercise in older adults”	
Tracy Gautsch (Nutritional Science, Don Layman) (Ph.D. 1995-1998)	“Metabolic responses during recovery from prolonged exercise: Role of nutrition and hormones”	Post-doctoral fellow at Hershey Medical Center (PA); currently Assistant Professor, University of Evansville.

Brian Finck (Immunophysiology, Rod Johnson) (M.S. 1995-1996)	“Peripheral endocrine and metabolic effects of pro-inflammatory cytokines and lipopolysaccharide in the brain”	Assistant Professor, Washington University, St. Louis, MO
Greg Gannon (Exercise Physiology, University of Toronto) (Ph.D. 1994-1998)	“Peripheral blood lymphocyte trafficking and natural killer cell cytolytic activity during prolonged exhaustive aerobic exercise: A focus on cell adhesion molecules and $\beta$ -endorphin”	Post doctoral fellow at Defense and Civil Institute of Environmental Medicine (Toronto, CAN)
Carl Sather (Nutritional Science, Don Layman) (M.S. 2000-2001)	“The need for and implications of increased branched-chain amino acids in a higher protein diet”	Medical student
Sri Yellayi (Veterinary Pathobiology, Paul Cooke) (M.S./Ph.D. 1999-2002)	“The phytoestrogen genistein induces thymic and immune changes: A human health concern?”	Post-doctoral fellow at Cornell University
Angelo Pascale (Kinesiology, Dick Boileau) (Ph.D. 1997-2001)	“Regional fat distribution, physical activity and hormonal factors in adults with type 2 diabetes”	Manager at FedEx
Antonio Galvan (Kinesiology, Ellen Evans) (M.S. 2004)	“The effect of training mode on balance and gait in older individuals”	Corporate wellness, Chicago IL
Wen Hong Shen (Immunophysiology, Keith Kelley) (Ph.D. 1999-2003)	“Mechanisms of cytokine-induced IGF-1 insensitivity in cancer cells”	Post-doctoral Fellow at UIUC
Eric Deszo (Immunophysiology, Greg Freund) (Ph.D. 1999-2003)	“CD45 Negatively Regulates Monocytic Cell Differentiation by Inhibiting Phorbol 12-Myristate 13-Acetate-dependent Activation and Tyrosine Phosphorylation of Protein Kinase C $\delta$ ”	Post-doctoral Fellow at UIUC
Jason O’Connor (Immunophysiology, Greg Freund) (Ph.D. 1999-2004)	“Type 2 diabetes impairs interleukin-4 function in macrophages and amplifies the brain-based neuroimmune response”	Post-doctoral Fellow at UIUC; Asst Professor UT San Antonio
Dan Johnson (Immunophysiology, Greg Freund) (Ph.D. 2002-2007)	“Psychoneuroimmune implications of non-infectious neuroimmune system activation and the impact of Type 2 diabetes”	Post-doctoral Fellow at University of Arkansas
Kevin Heffernan (Kinesiology, Bo Fernhall) (Ph.D. 2004-2009)	“Effects of resistance training on vascular function in African-American males”	Post-doctoral Fellow at Boston University; Asst Professor Syracuse University
Amanda Nelson (Kinesiology, Gary Iwamoto) (Ph.D. 2003-2007)	“Neuroplastic adaptations to exercise training and detraining”	Asst Professor at University of Wisconsin-Milwaukee
Mark Mistic (Kinesiology, Ellen Evans) (Ph.D. 2003-2007)	“Relationship of body composition, strength, and asymmetry to lower extremity physical function in women” Impact of age and physical activity level”	Asst Professor at Northern Illinois University
Mina Mojtahedi (Kinesiology, Ellen Evans) (Ph.D. 2002-2010)	“Effects of a higher protein weight loss supplement on body composition, metabolic disease risk and physical function in postmenopausal women”	Visiting Scientist in the Department of Sports Medicine at Justus Liebig Universität Gießen
Cara Kryzysztan (Immunophysiology, Rod Johnson) (M.S. 2005-2008)	“Aging and neuroinflammation are associated with fatigue and motor deficits in a murine model”	Veterinary school
Jayne Abraham (Immunophysiology, Rod Johnson) (Ph.D. 2005-2009)	“Neuroinflammation and cognitive impairment in the aged: Implications for nutritional intervention”	Post-doctoral research fellow at Northwestern University
Heidi Jurgens (Immunophysiology, Rod Johnson) (Ph.D. 2006-2012)	“Effects of influenza virus infection on cognitive behavior and neuroinflammation”	
Sushant Ranadive (Kinesiology, Bo Fernhall) (Ph.D. 2008- 2012)	“Protective effects of acute moderate exercise on vaccination-induced inflammation, arterial function and vaccine efficacy”	Post-doctoral fellow, Mayo Clinic, Rochester Minnesota
Rudy Valentine (Kinesiology, Ellen Evans) (Ph.D. 2006-2011)	“The influence of body composition and physical activity on inflammation, fatigue and function in older adults”	Post-doctoral fellow Boston

Min Jung Park (Immunophysiology, Greg Freund) (Ph.D. 2006-2010)	“Adrenergic regulation of hypoglycemia”	Post-doctoral research fellow at John Hopkins Medical School
Peter Clark (Psychology, Justin Rhodes) (Ph.D. 2007-2011)	“Evaluating the regulation and function of adult mouse hippocampal neurogenesis induced from running”	Post-doc University of Colorado-Boulder
Jill Shunk (Nutritional Science, Sharon Donovan) (MS 2010 - 2012)	“Effect of bovine lactoferrin on T lymphocyte cell phenotype and function and the response to vaccination in the neonatal piglet”	
Shannon Thorum-Cope (Nutritional Science, Sharon Donovan) (MS 2009 - 2011)	“Dietary (1,3/1,6)- $\beta$ -D-glucan minimally impacts development of lung immunity in the neonatal piglet”	
Shelly Hester (Nutritional Science, Sharon Donovan) (PhD 2008 - 2012)	“Impact of formula additives on immune and gastrointestinal development in the piglet”	Post-doc IU-PUI
Mike Burton (Nutritional Science, Rod Johnson) (PhD 2007 - 2012)	“Role of IL-6 trans-signaling in age-related cognitive dysfunction”	unknown
Claire Scavuzzo (Psychology, Donna Korol/Paul Gold) (PhD 2009- )	“Use it and boost it: Prior physical and cognitive activity modulate subsequent cognition via mBDNF signaling”	enrolled
Neha Gothe (Kinesiology, Ed McAuley) (PhD 2008-2013)	“The effects of an 8 week yoga intervention on cognition and functional fitness in older adults”	Assistant Professor, Wayne State University
Hae-Rye Chung (Kinesiology, Ken Wilund) (PhD 2006-2015)	“The impact of hypercholesterolemia and physical activity on statin-associated skeletal muscle myopathy”	Assistant Professor, Valdosta State
Heather Huntsman (Kinesiology, Marni Boppert) (PhD 2010-2014)	“Preconditioned muscle derived mesenchymal stem cells revitalized growth and function in aged skeletal muscle”	Post-doctoral fellow NHLBI/NIH
Gabe Chiu (Nutritional Science, Greg Freund) (PhD 2009 - 2014)	“Extracellular adenosine as a novel neuroimmune regulator”	Post-doc
Jennifer Joesting (Nutritional Science, Greg Freund) (MS 2009-2013)	“The effect of fasting on anti-inflammatory mediators, IL1RA and IL-1R2, and their role in resistance to sickness behavior”	unknown
Abbi Lane (Kinesiology UIC, Bo Fernhall) (PhD 2008-2013)	“Effects of aging and physical activity on cardiovascular responses to acute, induced inflammation”	Post-doc University of Iowa
Peter Fitschen (Nutritional Science, Ken Wilund) (2011-2015)	“Efficacy of beta-hydroxy-beta-methylbutyrate supplementation in hemodialysis patients”	enrolled
Madeline Weikert (Kinesiology, Rob Motl) (2010-2011)	“Associations among physical activity, perception of stress, and relapse recurrences in multiple sclerosis”	graduated
Kai Zou (Kinesiology, Marni Boppert) (2008-2013)	“Development of novel strategies to improve skeletal muscle repair and adaptation following eccentric exercise”	Graduated, post doc at East Carolina University with Joe Houmard
Huimin Yan (Kinesiology, Bo Fernhall)(2008-2014)	“Racial differences in cardiovascular responses following an acute bout of aerobic exercise”	
Trisha Gibbons (Nutritional Sciences, Rod Johnson, 2012-2014)	“Voluntary wheel running, but not a diet containing EGCG and beta-alanine, improve learning, memory and neurogenesis in aged mice”	graduated
Daniel Kougias (Psychology, Janice Juraska, 2012- )	“Effects of HMB on cognitive performance in middle and old aged”	

### **Visiting Research Scholars (hosted at UIUC):**

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

## **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

## **Professional Memberships:**

- American College of Sports Medicine (ACSM) (current)
- American Physiological Society (APS)
- International Society of Exercise and Immunology (current)
- Gerontological Society of America
- Psychoneuroimmunology Research Society (current)



### **Professional Presentations (78):**

- 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 \*3<sup>rd</sup> 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), ARCAHON, 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- $\gamma$  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  $\beta$ -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).