

## **Thomas William Lowder, PhD**

Department of Exercise and Sport Science  
University of Central Arkansas  
201 Donaghey Avenue  
Farris Center 101  
Conway, AR 72035  
Office (501) 450-5713  
Fax (501) 450-5708  
[tlowder@uca.edu](mailto:tlowder@uca.edu)

### **PROFESSIONAL**

University of Central Arkansas, Conway, Arkansas

Assistant Professor, Exercise and Sport Science, August, 2017-present

University of Houston, Houston, Texas

Assistant Professor, Health and Human Performance, September, 2009-June, 2016

Vice-chair, Institutional Animal Care and Use Committee (IACUC), 2010-2015

### **EDUCATION**

Post-doctoral (Physiology and Biophysics), University of Alabama-Birmingham, 2006-2009  
(Advisor: Lisa Schwiebert)

Ph.D. Kinesiology (Exercise Immunology), University of Illinois, Urbana, Illinois, December, 2006.

Dissertation Title: "Effects of exercise on immune function in young, adult, and aged mice: increased survival and a decrease in inflammation" (Chair: Jeffrey A. Woods)

M.S. Kinesiology (Exercise Immunology), University of Illinois, Urbana, Illinois, December, 2004.

Thesis Title: "Oxygen uptake in young, middle-aged, and aged Balb/cByJ mice during a graded exercise test" (Chair: Jeffrey A. Woods)

B.S. Physical Education, University of Nevada-Reno. 1997.

### **Certifications**

Certified Strength and Conditioning Specialist (C.S.C.S.), 1999-present

## PUBLICATIONS

### Peer-Reviewed Journal Articles (peer-reviewed)

1. LaVoy EC, Bollard CM, Hanley PJ, O'Connor DP, **Lowder TW**, Bosch JA, Simpson RJ. A Single Bout of Dynamic Exercise by Healthy Adults Enhances the Generation of Monocyte-Derived-Dendritic Cells. *Cellular Immunology*.
1. Thanawala, V, Forkuo, G, Sawalha, N, Nguyen, LP, Tuvim, M, **Lowder, TW**, Dickey, BF, Knoll, BK, Bond, RA.  $\beta$ 2-adrenoceptor agonists are required for development of the asthma phenotype in a murine model. *American Journal of Respiratory and Critical Care Medicine*. 2013; 48(2):220-229.
2. LaVoy, EC, Bosch, JA, **Lowder, TW**, Simpson, RJ. Acute aerobic exercise in humans increases cytokine expression in CD27- but not CD27+CD8+ T cells. *Brain Behavior and Immunity*. 2013; 27(1):54-62.
3. Pence, BD, **Lowder, TW**, Keylock, KT, Vieira Potter, VJ, Cook, MD, McAuley, E, Woods, JA. Relationship between systemic inflammation and delayed-type hypersensitivity response to candida antigen in older adults. *PLoS One*. 2012; 7(5):e36403.
4. Palanisami, A, Fang, J, **Lowder, TW**, Kunz, H, and Miller, JH. Rapid sizing of isolated mitochondria using Brownian motion. *Analytical Methods*. 2012; 4:513-521.
5. 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 Behavior and Immunity*. 2012; 26(1):177-186.
6. Simpson, R, **Lowder, TW**, Spielmann, G, Bigley, AB, LaVoy, EC, Kunz, H. Exercise and the aging immune system. *Aging Research Reviews*. 2011; 11(3):404-420.
7. Carpenter, K, Strohacker, K, Breslin, W, **Lowder, T**, Agha, NH, McFarlin, BK. Effects of exercise on weight loss and monocytes in obese mice. *Complimentary Medicine*. 2012; 62(1):21-26.
8. **Lowder, TW**, Kunz, HE. Regulatory T cells in asthma and airway hyperresponsiveness. *Journal of Allergy and Therapy*. 2011; S1:002. Doi:10.4172/2155-6121.
9. Zhang, L, Layne, C, **Lowder, T**. A review focused on the psychological effectiveness of Tai Chi on different populations. *Evidence Based Complement and Alternative Medicine*. 2012; 2012:678107
10. Bigley, AB, **Lowder, TW**, Spielmann, G, Rector, JL, Pircher, H, Simpson, RJ. Latent cytomegalovirus infection is associated with altered NK-cell phenotype and blunted NK-cell mobilization in response to acute exercise. *Brain Behavior and Immunity*. 2011; 26(1):177-86.
11. Woods, JA, Keylock, KT, **Lowder, T**, Vieira, VJ, Zelkovich, W, Dumich, S, Colantuano, K, Lyons, K, Leifheit, K, Cook, M, Chapman-Novakofski, K, McAuley, E. Cardiovascular exercise training extends influenza vaccine seroprotection in sedentary older adults: the immune function intervention trial. *Journal of the American Geriatric Society*. 2009; 57(12):2183-91.

12. **Lowder, T**, Dugger, K, Deshane, J, Estell, K, Schwiebert, L. Repeated bouts of aerobic exercise enhance regulatory T cell responses in a murine asthma model. *Brain Behavior and Immunity*. 2009.;24(1):153-159.
13. Dugger K, **Lowder TW**, Tucker TA, Schwiebert LM. Epithelial cells as immune effector cells: the role of CD40. *Seminars in Immunology*. 2009; 21(5):289-92.
14. Woods, JA, Keylock, KT, **Lowder, T**, Vieira, VJ, Zelkovich, W, Dumich, S, Colantuano, K, Lyons, K, Leifheit, K, Cook, M, Chapman-Novakofski, K, McAuley, E. Cardiovascular exercise training extends influenza vaccine seroprotection in sedentary older adults: the immune function intervention trial. *Journal of American Geriatric Society*. 2009; 57(12):2183-2191.
15. Grant, RW, Mariani, RA, Vieira, VJ, Fleshner, M, Smith, TP, Keylock, KT, **Lowder, TW**, McAuley, E, Hu, L, Chapman-Novakofski, K, Woods, JA. Cardiovascular exercise intervention improves the primary antibody response to keyhole limpet hemocyanin (KLH) in previously sedentary older adults. *Brain Behavior and Immunity*. 2008; 22(6):923-932.
16. \*Keylock, K, \***Lowder, T**, Leifheit, K, Cook, M, Mariani, R, Ross, K, Kim, K, Chapman-Novakofski, K, McAuley, E, Woods, J. Higher antibody, but not cell-mediated responses to vaccination in high physically fit elderly. *Journal of Applied Physiology*. 2006; 102(3):1090-1098. \*Denotes equal first-authorship
17. **Lowder, TW**, Padgett, DA, Woods, JA. Moderate exercise reduces the influenza virus-induced Th1 inflammatory response in lungs of mice. *Exercise Immunology Review*. 2006; 12:97-111.
18. **Lowder, TW**, Padgett, DA, Woods, JA. Moderate exercise protects mice from death due to influenza. *Brain Behavior and Immunity*. 2005; 19(5):377-80.
19. Woods, JA, Ceddia, MA, Zack, MD, **Lowder, TW**, Lu, Q. Exercise training increases the naive to memory T cell ratio in old mice. *Brain Behavior and Immunity*. 2003; 17(5):384-92.
20. Woods, JA, **Lowder, TW**, Keylock, KT. Can exercise training improve immune function in the aged? *Annals of the New York Academy of Sciences*. 2002; 959:117-27.
21. Woods, J, Lu, Q, Ceddia, MA, **Lowder, T**. Special feature for the Olympics: effects of exercise on the immune system: exercise-induced modulation of macrophage function. *Immunology and Cellular Biology*. 2000; 78(5):545-53.

#### Manuscripts Currently in Review/Revision

1. **Lowder, TW**. "Grant Writing" in Professional Writing in Kinesiology and Sports Medicine (book chapter).
2. **Lowder, TW**. High-intensity exercise improves lung function in a female with tuberous sclerosis lymphangiomyomatosis.
3. **Lowder, TW**. On exercise training in women with Lymphangiomyomatosis (LAM): Improved exercise tolerance and lung function following three months of exercise training.

4. **Lowder, TW.** Improved pulmonary function, DLCO, and bone mineral density in a 60 year-old female with lymphangioleiomyomatosis (LAM) following 15 months of exercise training.
5. Diak, D, Abadi, P, Bernardo, J, Pulicken, C, Moghaddam, S, **Lowder, TW.** Exercise training significantly decreases tumorigenesis in a K-ras mouse model of non-small cell lung cancer.

#### Presentations, Abstracts, Reviews, Letters, and Editorials

1. **Lowder, TW.** Improved pulmonary function in a patient with Tuberous Sclerosis Lymphangioleiomyomatosis following exercise training. American College of Sports Medicine Annual Meeting, Minneapolis, MN, 2018.
2. Garten, D, Bruenger, A, **Lowder, T,** Gallagher, M. Neuromuscular recruitment and vertical jump performance following antagonistic stretching. Central States American College of Sports Medicine Conference, St. Charles, MO, 2017.
3. **Lowder, TW.** Conditioning and cardiovascular training for the strength athlete. National Strength and Conditioning Association Regional Workshop. Little Rock, AR, 2017.
4. **Lowder, TW.** Improved lung function following high-intensity exercise training in a patient with Tuberous Sclerosis Lymphangioleiomyomatosis (TSC-LAM). Pittsburgh/Munich International Lung Conference, Pittsburgh, PA. 2016.
5. **Lowder, TW.** (Invited featured speaker.) The positive impact of a supervised exercise training program in women with LAM. LAMposium International Research and Patient Conference, Chicago, IL. 2015.
6. Hood, LR, Fowler, CE, Kabiri, L, Laughlin, MS, Almoosa, KF, **Lowder, TW.** Six months of exercise training improves lung function in patients with lymphangioleiomyomatosis. LAMposium International Research and Patient Conference, Chicago, IL. 2015.
7. Hood, LR, Fowler, CE, Kabiri, L, Laughlin, MS, Almoosa, KF, **Lowder, TW.** Exercise-induced pulmonary function improvement in a patient with tuberous-sclerosis lymphangioleiomyomatosis. LAMposium International Research and Patient Conference, Chicago, IL. 2015.
8. **Lowder, TW,** Diak, DM, Abadi, P, Moghaddam, SJ. Exercise significantly reduces tumor burden in a mouse model of non-small cell lung cancer. Pittsburgh International Lung Conference, Pittsburgh, PA. 2014.
9. **Lowder, TW,** Fowler, C, Kabiri, L, Almoosa, K. A supervised exercise training intervention enhances pulmonary in patients with lymphangioleiomyomatosis. Pittsburgh International Lung Conference, Pittsburgh, PA. 2014.
10. Fowler, C, Kabiri, L, Almoosa, K, **Lowder, TW.** Improved pulmonary function in older patients with lymphangioleiomyomatosis through an exercise training program. Pittsburgh International Lung Conference, Pittsburgh, PA. 2014.

11. Hood, L, Fowler, C, Kabiri, L, Almoosa, K, **Lowder, TW**. Enhanced pulmonary function following an exercise training intervention in a Tuberous Sclerosis patient with lymphangioliomyomatosis. Pittsburgh International Lung Conference, Pittsburgh, PA. 2014.
12. **Lowder, TW**, Kabiri, L. An exercise intervention clinical trial in patients with lymphangioliomyomatosis. MD Anderson Cancer Research Symposia, Houston, TX. 2014.
13. Diak, DM, Moghaddam, SJ, **Lowder, TW**. Exercise reduces tumor burden in a K-ras mutant model of lung cancer. MD Anderson Cancer Research Symposia, Houston, TX. 2014.
14. **Lowder, TW**, Kabiri, L, Almoosa, K. Supervised exercise in patients with LAM: Exercise tolerance, pulmonary function, and bone mineral density. LAMposium International Research and Patient Conference, Chicago, IL. 2014.
15. **Lowder, TW**. Exercise significantly enhances pulmonary function in viral, asthma, and non-small cell lung cancer murine models of exercise. Pittsburgh International Lung Conference, Pittsburgh, PA. 2013.
16. **Lowder, TW**, Diak, DM. Aerobic exercise training significantly reduces tumor burden in a mouse lung tumor model. LAMposium International Research and Patient Conference, Cincinnati, OH. 2013.
17. **Lowder, TW**. Exercise reduces Th2-cell inflammation and enhances regulatory T cell-mediated suppression in a mouse model of asthma. Lung Research Day, Collaborative Research Alliances for the Cure of Lung Diseases, Gulf Coast Consortia, Houston, TX. 2012.
18. **Lowder, TW**. Exercise as a means of enhancing lung immunity. PPIA Positive Health Promotion Forum, Houston, TX. 2012.
19. Bush, K, **Lowder, TW**. Effectiveness of utilizing a peer-matched tutoring program to increase examination scores in a university science course (KIN 3304). University of Houston Health and Human Performance Undergraduate Research Showcase. 2011.
20. **Lowder, TW**, Kunz, HE. Exercise prior to pregnancy enhances Treg-mediated suppression and airway hyperresponsiveness in murine pups. Pittsburgh International Lung Conference. 2011.
21. Kunz, HE, **Lowder, TW**. Exercise prior to pregnancy enhances Treg-mediated suppression and reduces asthma severity in offspring in a mouse model of asthma. American Association of Immunologists Annual Meeting, San Francisco, CA. 2011.
22. **Lowder, TW**, Kunz, HE. Regulatory T cell mobilization following an acute bout of exercise in human and murine models. American Association of Immunologists Annual Meeting, San Francisco, CA. 2011.
23. Kunz, HE, Montes, L, **Lowder, TW**. Exercise prior to pregnancy enhances the suppressive function of Tregs in offspring in a mouse model of asthma. Texas American College of Sports Medicine, Austin, TX. 2011.
24. Kunz, HE, **Lowder, TW**. Exercise significantly enhances regulatory T cell responses in a non-TGF-beta-dependent manner in a mouse model of asthma. Pittsburgh International Lung Conference. 2010.

25. **Lowder, TW**, Kunz, HE. Moderate exercise training reduces airway hyperresponsiveness and Th2 cytokine production while increasing regulatory T cell production in a mouse model of asthma. Pittsburgh International Lung Conference. 2010.
26. Strohacker, K, Breslin, WL, Carpenter, KC, Agha, N, **Lowder, TW**, McFarlin, BK. The effects of increasing fat intake on body composition and blood monocytes in CD-1 mice. *International Journal of Exercise Science: Conference Abstract Submissions*: 6(1):33. 2010.
27. Breslin, WL, Strohacker, K, Agha, N, Carpenter, KC, **Lowder, TW**, McFarlin, BK. Exercise as a prevention and countermeasure to diet-induced weight gain. *International Journal of Exercise Science: Conference Abstract Submissions*: 2(2):36. 2010.
28. Carpenter, KC, Strohacker, K, Breslin, WL, Agha, N, **Lowder, TW**, Simpson, RJ, McFarlin, BK. The effects of exercise and a low-fat diet on monocyte TLR expression and disease risk in mice. *International Journal of Exercise Science: Conference Abstract Submissions*: 2(2):38. 2010.
29. Carpenter, KC, Strohacker, K, Breslin, WL, Morrison, MR, Potucek, J, Agha, N, Simpson, RJ, **Lowder, TW**, McFarlin, BK. Voluntary exercise causes greater weight loss in obese mice. *International Journal of Exercise Science: Conference Abstract Submissions*: 3(1):5. 2009.
30. **Lowder, TW**, Dugger, KJ, Estell, K, DeShane, J, Schwiebert, LM. Exercise increases regulatory T cell function and decreases Th2 and Th17 cytokine production in healthy and asthmatic mice. Poster and invited talk, American Association of Immunologists Annual Meeting, Baltimore, MD. 2009.
31. **Lowder, TW**, Dugger, KJ, Estell, K, Schwiebert, LM. Exercise increases regulatory T cell function in asthmatic and non-asthmatic mice. International Society of Exercise Immunology, Tübingen, Germany. 2009.
32. **Lowder, TW**, Schwiebert, L. Moderate intensity exercise increase Treg cell distribution and suppression in the asthmatic lung. The American College of Sports Medicine annual meeting, Seattle, WA. 2009.
33. **Lowder, TW**. Effects of exercise on respiratory inflammation: influenza and asthma. Invited symposium presentation. The American College of Sports Medicine annual meeting, Seattle, WA. 2009.
34. **Lowder, T**, Schwiebert, L. Moderate intensity aerobic exercise increases Treg cell distribution and suppression within the asthmatic lung. Keystone Symposia on Regulatory T cells, Keystone, CO. 2009.
35. Vieira, VJ, McCauley, E, Hu, L, Keylock, T, **Lowder, T**, Woods, JA. Stress reduction through cardiovascular exercise is associated with lower C-reactive protein levels in older adults. Experimental Biology, San Diego, CA. 2008.
36. **Lowder, TW**, Schwiebert, LM. Effect of exercise on regulatory T cell responses in asthma. American Thoracic Society, San Francisco, CA. 2007.
37. Vieira, VJ, Keylock, KT, **Lowder, TW**, Zelkovich, W, Dumich, S, Colantuano, K, Potter, K, Leifheit, K, McAuley, E, Woods, JA. Effects of Exercise Training on the Immune Response to

Influenza Vaccination in Older Adults: A Randomized Controlled Trial. The Psychoneuroimmunology Research Society, Madison, WI. 2007.

38. **Lowder, TW**, Schwiebert, LM. Exercise increases Treg expression in primary and secondary lymphoid organs in asthmatic and non-asthmatic mouse models. Keystone Symposia on Regulatory T cells, Vancouver, B.C. 2007.
39. **Lowder, TW**, Padgett, DA, Woods, JA. Exercise increases survival in mice following infection with influenza virus: potential mechanisms. Advances in Influenza Research: From Birds to Bench to Bedside (part of the Keystone Symposia), Steamboat Springs, CO. 2006.
40. **Lowder, TW**, Padgett, DA, Woods, JA. The effects of exercise on lung IFN- $\gamma$ , IL-10, and viral mRNA expression in adult mice. The Psychoneuroimmunology Research Society, Denver, CO. 2005.
41. **Lowder, TW**. Moderate exercise increases survival in adult mice following influenza virus infection. (Invited oral presentation.) American College of Sports Medicine, Nashville, TN. 2005.
42. Keylock, TK, **Lowder, TW**, Woods, JA. Effects of exercise on wound healing in young mice. American College of Sports Medicine, Nashville, TN. 2005.
43. **Lowder, TW**. Moderate exercise protects mice from death due to influenza. (Invited oral and poster presentation.) St. Jude Children's Research Hospital National Graduate Student Symposium, Memphis, TN. 2005.
44. Woods, JA, **Lowder, TW**. Protective effect of exercise on mortality due to influenza in mice. American Physiological Society/Integrative Biology of Exercise, Austin, TX. 2004.
45. **Lowder, T**, Lankford, D, Padgett, D, Woods, J. Moderate exercise enhances survival following influenza infection in Balb/cByJ mice. Federation of American Societies for Experimental Biology, Washington, D.C. 2004.
46. Ross, KM, Keylock, KT, **Lowder, TW**, McAuley, E, Woods, JA. Natural killer cell activity in older adults of varying fitness levels. American College of Sports Medicine, San Francisco, CA. 2003.
47. **Lowder, TW**, Iwamoto, G, Woods, JA. Oxygen uptake in middle-aged and aged Balb/c mice during a graded exercise test. American College of Sports Medicine, San Francisco, CA. 2003.
48. **Lowder, TW**, Padgett, D, Woods, JA. Protective effect of moderate exercise on mortality due to influenza infection in mice. International Society for Exercise Immunology, Copenhagen, Denmark. 2003.
49. **Lowder, TW**, Woods, JA. BrdU incorporation into cells from primary and secondary lymphoid organs in aged and young mice. Federation of American Societies for Experimental Biology, Orlando, FL. 2001.
50. **Lowder, TW**, Zack, MD, Ceddia, MA, Woods, JA. Effects of glucocorticoid blockade on the exercise-induced suppression of macrophage antigen presentation. Psychoneuroimmunology Research Society, Wilmington, N.C. 2000.

51. Edwards, JE, DeBenedictis, L, **Lowder, T**, Evans, BW. Discontinuous versus continuous protocols for determination of VO<sub>2</sub>max criteria in young women. American College of Sports Medicine, Seattle, WA. 1999.

## **EXTERNALLY FUNDED SUPPORT**

**Total Awarded:** \$1,037,790 (IDC: \$227,711)

**PI Funding:** \$126,997.00 (IDC: \$1,315)

### **Total Research Funding Awarded**

Principal Investigator: \$166,497.00

Co-Investigator: \$910,793 (IDC: \$227,698)

### **Completed**

Principal Investigator

1. \$25,000 (5.26% IDC) Cancer Prevention Research Institute of Texas. Development of a K-ras lung tumor model for *in vivo* imaging. January 2013-December 2014. (10% total effort: overall project administration and coordination, analytical design, oversight of statistical analyses, supervision of all reporting).
2. \$3,000 (0% IDC) University of Houston Small Grants Program. Exercise in patients with lymphangioleiomyomatosis. September 2013-May 2014. (2.5% total effort: overall project administration and coordination, analytical design, oversight of statistical analyses, supervision of all reporting).
3. \$3,500 (0% IDC) University of Houston, Department of Health and Human Performance Summer Research Grant. Cardiac load in patients with lymphangioleiomyomatosis. (2.5% total effort: overall project administration and coordination, analytical design, oversight of statistical analyses, supervision of all reporting).
4. \$3,000 (0% IDC) University of Houston Small Grant Award. Reduction of tumor burden in a K-ras mouse model following exercise. August 2011-July 2012.
5. \$6,000 (0% IDC) University of Houston New Faculty Award. The effects of exercise training on regulatory T cell expression and function and airway hyperresponsiveness in asthmatic and non-asthmatic aged mice. August 2009-July 2010.
6. \$97,000 (0% IDC) National Institute of Health, Ruth L. Kirschstein National Research Service Award (NRSA Post-Doctoral Training Award, National Heart, Lung, and Blood Institute). Effects of aerobic exercise on regulatory T cell responses in asthma. February 2008-July 2009.
7. \$1,500 (0% IDC) University of Alabama-Birmingham Career Enhancement Award. 2008.



8. \$1,500 (0% IDC) University of Alabama-Birmingham Career Enhancement Award. 2007.
9. \$4,997 (0% IDC). American College of Sports Medicine Student Research Grant. Effects of exercise on immune response to influenza. 2005.

#### Co-Investigator

1. \$910,793 (25% IDC) National Aeronautics and Space Administration. The effects of long-term exposure to microgravity on salivary markers of innate immunity. (5% total effort: analytical design, data collection).

#### Grants Pending

##### Principal Investigator

1. \$3,000 (0% IDC) University of Central Arkansas. University of Central Arkansas Center for Teaching Excellence Faculty Development Grant to incorporate experiential learning into an undergraduate course.
2. \$2,800 (0% IDC) University of Central Arkansas Summer Research Stipend. Exercise training in women with Lymphangioliomyomatosis. (Summer support for an ongoing research project.)

#### Grants Submitted (Not Funded)

##### Principal Investigator

1. \$59,574 (10% IDC) Pilot Grant, Center for Orphan Disease Research and Therapy, Perelman School of Medicine, University of Pennsylvania. \$25,000 (0% IDC) LAM Foundation Pilot Grant. Exercise to enhance pulmonary function in women with lymphangioliomyomatosis. November, 2014.
2. A self-monitored exercise intervention in patients with LAM. (12.5% total effort: overall project administration and coordination, analytical design, oversight of statistical analyses, supervision of all reporting). August, 2014.
3. \$8,932,879 (25% IDC) National Institutes of Health U54. A multi-collaboration to mentor trainees studying rare diseases affecting females. (25% total effort: overall project administration and coordination, analytical design, oversight of statistical analyses, supervision of all reporting). April, 2014.
4. \$275,000 (49.5% IDC) National Institutes of Health R21. A multi-system approach to investigate the role of exercise in lung cancer. (12.5% total effort: overall project administration and coordination, analytical design, oversight of statistical analyses, supervision of all reporting). February, 2014.
5. \$30,000 (0% IDC) University of Houston Grants to Enhance and Advance Research (GEAR). Exercise to enhance pulmonary function in patients with lymphangioliomyomatosis. January, 2014.

6. \$25,000 (0% IDC) LAM Foundation Pilot Grant. A self-monitored rehabilitation program in LAM patients. October, 2013.
7. \$50,000 (0% IDC) Department of Defense Lung Grant. Supervised exercise training to enhance pulmonary function in patients with lymphangioleiomyomatosis.
8. \$275,000 (50% IDC) National Institutes of Health R21. Enhancing anti-tumor responses through exercise. June, 2012. 1R03CA17297-01.
9. \$275,000 (50% IDC) National Institutes of Health R21. Enhanced immunity against influenza virus in immunosenescent aged mice. October, 2011. 1R21AG042068-01.
10. \$1,250,000 (50% IDC) National Institutes of Health R01. Exercise as a means of decreasing asthma severity through enhanced Treg function. February, 2011. 1R01HL109622-01.
11. \$275,000 (50% IDC) National Institutes of Health R21. Effects of exercise on Treg function and airway hyperresponsiveness in aged mice. February, 2010.
12. \$80,000 (0%IDC) American Lung Association Academy of Allergy, Asthma, & Immunology Allergic Respiratory Diseases Award. Can exercise enhance regulatory T cell function and airway hyperresponsiveness in aged mice? October, 2009.

Co-Investigator

1. \$84,464 (0% IDC) National Institutes of Health F31 (Douglass Diak). Moderate intensity aerobic exercise as a means of enhancing anti-tumor and anti-inflammatory responses in a mouse model of lung carcinogenesis. February, 2013. Faculty mentor.
2. \$2,592,648 (49.5% IDC) National Science Foundation. Don't always blame the interface. November, 2011. Co-PI, 15%.

**Educational and Instructional Grants**

University of Houston

1. \$15,000 (0% IDC) College of Liberal Arts and Social Sciences, Faculty Development Initiative Program. Development of a graduate course, Mobility and functional training for sports performance and fitness. May 2012-August 2012.
2. \$3,000 (0% IDC) Department of Health and Human Performance Summer Curriculum Development Program Grant. Enhancement of a senior-level undergraduate course (KIN 4370). May 2012-August 2012.
3. \$3,000 (0% IDC) Department of Health and Human Performance Summer Curriculum Development Program Grant. Effectiveness of utilizing a peer-matched tutoring program to increase examination scores in a university science course (KIN 3304). May 2011-August 2011.

## TEACHING AND STUDENT LEARNING (135 TOTAL CREDIT HOURS)

1. Ethics in Medicine (HONS 3310), University of Central Arkansas, Schedler Honors College, Spring, 2018 (1 section).
2. Exercise Physiology (EXSS 3303, formerly EXSS 4300), University of Central Arkansas, Department of Exercise and Sport Science, Fall 2016, Spring 2017 (2 sections), Summer 2017 (1 section), Fall 2017 (2 sections), Spring 2018 (3 sections).
3. Exercise Prescription for Special Populations (EXSS 3352), University of Central Arkansas, Department of Exercise and Sport Science, Fall 2016.
4. Cardiovascular Adaptations to Exercise (Special Topics Graduate Course), University of Central Arkansas, Fall, 2017.
5. Lab Instrumentation (Special Topics Graduate Course), University of Central Arkansas, Spring 2017.
6. Ergogenic Aids (Special Topics Graduate Course), University of Central Arkansas, Fall 2016.
7. Human Structure and Physical Performance (KIN 3304), University of Houston, Department of Health and Human Performance, Fall 2010 (2 sections), Spring 2010, Summer 2010, Fall 2010, Spring 2011, Summer 2011, Fall 2011, Spring 2012, Summer 2012, Fall 2012, Spring 2013, Summer 2013, Fall 2013, Spring 2014, Summer 2014, Fall 2014, Spring 2015, Summer 2015, Fall 2015.
8. Exercise Testing and Prescription (KIN 4370), University of Houston, Department of Health and Human Performance, Spring 2010, Summer 2010, Fall 2010, Fall 2011, Summer 2012, Fall 2012.
9. Independent Study (KIN 4398, Peer-matched tutoring matching previous semester's 3304 students with present KIN 3304 students), University of Houston, Department of Health and Human Performance, Spring 2011, Summer 2011, Fall 2011, Spring 2011.
10. Independent Study (KIN 4398, research methods and data collection for students working with patients with lymphangiomyomatosis), University of Houston, Department of Health and Human Performance, Spring 2013, Summer 2013, Fall 2013, Spring 2014, Summer 2014, Fall 2014, Spring 2015, Fall 2015.
11. Measurement in Health and Physical Education (PEP 6305), University of Houston, Department of Health and Human Performance, Summer 2011.
12. Exercise Immunology (PEP 6397-1), University of Houston, Department of Health and Human Performance, Summer 2010.
13. Advanced Selected Topics (PEP 7397), Fall 2011, Fall 2012.
14. Advanced Special Topics in Kinesiology (PEP 7398), University of Houston, Department of Health and Human Performance, Summer 2011, Fall 2013.

15. Introduction to Oncoimmunology (PEP 7398-7), University of Houston, Department of Health and Human Performance, Summer 2013.
16. Journal Colloquium (PEP 8304), University of Houston, Department of Health and Human Performance, Fall 2015.
17. Scientific Inquiry in Health Professions (PEP 8306), University of Houston, Department of Health and Human Performance, Fall 2013, Fall 2014.
18. Doctoral Residency (PEP 8314), Introduction to Oncoimmunology (PEP 7398-7), University of Houston, Department of Health and Human Performance, Spring 2014, Spring 2015.
19. Integrated Physiology Laboratory (PEP 8332), Introduction to Oncoimmunology (PEP 7398-7), University of Houston, Department of Health and Human Performance, Fall 2012.

#### Student Achievements

1. Parisa Abadi, \$1,000 Provost's Undergraduate Research Scholarship (PURS). August 2014-December 2014. (Role: Mentor)
2. Sina Mirab, \$1,000 Provost's Undergraduate Research Scholarship (PURS). August 2012-December 2012. (Role: Mentor)
3. Barry Brinker, \$3,500 Provost's Summer Undergraduate Research Fellowship (SURF). May 2012-August 2012. (Role: Mentor)
4. Lydia Boyle, \$1,000 Provost's Undergraduate Research Scholarship (PURS). August 2010-December 2010. (Role: Mentor)
5. Godfrey Rodriguez, Undergraduate Honors Thesis, Applied sport biomechanics for improvement in the efficiency of the punt in American football: the practical importance of the angle of projection. Spring, 2010. (Role: Committee Member)

#### Thesis and Dissertation Committees—Completed

1. Jerrald Rector (Thesis: T-cell apoptosis and trafficking in response to acute exercise: an impact on immunosenescence?) Chair: Richard Simpson. Defended March 7, 2011.
2. Kelly Strohacker (Dissertation: Examining life course changes in inflammation with high-fat feeding) Chair: Brian McFarlin. Defended June 21, 2011.
3. Mark A. Knoblauch (Dissertation: Neuromuscular and biodynamic responses to whole body vibration training) Chairs: Mark Clarke and Daniel O'Connor. Defended July 25, 2011.
4. Mark Morrison (Thesis: Regulatory T cell responses in young and old subjects following an acute bout of exercise) Chair. Defended: April 23, 2012.
5. Whitney Breslin (Dissertation: The effects of a school based intervention on monocytes, systemic inflammation, and disease risk in Mexican-American children) Chair: Brian McFarlin. Defended July 6, 2012.

6. Katie Carpenter (Dissertation: Effects of the consumption of a high-fat meal on consecutive days on immune cells and inflammatory biomarkers) Chair: Brian McFarlin. Defended July 6, 2012.
7. Emily LaVoy (Dissertation: The effect of an acute bout of exercise on the expansion of functional tumor-associated antigen-specific T cells) Chair: Richard Simpson. Defended April 18, 2014.
8. Austin Bigley (Dissertation: The effect of acute exercise and latent cytomegalovirus infection on NK-cell redeployment and anti-tumor cytotoxicity in healthy adults) Co-chair. Defended: August 18, 2014.
9. Daniel Garten (Thesis: Neuromuscular recruitment and vertical jump performance following antagonistic stretching.) Chair: Adam Bruenger. Defended August 2, 2017.
10. Hannah Nelson (UCA Schedler Honors College Senior Thesis: Maintaining motivation: The role of community, health, dedication, and technology on runners in the United States and Europe) Co-chair. Defended: December 8, 2017.
11. Anna Rogers (UCA Schedler Honors College Senior Thesis: Get your head OUT of the game: concussion management in collegiate athletes) Co-chair. Defended: December 8, 2017.

## **ACADEMIC SERVICE**

### University

1. Title IX Deputy, University of Central Arkansas Title IX Committee, 2017-present.
2. Institutional Review Board, University of Central Arkansas, 2017-present.
3. Faculty Senate Committee Member (representing College of Health and Behavioral Sciences), University of Central Arkansas, 2017-present.
4. Institutional Animal Care and Use Committee, University of Central Arkansas, 2017-present.
5. Committee Member, University of Houston Title IX Grievance Committee, 2014-present.
6. Academic Dishonesty Hearing Panel, University of Houston College of Liberal Arts and Social Sciences, 2012.
7. Committee Member, University of Houston Director of Research Compliance, 2012.
8. Committee Member, University of Houston, Institutional Animal Care and Use Committee (IACUC) Coordinator, 2012.
9. Vice-chair, University of Houston Institutional Animal Care and Use Committee (IACUC), December, 2010-present.
10. Committee Member, University of Houston Animal Care Operations, Clinical Veterinarian, 2010.

11. Committee Member, University of Houston Institutional Animal Care and Use Committee (IACUC), December, 2009-2010.

12. Judge, University of Houston Office of Undergraduate Research Day, 2009-present

### College

1. Committee Member, University of Houston College of Education Faculty Development Committee, August 2009-May 2010.

### Department

1. Organizer and moderator, University of Houston Department of Health and Human Performance Fall Research Symposia, 2014.
2. Committee Member, Faculty Evaluation Committee, University of Houston Department of Health and Human Performance, 2013-present.
3. Organizer and moderator, University of Houston Department of Health and Human Performance Fall Research Symposia, 2013.
4. Organizer and moderator, University of Houston Department of Health and Human Performance Faculty Research Day, 2013.
5. Chair, Visiting Professor of Physiology, University of Houston Department of Health and Human Performance, 2013.
6. Search Committee, Assistant Professor of Physiology, University of Houston Department of Health and Human Performance, 2013.
7. Search Committee, Clinical Nutrition Professor, University of Houston Department of Health and Human Performance, 2013.
8. Search Committee, Adjunct Teaching Faculty (Physical Activity Instructor), University of Houston Department of Health and Human Performance, 2013.
9. Search Committee, Adjunct Teaching Faculty (Physical Activity Instructor), University of Houston Department of Health and Human Performance, 2013.
10. Search Committee, Adjunct Teaching Faculty, University of Houston Department of Health and Human Performance, 2013.
11. Organizer and moderator, University of Houston Department of Health and Human Performance Graduate Student Research Day, 2012.
12. Organizer and moderator, University of Houston Department of Health and Human Performance Faculty Research Day, 2012.

13. Search Committee, Laboratory of Integrative Physiology Lab Director, University of Houston Department of Health and Human Performance, 2012.
14. Organizer and moderator, University of Houston Department of Health and Human Performance Graduate Student Research Day, 2011.
15. Organizer and moderator, University of Houston Department of Health and Human Performance Faculty Research Day, 2011.
16. Organizer and moderator, University of Houston Department of Health and Human Performance Graduate Student Research Day, 2010.
17. Committee Member, University of Houston Department of Health and Human Performance MED Committee, August, 2010-present.
18. Faculty Representative, University of Houston Department of Health and Human Performance Honor Society, 2010-2011.
19. Organizer and moderator, University of Houston Department of Health and Human Performance Faculty Research Day, 2010.
20. Member, Graduate Research Committee, University of Houston Department of Health and Human Performance, 2010-present.
21. Committee Member, Assistant Professor of Nutrition, University of Houston Department of Health and Human Performance, 2009.
22. Committee Member, Professional Degree Committee, University of Houston Department of Health and Human Performance, 2009-present.

## **PROFESSIONAL ASSOCIATIONS, SERVICE, AND CONSULTING**

National Strength and Conditioning Association, 1999-present

International Society for Exercise Immunology, 2000-present

American Association of Immunologists, 2007-present

### Current

1. Manuscript reviewer, *Respiratory Research*
2. Manuscript reviewer, *Journal of Immunology*
3. Manuscript reviewer, *American Journal of Physiology—Lung Cellular and Molecular Physiology*
4. Manuscript reviewer, *American Journal of Physiology—Regulatory, Integrative, and Comparative Physiology*

5. Manuscript reviewer, *Journal of Applied Physiology*
6. Manuscript reviewer, *International Journal of Sports Medicine*
7. Manuscript reviewer, *Brain, Behavior, and Immunity*
8. Manuscript reviewer, *Medicine and Science in Sports and Exercise*
9. Section Editor, *Frontiers in Biology, Physiology*
10. Manuscript reviewer, *Inflammation*
11. Manuscript reviewer, *Exercise Immunology Review*
12. Manuscript reviewer, *Experimental Gerontology*
13. Manuscript reviewer, *International Journal of Exercise Science*

#### **PROFESSIONAL HONORS AND AWARDS**

1. Finalist, Lence Teaching Excellence Award, University of Houston, 2014, 2015.
2. Finalist, Minnie Piper Teaching Excellence Award, University of Houston, 2014, 2015.
3. University of Houston Provost's Faculty Travel Award, Pittsburgh International Lung Conference, 2014.
4. Teaching Excellence Award (winner), University of Houston, 2013.
5. University of Houston Provost's Faculty Travel Award, Pittsburgh International Lung Conference, 2013.
6. Outstanding Poster, Pittsburgh International Lung Conference, 2013.
7. University of Houston Provost's Faculty Travel Award, Pittsburgh International Lung Conference, 2011.
8. Outstanding Poster, Pittsburgh International Lung Conference, 2010.
9. American Association of Immunologists Junior Faculty Travel Award, 2010.
10. University of Illinois Initiative on Aging Travel Grant, 2006.
11. National Institutes of Allergy and Infectious Diseases Travel Grant, 2006.
12. Outstanding Poster Presentation, Keystone Symposia (Advances in Influenza Research: From Birds to Benchside). Steamboat Springs, CO. 2006.



13. University of Illinois Graduate Student Travel Grant, 2001.
14. Outstanding Graduating Senior, College of Health Sciences, University of Nevada-Reno, 1997.

#### **OTHER ACTIVITIES**

1. Founder and President, Order of the Camel's Nose, 2002-present.
2. University of Central Arkansas Center for Teaching Excellence Book Club, Fall 2016, Spring 2017, Fall 2017.
3. University of Central Arkansas Exercise Science Club, Spring 2017-present.
4. Foster, Corridor Rescue Incorporated (dog rescue), Houston, TX. 2009-2016.
5. Foster, Forgotten Dogs of the Fifth Ward Project (dog rescue), Houston, TX. 2009-2016.
6. Foster, Barrio Dogs, Incorporated (dog rescue), Houston, TX. 2009-2016.
7. Foster, Melrose Park Neglected Dogs (dog rescue), Houston, TX. 2011-2015.
8. Foster, South Side Street Dogs (dog rescue), Houston, TX. 2011-2015.