

Curriculum Vita

Scott K. Powers

Work Address

Department of Applied Physiology and Kinesiology
University of Florida
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Educational Background

Louisiana State University
Baton Rouge, LA

Ph.D. (1985)
Major: Physiology
Minor: Cell Biology

University of Tennessee
Knoxville, TN

Ed.D. (1980)
Major: Exercise Physiology
Minor: Zoology

University of Georgia
Athens, GA

M.Ed. (1973)
Major: Exercise Physiology

Carson Newman University
Jefferson City, TN

B.S. (1972)
Major: Physical Education
and Health

Additional Educational training

Center for Biotechnology
University of Florida

Molecular Biology: Theory
and application
(1992)

Professional Experience

UAA Endowed Professor and Distinguished Professor
Dept. of Applied Physiology and Kinesiology
Director, Center for Exercise Science
Adjunct Professor: Dept. of Physiology,
College of Medicine

University of Florida
Gainesville, FL
2004-present

Professor and Chair
Dept. of Exercise & Sport Sciences
Director, Center for Exercise Science
Adjunct Professor: Dept. of Physiology,
College of Medicine

University of Florida
Gainesville, FL
2002-2003

Professor
Dept. of Exercise & Sport Sciences
Director, Center for Exercise Science
Adjunct Professor: Dept. of Physiology,
College of Medicine

University of Florida
Gainesville, FL
1998-2002

Professor
Dept. of Exercise & Sport Sciences
Co-Director, Center for Exercise Science
Adjunct Professor: Dept. of Physiology,
College of Medicine

University of Florida
Gainesville, FL
1991-1997

Associate Professor
Dept. of Exercise & Sport Sciences
Co-Director, Center for Exercise Science
Adjunct Professor: Dept. of Physiology,
College of Medicine

University of Florida
Gainesville, FL
1988 - 1990

Associate Professor
Dept. of Kinesiology
Director, Applied Physiology Laboratory
Coordinator, Exercise Physiology Graduate
Studies; Adjunct Professor - Dept. of Physiology,
Pharmacology, and Toxicology, School of
Veterinary Medicine

Louisiana State University
Baton Rouge, LA
1986 to 1988

Full-time graduate student
Part-time Lecturer (25% FTE)

Louisiana State University
Department of Physiology,
Pharmacology and Toxicology
Baton Rouge, LA
1982-1985

Assistant Professor
Director, Applied Physiology Lab
Coordinator, Exercise Physiology Graduate

Louisiana State University
Dept. of Kinesiology
Baton Rouge, LA
1980-1982

Graduate Teaching Assistant

University of Tennessee
Knoxville, TN
1977-1980

Public School Teacher

Griffin Middle School
Atlanta, GA
1974-1977

Graduate Teaching Assistant

University of Georgia
1972-1973

Visiting Professorship-sabbatical

Department of Cell and Molecular Biology
University of California-Berkeley

March-April 1997

Department of Physiology
Medical College of Wisconsin-Milwaukee

June-August 1987

Institute of Environment Stress
University of California-Santa Barbara

June-August 1982

Honors (by category)

Teaching/Advising Awards

Teacher of the Year, Department of Exercise and Sport Sciences, University of Florida, 1992

Teacher Improvement Award, University of Florida, 1993

Teacher Improvement Award, University of Florida, 1996

David R. Lamb Excellence in Education Award, conferred by Gatorade Sports Science Institute, 2008

University of Florida Doctoral Dissertation Advisor/Mentoring Award, 2009

Elected to the University of Florida Academy of Distinguished Teaching Scholars (2017)

Research Awards

Visiting Scholar Award, American College of Sports Medicine, 1987

Scholar of the Year, Southeastern Chapter of the American College of Sports Medicine, 1995

Career Enhancement Award, American Physiological Society, 1996

American College of Sports Medicine Scholar-Lecture tour, 1996

Professional Excellence Award, University of Florida, 1998

University of Florida Research Foundation Professor, 2000-2002

Faculty Achievement Recognition Award, University of Florida, 2007

University of Florida Research Foundation Professor, 2010-2012

University of Florida Research Foundation Professor, 2015-2017

University of Florida Teacher/Scholar Award, 2017

Career Achievement Awards

Fellow of the American College of Sports Medicine, (elected 1984)

Fellow, American Academy of Kinesiology and Physical Education (elected 1995)

University Athletic Association Endowed Professorship, College of Health and Human Performance, University of Florida, 2004

American College of Sports Medicine Citation Award, 2005

Distinguished Professor, University of Florida, 2005

Outstanding Alumni Award in Exercise Science, University of Tennessee, 2006

Presented the Wolffe Memorial Lecture (keynote) at American College of Sports Medicine Annual Meeting, 2013

Presented the Edward Adolph Lecture (keynote) at the Experimental Biology Annual Meeting, 2016

Honor Award from the EEP section of the American Physiological Society, 2017

Elected Offices (Professional Organizations)

Vice-President for Research, Louisiana Association for Health and Physical Education, 1981-1982

Board of Trustees; Southeastern Chapter of the American College of Sports Medicine, 1982-1985

President; Southeastern Chapter of the American College of Sports Medicine, 1986

Board of Trustees; American College of Sports Medicine, 1993-1996

Vice President; American College of Sports Medicine, 1997-1999

Councilor; Environmental and Exercise Physiology Section-American Physiological Society, 2002-2005

Chair; Environmental and Exercise Physiology Section-American Physiological Society, 2010-2013

University teaching experience

Undergraduate courses:

Exercise physiology

Human anatomy

Human physiology (with laboratory)

Graduate courses:

Exercise Physiology

Advanced Exercise Physiology

Exercise in health and disease

Exercise metabolism

Pulmonary function during exercise

Professional Skills/Grant writing

Mentorship: Post-doctoral fellows and graduate students

During my tenure at the University of Florida (1989-present), I have mentored 14 post-doctoral fellows that have matriculated to faculty positions at major research universities in the US, Japan, and Australia. Further, I have served as the major professor for 20 PhD students, 13 masters' degree students (thesis), and 24 masters' degree students (non-thesis). In addition, I have also served as a graduate committee member for an additional 38 PhD students, 23 masters' degree students (thesis), and 38 masters' degree students (non-thesis). A complete list of these trainees and their current positions is available upon request.

Professional Affiliations

American College of Sports Medicine
American Physiological Society
Physiological Society (UK)

Participation as Journal Editor

Senior Editor, Journal of Physiology (London)

2014-present

Review Editor, Journal of Physiology (London)

2013-2014

Associate Editor, American Journal of Physiology; Regulatory, Integrative, and Comparative Physiology

2008-2013

Associate Editor, Medicine and Science in Sports and Exercise

1990-1994

Section Editor-Physiology, Research Quarterly for Exercise and Sport

1991-1994

Member of Journal Editorial Boards

Editorial Board, Journal of Sport and Health Science

2014-present

Editorial Board, International Journal of Sports Nutrition and Exercise Metabolism

1990-present

Editorial Advisory Board, Journal of Sports Science (London)

1991- 2012

Editorial Board, Journal of Applied Physiology

1993-present

Editorial Board, Medicine and Science in Sports and Exercise

1994-2006

Editorial Board, International Journal of Sports Medicine

1994-present

Participation as Journal Referee

Acta Physiologica Scandanavica

American Journal of Physiology

American Review of Respiratory Disease and Critical Care Medicine

Cell Metabolism

Circulation

Circulation Research

Comparative Biochemistry and Physiology

Critical Care Medicine

Critical Care

European Journal of Applied Physiology

European Journal of Physiology (Pflugers Archives)

FASEB Journal

International Journal of Sports Medicine

International Journal of Sports Nutrition
Journal of Physiology (London)
Journal of Applied Physiology
Journal of Clinical Investigation
Journal of Sports Science
Medicine and Science in Sports and Exercise
Muscle and Nerve
Nature Medicine
Plos One
Plos Medicine
Sports Medicine

Service as a grant reviewer

NASA, Muscle Biology study section, January 1996

NASA, Countermeasures study section, June 1996

American Heart Association-Florida, March 1997

American Heart Association-Florida, March 1999

National Institutes of Health, Respiratory and Applied Physiology-special emphasis study section. November 1999

National Institutes of Health, Respiratory and Applied Physiology-special emphasis study section. June 2000

National Institutes of Health, Geriatric and Rehabilitation Medicine Study section, ad hoc reviewer, February 2001

American College of Sports Medicine Research Study Section, March 2002

National Institutes of Health, Skeletal Muscle Biology Study section, ad hoc reviewer, February 2003

National Institutes of Health, Skeletal Muscle Biology (Special emphasis) Study section, March 2007

National Institutes of Health, Program project review (Special emphasis) Study section, August, 2007

National Institutes of Health, Skeletal muscle biology. Special Emphasis study section, March, 2008.

National Institutes of Health, Program project review (Special emphasis Study section), April, 2008

National Institutes of Health, Skeletal Muscle Biology (Special emphasis Study section), December 2008

National Institutes of Health, Skeletal Muscle Biology/Exercise Physiology Study Section, ad hoc reviewer, October 2010

National Institutes of Health, Skeletal Muscle Biology/Exercise Physiology Study Section, ad hoc reviewer, February 2011

National Institutes of Health, Skeletal Muscle Biology (Special emphasis Study section), March 2012

National Institutes of Health, Skeletal Muscle Biology/Exercise Physiology Study Section, ad hoc reviewer, June 2013

US patent applications

US patent application 20160058826: Mitochondrial-targeted antioxidants protect against mechanical ventilation-induced diaphragm dysfunction and skeletal muscle atrophy

Publications (refereed publications, book chapters, and textbooks)

Refereed Research Publications

Citation statistics (Google Scholar): H index = 82 (total citations = 24,924)

(1-250)

1. Sollanek KJ, Burniston, J.G., Kavazis, A.N., Morton, A.B. Wiggs, M.P., Ahn, B., Smuder, A.J., Powers, S.K. Global Proteome changes in the rat diaphragm induced by endurance exercise training. *PLoS One* 2017; 12: e0171007.doi:0101371/journal.pone.0171007.
2. Powers SK. Edward F. Adolph Distinguished Lecture Exercise: Teaching myocytes new tricks. *J Appl Physiol (1985)* 2017: jap 00418 02017.
3. Talbert EE, Smuder AJ, Kwon OS, Sollanek KJ, Wiggs MP, Powers SK. Blockage of the Ryanodine Receptor via Azumolene Does Not Prevent Mechanical Ventilation-Induced Diaphragm Atrophy. *PLoS One* 2016; 11: e0148161.
4. Smuder AJ, Gonzalez-Rothi EJ, Kwon OS, Morton AB, Sollanek KJ, Powers SK, Fuller DD. Cervical spinal cord injury exacerbates ventilator-induced diaphragm dysfunction. *J Appl Physiol (1985)* 2016; 120: 166-177.
5. Powers SK, Radak Z, Ji LL. Exercise-induced oxidative stress: past, present and future. *J Physiol-London* 2016; 594: 5081-5092.
6. Powers SK, Morton AB, Ahn B, Smuder AJ. Redox control of skeletal muscle atrophy. *Free Radical Bio Med* 2016; 98: 208-217.

7. Powers SK, Lynch GS, Murphy KT, Reid MB, Zijdewind I. Disease-Induced Skeletal Muscle Atrophy and Fatigue. *Med Sci Sport Exer* 2016; 48: 2307-2319.
8. Klionsky DJ et al. Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition). *Autophagy* 2016; 12: 1-222.
9. Yoshihara T, Ichinoseki-Sekine N, Kakigi R, Tsuzuki T, Sugiura T, Powers SK, Naito H. Repeated exposure to heat stress results in a diaphragm phenotype that resists ventilator-induced diaphragm dysfunction. *J Appl Physiol (1985)* 2015; 119: 1023-1031.
10. Wiggs MP, Duarte AF, Powers SK. Exercise can protect against a broken heart. *Curr Sports Med Rep* 2015; 14: 6-8.
11. Sollanek KJ, Smuder AJ, Wiggs MP, Morton AB, Koch LG, Britton SL, Powers SK. Role of Intrinsic Aerobic Capacity and Ventilator-Induced Diaphragm Dysfunction. *J Appl Physiol (1985)* 2015; jap 00797 02014.
12. Smuder AJ, Sollanek KJ, Min K, Nelson WB, Powers SK. Inhibition of forkhead boxO-specific transcription prevents mechanical ventilation-induced diaphragm dysfunction. *Crit Care Med* 2015; 43: e133-142.
13. Min K, Kwon OS, Smuder AJ, Wiggs MP, Sollanek KJ, Christou DD, Yoo JK, Hwang MH, Szeto HH, Kavazis AN, Powers SK. Increased mitochondrial emission of reactive oxygen species and calpain activation are required for doxorubicin-induced cardiac and skeletal muscle myopathy. *J Physiol* 2015; 593: 2017-2036.
14. Kwon OS, Smuder AJ, Wiggs MP, Hall SE, Sollanek KJ, Morton AB, Talbert EE, Toklu HZ, Tumer N, Powers SK. AT1 receptor blocker losartan protects against mechanical ventilation-induced diaphragmatic dysfunction. *J Appl Physiol (1985)* 2015; 119: 1033-1041.
15. Hudson MB, Smuder AJ, Nelson WB, Wiggs MP, Shimkus KL, Fluckey JD, Szeto HH, Powers SK. Partial Support Ventilation and Mitochondrial-Targeted Antioxidants Protect against Ventilator-Induced Decreases in Diaphragm Muscle Protein Synthesis. *PLoS One* 2015; 10: e0137693.
16. Toklu HZ, Kwon OS, Sakarya Y, Powers SK, Llinas K, Kirichenko N, Sollanek KJ, Wiggs MP, Smuder AJ, Talbert EE, Scarpace PJ, Tumer N. The effects of enalapril and losartan on mechanical ventilation-induced sympathoadrenal activation and oxidative stress in rats. *J Surg Res* 2014; 188: 510-516.
17. Smuder AJ, Nelson WB, Hudson MB, Kavazis AN, Powers SK. Inhibition of the ubiquitin-proteasome pathway does not protect against ventilator-induced accelerated proteolysis or atrophy in the diaphragm. *Anesthesiology* 2014; 121: 115-126.
18. Smith IJ, Godinez GL, Singh BK, McCaughey KM, Alcantara RR, Gururaja T, Ho MS, Nguyen HN, Frieria AM, White KA, McLaughlin JR, Hansen D, Romero JM, Baltgalvis KA, Claypool MD, Li W, Lang W, Yam GC, Gelman MS, Ding R, Yung SL, Creger DP, Chen Y, Singh R, Smuder AJ, Wiggs MP, Kwon OS, Sollanek KJ, Powers SK, Masuda ES, Taylor VC, Payan DG, Kinoshita T, Kinsella TM. Inhibition of Janus kinase signaling during controlled mechanical ventilation prevents ventilation-induced diaphragm dysfunction. *FASEB J* 2014; 28: 2790-2803.
19. Sassoon C, Zhu E, Fang L, Sieck GC, Powers SK. Positive end-expiratory airway pressure does not aggravate ventilator-induced diaphragmatic dysfunction in rabbits. *Crit Care* 2014; 18: 494.
20. Powers SK, Sollanek KJ, Wiggs MP, Demirel HA, Smuder AJ. Exercise-induced improvements in myocardial antioxidant capacity: the antioxidant players and cardioprotection. *Free Radic Res* 2014; 48: 43-51.

21. Powers SK, Smuder AJ, Kavazis AN, Quindry JC. Mechanisms of exercise-induced cardioprotection. *Physiology (Bethesda)* 2014; 29: 27-38.
22. Powers SK. Can antioxidants protect against disuse muscle atrophy? *Sports Med* 2014; 44 Suppl 2: S155-165.
23. Maes K, Stamiris A, Thomas D, Cielen N, Smuder A, Powers SK, Leite FS, Hermans G, Decramer M, Hussain SN, Gayan-Ramirez G. Effects of controlled mechanical ventilation on sepsis-induced diaphragm dysfunction in rats. *Crit Care Med* 2014; 42: e772-782.
24. Kavazis AN, Smuder AJ, Powers SK. Effects of short-term endurance exercise training on acute doxorubicin-induced FoxO transcription in cardiac and skeletal muscle. *J Appl Physiol (1985)* 2014; 117: 223-230.
25. Ichinoseki-Sekine N, Yoshihara T, Kakigi R, Sugiura T, Powers SK, Naito H. Heat stress protects against mechanical ventilation-induced diaphragmatic atrophy. *J Appl Physiol (1985)* 2014; 117: 518-524.
26. Bruells CS, Bergs I, Rossaint R, Du J, Bleilevens C, Goetzenich A, Weis J, Wiggs MP, Powers SK, Hein M. Recovery of diaphragm function following mechanical ventilation in a rodent model. *PLoS One* 2014; 9: e87460.
27. Borges JP, Verdoorn KS, Daliry A, Powers SK, Ortenzi VH, Fortunato RS, Tibirica E, Lessa MA. Delta Opioid Receptors: The Link between Exercise and Cardioprotection. *PLoS One* 2014; 9: e113541.
28. Talbert EE, Smuder AJ, Min K, Kwon OS, Szeto HH, Powers SK. Immobilization-induced activation of key proteolytic systems in skeletal muscles is prevented by a mitochondria-targeted antioxidant. *J Appl Physiol (1985)* 2013; 115: 529-538.
29. Talbert EE, Smuder AJ, Min K, Kwon OS, Powers SK. Calpain and caspase-3 play required roles in immobilization-induced limb muscle atrophy. *J Appl Physiol (1985)* 2013; 114: 1482-1489.
30. Smuder AJ, Kavazis AN, Min K, Powers SK. Doxorubicin-induced markers of myocardial autophagic signaling in sedentary and exercise trained animals. *J Appl Physiol (1985)* 2013; 115: 176-185.
31. Smuder AJ, Falk DJ, Sollanek KJ, Nelson WB, Powers SK. Delivery of recombinant adeno-associated virus vectors to rat diaphragm muscle via direct intramuscular injection. *Hum Gene Ther Methods* 2013; 24: 364-371.
32. Roberts BM, Ahn B, Smuder AJ, Al-Rajhi M, Gill LC, Beharry AW, Powers SK, Fuller DD, Ferreira LF, Judge AR. Diaphragm and ventilatory dysfunction during cancer cachexia. *FASEB J* 2013; 27: 2600-2610.
33. Powers SK, Wiggs MP, Sollanek KJ, Smuder AJ. Ventilator-induced diaphragm dysfunction: cause and effect. *Am J Physiol Regul Integr Comp Physiol* 2013; 305: R464-477.
34. Powers SK, Smuder AJ, Fuller D, Levine S. CrossTalk proposal: Mechanical ventilation-induced diaphragm atrophy is primarily due to inactivity. *J Physiol* 2013; 591: 5255-5257.
35. Levine S, Bashir MH, Clanton TL, Powers SK, Singhal S. COPD elicits remodeling of the diaphragm and vastus lateralis muscles in humans. *J Appl Physiol (1985)* 2013; 114: 1235-1245.
36. Bruells CS, Smuder AJ, Reiss LK, Hudson MB, Nelson WB, Wiggs MP, Sollanek KJ, Rossaint R, Uhlig S, Powers SK. Negative pressure ventilation and positive pressure ventilation promote comparable levels of ventilator-induced diaphragmatic dysfunction in rats. *Anesthesiology* 2013; 119: 652-662.

37. Smuder AJ, Min K, Hudson MB, Kavazis AN, Kwon OS, Nelson WB, Powers SK. Endurance exercise attenuates ventilator-induced diaphragm dysfunction. *J Appl Physiol (1985)* 2012; 112: 501-510.
38. Smuder AJ, Hudson MB, Nelson WB, Kavazis AN, Powers SK. Nuclear factor-kappaB signaling contributes to mechanical ventilation-induced diaphragm weakness*. *Crit Care Med* 2012; 40: 927-934.
39. Shadgan B, Reid WD, Harris RL, Jafari S, Powers SK, O'Brien PJ. Hemodynamic and oxidative mechanisms of tourniquet-induced muscle injury: near-infrared spectroscopy for the orthopedics setting. *J Biomed Opt* 2012; 17: 081408-081401.
40. Powers SK, Wiggs MP, Duarte JA, Zergeroglu AM, Demirel HA. Mitochondrial signaling contributes to disuse muscle atrophy. *Am J Physiol Endocrinol Metab* 2012; 303: E31-39.
41. Powers SK, Smuder AJ, Judge AR. Oxidative stress and disuse muscle atrophy: cause or consequence? *Curr Opin Clin Nutr Metab Care* 2012; 15: 240-245.
42. Nelson WB, Smuder AJ, Hudson MB, Talbert EE, Powers SK. Cross-talk between the calpain and caspase-3 proteolytic systems in the diaphragm during prolonged mechanical ventilation. *Crit Care Med* 2012; 40: 1857-1863.
43. Lee Y, Min K, Talbert EE, Kavazis AN, Smuder AJ, Willis WT, Powers SK. Exercise protects cardiac mitochondria against ischemia-reperfusion injury. *Med Sci Sports Exerc* 2012; 44: 397-405.
44. Hudson MB, Smuder AJ, Nelson WB, Bruells CS, Levine S, Powers SK. Both high level pressure support ventilation and controlled mechanical ventilation induce diaphragm dysfunction and atrophy. *Crit Care Med* 2012; 40: 1254-1260.
45. Fonseca H, Powers SK, Goncalves D, Santos A, Mota MP, Duarte JA. Physical inactivity is a major contributor to ovariectomy-induced sarcopenia. *Int J Sports Med* 2012; 33: 268-278.
46. Smuder AJ, Kavazis AN, Min K, Powers SK. Exercise protects against doxorubicin-induced oxidative stress and proteolysis in skeletal muscle. *J Appl Physiol (1985)* 2011; 110: 935-942.
47. Smuder AJ, Kavazis AN, Min K, Powers SK. Exercise protects against doxorubicin-induced markers of autophagy signaling in skeletal muscle. *J Appl Physiol (1985)* 2011; 111: 1190-1198.
48. Powers SK, Talbert EE, Adhietty PJ. Reactive oxygen and nitrogen species as intracellular signals in skeletal muscle. *J Physiol* 2011; 589: 2129-2138.
49. Powers SK, Smuder AJ, Criswell DS. Mechanistic links between oxidative stress and disuse muscle atrophy. *Antioxid Redox Signal* 2011; 15: 2519-2528.
50. Powers SK, Nelson WB, Hudson MB. Exercise-induced oxidative stress in humans: cause and consequences. *Free Radic Biol Med* 2011; 51: 942-950.
51. Powers SK, Ji LL, Kavazis AN, Jackson MJ. Reactive oxygen species: impact on skeletal muscle. *Compr Physiol* 2011; 1: 941-969.
52. Powers SK, Hudson MB, Nelson WB, Talbert EE, Min K, Szeto HH, Kavazis AN, Smuder AJ. Mitochondria-targeted antioxidants protect against mechanical ventilation-induced diaphragm weakness. *Crit Care Med* 2011; 39: 1749-1759.
53. Powers S, Nelson WB, Larson-Meyer E. Antioxidant and Vitamin D supplements for athletes: sense or nonsense? *J Sports Sci* 2011; 29 Suppl 1: S47-55.

54. Min K, Smuder AJ, Kwon OS, Kavazis AN, Szeto HH, Powers SK. Mitochondrial-targeted antioxidants protect skeletal muscle against immobilization-induced muscle atrophy. *J Appl Physiol (1985)* 2011; 111: 1459-1466.
55. Falk DJ, Kavazis AN, Whidden MA, Smuder AJ, McClung JM, Hudson MB, Powers SK. Mechanical ventilation-induced oxidative stress in the diaphragm: role of heme oxygenase-1. *Chest* 2011; 139: 816-824.
56. Agten A, Maes K, Smuder A, Powers SK, Decramer M, Gayan-Ramirez G. N-Acetylcysteine protects the rat diaphragm from the decreased contractility associated with controlled mechanical ventilation. *Crit Care Med* 2011; 39: 777-782.
57. Whidden MA, Smuder AJ, Wu M, Hudson MB, Nelson WB, Powers SK. Oxidative stress is required for mechanical ventilation-induced protease activation in the diaphragm. *J Appl Physiol (1985)* 2010; 108: 1376-1382.
58. Smuder AJ, Kavazis AN, Hudson MB, Nelson WB, Powers SK. Oxidation enhances myofibrillar protein degradation via calpain and caspase-3. *Free Radic Biol Med* 2010; 49: 1152-1160.
59. Quindry JC, French J, Hamilton KL, Lee Y, Selsby J, Powers S. Exercise does not increase cyclooxygenase-2 myocardial levels in young or senescent hearts. *J Physiol Sci* 2010; 60: 181-186.
60. Powers SK, Smuder AJ, Kavazis AN, Hudson MB. Experimental guidelines for studies designed to investigate the impact of antioxidant supplementation on exercise performance. *Int J Sport Nutr Exerc Metab* 2010; 20: 2-14.
61. Powers SK, Duarte J, Kavazis AN, Talbert EE. Reactive oxygen species are signalling molecules for skeletal muscle adaptation. *Exp Physiol* 2010; 95: 1-9.
62. McClung JM, Judge AR, Powers SK, Yan Z. p38 MAPK links oxidative stress to autophagy-related gene expression in cachectic muscle wasting. *Am J Physiol Cell Physiol* 2010; 298: C542-549.
63. McClung JM, Deruisseau KC, Whidden MA, Van Remmen H, Richardson A, Song W, Vrabas IS, Powers SK. Overexpression of antioxidant enzymes in diaphragm muscle does not alter contraction-induced fatigue or recovery. *Exp Physiol* 2010; 95: 222-231.
64. Maes K, Agten A, Smuder A, Powers SK, Decramer M, Gayan-Ramirez G. Corticosteroid effects on ventilator-induced diaphragm dysfunction in anesthetized rats depend on the dose administered. *Respir Res* 2010; 11: 178.
65. Kavazis AN, Smuder AJ, Min K, Tumer N, Powers SK. Short-term exercise training protects against doxorubicin-induced cardiac mitochondrial damage independent of HSP72. *Am J Physiol Heart Circ Physiol* 2010; 299: H1515-1524.
66. Ferreira R, Vitorino R, Alves RM, Appell HJ, Powers SK, Duarte JA, Amado F. Subsarcolemmal and intermyofibrillar mitochondria proteome differences disclose functional specializations in skeletal muscle. *Proteomics* 2010; 10: 3142-3154.
67. Borst SE, Quindry JC, Yarrow JF, Conover CF, Powers SK. Testosterone administration induces protection against global myocardial ischemia. *Horm Metab Res* 2010; 42: 122-129.
68. Whidden MA, McClung JM, Falk DJ, Hudson MB, Smuder AJ, Nelson WB, Powers SK. Xanthine oxidase contributes to mechanical ventilation-induced diaphragmatic oxidative stress and contractile dysfunction. *J Appl Physiol (1985)* 2009; 106: 385-394.
69. Staib JL, Tumer N, Powers SK. Increased temperature and protein oxidation lead to HSP72 mRNA and protein accumulation in the in vivo exercised rat heart. *Exp Physiol* 2009; 94: 71-80.

70. Powers SK, Kavazis AN, Levine S. Prolonged mechanical ventilation alters diaphragmatic structure and function. *Crit Care Med* 2009; 37: S347-353.
71. McClung JM, Van Gammeren D, Whidden MA, Falk DJ, Kavazis AN, Hudson MB, Gayan-Ramirez G, Decramer M, DeRuisseau KC, Powers SK. Apocynin attenuates diaphragm oxidative stress and protease activation during prolonged mechanical ventilation. *Crit Care Med* 2009; 37: 1373-1379.
72. McClung JM, Judge AR, Talbert EE, Powers SK. Calpain-1 is required for hydrogen peroxide-induced myotube atrophy. *Am J Physiol Cell Physiol* 2009; 296: C363-371.
73. Kavazis AN, Talbert EE, Smuder AJ, Hudson MB, Nelson WB, Powers SK. Mechanical ventilation induces diaphragmatic mitochondrial dysfunction and increased oxidant production. *Free Radic Biol Med* 2009; 46: 842-850.
74. Kavazis AN, Alvarez S, Talbert E, Lee Y, Powers SK. Exercise training induces a cardioprotective phenotype and alterations in cardiac subsarcolemmal and intermyofibrillar mitochondrial proteins. *Am J Physiol Heart Circ Physiol* 2009; 297: H144-152.
75. Figueiredo PA, Powers SK, Ferreira RM, Appell HJ, Duarte JA. Aging impairs skeletal muscle mitochondrial bioenergetic function. *J Gerontol A Biol Sci Med Sci* 2009; 64: 21-33.
76. Figueiredo PA, Powers SK, Ferreira RM, Amado F, Appell HJ, Duarte JA. Impact of lifelong sedentary behavior on mitochondrial function of mice skeletal muscle. *J Gerontol A Biol Sci Med Sci* 2009; 64: 927-939.
77. Powers SK, Quindry JC, Kavazis AN. Exercise-induced cardioprotection against myocardial ischemia-reperfusion injury. *Free Radic Biol Med* 2008; 44: 193-201.
78. Powers SK, Jackson MJ. Exercise-induced oxidative stress: cellular mechanisms and impact on muscle force production. *Physiol Rev* 2008; 88: 1243-1276.
79. Ogura Y, Naito H, Akin S, Ichinoseki-Sekine N, Kurosaka M, Kakigi R, Sugiura T, Powers SK, Katamoto S, Demirel HA. Elevation of body temperature is an essential factor for exercise-increased extracellular heat shock protein 72 level in rat plasma. *Am J Physiol Regul Integr Comp Physiol* 2008; 294: R1600-1607.
80. McClung JM, Whidden MA, Kavazis AN, Falk DJ, Deruisseau KC, Powers SK. Redox regulation of diaphragm proteolysis during mechanical ventilation. *Am J Physiol Regul Integr Comp Physiol* 2008; 294: R1608-1617.
81. Maes K, Testelmans D, Cadot P, Deruisseau K, Powers SK, Decramer M, Gayan-Ramirez G. Effects of acute administration of corticosteroids during mechanical ventilation on rat diaphragm. *Am J Respir Crit Care Med* 2008; 178: 1219-1226.
82. Levine S, Nguyen T, Taylor N, Friscia ME, Budak MT, Rothenberg P, Zhu J, Sachdeva R, Sonnad S, Kaiser LR, Rubinstein NA, Powers SK, Shrager JB. Rapid disuse atrophy of diaphragm fibers in mechanically ventilated humans. *N Engl J Med* 2008; 358: 1327-1335.
83. Kavazis AN, McClung JM, Hood DA, Powers SK. Exercise induces a cardiac mitochondrial phenotype that resists apoptotic stimuli. *Am J Physiol Heart Circ Physiol* 2008; 294: H928-935.
84. French JP, Hamilton KL, Quindry JC, Lee Y, Upchurch PA, Powers SK. Exercise-induced protection against myocardial apoptosis and necrosis: MnSOD, calcium-handling proteins, and calpain. *FASEB J* 2008; 22: 2862-2871.

85. Van Gammeren D, Falk DJ, Deering MA, Deruisseau KC, Powers SK. Diaphragmatic nitric oxide synthase is not induced during mechanical ventilation. *J Appl Physiol (1985)* 2007; 102: 157-162.
86. Testelmans D, Maes K, Wouters P, Powers SK, Decramer M, Gayan-Ramirez G. Infusions of rocuronium and cisatracurium exert different effects on rat diaphragm function. *Intensive Care Med* 2007; 33: 872-879.
87. Staib JL, Quindry JC, French JP, Criswell DS, Powers SK. Increased temperature, not cardiac load, activates heat shock transcription factor 1 and heat shock protein 72 expression in the heart. *Am J Physiol Regul Integr Comp Physiol* 2007; 292: R432-439.
88. Quindry JC, Hamilton KL, French JP, Lee Y, Murlasits Z, Tumer N, Powers SK. Exercise-induced HSP-72 elevation and cardioprotection against infarct and apoptosis. *J Appl Physiol (1985)* 2007; 103: 1056-1062.
89. Powers SK, Murlasits Z, Wu M, Kavazis AN. Ischemia-reperfusion-induced cardiac injury: a brief review. *Med Sci Sports Exerc* 2007; 39: 1529-1536.
90. Powers SK, Kavazis AN, McClung JM. Oxidative stress and disuse muscle atrophy. *J Appl Physiol (1985)* 2007; 102: 2389-2397.
91. Murlasits Z, Lee Y, Powers SK. Short-term exercise does not increase ER stress protein expression in cardiac muscle. *Med Sci Sports Exerc* 2007; 39: 1522-1528.
92. McClung JM, Kavazis AN, Whidden MA, DeRuisseau KC, Falk DJ, Criswell DS, Powers SK. Antioxidant administration attenuates mechanical ventilation-induced rat diaphragm muscle atrophy independent of protein kinase B (PKB Akt) signalling. *J Physiol* 2007; 585: 203-215.
93. McClung JM, Kavazis AN, DeRuisseau KC, Falk DJ, Deering MA, Lee Y, Sugiura T, Powers SK. Caspase-3 regulation of diaphragm myonuclear domain during mechanical ventilation-induced atrophy. *Am J Respir Crit Care Med* 2007; 175: 150-159.
94. Maes K, Testelmans D, Powers S, Decramer M, Gayan-Ramirez G. Leupeptin inhibits ventilator-induced diaphragm dysfunction in rats. *Am J Respir Crit Care Med* 2007; 175: 1134-1138.
95. Kavazis AN, DeRuisseau KC, McClung JM, Whidden MA, Falk DJ, Smuder AJ, Sugiura T, Powers SK. Diaphragmatic proteasome function is maintained in the ageing Fisher 344 rat. *Exp Physiol* 2007; 92: 895-901.
96. Testelmans D, Maes K, Wouters P, Gosselin N, Deruisseau K, Powers S, Sciort R, Decramer M, Gayan-Ramirez G. Rocuronium exacerbates mechanical ventilation-induced diaphragm dysfunction in rats. *Crit Care Med* 2006; 34: 3018-3023.
97. Sugiura T, Ito N, Goto K, Naito H, Yoshioka T, Powers SK. Estrogen administration attenuates immobilization-induced skeletal muscle atrophy in male rats. *J Physiol Sci* 2006; 56: 393-399.
98. French JP, Quindry JC, Falk DJ, Staib JL, Lee Y, Wang KK, Powers SK. Ischemia-reperfusion-induced calpain activation and SERCA2a degradation are attenuated by exercise training and calpain inhibition. *Am J Physiol Heart Circ Physiol* 2006; 290: H128-136.
99. Falk DJ, Deruisseau KC, Van Gammeren DL, Deering MA, Kavazis AN, Powers SK. Mechanical ventilation promotes redox status alterations in the diaphragm. *J Appl Physiol (1985)* 2006; 101: 1017-1024.
100. Deruisseau KC, Kavazis AN, Judge S, Murlasits Z, Deering MA, Quindry JC, Lee Y, Falk DJ, Leeuwenburgh C, Powers SK. Moderate caloric restriction increases diaphragmatic

- antioxidant enzyme mRNA, but not when combined with lifelong exercise. *Antioxid Redox Signal* 2006; 8: 539-547.
101. Van Gammeren D, Falk DJ, DeRuisseau KC, Sellman JE, Decramer M, Powers SK. Reloading the diaphragm following mechanical ventilation does not promote injury. *Chest* 2005; 127: 2204-2210.
 102. Sugiura T, Abe N, Nagano M, Goto K, Sakuma K, Naito H, Yoshioka T, Powers SK. Changes in PKB/Akt and calcineurin signaling during recovery in atrophied soleus muscle induced by unloading. *Am J Physiol Regul Integr Comp Physiol* 2005; 288: R1273-1278.
 103. Quindry J, French J, Hamilton K, Lee Y, Mehta JL, Powers S. Exercise training provides cardioprotection against ischemia-reperfusion induced apoptosis in young and old animals. *Exp Gerontol* 2005; 40: 416-425.
 104. Powers SK, Kavazis AN, DeRuisseau KC. Mechanisms of disuse muscle atrophy: role of oxidative stress. *Am J Physiol Regul Integr Comp Physiol* 2005; 288: R337-344.
 105. DeRuisseau KC, Shanely RA, Akunuri N, Hamilton MT, Van Gammeren D, Zergeroglu AM, McKenzie M, Powers SK. Diaphragm unloading via controlled mechanical ventilation alters the gene expression profile. *Am J Respir Crit Care Med* 2005; 172: 1267-1275.
 106. Deruisseau KC, Kavazis AN, Powers SK. Selective downregulation of ubiquitin conjugation cascade mRNA occurs in the senescent rat soleus muscle. *Exp Gerontol* 2005; 40: 526-531.
 107. DeRuisseau KC, Kavazis AN, Deering MA, Falk DJ, Van Gammeren D, Yimlamai T, Ordway GA, Powers SK. Mechanical ventilation induces alterations of the ubiquitin-proteasome pathway in the diaphragm. *J Appl Physiol (1985)* 2005; 98: 1314-1321.
 108. Carmeli E, Moas M, Lennon S, Powers SK. High intensity exercise increases expression of matrix metalloproteinases in fast skeletal muscle fibres. *Exp Physiol* 2005; 90: 613-619.
 109. Shanely RA, Van Gammeren D, Deruisseau KC, Zergeroglu AM, McKenzie MJ, Yarasheski KE, Powers SK. Mechanical ventilation depresses protein synthesis in the rat diaphragm. *Am J Respir Crit Care Med* 2004; 170: 994-999.
 110. Powers SK, Quindry J, Hamilton K. Aging, exercise, and cardioprotection. *Ann N Y Acad Sci* 2004; 1019: 462-470.
 111. Powers SK, DeRuisseau KC, Quindry J, Hamilton KL. Dietary antioxidants and exercise. *J Sports Sci* 2004; 22: 81-94.
 112. Lennon SL, Quindry JC, Hamilton KL, French JP, Hughes J, Mehta JL, Powers SK. Elevated MnSOD is not required for exercise-induced cardioprotection against myocardial stunning. *Am J Physiol Heart Circ Physiol* 2004; 287: H975-980.
 113. Lennon SL, Quindry JC, French JP, Kim S, Mehta JL, Powers SK. Exercise and myocardial tolerance to ischaemia-reperfusion. *Acta Physiol Scand* 2004; 182: 161-169.
 114. Lennon SL, Quindry J, Hamilton KL, French J, Staib J, Mehta JL, Powers SK. Loss of exercise-induced cardioprotection after cessation of exercise. *J Appl Physiol (1985)* 2004; 96: 1299-1305.
 115. Hamilton KL, Quindry JC, French JP, Staib J, Hughes J, Mehta JL, Powers SK. MnSOD antisense treatment and exercise-induced protection against arrhythmias. *Free Radic Biol Med* 2004; 37: 1360-1368.
 116. Betters JL, Criswell DS, Shanely RA, Van Gammeren D, Falk D, Deruisseau KC, Deering M, Yimlamai T, Powers SK. Trolox attenuates mechanical ventilation-induced diaphragmatic dysfunction and proteolysis. *Am J Respir Crit Care Med* 2004; 170: 1179-1184.

117. Zergeroglu MA, McKenzie MJ, Shanely RA, Van Gammeren D, DeRuisseau KC, Powers SK. Mechanical ventilation-induced oxidative stress in the diaphragm. *J Appl Physiol (1985)* 2003; 95: 1116-1124.
118. Shanely RA, Coombes JS, Zergeroglu AM, Webb AI, Powers SK. Short-duration mechanical ventilation enhances diaphragmatic fatigue resistance but impairs force production. *Chest* 2003; 123: 195-201.
119. Powers SW, Patton SR. A comparison of nutrient intake between infants and toddlers with and without cystic fibrosis. *J Am Diet Assoc* 2003; 103: 1620-1625.
120. Hamilton KL, Staib JL, Phillips T, Hess A, Lennon SL, Powers SK. Exercise, antioxidants, and HSP72: protection against myocardial ischemia/reperfusion. *Free Radic Biol Med* 2003; 34: 800-809.
121. Eason JM, Dodd SL, Powers SK. Use of anabolic steroids to attenuate the effects of glucocorticoids on the rat diaphragm. *Phys Ther* 2003; 83: 29-36.
122. Demirel HA, Hamilton KL, Shanely RA, Tumer N, Koroly MJ, Powers SK. Age and attenuation of exercise-induced myocardial HSP72 accumulation. *Am J Physiol Heart Circ Physiol* 2003; 285: H1609-1615.
123. Criswell DS, Shanely RA, Betters JJ, McKenzie MJ, Sellman JE, Van Gammeren DL, Powers SK. Cumulative effects of aging and mechanical ventilation on in vitro diaphragm function. *Chest* 2003; 124: 2302-2308.
124. Vincent HK, Shanely RA, Stewart DJ, Demirel HA, Hamilton KL, Ray AD, Michlin C, Farkas GA, Powers SK. Adaptation of upper airway muscles to chronic endurance exercise. *Am J Respir Crit Care Med* 2002; 166: 287-293.
125. Staib JL, Swoap SJ, Powers SK. Diaphragm contractile dysfunction in MyoD gene-inactivated mice. *Am J Physiol Regul Integr Comp Physiol* 2002; 283: R583-590.
126. Smith WN, Dirks A, Sugiura T, Muller S, Scarpace P, Powers SK. Alteration of contractile force and mass in the senescent diaphragm with beta(2)-agonist treatment. *J Appl Physiol (1985)* 2002; 92: 941-948.
127. Shanely RA, Zergeroglu MA, Lennon SL, Sugiura T, Yimlamai T, Enns D, Belcastro A, Powers SK. Mechanical ventilation-induced diaphragmatic atrophy is associated with oxidative injury and increased proteolytic activity. *Am J Respir Crit Care Med* 2002; 166: 1369-1374.
128. Powers SK, Shanely RA, Coombes JS, Koesterer TJ, McKenzie M, Van Gammeren D, Cicale M, Dodd SL. Mechanical ventilation results in progressive contractile dysfunction in the diaphragm. *J Appl Physiol (1985)* 2002; 92: 1851-1858.
129. Powers SK, Shanely RA. Exercise-induced changes in diaphragmatic bioenergetic and antioxidant capacity. *Exerc Sport Sci Rev* 2002; 30: 69-74.
130. Powers SK, Lennon SL, Quindry J, Mehta JL. Exercise and cardioprotection. *Curr Opin Cardiol* 2002; 17: 495-502.
131. Koesterer TJ, Dodd SL, Powers S. Increased antioxidant capacity does not attenuate muscle atrophy caused by unweighting. *J Appl Physiol (1985)* 2002; 93: 1959-1965.
132. Fraites TJ, Jr., Schleissing MR, Shanely RA, Walter GA, Cloutier DA, Zolotukhin I, Pauly DF, Raben N, Plotz PH, Powers SK, Kessler PD, Byrne BJ. Correction of the enzymatic and functional deficits in a model of Pompe disease using adeno-associated virus vectors. *Mol Ther* 2002; 5: 571-578.
133. Coombes JS, Rowell B, Dodd SL, Demirel HA, Naito H, Shanely RA, Powers SK. Effects of vitamin E deficiency on fatigue and muscle contractile properties. *Eur J Appl Physiol* 2002; 87: 272-277.

134. Vincent HK, Powers SK, Dirks AJ, Scarpace PJ. Mechanism for obesity-induced increase in myocardial lipid peroxidation. *Int J Obes Relat Metab Disord* 2001; 25: 378-388.
135. Tumer N, Demirel HA, Serova L, Sabban EL, Broxson CS, Powers SK. Gene expression of catecholamine biosynthetic enzymes following exercise: modulation by age. *Neuroscience* 2001; 103: 703-711.
136. Powers SK, Locke, Demirel HA. Exercise, heat shock proteins, and myocardial protection from I-R injury. *Med Sci Sports Exerc* 2001; 33: 386-392.
137. Naito H, Powers SK, Demirel HA, Aoki J. Exercise training increases heat shock protein in skeletal muscles of old rats. *Med Sci Sports Exerc* 2001; 33: 729-734.
138. Hamilton KL, Powers SK, Sugiura T, Kim S, Lennon S, Tumer N, Mehta JL. Short-term exercise training can improve myocardial tolerance to I/R without elevation in heat shock proteins. *Am J Physiol Heart Circ Physiol* 2001; 281: H1346-1352.
139. Demirel HA, Powers SK, Zergeroglu MA, Shanely RA, Hamilton K, Coombes J, Naito H. Short-term exercise improves myocardial tolerance to in vivo ischemia-reperfusion in the rat. *J Appl Physiol (1985)* 2001; 91: 2205-2212.
140. Coombes JS, Powers SK, Rowell B, Hamilton KL, Dodd SL, Shanely RA, Sen CK, Packer L. Effects of vitamin E and alpha-lipoic acid on skeletal muscle contractile properties. *J Appl Physiol (1985)* 2001; 90: 1424-1430.
141. Vincent HK, Powers SK, Stewart DJ, Demirel HA, Shanely RA, Naito H. Short-term exercise training improves diaphragm antioxidant capacity and endurance. *Eur J Appl Physiol* 2000; 81: 67-74.
142. Stark LJ, Jelalian E, Powers SW, Mulvihill MM, Pipari LC, Bowen A, Harwood I, Passero MA, Lapey A, Light M, Hovell MF. Parent and child mealtime behavior in families of children with cystic fibrosis. *J Pediatr* 2000; 136: 195-200.
143. Naito H, Powers SK, Demirel HA, Sugiura T, Dodd SL, Aoki J. Heat stress attenuates skeletal muscle atrophy in hindlimb-unweighted rats. *J Appl Physiol (1985)* 2000; 88: 359-363.
144. Fletcher LK, Powers SK, Coombes JS, Demirel H, Vincent H, Dodd SL, McLaughlin J. Glucocorticoid-induced alterations in the rate of diaphragmatic fatigue. *Pharmacol Res* 2000; 42: 61-68.
145. Eason JM, Dodd SL, Powers SK, Martin AD. Detrimental effects of short-term glucocorticoid use on the rat diaphragm. *Phys Ther* 2000; 80: 160-167.
146. Coombes JS, Powers SK, Hamilton KL, Demirel HA, Shanely RA, Zergeroglu MA, Sen CK, Packer L, Ji LL. Improved cardiac performance after ischemia in aged rats supplemented with vitamin E and alpha-lipoic acid. *Am J Physiol Regul Integr Comp Physiol* 2000; 279: R2149-2155.
147. Coombes JS, Powers SK, Demirel HA, Jessup J, Vincent HK, Hamilton KL, Naito H, Shanely RA, Sen CK, Packer L, Ji LL. Effect of combined supplementation with vitamin E and alpha-lipoic acid on myocardial performance during in vivo ischaemia-reperfusion. *Acta Physiol Scand* 2000; 169: 261-269.
148. Coombes JS, Powers SK, Demirel HA, Hamilton KL, Jessup J, Vincent HK, Shanely RA. Vitamin E deficiency fails to affect myocardial performance during in vivo ischemia-reperfusion. *Int J Vitam Nutr Res* 2000; 70: 293-300.
149. Wade ME, Herb RA, Powers SK, Criswell D. Exercise and beta-adrenergic regulation of rat cardiac myosin isoforms. *J Sports Med Phys Fitness* 1999; 39: 42-46.

150. Vrabas IS, Dodd SL, Powers SK, Hughes M, Coombes J, Fletcher L, Demirel H, Reid MB. Endurance training reduces the rate of diaphragm fatigue in vitro. *Med Sci Sports Exerc* 1999; 31: 1605-1612.
151. Vincent HK, Powers SK, Stewart DJ, Shanely RA, Demirel H, Naito H. Obesity is associated with increased myocardial oxidative stress. *Int J Obes Relat Metab Disord* 1999; 23: 67-74.
152. Vincent HK, Powers SK, Demirel HA, Coombes JS, Naito H. Exercise training protects against contraction-induced lipid peroxidation in the diaphragm. *Eur J Appl Physiol Occup Physiol* 1999; 79: 268-273.
153. Powers SK, Lennon SL. Analysis of cellular responses to free radicals: focus on exercise and skeletal muscle. *Proc Nutr Soc* 1999; 58: 1025-1033.
154. Powers SK, Ji LL, Leeuwenburgh C. Exercise training-induced alterations in skeletal muscle antioxidant capacity: a brief review. *Med Sci Sports Exerc* 1999; 31: 987-997.
155. Powers SK, Hamilton K. Antioxidants and exercise. *Clin Sports Med* 1999; 18: 525-536.
156. Demirel HA, Powers SK, Naito H, Tumer N. The effects of exercise duration on adrenal HSP72/73 induction in rats. *Acta Physiol Scand* 1999; 167: 227-231.
157. Demirel HA, Powers SK, Naito H, Hughes M, Coombes JS. Exercise-induced alterations in skeletal muscle myosin heavy chain phenotype: dose-response relationship. *J Appl Physiol (1985)* 1999; 86: 1002-1008.
158. Powers SK, Demirel HA, Vincent HK, Coombes JS, Naito H, Hamilton KL, Shanely RA, Jessup J. Exercise training improves myocardial tolerance to in vivo ischemia-reperfusion in the rat. *Am J Physiol* 1998; 275: R1468-1477.
159. Lawler JM, Powers SK. Oxidative stress, antioxidant status, and the contracting diaphragm. *Can J Appl Physiol* 1998; 23: 23-55.
160. Demirel HA, Powers SK, Caillaud C, Coombes JS, Naito H, Fletcher LA, Vrabas I, Jessup JV, Ji LL. Exercise training reduces myocardial lipid peroxidation following short-term ischemia-reperfusion. *Med Sci Sports Exerc* 1998; 30: 1211-1216.
161. Powers SK, Demirel HA, Coombes JS, Fletcher L, Calliaud C, Vrabas I, Prezant D. Myosin phenotype and bioenergetic characteristics of rat respiratory muscles. *Med Sci Sports Exerc* 1997; 29: 1573-1579.
162. Powers SK, Coombes J, Demirel H. Exercise training-induced changes in respiratory muscles. *Sports Med* 1997; 24: 120-131.
163. Poole DC, Sexton WL, Farkas GA, Powers SK, Reid MB. Diaphragm structure and function in health and disease. *Med Sci Sports Exerc* 1997; 29: 738-754.
164. Hodge K, Powers SK, Coombes J, Fletcher L, Demirel HA, Dodd SL, Martin D. Bioenergetic characteristics of the costal and crural diaphragm in mammals. *Respir Physiol* 1997; 109: 149-154.
165. Criswell DS, Powers SK, Herb RA, Dodd SL. Mechanism of specific force deficit in the senescent rat diaphragm. *Respir Physiol* 1997; 107: 149-155.
166. Powers SK, Farkas GA, Demirel H, Coombes J, Fletcher L, Hughes MG, Hodge K, Dodd SL, Schlenker EH. Effects of aging and obesity on respiratory muscle phenotype in Zucker rats. *J Appl Physiol (1985)* 1996; 81: 1347-1354.
167. Powers SK, Criswell D, Herb RA, Demirel H, Dodd S. Age-related increases in diaphragmatic maximal shortening velocity. *J Appl Physiol (1985)* 1996; 80: 445-451.
168. Powers SK, Criswell D. Adaptive strategies of respiratory muscles in response to endurance exercise. *Med Sci Sports Exerc* 1996; 28: 1115-1122.

169. Norenberg KM, Herb RA, Dodd SL, Powers SK. The effects of hypothyroidism on single fibers of the rat soleus muscle. *Can J Physiol Pharmacol* 1996; 74: 362-367.
170. Herb RA, Powers SK, Criswell DS, Caiozzo VJ, Vrabas IS, Dodd SL. Alterations in phenotypic and contractile properties of the rat diaphragm: influence of hypothyroidism. *J Appl Physiol (1985)* 1996; 80: 2163-2170.
171. Grace M, Fletcher L, Powers SK, Hughes M, Coombes J. A comparison of maximal bioenergetic enzyme activities obtained with commonly used homogenization techniques. *J Sports Med Phys Fitness* 1996; 36: 281-286.
172. Dodd SL, Powers SK, Vrabas IS, Criswell D, Stetson S, Hussain R. Effects of clenbuterol on contractile and biochemical properties of skeletal muscle. *Med Sci Sports Exerc* 1996; 28: 669-676.
173. Criswell DS, Powers SK, Herb RA. Clenbuterol-induced fiber type transition in the soleus of adult rats. *Eur J Appl Physiol Occup Physiol* 1996; 74: 391-396.
174. Wheeler DL, Graves JE, Miller GJ, Vander Griend RE, Wronski TJ, Powers SK, Park HM. Effects of running on the torsional strength, morphometry, and bone mass of the rat skeleton. *Med Sci Sports Exerc* 1995; 27: 520-529.
175. Sullivan VK, Powers SK, Criswell DS, Tumer N, Larochelle JS, Lowenthal D. Myosin heavy chain composition in young and old rat skeletal muscle: effects of endurance exercise. *J Appl Physiol (1985)* 1995; 78: 2115-2120.
176. Powers SK, Wade M, Criswell D, Herb RA, Dodd S, Hussain R, Martin D. Role of beta-adrenergic mechanisms in exercise training-induced metabolic changes in respiratory and locomotor muscle. *Int J Sports Med* 1995; 16: 13-18.
177. Dodd SL, Powers SK, Vrabas IS, Eason JM. Interaction of glucocorticoids and activity patterns affect muscle function. *Muscle Nerve* 1995; 18: 190-195.
178. Talmadge RJ, Mills S, Powers SK, Silverman H. Limited capacity for glycconeogenesis from alanine by diaphragm muscle. *Respir Physiol* 1994; 98: 153-164.
179. Powers SK, Farkas GA, Criswell D, Herb RA, Zambito K, Dodd S. Metabolic characteristics of primary inspiratory and expiratory muscles in the dog. *J Appl Physiol (1985)* 1994; 77: 2188-2193.
180. Powers SK, Criswell D, Lawler J, Martin D, Ji LL, Herb RA, Dudley G. Regional training-induced alterations in diaphragmatic oxidative and antioxidant enzymes. *Respir Physiol* 1994; 95: 227-237.
181. Powers SK, Criswell D, Lawler J, Ji LL, Martin D, Herb RA, Dudley G. Influence of exercise and fiber type on antioxidant enzyme activity in rat skeletal muscle. *Am J Physiol* 1994; 266: R375-380.
182. Lawler JM, Powers SK, Van Dijk H, Visser T, Kordus MJ, Ji LL. Metabolic and antioxidant enzyme activities in the diaphragm: effects of acute exercise. *Respir Physiol* 1994; 96: 139-149.
183. Lawler JM, Powers SK, Criswell DS. Gender differences in diaphragmatic metabolic properties of the adult Sprague-Dawley rat. *Respir Physiol* 1994; 97: 263-273.
184. Dodd SL, Powers SK, Crawford MP. Tension development and duty cycle affect Qpeak and VO₂peak in contracting muscle. *Med Sci Sports Exerc* 1994; 26: 997-1002.
185. Powers SK, Martin D, Dodd S. Exercise-induced hypoxaemia in elite endurance athletes. Incidence, causes and impact on VO₂max. *Sports Med* 1993; 16: 14-22.
186. Powers SK, Lieu FK, Criswell D, Dodd S. Biochemical verification of quantitative histochemical analysis of succinate dehydrogenase activity in skeletal muscle fibres. *Histochem J* 1993; 25: 491-496.

187. Powers SK, Criswell D, Lawler J, Martin D, Lieu FK, Ji LL, Herb RA. Rigorous exercise training increases superoxide dismutase activity in ventricular myocardium. *Am J Physiol* 1993; 265: H2094-2098.
188. Lieu FK, Powers SK, Herb RA, Criswell D, Martin D, Wood C, Stainsby W, Chen CL. Exercise and glucocorticoid-induced diaphragmatic myopathy. *J Appl Physiol (1985)* 1993; 75: 763-771.
189. Lawler JM, Powers SK, Visser T, Van Dijk H, Kordus MJ, Ji LL. Acute exercise and skeletal muscle antioxidant and metabolic enzymes: effects of fiber type and age. *Am J Physiol* 1993; 265: R1344-1350.
190. Lawler JM, Powers SK, Hammeren J, Martin AD. Oxygen cost of treadmill running in 24-month-old Fischer-344 rats. *Med Sci Sports Exerc* 1993; 25: 1259-1264.
191. Lawler JM, Powers SK, Criswell DS. Inducibility of NADP-specific isocitrate dehydrogenase with endurance training in skeletal muscle. *Acta Physiol Scand* 1993; 149: 177-181.
192. Dodd SL, Powers SK, Brooks E, Crawford MP. Effects of reduced O₂ delivery with anemia, hypoxia, or ischemia on peak VO₂ and force in skeletal muscle. *J Appl Physiol (1985)* 1993; 74: 186-191.
193. Dodd SL, Herb RA, Powers SK. Caffeine and exercise performance. An update. *Sports Med* 1993; 15: 14-23.
194. Criswell D, Powers S, Dodd S, Lawler J, Edwards W, Renshler K, Grinton S. High intensity training-induced changes in skeletal muscle antioxidant enzyme activity. *Med Sci Sports Exerc* 1993; 25: 1135-1140.
195. Powers SK, Martin D, Cicale M, Collop N, Huang D, Criswell D. Exercise-induced hypoxemia in athletes: role of inadequate hyperventilation. *Eur J Appl Physiol Occup Physiol* 1992; 65: 37-42.
196. Powers SK, Lawler J, Criswell D, Lieu FK, Martin D. Aging and respiratory muscle metabolic plasticity: effects of endurance training. *J Appl Physiol (1985)* 1992; 72: 1068-1073.
197. Powers SK, Lawler J, Criswell D, Lieu FK, Dodd S. Alterations in diaphragmatic oxidative and antioxidant enzymes in the senescent Fischer 344 rat. *J Appl Physiol (1985)* 1992; 72: 2317-2321.
198. Powers SK, Grinton S, Lawler J, Criswell D, Dodd S. High intensity exercise training-induced metabolic alterations in respiratory muscles. *Respir Physiol* 1992; 89: 169-177.
199. Powers SK, Criswell D, Lieu FK, Dodd S, Silverman H. Diaphragmatic fiber type specific adaptation to endurance exercise. *Respir Physiol* 1992; 89: 195-207.
200. Powers SK, Criswell D, Lieu FK, Dodd S, Silverman H. Exercise-induced cellular alterations in the diaphragm. *Am J Physiol* 1992; 263: R1093-1098.
201. Martin D, Powers S, Cicale M, Collop N, Huang D, Criswell D. Validity of pulse oximetry during exercise in elite endurance athletes. *J Appl Physiol (1985)* 1992; 72: 455-458.
202. Hammeren J, Powers S, Lawler J, Criswell D, Martin D, Lowenthal D, Pollock M. Exercise training-induced alterations in skeletal muscle oxidative and antioxidant enzyme activity in senescent rats. *Int J Sports Med* 1992; 13: 412-416.
203. Grinton S, Powers SK, Lawler J, Criswell D, Dodd S, Edwards W. Endurance training-induced increases in expiratory muscle oxidative capacity. *Med Sci Sports Exerc* 1992; 24: 551-555.
204. Criswell D, Renshler K, Powers SK, Tulley R, Cicale M, Wheeler K. Fluid replacement beverages and maintenance of plasma volume during exercise: role of aldosterone and vasopressin. *Eur J Appl Physiol Occup Physiol* 1992; 65: 445-451.

205. Powers SK, Lawler J, Criswell D, Dodd S, Silverman H. Age-related changes in enzyme activity in the rat diaphragm. *Respir Physiol* 1991; 83: 1-9.
206. Powers SK, Dodd S, Criswell DD, Lawler J, Martin D, Grinton S. Evidence for an alveolar-arterial PO₂ gradient threshold during incremental exercise. *Int J Sports Med* 1991; 12: 313-318.
207. Iyriboz Y, Powers S, Morrow J, Ayers D, Landry G. Accuracy of pulse oximeters in estimating heart rate at rest and during exercise. *Br J Sports Med* 1991; 25: 162-164.
208. Dodd SL, Brooks E, Powers SK, Tulley R. The effects of caffeine on graded exercise performance in caffeine naive versus habituated subjects. *Eur J Appl Physiol Occup Physiol* 1991; 62: 424-429.
209. Deason J, Powers SK, Lawler J, Ayers D, Stuart MK. Physiological correlates to 800 meter running performance. *J Sports Med Phys Fitness* 1991; 31: 499-504.
210. Criswell D, Powers S, Lawler J, Tew J, Dodd S, Iyriboz Y, Tulley R, Wheeler K. Influence of a carbohydrate-electrolyte beverage on performance and blood homeostasis during recovery from football. *Int J Sport Nutr* 1991; 1: 178-191.
211. Powers SK, Lawler J, Dodd S, Tulley R, Landry G, Wheeler K. Fluid replacement drinks during high intensity exercise: effects on minimizing exercise-induced disturbances in homeostasis. *Eur J Appl Physiol Occup Physiol* 1990; 60: 54-60.
212. Powers SK, Lawler J, Criswell D, Silverman H, Forster HV, Grinton S, Harkins D. Regional metabolic differences in the rat diaphragm. *J Appl Physiol (1985)* 1990; 69: 648-650.
213. Powers SK, Lawler J, Criswell D, Dodd S, Grinton S, Bagby G, Silverman H. Endurance-training-induced cellular adaptations in respiratory muscles. *J Appl Physiol (1985)* 1990; 68: 2114-2118.
214. Brown DR, Forster HV, Pan LG, Brice AG, Murphy CL, Lowry TF, Gutting SM, Funahashi A, Hoffman M, Powers S. Ventilatory response of spinal cord-lesioned subjects to electrically induced exercise. *J Appl Physiol (1985)* 1990; 68: 2312-2321.
215. Powers SK, Lawler J, Dempsey JA, Dodd S, Landry G. Effects of incomplete pulmonary gas exchange on VO₂ max. *J Appl Physiol (1985)* 1989; 66: 2491-2495.
216. Powers SK, Dodd S, Freeman J, Ayers GD, Samson H, McKnight T. Accuracy of pulse oximetry to estimate HbO₂ fraction of total Hb during exercise. *J Appl Physiol (1985)* 1989; 67: 300-304.
217. Dodd SL, Powers SK, Thompson D, Landry G, Lawler J. Exercise performance following intense, short-term ventilatory work. *Int J Sports Med* 1989; 10: 48-52.
218. Powers SK, Stewart MK, Landry G. Ventilatory and gas exchange dynamics in response to head-down tilt with and without venous occlusion. *Aviat Space Environ Med* 1988; 59: 239-245.
219. Powers SK, Dodd S, Lawler J, Landry G, Kirtley M, McKnight T, Grinton S. Incidence of exercise induced hypoxemia in elite endurance athletes at sea level. *Eur J Appl Physiol Occup Physiol* 1988; 58: 298-302.
220. Lawler J, Powers SK, Thompson D. Linear relationship between VO₂max and VO₂max decrement during exposure to acute hypoxia. *J Appl Physiol (1985)* 1988; 64: 1486-1492.
221. Dodd S, Powers S, O'Malley N, Brooks E, Sommers H. Effects of beta-adrenergic blockade on ventilation and gas exchange during the rest to work transition. *Aviat Space Environ Med* 1988; 59: 255-258.

222. Dodd S, Powers S, O'Malley N, Brooks E, Sommers H. Effects of beta-adrenergic blockade on ventilation and gas exchange during incremental exercise. *Aviat Space Environ Med* 1988; 59: 718-722.
223. Powers SK, Williams J. Exercise-induced hypoxaemia in highly trained athletes. *Sports Med* 1987; 4: 46-53.
224. Powers SK, Lawler J, Thompson D, Beadle R. Measurement of oxygen uptake in the non-steady-state. *Aviat Space Environ Med* 1987; 58: 323-327.
225. Powers SK, Beadle RE, Thompson D, Lawler J. Ventilatory and blood gas dynamics at onset and offset of exercise in the pony. *J Appl Physiol (1985)* 1987; 62: 141-148.
226. Powers SK, Beadle RE, Lawler J, Thompson D. Oxygen deficit-oxygen debt relationships in ponies during submaximal treadmill exercise. *Respir Physiol* 1987; 70: 251-263.
227. Lawler J, Powers SK, Dodd S. A time-saving incremental cycle ergometer protocol to determine peak oxygen consumption. *Br J Sports Med* 1987; 21: 171-173.
228. Williams JH, Powers SK, Stuart MK. Hemoglobin desaturation in highly trained athletes during heavy exercise. *Med Sci Sports Exerc* 1986; 18: 168-173.
229. Walker R, Powers S, Stuart MK. Peak oxygen uptake in arm ergometry: effects of testing protocol. *Br J Sports Med* 1986; 20: 25-26.
230. Powers SK, Jacques M, Richard R, Beadle RE. Effects of breathing a normoxic He-O₂ gas mixture on exercise tolerance and VO₂ max. *Int J Sports Med* 1986; 7: 217-221.
231. Powers SK, Dodd S, Woodyard J, Mangum M. Caffeine alters ventilatory and gas exchange kinetics during exercise. *Med Sci Sports Exerc* 1986; 18: 101-106.
232. Garner RP, Powers SK, Church G. Effects of hypoxia and hyperoxia on ventilatory kinetics during recovery from exercise. *Aviat Space Environ Med* 1986; 57: 1165-1169.
233. Powers SK, Howley ET, Cox R. Blood lactate concentrations during submaximal work under differing environmental conditions. *J Sports Med Phys Fitness* 1985; 25: 84-89.
234. Powers SK, Dodd S, Beadle RE. Oxygen uptake kinetics in trained athletes differing in VO₂max. *Eur J Appl Physiol Occup Physiol* 1985; 54: 306-308.
235. Powers SK, Dodd S. Caffeine and endurance performance. *Sports Med* 1985; 2: 165-174.
236. Powers SK, Beadle RE. Control of ventilation during submaximal exercise: a brief review. *J Sports Sci* 1985; 3: 51-65.
237. Powers SK, Dodd S, Woodyard J, Beadle RE, Church G. Haemoglobin saturation during incremental arm and leg exercise. *Br J Sports Med* 1984; 18: 212-216.
238. Powers SK, Dodd S, Garner R. Precision of ventilatory and gas exchange alterations as a predictor of the anaerobic threshold. *Eur J Appl Physiol Occup Physiol* 1984; 52: 173-177.
239. Powers SK, Beadle RE, Mangum M. Exercise efficiency during arm ergometry: effects of speed and work rate. *J Appl Physiol Respir Environ Exerc Physiol* 1984; 56: 495-499.
240. Powers SK, Baker BA, Deason R, Mangum M. A trend analysis of steady state oxygen consumption during arm crank ergometry. *J Sports Med Phys Fitness* 1984; 24: 131-134.
241. Dodd S, Powers SK, Callender T, Brooks E. Blood lactate disappearance at various intensities of recovery exercise. *J Appl Physiol Respir Environ Exerc Physiol* 1984; 57: 1462-1465.
242. Williams J, Cottrell E, Powers SK, McKnight T. Arm ergometry: a review of published protocols and the introduction of a new weight adjusted protocol. *J Sports Med Phys Fitness* 1983; 23: 107-112.

243. Powers SK, Byrd RJ, Tulley R, Callender T. Effects of caffeine ingestion on metabolism and performance during graded exercise. *Eur J Appl Physiol Occup Physiol* 1983; 50: 301-307.
244. Powers SK, Walker R. Physiological and anatomical characteristics of outstanding female junior tennis players. *Res Q Exerc Sport* 1982; 53: 172-175.
245. Powers SK, Howley ET, Cox R. A differential catecholamine response during prolonged exercise and passive heating. *Med Sci Sports Exerc* 1982; 14: 435-439.
246. Powers SK, Howley ET, Cox R. Ventilatory and metabolic reactions to heat stress during prolonged exercise. *J Sports Med Phys Fitness* 1982; 22: 32-36.
247. Powers SK, Hopkins P, Ragsdale MR. Oxygen uptake and ventilatory responses to various stride lengths in trained women. *Am Correct Ther J* 1982; 36: 5-8.
248. Hopkins P, Powers SK. Oxygen uptake during submaximal running in highly trained men and women. *Am Correct Ther J* 1982; 36: 130-132.
249. Riley WW, Jr., Powers SK, Welch HG. The effect of two levels of muscular work on urinary creatinine excretion. *Res Q Exerc Sport* 1981; 52: 339-347.
250. Powers SK, Riley W, Howley ET. Comparison of fat metabolism between trained men and women during prolonged aerobic work. *Res Q Exerc Sport* 1980; 51: 427-431.

Chapters in Books

1. **Powers**, S. Children and Exercise. In: Motor Development in Preschool and Elementary Children. Burgess Publishing. 1984, pp. 27-47, (Ed.) J. Thomas.
2. Dempsey, J., S. **Powers**, and N. Gledhill. Demand vs. capacity in the pulmonary system response to exercise. In: Exercise, Fitness, and Health: A consensus on current knowledge . (C. Bouchard, R. Shepard, T. Stephens, J. Sutton, and B. McPherson, Eds.) Human Kinetics, Champaign, 1990.
3. Lowenthal, D., S. **Powers**, and Z. Kendrick. The effects of exercise training on skeletal muscle in humans and aging Fischer 344 rats. In: Musculoskeletal soft-tissue aging: impact on mobility. (J. Buckwalter, V. Goldberg, and S. L-Y Woo, Eds.). American College of Orthopaedic Surgeons. pp 201-207, 1993.
4. Dempsey, J., L. Adams, D. Ainsworth, R. Fregosi, C. Gallagher, A. Guz, B. Johnson, and S. **Powers**. Airway, lung, and respiratory muscle function during exercise. In: Handbook of Physiology: Exercise Physiology. Cambridge Press, London. pp. 448-514, 1996.
5. **Powers**, S., J. Lawler, and H. Vincent. The diaphragm and oxidative stress. In: Oxidative stress in skeletal muscle. (A. Reznick, Ed.) Birkhauser Verlag. Basel. pp. 223-238, 1998.
6. **Powers**, S. Fundamentals of Exercise Metabolism. In: Resource manual for guidelines for exercise testing and prescription. Lea & Febiger. (Ed.L. Durstine et al.) pp. 59-65. Third Edition. 1998.
7. Hamilton, K., J. Coombes, H. Demirel, and S. **Powers**. Physiological adaptations to exercise training. In: Basic and Applied Sciences for Sports Medicine. (R. Maughn, Ed.) pp. 90- 122, 1999.

8. **Powers**, S. and C. Sen. Physiological antioxidants and Exercise Training. In: Exercise and Oxygen Toxicity. (C. Sen and L. Packer, Eds.) Elsevier Press, Amsterdam. pp. 221-241, 2000.
9. Hamilton, K. and S. K. **Powers**. Heat shock proteins and reactive oxygen species. In: Exercise and Stress Response. CRC Press. Boca Raton, Florida. pp. 123-136, 2002.
10. **Powers**, S. K., R. Shanely, and M. Cicale. Exercise and rehabilitation from chronic obstructive pulmonary disease. In: Exercise and Disease: Prevention through training. Z. Radak (Ed). Meyer and Meyer Sport. Oxford, UK. Pp. 79-94, 2005.
11. Quindry, J. and S. **Powers**. Aging, exercise, antioxidants, and cardioprotection. In: Oxidative stress, exercise and aging. Imperial College Press. London, England. pp. 125-144, 2006.
12. **Powers**, S.K., S. Levine, D. Falk, and Andreas Kavazis. ROS and diaphragmatic weakness following mechanical ventilation. In: Free Radicals in Biology and Medicine. C. Gutierrez and C. Leeuwenburgh (Eds). Research Signpost, Kerala, India. pp. 233- 249, 2008.
13. Kavazis A.N. and **Powers**, S.K. Impact of exercise, reactive oxygen and reactive nitrogen species on tumor growth. In: Exercise, Energy Balance and Cancer: Ulrich CM, Steindorf K, and Berger NA (Eds). Springer. pp 7-20. 2013.
14. Quindry JC, Kavazis AN, and **Powers**, S.K. Exercise-Induced Oxidative Stress: Are Supplemental Antioxidants Warranted? In: Sports Nutrition: Volume XIX of the Encyclopaedia of Sports Medicine – An IOC Medical Commission Publication. Maughan RJ (Ed). John Wiley & Sons. pp 263-276. 2014.

Textbook Authorship

1. **Powers**, S. and E. Howley. Exercise Physiology: Theory and Application to Fitness and Performance. McGraw-Hill, St. Louis. 9e. 2015.
2. **Powers**, S. and S. Dodd. Total Fitness and Wellness. Benjamin Cummings. San Francisco. 7e. 2017.
3. **Powers**, S. and S. Dodd. Total Fitness and Wellness; Brief Edition. Benjamin Cummings. 6e. San Francisco. 5e 2017.
4. Brown, S., R. Byrd, and S. **Powers**. Experiences in Work Physiology. Burgess Publishing Company, Edina, MN. 2e.1997.

Extramural Grants/Contracts Attained at the University of Florida

Current Grant Funding

1. (Principal Investigator) National Institutes of Health. (R01AR064189) (2013-2018)
Mechanisms of exercise-induced protection against ventilator-induced diaphragm dysfunction (\$2,173,530 direct + indirect costs).

2. (Co-Investigator) National Institutes of Health (U01AG055137- Molecular transducers of physical activity (MoTrPAC) center grant) (2017-2022)
Regulation of exercise transducers (\$2,197,678 direct + indirect cost)

Completed Grant Funding

3. (Principal Investigator) National Institutes of Health. (R21AR0649-56) (2014-2016)
Ventilator-induced diaphragm atrophy: role of autophagy (\$357, 956 direct + indirect costs).
4. (Principal Investigator) National Institutes of Health. (R21AR063805) (2012-2015)
Ventilator-induced diaphragm dysfunction: role of FOXO signaling (\$361,688 direct + indirect costs).
5. (Principal Investigator) Rigel Pharmaceuticals research contract. (2013-2015)
Pharmacological protection against ventilator-induced diaphragm dysfunction (\$125,000 direct + indirect costs).
6. (Principal Investigator) Regeneron Pharmaceuticals research contract. (2013-2014)
Pharmacological agents and protection against ventilator-induced diaphragm dysfunction (\$65,000 direct + indirect costs).
7. (Principal Investigator) National Institutes of Health. (R01HL087839) (2009-2014)
Mechanical ventilation, oxidative stress, and diaphragmatic atrophy (\$1,450,168 direct + indirect costs).
8. (Principal Investigator) National Institutes of Health. (R01-HL072789) (2005-2010)
Mechanical ventilation and diaphragmatic oxidant injury (\$1,241, 644 direct + indirect costs)
9. (Co-Investigator with C. Leeuwenburgh, P.I.) National Institutes of Health (2003-2008)
Apoptosis and lifelong caloric restriction. (\$1,622,033 direct + indirect costs).
10. (Principal Investigator) National Institutes of Health. (R01-HL67855) (2003-2007)
Exercise, antioxidants, and I-R injury (\$1,264,256 direct + indirect costs).
11. (Principal Investigator) National Institutes of Health (R01-HL062361) (2000-2005)
Mechanical ventilation and respiratory muscles. (\$1,289,464 direct + indirect costs).

12. (Principal Investigator) Florida Department of Health: Biomedical Research Program (project BM007) (2001-2004) Exercise and myocardial protection against I-R injury (\$355,525 direct + indirect costs).
13. (Co-Investigator with B. Byrne) National Institutes of Health. Program Project Grant (2000-2005) Transduction of Hepatocytes with Recombinant AAV for Correction of Genetic and Metabolic Abnormalities (\$5,377,369 direct + indirect costs)
14. (Co-Investigator with C. Leeuwenburgh, P.I.) National Institutes of Health (R01) (2000-2005) Molecular mechanisms of skeletal muscle aging. (\$1,434,221, direct + indirect costs).
15. (Co-Principal Investigator with J. Mehta) Department of Defense (1999-2002) Aging, Exercise, and Heat Shock Proteins (\$370,472 direct costs)
16. (Principal Investigator) American Heart Association-Florida affiliate (1998-2001) Protective strategies against myocardial ischemia-reperfusion injury (\$109,388 direct + indirect costs)
17. (Principal Investigator) United States Air Force (1998-1999) Comparison of proposed submaximal aerobic fitness evaluations (\$102,949 direct + indirect costs)
18. (Principal Investigator) National Institutes of Health (R03 AG014779) (1997-1999) Beta-2 agonist restoration of muscle mass in senescent rats (\$62,413 direct + indirect costs)
19. (Principal Investigator) American Lung Association-Florida affiliate (1997-1999) Mechanical ventilation and diaphragmatic contractile dysfunction (\$58,413 direct costs)
20. (Principal Investigator) American Heart Association-Florida affiliate (1996-1998) Antioxidants and ischemia-reperfusion injury in the heart (\$97,668 direct costs)
21. (Principal Investigator) American Heart Association-Florida affiliate (1994-1996) Exercise-training and ischemia-reperfusion injury in the heart (\$78,097 direct costs)
22. (Principal Investigator) American Lung Association-Florida affiliate (1993-95) Hypothyroid-induced diaphragmatic contractile dysfunction (\$46,881 direct costs)
23. (Principal Investigator) American Lung Association-Florida affiliate (1991-92) Glucocorticoid-induced diaphragm myopathy: cellular alterations and the role of exercise as an antagonist (\$40, 769 direct costs)
24. (Principal Investigator) Ross Laboratories research contract. (1990-91) Influence of various fluid replacement strategies on shifts in plasma volume and blood electrolyte concentrations during prolonged exercise (\$46,844 direct costs)

25. (Principal Investigator) American Lung Association-Florida affiliate (1990-91) Respiratory muscle adaptation: effects of aging and exercise (\$ 49,028 direct costs)

26. (Principal Investigator) Ross Laboratories research contract (1989-1990) Influence of hydration status on anaerobic power output (\$15,000 direct costs)

Grants/Contracts Funding Summary

Total grant dollars (as PI) at University of Florida = \$9,747,153

Total grant dollars (as co-investigator) at University of Florida = \$10,631,301

Total grant dollars (PI + co-investigator) at University of Florida = \$20,378,454

Research Presentations (Professional Meetings and University Lectures)

Research Presentations at Professional Meetings

To date, I have presented 224 presentations at regional, national, or international research meetings; 186 of these lectures were invited and 20 lectures were keynote presentations. Specific presentations are identified below:

Meeting/location/date: 40th International Symposium on Sports Science, Sao Paulo, Brazil, October, 2017

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes-Keynote lecture

Meeting/location/date: 40th International Symposium on Sports Science, Sao Paulo, Brazil, October, 2017

Presentation title: Exercise-induced protection against muscle atrophy

Invited presentation: Yes

Meeting/location/date: 40th International Symposium on Sports Science, Sao Paulo, Brazil, October, 2017

Presentation title: Taking advantage of the science behind exercise is medicine

Invited presentation: Yes

Meeting/location/date: Second International Symposia of Exercise and Physical Activity, Santiago, Chile, April, 2017

Presentation title: Concurrent resistance and endurance training: Are they compatible?

Invited presentation: Yes-Keynote lecture

Meeting/location/date: Second International Symposia of Exercise and Physical Activity, Santiago, Chile, April, 2017

Presentation title: Exercise-induced oxidative stress: cause or consequences

Invited presentation: Yes

Meeting/location/date: Second International Symposia of Exercise and Physical Activity, Santiago, Chile, April, 2017

Presentation title: Exercise-induced protection against ventilator-induced diaphragm dysfunction

Invited presentation: Yes

Meeting/location/date: Annual Meeting of Southeast Chapter of the American College of Sports Medicine, Greenville, SC, February, 2017

Presentation title: Exercise-induced oxidative stress: cause or consequences

Invited presentation: Yes

Meeting/location/date: Annual Meeting of Southeast Chapter of the American College of Sports Medicine, Greenville, SC, February, 2017

Presentation title: Professional advice to trainees-Town Hall Discussion

Invited presentation: Yes

Meeting/location/date: Annual Meeting of the Society for Free Radical Research-Europe, Budapest, Hungary, June, 2016

Presentation title: Oxidative stress in disuse muscle atrophy: cause or consequence?

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine meeting, Boston, MA, May, 2016

Presentation title: Exercise-induced oxidative stress: cause and consequences

Invited presentation: Yes-tutorial Lecture

Meeting/location/date: Experimental Biology meeting, San Diego, CA, April, 2016

Presentation title: Exercise: Teaching myocytes new tricks

Invited presentation: Yes-Edward Adolph lecture-Keynote Lecture

Meeting/location/date: Southeastern American College of Sports Medicine meeting, Greenville, SC, February, 2016

Presentation title: Exercise-a tale to two myocytes

Invited presentation: Yes

Meeting/location/date: Advances in skeletal muscle biology in health and disease, Gainesville, Florida, January, 2016

Presentation title: Ventilator-induced diaphragm dysfunction

Invited presentation: Yes

Meeting/location/date: Physical activity through the lifespan, Shanghai, China November, 2015.

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes-Keynote Lecture

Meeting/location/date: 12th conference of the Asian Society of Mitochondrial Research and Medicine, Hangzhou, China, November, 2015.

Presentation title: Mitochondrial signaling in disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: World Health Organization (Europe) sponsored meeting on Health, enhancing physical activity, Istanbul, Turkey, October, 2015.

Presentation title: Exercise is good medicine

Invited presentation: Yes-Keynote Lecture

Meeting/location/date: IMPACT meeting, Pusan, South Korea, June, 2015.

Presentation title: Mechanisms of exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, San Diego, May, 2015.

Presentation title: Mitochondria: Old players in new dramas

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, San Diego, May, 2015.

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, San Diego, May, 2015.

Presentation title: Intensive Care Unit acquired muscle weakness

Invited presentation: Yes

Meeting/location/date: Seoul National University Cancer Symposium, Hwasun, Korea, April, 2015.

Presentation title: Mechanisms of doxorubicin-induced cardiomyopathy

Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Jacksonville, FL, 2015.

Presentation title: Role of angiotensin II signaling in disuse muscle atrophy

Invited presentation: No

Meeting/location/date: International Symposia on physical activity, Rio de Janeiro, 2014
Presentation title: Exercise-induced radical production: friend or foe?
Invited presentation: Yes

Meeting/location/date: International Symposia on physical activity, Rio de Janeiro, 2014
Presentation title: Exercise-induced cardioprotection
Invited presentation: Yes

Meeting/location/date: Integrative Physiology of Exercise Meeting, Miami, FL, 2014
Presentation title: Exercise-induced radical production: friend or foe?
Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Orlando, FL, 2014
Presentation title: Mitochondrial-targeted antioxidants and athletes
Invited presentation: Yes

Meeting/location/date: International symposium on physical activity, Rio de Janeiro, Brazil, 2013
Presentation title: Concurrent resistance and endurance training: are they compatible?
Invited presentation: Yes

Meeting/location/date: International symposium on physical activity, Rio de Janeiro, Brazil, 2013
Presentation title: Exercise is good medicine
Invited presentation: Yes

Meeting/location/date: 36th International Symposia of Sport Science, Sao Paulo, Brazil, 2013
Presentation title: Exercise-induced oxidative stress: cause and consequences
Invited presentation: Yes

Meeting/location/date: 36th International Symposia of Sport Science, Sao Paulo, Brazil, 2013
Presentation title: Concurrent resistance and endurance training: Are they compatible?
Invited presentation: Yes

Meeting/location/date: 36th International Symposia of Sport Science, Sao Paulo, Brazil, 2013
Presentation title: Exercise is good medicine
Invited presentation: Yes-keynote

Meeting/location/date: American College of Sports Medicine Annual Meeting, Indianapolis, IN, 2013
Presentation title: Role of mitochondrial signaling in disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Indianapolis, IN, 2013

Presentation title: Exercise is good medicine

Invited presentation: Yes -keynote-Wolffe Memorial lecture

Meeting/location/date: American College of Sports Medicine Annual Meeting, Indianapolis, IN, 2013

Presentation title: Does antioxidant supplementation blunt exercise training responses?

Invited presentation: Yes

Meeting/location/date: Gatorade Sports Science Institute XP Meeting. Houston, TX, 2013

Presentation title: Antioxidants: Good or bad?

Invited presentation: Yes

Meeting/location/date: Puerto Rican Physiological Society Annual Meeting, San Juan, PR, 2013

Presentation title: Exercise-induced cardioprotection: role of mitochondria

Invited presentation: Yes

Meeting/location/date: Turkish Society for Exercise is Medicine Annual Meeting, Istanbul, Turkey, 2012

Presentation title: Exercise is good medicine

Invited presentation: Yes

Meeting/location/date: 9th Conference of the Asian Society of Mitochondrial Research and Medicine. Beijing, China, 2012

Presentation title: Role of mitochondria in disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: Integrated Biology of Exercise Meeting, Westminster, CO, 2012

Presentation title: Exercising mitochondria for cardioprotection

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, San Francisco, CA, 2012

Presentation title: Exercise-induced oxidative stress: an introduction

Invited presentation: Yes

Meeting/location/date: Advances in Skeletal Muscle Biology in Health and Disease, Gainesville, FL, 2012

Presentation title: Role of mitochondrial signaling in disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Jacksonville, FL, 2012

Presentation title: Experimental approaches to solving complex physiological questions

Invited presentation: Yes

Meeting/location/date: Mid-Atlantic American College of Sports Medicine Annual Meeting, Harrisburg, PA, 2011

Presentation title: Exercise-induced protection to cardiac and skeletal muscles

Invited presentation: Yes-keynote lecture

Meeting/location/date: British Association of Exercise and Sports Sciences Annual Meeting, Colchester, England, 2011

Presentation title: Role of free radicals in exercise-induced muscle fatigue

Invited presentation: Yes-keynote lecture

Meeting/location/date: BBRC workshop on understanding the mechanisms underlying age-related loss of skeletal muscle mass as a guide to intervention strategies, Liverpool, England, 2011

Presentation title: Exercise-induced protection against oxidant stress in muscle

Invited presentation: Yes

Meeting/location/date: Second Brazilian Conference on Exercise and Nutrition, Goiania, Brazil, 2011

Presentation title: Exercise-induced oxidative stress: Do athletes need antioxidant supplements?

Invited presentation: Yes

Meeting/location/date: Second Brazilian Conference on Exercise and Nutrition, Goiania, Brazil, 2011

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine, Denver, CO, 2011

Presentation title: Exercise-induced oxidative stress: cause and consequences

Invited presentation: Yes

Meeting/location/date: International Academy of Sportology meeting, Tokyo, Japan, 2011

Presentation title: Redox control of muscle atrophy

Invited presentation: Yes-keynote lecture

Meeting/location/date: Texas Chapter of the American College of Sports Medicine, Austin, TX, 2011

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes-keynote lecture

Meeting/location/date: Southeastern Chapter of the American College of Sports Medicine. Greenville, SC, 2011

Presentation title: Exercise-induced oxidative stress: cause and consequences

Invited presentation: Yes

Meeting/location/date: Southeastern Chapter of the American College of Sports Medicine. Greenville, SC, 2011

Presentation title: Exercise can protect against a broken heart

Invited presentation: Yes-keynote lecture

Meeting/location/date: International Olympic Committee Consensus Conference on Sports Nutrition. Lausanne, Switzerland, 2010

Presentation title: Antioxidant supplementation for athletes

Invited presentation: Yes

Meeting/location/date: European Muscle Conference, Abano Terme, Italy, 2010

Presentation title: Role of redox signaling in skeletal muscle adaptation

Invited presentation: Yes

Meeting/location/date: European College of Sports Science Annual Congress. Antalya, Turkey, 2010

Presentation title: Aging, exercise, and mitochondrial function in skeletal muscle

Invited presentation: Yes

Meeting/location/date: European College of Sports Science Annual Congress. Antalya, Turkey, 2010

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Baltimore, MD, 2010

Presentation title: Exercise-induced oxidative stress: cause and consequences

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Baltimore, MD, 2010

Presentation title: Mitochondrial ROS as signaling molecules

Invited presentation: Yes

Meeting/location/date: Experimental Biology, Anaheim, CA, 2010

Presentation title: Role of reactive oxygen species in skeletal muscle remodeling

Invited presentation: Yes

Meeting/location/date: Exercise and Sports Sciences-Australia Annual Meeting. Gold Coast, Australia, 2010

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes-keynote lecture

Meeting/location/date: Exercise and Sports Sciences-Australia Annual Meeting. Gold Coast, Australia, 2010

Presentation title: Antioxidants-friend or foe?

Invited presentation: Yes

Meeting/location/date: 4th International Congress of Applied Sports Nutrition, Zurich, Switzerland, 2010

Presentation title: Antioxidants for athletes: sense or nonsense

Invited presentation: Yes

Meeting/location/date: New England Chapter of American College of Sports Medicine Annual Meeting, Providence, RI, 2009

Presentation title: Mechanisms of disuse muscle atrophy

Invited presentation: Yes-keynote lecture

Meeting/location/date: American College of Sports Medicine Annual Meeting. Seattle, WA, 2009

Presentation title: Redox signaling and skeletal muscle atrophy

Invited presentation: Yes

Meeting/location/date: 3rd International Symposium of Nutrition, oxygen biology, and medicine. Paris, France, 2009

Presentation title: Redox control of disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: International Conference on Intensive Care Medicine. Brussels, Belgium, 2009

Presentation title: Mechanisms of mechanical ventilation-induced diaphragmatic weakness

Invited presentation: Yes

Meeting/location/date: Round table conference on ICU-acquired weakness. Brussels, Belgium, 2009

Presentation title: Mechanical ventilation-induced diaphragmatic dysfunction

Invited presentation: Yes

Meeting/location/date: Advances in Skeletal Muscle Biology, Gainesville, FL, 2009

Presentation title: Mitochondrial-targeted antioxidants and protection against mechanical ventilation-induced diaphragmatic weakness

Invited presentation: Yes

Meeting/location/date: Southwest American College of Sports Medicine, San Diego, CA, 2008

Presentation title: Mechanisms of disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: European College of Sports Science Meeting. Estoril, Portugal, 2008

Presentation title: Exercise and heat shock proteins

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Indianapolis, IN, 2008

Presentation title: Role of free radicals in disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Indianapolis, IN, 2008

Presentation title: Myocardial ischemia-reperfusion injury and exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: Alexio Institute Conference on Exercise in Special Populations, Porto Seguro, Brazil, 2008

Presentation title: Antioxidants in health and exercise

Invited presentation: Yes

Meeting/location/date: Ironman Sports Medicine Conference, Kona, HI, 2007

Presentation title: Exercise and cardioprotection

Invited presentation: Yes

Meeting/location/date: Ironman Sports Medicine Conference, Kona, HI, 2007

Presentation title: Dietary antioxidants and exercise

Invited presentation: Yes

Meeting/location/date: Ironman Sports Medicine Conference, Kona, HI, 2007

Presentation title: Mechanisms of disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: British Association of Sport and Exercise Science Annual Meeting.
Bath, England, 2007

Presentation title: Exercise-induced cardioprotection against IR injury

Invited presentation: Yes-keynote lecture

Meeting/location/date: Life Sciences 2007, Glasgow, Scotland, 2007

Presentation title: Exercise, aging, and cardioprotection

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting. New Orleans,
LA, 2007

Presentation title: Mechanisms of disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: R. Tait McKenzie Symposium, University of Tennessee, Knoxville,
2007

Presentation title: Mechanical ventilation-induced diaphragmatic atrophy

Invited presentation: Yes

Meeting/location/date: Rocky Mountain Chapter of the American College of Sports Medicine
Annual Meeting, Colorado Springs, CO, 2007

Presentation title: Disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: Rocky Mountain Chapter of the American College of Sports Medicine,
Colorado Springs, CO, 2007

Presentation title: Exercise and your heart

Invited presentation: Yes-keynote lecture

Meeting/location/date: Southeastern Chapter of the American College of Sports Medicine Meeting, Charlotte, NC, 2007

Presentation title: Exercise can protect a breaking heart

Invited presentation: Yes-keynote lecture

Meeting/location/date: Alexis Institute Congress on Exercise Physiology, Rio de Janeiro, Brazil, 2007

Presentation title: Exercise, antioxidants, and health

Invited presentation: Yes

Meeting/location/date: Ninth International Sports Science Congress, Mugla, Turkey, 2006

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: Integrative Physiology of Exercise Meeting, Indianapolis, IN, 2006

Presentation title: Mechanical ventilation-induced diaphragm weakness

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Meeting, Denver, CO, 2006

Presentation title: Are free radicals friend or foe?: A history of free radical research in medicine and exercise science

Invited presentation: Yes- keynote D.B. Dill lecture

Meeting/location/date: American College of Sports Medicine Meeting, Denver, CO, 2006

Presentation title: Exercise and cardioprotection against ischemia-reperfusion injury

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Meeting, Denver, CO, 2006

Presentation title: Micro-nutrients and nutritional supplements and football

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Meeting, Denver, CO, 2006

Presentation title: Respiratory muscle adaptation to exercise training

Invited presentation: Yes

Meeting/location/date: American Thoracic Society Meeting. San Diego, CA, 2006

Presentation title: American Thoracic Society Meeting. San Diego, California. May, 2006

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Nashville, Tennessee, 2005

Presentation title: Oxidative stress and mechanical ventilation-induced disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Nashville, Tennessee, 2005

Presentation title: Introduction to redox regulation of disuse muscle atrophy: mechanisms and countermeasures

Invited presentation: Yes

Meeting/location/date: Ninth International Symposia on Physical Activity, Rio de Janeiro, Brazil, 2005

Presentation title: Aerobic exercise and aging

Invited presentation: Yes

Meeting/location/date: Ninth International Symposia on Physical Activity, Rio de Janeiro, Brazil, 2005

Presentation title: Why is exercise good for your heart?

Invited presentation: Yes

Meeting/location/date: Diet and Optimum Health (meeting sponsored by the Linus Pauling Institute), Portland, Oregon, 2005

Presentation title: Exercise, antioxidants, and cardioprotection.

Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Charlotte, North Carolina, 2005

Presentation title: Introduction to disuse muscle atrophy

Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Charlotte, North Carolina, 2005

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: Turkish Sports Science Congress, Antalya, Turkey, 2004

Presentation title: Evolution of exercise science research in the United States

Invited presentation: Yes

Meeting/location/date: Turkish Sports Science Congress, Antalya, Turkey, 2004

Presentation title: Sports drinks and exercise performance

Invited presentation: Yes

Meeting/location/date: Southwest American College of Sports Medicine Meeting, Las Vegas, Nevada, 2004

Presentation title: Exercise-induced protection against ischemia-reperfusion injury in the heart

Invited presentation: Yes

Meeting/location/date: Japanese Society of Exercise Physiology Annual Meeting, Narita, Japan, 2004

Presentation title: Exercise Physiology in the United States

Invited presentation: Yes

Meeting/location/date: Japanese Society of Exercise Physiology Annual Meeting, Narita, Japan, 2004

Presentation title: American College of Sports Medicine National Meeting. Indianapolis, Indiana. May 2004

Invited presentation: Yes-keynote lecture

Meeting/location/date: American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, 2004

Presentation title: 50 years of ACSM: impact of ACSM position stands

Invited presentation: Yes

Meeting/location/date: American Thoracic Society, Orlando, Florida, 2004

Presentation title: Oxidants and muscle function

Invited presentation: Yes

Meeting/location/date: Experimental Biology. Washington, DC, 2004

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: Experimental Biology. Washington, DC, 2004

Presentation title: Redox control of skeletal muscle adaptation to inactivity

Invited presentation: Yes

Meeting/location/date: Texas chapter of American College of Sports Medicine, Tyler, Texas, 2004

Presentation title: Gatorade Sports Science Institute meeting. Boston, MA. December 2003

Invited presentation: Yes- keynote lecture

Meeting/location/date: Gatorade Sports Science Institute Annual Meeting. Boston, MA, 2003
Presentation title: Can antioxidants prevent disuse muscle atrophy?
Invited presentation: Yes

Meeting/location/date: Sixth Scientific Symposium on Sport Sciences, Thessaloniki, Greece, 2003
Presentation title: Exercise and antioxidants
Invited presentation: Yes

Meeting/location/date: Sixth Scientific Symposium on Sport Sciences, Thessaloniki, Greece, 2003
Presentation title: Exercise-induced cardiac protection
Invited presentation: Yes

Meeting/location/date: Turkish National Sports Medicine Congress, Cappadocia, Turkey, 2003
Presentation title: Mechanisms of muscle disuse atrophy
Invited presentation: Yes

Meeting/location/date: Turkish National Sports Medicine Congress, Capadoccia, Turkey, 2003
Presentation title: Exercise and the heart
Invited presentation: Yes

Meeting/location/date: International Association of Biomedical Gerontology, Cambridge, England, 2003
Presentation title: Aging, exercise, and cardioprotection
Invited presentation: Yes

Meeting/location/date: Hot Topics in Sports Nutrition, Chicago, Illinois, 2003
Presentation title: Making sense of antioxidants
Invited presentation: Yes

Meeting/location/date: British Physiological Society Annual Meeting, Dublin, Ireland, 2003
Presentation title: Exercise protects the heart against I-R injury
Invited presentation: Yes

Meeting/location/date: Olympic Committee Consensus Conference on Sports Nutrition, Lausanne, Switzerland, 2003
Presentation title: Antioxidant supplementation in athletes
Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, San Francisco, California, 2003

Presentation title: Oxidative stress and muscle atrophy

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, San Francisco, California, 2003

Presentation title: Antioxidants and the heart

Invited presentation: Yes

Meeting/location/date: Frontiers of Cardiology Meeting, Winter Park, Colorado, 2003

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes

Meeting/location/date: Gatorade Sports Science Institute Annual Meeting. Miami, Florida, 2002

Presentation title: Effects of vitamin E deficiency on skeletal muscle fatigue

Invited presentation: Yes

Meeting/location/date: Gerontology Society of America, Boston, MA, 2002

Presentation title: Exercise, aging, and skeletal muscle heat shock proteins and antioxidants

Invited presentation: Yes

Meeting/location/date: Sixth International Symposia on Physical Activity, Rio de Janeiro, Brazil, 2002

Presentation title: Aerobic exercise and aging

Invited presentation: Yes

Meeting/location/date: Sixth International Symposia on Physical Activity, Rio de Janeiro, Brazil, 2002

Presentation title: Exercise and the heart

Invited presentation: Yes

Meeting/location/date: Central States Chapter of the American College of Sports Medicine meeting, Kansas City, Missouri, 2002

Presentation title: Exercise and protection against ischemia-reperfusion injury

Invited presentation: Yes-keynote lecture

Meeting/location/date: American College of Sports Medicine Annual Meeting, St. Louis, Missouri, 2002

Presentation title: Exercise-induced cardioprotection

Invited presentation: Yes- Keynote-President's lecture

Meeting/location/date: Experimental Biology, New Orleans, Louisiana, 2002

Presentation title: Skeletal muscle atrophy: role of oxidative stress

Invited presentation: Yes

Meeting/location/date: Frontiers in Cardiology Meeting, Winter Park, Colorado, 2002

Presentation title: Mechanical ventilation and diaphragmatic contractile dysfunction

Invited presentation: Yes

Meeting/location/date: Gatorade Sports Science Institute Annual Meeting, Miami, Florida, 2001

Presentation title: Nutritional antioxidants and muscular performance

Invited presentation: Yes

Meeting/location/date: Physical Exercise and training: oxidants, antioxidants, and gene regulation, Rennes, France, 2001

Presentation title: Exercise-induced alterations in myocardial antioxidants

Invited presentation: Yes

Meeting/location/date: Fifth International Symposium of Physical Activity, Rio de Janeiro, Brazil, 2001

Presentation title: Exercise-induced improvements in skeletal muscle antioxidant capacity

Invited presentation: Yes

Meeting/location/date: Fifth International Symposium of Physical Activity, Rio de Janeiro, Brazil, 2001

Presentation title: Nutritional antioxidants and muscular fatigue

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Baltimore, Maryland, 2001

Presentation title: Nutritional antioxidants and myocardial protection

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Baltimore, Maryland, 2001

Presentation title: Aging, antioxidants and myocardial ischemia-reperfusion injury

Invited presentation: Yes

Meeting/location/date: American Thoracic Society International Meeting. San Francisco, California, 2001

Presentation title: Prolonged mechanical ventilation results in diaphragmatic contractile dysfunction

Invited presentation: No

Meeting/location/date: Free Radical Underground Meeting, Gainesville, Florida, 2001

Presentation title: Mechanical ventilation-induced diaphragmatic atrophy

Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting. Columbia, South Carolina, 2001

Presentation title: Antioxidants, exercise, and myocardial protection

Invited presentation: Yes

Meeting/location/date: Frontiers in Cardiology Meeting, Winterpark, Colorado, 2001

Presentation title: Exercise and cardiac protection against ischemia-reperfusion injury

Invited presentation: Yes

Meeting/location/date: Gatorade Sports Science Institute Annual Meeting. Chicago, Illinois, 2000

Presentation title: Dietary antioxidants and myocardial protection

Invited presentation: Yes

Meeting/location/date: Sixth Sports Sciences Congress. Ankara, Turkey, 2000

Presentation title: Exercise, antioxidants and myocardial protection

Invited presentation: Yes

Meeting/location/date: Fourth International Symposium of Physical Activity, Rio de Janeiro, Brazil, 2000

Presentation title: Concurrent strength and endurance training: impact on strength development

Invited presentation: Yes

Meeting/location/date: Fourth International Symposium of Physical Activity, Rio de Janeiro, Brazil, 2000

Presentation title: Mechanisms of muscular fatigue

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Indianapolis, Indiana, 2000

Presentation title: Aging, oxidative stress, and skeletal muscle

Invited presentation: Yes

Meeting/location/date: American Association for Health, Physical Education, Recreation, and Dance National Meeting, Orlando, Florida, 2000.

Presentation title: Exercise-induced protection for the heart

Invited presentation: Yes- keynote lecture

Meeting/location/date: Cardiopulmonary rehabilitation symposium: Status 2000, Orlando, Florida, 2000

Presentation title: Exercise and myocardial protection against ischemia-reperfusion injury

Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Charlotte, North Carolina, 2000

Presentation title: Heat shock proteins and protection against myocardial ischemia-reperfusion injury

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Exercise Specialist Workshop, Orlando, Florida, 1999

Presentation title: Cardiopulmonary exercise physiology

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Meeting. Seattle, Washington, 1999

Presentation title: Heat shock proteins and protection against myocardial ischemia-reperfusion injury

Invited presentation: Yes

Meeting/location/date: Northland chapter of the American College of Sports Medicine Meeting, St. Cloud, Minnesota, 1999

Presentation title: Exercise training protects the heart against injury during a heart attack

Invited presentation: Yes

Meeting/location/date: Northland chapter of the American College of Sports Medicine Meeting, St. Cloud, Minnesota, 1999

Presentation title: Limiting factors to human performance

Invited presentation: Yes-keynote lecture

Meeting/location/date: International Congress on Metabolic aspects of human nutrition at rest and during physical stress, Maastricht, Netherlands, 1999

Presentation title: Analysis of cellular response to free radicals focusing on exercise

Invited presentation: Yes

Meeting/location/date: Cardiopulmonary Rehabilitation: update 1999. Orlando, Florida, 1999

Presentation title: Exercise training and respiratory muscle adaptation: implications for pulmonary rehab

Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting. Norfolk, Virginia, 1999

Presentation title: Exercise-induced protection against myocardial ischemia-reperfusion injury

Invited presentation: Yes

Meeting/location/date: Fifth Congress of Sports Medicine, Ankara, Turkey, 1998

Presentation title: Aging, exercise, and skeletal muscle

Invited presentation: Yes

Meeting/location/date: Fifth Congress of Sports Medicine, Ankara, Turkey, 1998

Presentation title: Antioxidants and human performance

Invited presentation: Yes

Meeting/location/date: International Society for Pathophysiology, Laiti, Finland, 1998

Presentation title: Exercise training and ischemia-reperfusion injury in the heart

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Orlando, Florida, 1998

Presentation title: Exercise and oxidative stress

Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Destin, Florida, 1998

Presentation title: Exercise-induced protection against myocardial ischemia-reperfusion injury

Invited presentation: Yes

Meeting/location/date: Frontiers in Cardiology, Winterpark, Colorado, 1998

Presentation title: Exercise and dietary antioxidants provide protection against ischemia-reperfusion injury in the heart

Invited presentation: Yes

Meeting/location/date: Stress Proteins in Biology and Medicine, Gainesville, Florida, 1997
Presentation title: Exercise-induced expression of heat shock proteins in the heart
Invited presentation: Yes

Meeting/location/date: International Union of Physiological Sciences. St. Petersburg, Russia, 1997
Presentation title: Exercise training and skeletal muscle antioxidant capacity
Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting. Denver, Colorado, 1997
Presentation title: Exercise training-induced changes in skeletal muscle antioxidant capacity
Invited presentation: Yes

Meeting/location/date: Experimental Biology Meeting, New Orleans, Louisiana, 1997
Presentation title: Exercise training improves myocardial performance during I-R
Invited presentation: Yes

Meeting/location/date: Fourth Congress of Sports Medicine, Ankara, Turkey, 1996
Presentation title: Exercise training induced changes in skeletal muscle antioxidant capacity
Invited presentation: Yes

Meeting/location/date: Fourth Congress of Sports Medicine, Ankara, Turkey, 1996
Presentation title: Exercise-induced hypoxemia
Invited presentation: Yes

Meeting/location/date: American Academy of Kinesiology and Physical Education Annual Meeting, Danvers, MA, 1996
Presentation title: Technology in Exercise Physiology
Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting. Cincinnati, Ohio, 1996
Presentation title: Diaphragmatic plasticity in health and disease
Invited presentation: Yes

Meeting/location/date: American thoracic Society Meeting, New Orleans, Louisiana, 1996
Presentation title: Bioenergetic and myosin phenotype of rat respiratory muscles
Invited presentation: Yes

Meeting/location/date: American Association for Health, Physical Education, Recreation, and Dance Annual Meeting, Atlanta, Georgia, 1996

Presentation title: Aging, exercise and skeletal muscle

Invited presentation: Yes

Meeting/location/date: Experimental Biology Meeting, Washington, DC, 1996

Presentation title: Exercise training and skeletal muscle antioxidant enzymes

Invited presentation: Yes

Meeting/location/date: Frontiers in Cardiology, Winterpark, Colorado, 1996

Presentation title: Aging and respiratory muscle function

Invited presentation: Yes

Meeting/location/date: Fourteenth Congress of Sports Medicine, Brugge, Belgium, 1995

Presentation title: Carbohydrate feedings and exercise performance

Invited presentation: Yes

Meeting/location/date: International Association of Health, Physical Education and Recreation-38th World Congress, Gainesville, Florida, 1995

Presentation title: Exercise, aging and skeletal muscle

Invited presentation: Yes

Meeting/location/date: International Association of Health, Physical Education and Recreation-38th World Congress, Gainesville, Florida, 1995

Presentation title: Exercise training-induced changes in skeletal muscle

Invited presentation: Yes

Meeting/location/date: Southeastern Chapter of the American College of Sports Medicine Meeting, Lexington, Kentucky, 1995

Presentation title: Adventures in heavy breathing

Invited presentation: Yes-Southeastern Scholar of the year keynote lecture

Meeting/location/date: Frontiers in Cardiology, Winterpark, Colorado, 1995

Presentation title: Exercise-induced hypoxemia: mechanisms and functional significance

Invited presentation: Yes

Meeting/location/date: International Symposium on Exercise Biochemistry, Aberdeen, Scotland, 1994

Presentation title: Metabolic properties of canine respiratory muscles

Invited presentation: No

Meeting/location/date: Cardiopulmonary Rehab: Status: 1994, Orlando, Florida

Presentation title: Heat and exercise intolerance

Invited presentation: Yes

Meeting/location/date: Federation of American Societies for Experimental Biology, Anaheim, CA. 1994

Presentation title: Age-related changes in diaphragmatic contractile properties: role of connective tissue

Invited presentation: No

Meeting/location/date: American College of Sports Medicine Meeting, Indianapolis, Indiana, 1994

Presentation title: Exercise and respiratory muscle plasticity

Invited presentation: Yes

Meeting/location/date: Cardiopulmonary Rehab: Status: 1993, Orlando, Florida, 1993

Presentation title: Exercise in the heat

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Seattle, Washington, 1993

Presentation title: Role of beta receptor stimulation in mediating exercise training-induced metabolic changes in respiratory and locomotor muscles

Invited presentation: No

Meeting/location/date: Federation of American Society for Experimental Biology, New Orleans, LA, 1993

Presentation title: Regional differences in training-induced alterations in diaphragmatic oxidative and antioxidant enzyme activity.

Invited presentation: No

Meeting/location/date: American College of Sports Medicine Meeting in Dallas, Texas, 1992

Presentation title: Exercise training increases SDH activity in type I and type IIa fibers in the diaphragm

Invited presentation: No

Meeting/location/date: Federation of American Societies for Experimental Biology, Anaheim, CA, 1992

Presentation title: Aging and Exercise-induced cellular alterations in the diaphragm

Invited presentation: No

Meeting/location/date: International Congress on Sports Medicine and Human Performance, Vancouver, Canada, 1991

Presentation title: Exercise-induced hypoxemia in athletes: role of inadequate hyperventilation

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Meeting in Orlando, Florida, 1991

Presentation title: Aging and respiratory muscle metabolic plasticity: effects of endurance training

Invited presentation: No

Meeting/location/date: American Physiological Society Meeting in Orlando, Florida, 1990

Presentation title: Interval training-induced metabolic alterations in respiratory

Invited presentation: No

Meeting/location/date: American College of Sports Medicine Annual Meeting, Salt Lake City, Utah, 1990

Presentation title: Endurance-training-induced cellular adaptations in respiratory muscles

Invited presentation: Yes

Meeting/location/date: Federation of American Society for Experimental Biology Meeting, Washington, DC, 1990

Presentation title: Age related changes in enzyme activity in the rat diaphragm

Invited presentation: No

Meeting/location/date: Southeastern Chapter of the American College of Sports Medicine Meeting, Columbia, South Carolina, 1990

Presentation title: Noninvasive measurement of cardiac output

Invited presentation: Yes

Meeting/location/date: Cardiopulmonary Rehab: Status 1990 in Orlando, Florida, 1990

Presentation title: Cardiopulmonary rehab: environmental concerns

Invited presentation: Yes

Meeting/location/date: Annual meeting of the American Physiological Society, Rochester, Minnesota, 1989

Presentation title: Regional metabolic differences in the rat diaphragm

Invited presentation: No

Meeting/location/date: Evidence for an alveolar-arterial gradient threshold during exercise
Presentation title: Southeastern Chapter of the American College of Sports Medicine Meeting, Atlanta, Georgia. 1989

Invited presentation: No

Meeting/location/date: Cardiopulmonary Rehab: Status 1989 in Orlando, Florida, 1989

Presentation title: Environmental concerns for exercise training

Invited presentation: Yes

Meeting/location/date: Ross Laboratories sponsored meeting: theory and practice of athletic nutrition: bridging the gap, in Monterey, California, 1988

Presentation title: Effects of carbohydrate feedings on blood electrolyte homeostasis during high intensity exercise

Invited presentation: Yes

Meeting/location/date: Federation of American Society for Experimental Biology, Las Vegas, Nevada, 1988

Presentation title: Accuracy of pulse oximetry to estimate %SaO₂ during exercise

Invited presentation: No

Meeting/location/date: American College of Sports Medicine Annual Meeting, Dallas, Texas, 1988

Presentation title: Pulmonary gas exchange limits VO₂ max in elite athletes

Invited presentation: No

Meeting/location/date: Southeastern Chapter of the American College of Sports Medicine Meeting, Winston Salem, North Carolina, 1988

Presentation title: Does pulmonary gas exchange limit maximal O₂ transport?

Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual meeting, Las Vegas, Nevada, 1987

Presentation title: Temporal patterns of arterial O₂ content at the onset of exercise

Invited presentation: No

Meeting/location/date: Southeastern American College of Sports Medicine annual meeting held in Charleston, South Carolina, 1987

Presentation title: Testing the Elite Athlete

Invited presentation: Yes

Meeting/location/date: Fifth Congress of Sports Medicine, Brugge, Belgium, 1986
Presentation title: Precision of ventilatory and gas exchange alterations to predict the anaerobic threshold
Invited presentation: Yes

Meeting/location/date: American Physiological Society meeting in New Orleans, Louisiana, 1986
Presentation title: Measurement of gas exchange in the non-steady-state
Invited presentation: No

Meeting/location/date: Second International Conference on Equine Exercise Physiology, San Diego, California, 1986
Presentation title: Respiratory gas exchange kinetics in transitions from rest or prior exercise in ponies
Invited presentation: No

Meeting/location/date: American College of Sports Medicine Meeting, Indianapolis, Indiana, 1986
Presentation title: Ventilatory and blood gas dynamics in the pony at the onset of exercise
Invited presentation: No

Meeting/location/date: Federation of American Societies for Experimental Biology, St. Louis, Missouri, 1986
Presentation title: Oxygen deficit-debt relationship in ponies during submaximal treadmill exercise
Invited presentation: No

Meeting/location/date: National Strength Research Center Symposium at Auburn University, Auburn, Alabama, 1986
Presentation title: Effects of caffeine on muscular performance
Invited presentation: Yes

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Athens, Georgia, 1986
Presentation title: Animal Models in Exercise Physiology
Invited presentation: Yes

Meeting/location/date: American College of Sports Medicine Annual Meeting, Nashville, Tennessee, 1985
Presentation title: Effects of caffeine on ventilatory and gas exchange kinetics during exercise
Invited presentation: No

Meeting/location/date: Federation of American Societies for Experimental Biology, Anaheim, California, 1985

Presentation title: Effects of breathing a normoxic He-O₂ gas mixture on VO₂ max and work tolerance

Invited presentation: No

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Boone, North Carolina, 1985

Presentation title: Control of ventilation during incremental work

Invited presentation: No

Meeting/location/date: American Physiological Society Annual Meeting. Lexington, Kentucky, 1984.

Presentation title: Oxygen uptake kinetics in trained athletes differing in VO₂ max

Invited presentation: No

Meeting/location/date: Southern District American Association of Physical Education, Health, and Recreation Convention, Biloxi, Mississippi, 1984

Presentation title: Precision of ventilatory and gas exchange measurements to predict the anaerobic threshold

Invited presentation: No

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Auburn, Alabama, 1984

Presentation title: Alterations in hemoglobin saturation during incremental arm and leg exercise

Invited presentation: No

Meeting/location/date: Southeastern American College of Sports Medicine Convention, Auburn, Alabama, 1984

Presentation title: Drugs and Sport: Caffeine and Androgens.

Invited presentation: Yes

Meeting/location/date: Southern District American Association of Physical Education, Health, and Recreation Convention, Tulsa, Oklahoma, 1983.

Presentation title: Influence of speed and work rate on energy expenditure during steady-rate arm crank exercise

Invited presentation: No

Meeting/location/date: Louisiana Association of Health, Physical Education, and Recreation Convention, 1983

Presentation title: Kinetics of ventilation following the onset of dynamic muscular exercise

Invited presentation: No

Meeting/location/date: American College of Sports Medicine Annual Meeting in Montreal, Canada, 1983

Presentation title: Exercise efficiency during arm ergometry: effects of speed work rate

Invited presentation: No

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Gainesville, Florida, 1983

Presentation title: Blood lactate concentration during submaximal work in differing environmental conditions

Invited presentation: No

Meeting/location/date: American College of Sports Medicine Convention, Minneapolis, Minnesota, 1982

Presentation title: Effects of caffeine ingestion on performance and metabolism.

Invited presentation: No

Meeting/location/date: American Association of Health, Physical Education, and Recreation Convention. Houston, Texas, 1982

Presentation title: Changes in plasma catecholamines during prolonged work and passive heating

Invited presentation: No

Meeting/location/date: Southeastern American College of Sports Medicine Meeting, Blacksburg, Virginia, 1982.

Presentation title: Physiological parameters related to success in distance running

Invited presentation: No

Meeting/location/date: Louisiana Association of Health, Physical Education, and Recreation Convention. Baton Rouge, Louisiana, 1981.

Presentation title: Oxygen uptake and ventilatory responses to various strike lengths in trained women

Invited presentation: No

Meeting/location/date: American Association of Health, Physical Education, and Recreation Convention. New Orleans, Louisiana, 1979

Presentation title: A comparison of fat metabolism in trained men and women during prolonged aerobic work

Invited presentation: No

Visiting Professorships and University Lectures

In addition to presentations at professional meetings, I have also presented 69 invited research seminars at both domestic and foreign universities. Specific presentations are identified below:

University/location/date: University of Porto, Porto, Portugal, 2017

Presentation title: Cardiovascular response to acute exercise

University/location/date: University of Porto, Porto, Portugal, 2017

Presentation title: Exercise: Teaching myocytes new tricks

University/location/date: University of Porto, Porto, Portugal, 2017

Presentation title: Cardiovascular adaptations to endurance exercise training

University/location/date: Pontificia Catholic University of Valparaiso (Valparaiso, Chile) 2017

Presentation title: Exercise is good medicine

University/location/date: Finis Terrae University (Santiago, Chile) 2017

Presentation title: Exercise: experimental tool to develop therapeutics to prevent muscle wasting

University/location/date: Lamar University (Beaumont, Texas) 2016

Presentation title: Exercise is good medicine

University/location/date: Texas Women's University (Denton, Texas) 2016

Presentation title: Exercise is good medicine

University/location/date: University of Texas-El Paso (El Paso, Texas) 2016

Presentation title: Exercise is good medicine

University/location/date: Baylor University (Waco, Texas) 2016

Presentation title: Exercise: Teaching myocytes new tricks

University/location/date: University of Texas-Austin (Austin, Texas) 2016

Presentation title: Exercise: Teaching myocytes new tricks

University/location/date: University of Missouri (Columbia) 2016

Presentation title: Exercise: Teaching myocytes new tricks

University/location/date: University of Missouri (Kansas City) 2015

Presentation title: Ventilator-induced diaphragm dysfunction

University/location/date: Shanghai University of Sport (Shanghai, China), 2015

Presentation title: Exercise-induced protection against cardiac ischemia-reperfusion injury

University/location/date: University of Iowa, 2014

Presentation title: Exercise-induced protection against disuse muscle atrophy

University/location/date: Federal University of Rio de Janeiro, Brazil, 2014

Presentation title: Mechanisms of Ventilator-induced diaphragm dysfunction

University/location/date: University of Freiburg, Freiburg, Germany, 2013

Presentation title: Exercise is good medicine

University/location/date: University of Caribbean School of Medicine. (San Juan, Puerto Rico) 2013.

Presentation title: Mechanisms of disuse muscle atrophy

University/location/date: University of Porto, Porto, Portugal, 2012

Presentation title: Biology of weight loss

University/location/date: University of Porto, Porto, Portugal, 2012

Presentation title: Mechanisms of disuse muscle atrophy

University/location/date: Jentendo University, Chiba, Japan, 2011

Presentation title: History of exercise physiology in the United States

University/location/date: Texas A&M University, College Station, TX, 2011

Presentation title: Exercise can protect against a broken heart

University/location/date: Pennsylvania State University, State College, PA, 2010

Presentation title: Mechanisms of exercise-induced cardioprotection

University/location/date: Pennsylvania State University, State College, PA, 2010

Presentation title: Redox control of disuse muscle atrophy

University/location/date: University of Porto, Porto, Portugal, 2009
Presentation title: Exercise is good for your heart

University/location/date: University of Exeter, Exeter, England, 2007
Presentation title: Exercise-induced cardioprotection

University/location/date: Municipal Institute of Investigative Medicine. Universidad Pompeu Fabra and Universidad Autònoma, Barcelona, Spain, 2006
Presentation title: Exercise and cardioprotection

University/location/date: University of Porto, Porto, Portugal, 2006
Presentation title: Exercise-induced oxidative stress

University/location/date: University of Porto, Porto, Portugal, 2006
Presentation title: Exercise-induced cardioprotection against IR injury

University/location/date: University of Porto, Porto, Portugal, 2006
Presentation title: Disuse muscle atrophy

University/location/date: University of Porto, Porto, Portugal, 2006
Presentation title: Crafting the scientific paper

University/location/date: University of Delaware, Newark, DE, 2006
Presentation title: Exercise and cardioprotection against ischemia-reperfusion injury

University/location/date: East Carolina University, Greenville, NC, 2005
Presentation title: Exercise-induced cardioprotection

University/location/date: University of California-Irvine, Irvine, CA, 2005
Presentation title: Exercise and cardioprotection

University/location/date: Juntendo University School of Medicine, Tokyo, Japan, 2004
Presentation title: Exercise-mediated protection against I-R injury

University/location/date: Toho University, Tokyo, Japan, 2004
Presentation title: Exercise-induced cardioprotection

University/location/date: Yamaguchi University, Yamaguchi, Japan, 2004
Presentation title: Mechanisms of muscle disuse atrophy

University/location/date: Juntendo University, Chiba, Japan, 2004

Presentation title: Exercise Science in the United States

University/location/date: University of Kentucky, Lexington, KY, 2004

Presentation title: Exercise-induced cardioprotection

University/location/date: Texas A&M University, College Station, TX, 2004

Presentation title: Exercise-induced protection against cardiac ischemia-reperfusion injury

University/location/date: Bloomsburg University, Bloomsburg, PA, 2004

Presentation title: Exercise-induced cardioprotection

University/location/date: Catholic University of Leuven, Leuven, Belgium, 2003

Presentation title: Mechanical ventilation and diaphragm contractile dysfunction

University/location/date: University of Bath. Bath, England, 2003

Presentation title: Exercise-induced protection against cardiac ischemia-reperfusion injury

University/location/date: University of North Texas Health Science Center, Fort Worth, Texas, 2003

Presentation title: Exercise-induced protection against myocardial I-R injury

University/location/date: Gama Filo University, Rio de Janeiro, Brazil, 2002

Presentation title: Exercise-induced cardioprotection

University/location/date: Pennsylvania State University, State College, PA, 2002

Presentation title: Mechanical ventilation-induced alterations in diaphragmatic gene expression

University/location/date: Pennsylvania State University, State College, PA, 2002

Presentation title: Exercise-induced cardioprotection

University/location/date: Colorado State University, Fort Collins, CO, 2001

Presentation title: Exercise-induced cardioprotection

University/location/date: University of Colorado, Boulder, CO, 2001

Presentation title: Mechanical ventilation-induced diaphragmatic atrophy

University/location/date: University of Colorado-Health Science Center, Denver, CO, 2001

Presentation title: Exercise-induced cardioprotection

University/location/date: Georgia Tech, Atlanta, GA, 2001
Presentation title: Exercise-induced protection against age-related changes in skeletal muscle

University/location/date: University of Montpellier, Montpellier, France, 2000
Presentation title: Exercise and cardioprotection

University/location/date: University of Paris V, Paris, France, 1999
Presentation title: Exercise and cardioprotection against myocardial I-R injury

University/location/date: University of Kuopio, Kuopio, Finland, 1997
Presentation title: Exercise-induced changes in skeletal muscle antioxidant capacity

University/location/date: University of California-Berkeley, Berkeley, CA, 1997
Presentation title: Redox control of respiratory muscle contractile properties

University/location/date: Auburn University, Auburn, AL, 1996
Presentation title: Aging, exercise, and skeletal muscle plasticity

University/location/date: Georgia State University, Atlanta, GA, 1996
Presentation title: Aging, exercise, and skeletal muscle phenotype

University/location/date: Florida Atlantic University, Davie, FL, 1996
Presentation title: Exercise and respiratory muscles

University/location/date: University of South Florida, Tampa, FL, 1996
Presentation title: Aging and exercise-induced changes in skeletal muscles

University/location/date: University of Georgia, Athens, GA, 1996
Presentation title: Aging, exercise, and skeletal muscle phenotype

University/location/date: University of Kuopio, Kuopio, Finland, 1995
Presentation title: Exercise and respiratory muscle antioxidant capacity

University/location/date: Free University, Amsterdam, Netherlands, 1995
Presentation title: Exercise-induced alterations in skeletal muscle antioxidant capacity

University/location/date: University of Texas Health Science Center, San Antonio, TX, 1995
Presentation title: Mechanisms of hypothyroid-induced alterations in diaphragm contractile function

University/location/date: Albert Einstein College of Medicine, New York City, NY, 1995
Presentation title: Exercise-induced phenotypic changes in respiratory muscles

University/location/date: State University of New York, Buffalo, NY, 1995
Presentation title: Exercise-induced alterations in respiratory muscles

University/location/date: University of South Carolina, Columbia, SC, 1994
Presentation title: Aging, exercise, and respiratory muscle function

University/location/date: Temple University School of Medicine, Philadelphia, PA, 1991
Presentation title: Exercise-induced cellular alterations in respiratory muscles

University/location/date: Mayo Clinic, Jacksonville, FL, 1991
Presentation title: Exercise and the diaphragm

University/location/date: Florida State University, Tallahassee, FL, 1991
Presentation title: Exercise-induced changes in skeletal muscle antioxidant capacity

University/location/date: Medical College of Wisconsin, Milwaukee, WI, 1987
Presentation title: Control of ventilation during exercise

University/location/date: Auburn University, Auburn, Alabama, 1986
Presentation title: Caffeine and exercise