

BIOGRAPHICAL SKETCH

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NAME Scott K. Powers		POSITION TITLE Distinguished Professor of Applied Physiology and Kinesiology	
eRA COMMONS USER NAME spowers			
EDUCATION/TRAINING <i>(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)</i>			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Carson Newman College, Jefferson City, TN	B.S.	1972	Physical Education
University of Georgia, Athens, GA	M.S.	1973	Exercise Physiology
University of Tennessee, Knoxville, TN	Ed.D.	1980	Exercise Physiology
University of California – Santa Barbara	Post-doc	1982	Physiology/Biochem
Louisiana State University, Baton Rouge, LA	Ph.D.	1985	Physiology

A. Positions and Honors.**Positions**

1980-1982	Assistant Professor, Dept. of Kinesiology, Louisiana State University, Baton Rouge
1982-1985	Part-time instructor (0.25 FTE), Dept. of Kinesiology, Louisiana State University, Baton Rouge (full-time graduate student in physiology)
1985-1986	Assistant Professor, Dept. of Kinesiology, Louisiana State University, Baton Rouge
1986-1988	Associate Professor, Dept. of Kinesiology, Louisiana State University, Baton Rouge
1989-1990	Associate Professor, Dept. of Exercise/Sports Sciences and Physiology-School of Medicine, University of Florida, Gainesville
1991-1997	Professor, Center for Exercise Science, University of Florida, Dept. of Exercise/Sport Sciences and Physiology-School of Medicine, University of Florida, Gainesville
1998-2003	Professor and Director, Center for Exercise Science, University of Florida, Dept. of Exercise/Sport Sciences and Physiology-School of Medicine, University of Florida, Gainesville
2004-present	UAA Endowed Professor, Department of Applied Physiology and Kinesiology, Director, Center for Exercise Science, University of Florida, Gainesville

Honors

1986	President, Southeastern Chapter of the American College of Sports Medicine
1987	Visiting Scholar Award-Awarded by the American College of Sports Medicine
1995	Scholar of the year-Awarded by the Southeastern American College of Sports Medicine
1995 - present	Editorial Board, Journal of Applied Physiology
1991-1995	Associate Editor, Medicine and Science in Sports and Exercise
1996	Career Enhancement Award-Awarded by the American Physiological Society
1997-98	Vice President, American College of Sports Medicine
1999-2002	University of Florida Research Professor
2004	Awarded UAA Endowed Professorship
2005	Awarded Distinguished Professor title at University of Florida
2005	Citation Award, American College of Sports Medicine

B. Selected peer-reviewed publications (selected from 140 publications).

French, J., J. Quindry, D. Falk, J. Staib, Y. Lee, K. K. Wang, and S. K. Powers. Ischemia-reperfusion induced calpain activation and SERCA2a degradation are attenuated by exercise training and calpain inhibition. *American Journal of Physiology*. epub, 2005.

Powers, S., A. Kavazis, and K. DeRuisseau. Mechanisms of disuse muscle atrophy: role of oxidative stress. *American Journal of Physiology*. 288:R337-344, 2005.

Quindry, J., J. French, K. Hamilton, Y. Lee, J. Mehta, and S. K. Powers. Exercise training provides cardioprotection against ischemia-reperfusion induced apoptosis in young and old animals. *Experimental Gerontology*. 40:416-425, 2005.

DeRuisseau, K., R. Shanely, N. Akunuri, M. Hamilton, D. Van Gammeren, A. Zergeroglu, M. McKenzie, and S.K. Powers. Diaphragm unloading via controlled mechanical ventilation alters the gene expression profile. *American Journal of Respiratory and Critical Care Medicine*. 172:1267-1275, 2005.

Lennon, S., J.C. Quindry, K. L. Hamilton, J. P. French, J. Hughes, J. L. Mehta, and S. K. Powers. Elevated MnSOD is not required for exercise-induced cardioprotection against myocardial stunning. *American Journal of Physiology*. 287:H975-980, 2004.

Hamilton K., J. C. Quindry, J. P. French, J. Staib, J. Hughes, J. L. Mehta, and S. K. Powers. MnSOD antisense oligonucleotides attenuate exercise-induced protection against arrhythmias during ischemia-reperfusion. *Free Radical Biology and Medicine*. 37:1360-1368, 2004.

Powers, S. J. Quindry, and K. Hamilton. Aging, exercise, and Cardioprotection. *Annals of the New York Academy of Sciences*. 1019:462-470, 2004.

Lennon, S. L., J. C. Quindry, J. French, S. Kim, J. L. Mehta, and S. K. Powers. Exercise and myocardial tolerance to ischemia-reperfusion. *Acta Physiologica Scandanavica*. 182:161-169, 2004.

Lennon, S. J. Quindry, K. L. Hamilton, J. French, J. Staib, J. L. Mehta, and S. K. Powers. Loss of exercise-induced cardioprotection following cessation of exercise. *Journal of Applied Physiology*. 96:1299-1305, 2004.

Hamilton, K. Staib, J., Phillips, T., Hess, A., Lennon, S. and Powers, S. K. Exercise, Antioxidants, and HSP72: Protection Against Myocardial Ischemia-Reperfusion. *Free Radical Biology and Medicine*. 34:800-809, 2003.

Demirel, H.A., K. Hamilton, R. A. Shanely, N. Tumer, M.J. Koroly, and S. K. Powers. Age and attenuation of exercise-induced myocardial HSP72 accumulation. *American Journal of Physiology*. 285:H1609-H1615, 2003.

Powers, S., S. Lennon, J. Quindry, and J. L. Mehta. Exercise and cardioprotection. *Current Opinion in Cardiology*. 17:495-502, 2002.

Hamilton, K., S. K. Powers, T. Sugiura, S. Kim, S. Lennon, N. Tumer, and J. L. Mehta. Short-term exercise training can improve myocardial tolerance to ischemia-reperfusion without an elevation in heat shock proteins. *American Journal of Physiology*. 281:H1346-1352, 2001.

Demirel, H., S. K. Powers, M. A. Zergeroglu, R. A. Shanely, K. Hamilton, J. Coombes, and H. Naito. Short-term exercise improves myocardial tolerance to in vivo ischemia-reperfusion in the rat. *Journal of Applied Physiology*. 91: 2205-2212, 2001.

Powers, S., H. Demirel, and M. Locke. Exercise, heat shock proteins, and myocardial protection from I-R injury. *Medicine and Science in Sports and Exercise*. 33: 386-392, 2001.

Vincent, H., S. K. Powers, A. Dirks, and P. Scarpance. Mechanism for obesity-induced increase in myocardial lipid peroxidation. *International Journal of Obesity*. 25:378-388, 2001.

Coombes, J., S.K. Powers, H. Demirel, J. Jessup, H. Vincent, K. Hamilton, H. Naito, R. A. Shanely, C. Sen, L. Packer, and L. Ji. Effect of combined supplementation with vitamin E and alpha-lipoic acid on myocardial performance during in vivo ischemia-reperfusion. *Acta Physiologica Scandanavica*. 169:261-269, 2000.

Coombes, J., S.K. Powers, K. Hamilton, H. A. Demirel, R.A. Shanely, M. A. Zergeroglu, C. K. Sen, L. Packer and L. Ji. Improved cardiac performance following ischemia in aged rats supplemented with vitamin E and alpha-lipoic acid. *American Journal of Physiology*. 279:R2149-R2155, 2000.

Coombes, J., S. K. Powers, H. Demirel, J. Jessup, K. Hamilton, H. Vincent, H. Naito, and R. A. Shanely. Vitamin E deficiency fails to affect myocardial performance during in vivo ischemia-reperfusion. *International Journal of Vitamin and Nutrition Research*. 70:293-300, 2000.

Demirel, H., S. Powers, C. Caillaud, J. Coombes, L. Fletcher, I. Vrabas, H. Naito, J. Jessup, and L. Ji. Exercise training reduces myocardial lipid peroxidation following short-term ischemia-reperfusion. *Medicine and Science in Sports and Exercise*. 30:1211-1216, 1998.

Powers, S, H. Demirel, H. Vincent, J. Coombes, H. Naito, K. Ward, R. Shanely, and J. Jessup. Exercise training improves myocardial tolerance to in vivo ischemia-reperfusion in the rat. *American Journal of Physiology*. 275: R1468-R1477, 1998.

Vincent, H., S. Powers, D. Stewart, R. A. Shanely, H. Demirel, and H. Naito. Obesity is associated with increased myocardial oxidative stress. *International Journal of Obesity*. 23: 67-74, 1998.

Powers, S., D. Criswell, J. Lawler, D. Martin, F. Lieu, L. Ji, and R. Herb. Rigorous exercise training increases superoxide dismutase activity in the ventricular myocardium. *American Journal of Physiology*. 265: H2094-H2098, 1993.

C. Research Support.

Ongoing Research Support

National Institutes of Health R01 HL62361	Powers (P.I.)	9/01/2005-8/31/2009
Mechanical ventilation and respiratory muscles		

The goal of this research is to determine the pathways responsible for mechanical ventilation induced oxidant production in the diaphragm.

National Institutes of Health R01 HL67855	Powers (P.I.)	7/01/2003-6/30/2007
Exercise, antioxidants and cardioprotection		

The goal of this project is to investigate the role of exercise-induced increases in myocardial MnSOD activity and glutathione levels on I-R-induced myocardial infarction.

Completed Research Support

National Institute on Aging 1R01-AG17994 NIH	Leeuwenburgh (P.I.)	8/01/2000-7/31/2005
Molecular mechanisms of oxidative stress in aging muscle		

The major goal for this project was to study mitochondrial function with aging and caloric restriction.

Role: Co-investigator.

Florida Biomedical Research Program BM 007	Powers (P.I.)	2001-2003
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Exercise-induced cardioprotection. The goal of this research was to investigate the mechanism(s) responsible for the exercise-induced prevention of I-R induced myocardial stunning.