

CURRICULUM VITA

Fred William Kolkhorst

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EDUCATION

University of Missouri-Columbia: Ph.D. in Exercise Physiology, 1990. Dissertation title: The effects of exercise mode on postexercise oxygen consumption, urinary nitrogen, and fat utilization

University of Missouri-Columbia: M.Ed. in Health Education, 1980

University of Missouri-Columbia: B.S. in Health and Physical Education, 1976

PROFESSIONAL EXPERIENCE

2008 to 2009 – Scientific Advisory Board, VitaSense Technology, Inc.

1998 to present – San Diego State University, School of Exercise and Nutritional Sciences

- Director, 2010 to present
- Professor, 2005 to present
- Director, Kasch Exercise Physiology Laboratory, 2002 to present
- Associate Professor, 1998 to 2005

1991 to 1998 – University of Northern Iowa, School of Health, Physical Education and Leisure Services

- Associate Professor, 1996-1998
- Director, Human Performance Laboratory, 1992-1998
- Assistant Professor, 1991-1996

PEER-REVIEWED PUBLICATIONS (student authors indicated in boldface)

DiPasquale, D.M., F.W. Kolkhorst, and M.J. Buono. Acute normobaric hypoxia reduces body temperature in humans. *High Altitude Medicine and Biology* (in press)

Abouaf-Tabet, E.R., F.W. Kolkhorst, and Mee Young Hong, Effects of Resveratrol on Inflammatory Bowel Disease: A Review, *Journal of Nutritional Health & Food Science* (in press)

Buono, M.J., M Burnsed-Torres, B. Hess, K. Lopez, C. Ortiz, A. Giordo, K. Lolli, B. Bloom, D. Bailey, F.W. Kolkhorst. Alterations in the rate of limb movement using a lower body positive pressure treadmill do not influence respiratory rate or phase III ventilation. *BioMed Research International*, Volume 2015 (2015), Article ID 618291, <http://dx.doi.org/10.1155/2015/618291>

Buono, M.J., **B. Holloway, A. Levine, C. Rasmussen**, and F.W. Kolkhorst. Effect of air temperature on the rectal temperature gradient at rest and during exercise. *International Journal of Physiology, Pathophysiology, and Pharmacology* 6(1): 61-65, 2014.

Sloane, C., T.C. Chan, F.W. Kolkhorst, T. Neuman, E.M. Castillo, and G.M. Vilke. Evaluation of the ventilatory effects of the prone maximum restraint (PMR) position on obese human subjects. *Forensic Science International* 237: 86–89, 2014.

- Johnson, E.C.**, F.W. Kolkhorst, A. Richburg, A. Schmitz, J. Martinez, L.E. Armstrong. Specific exercise-heat stress protocol for a triathlete's return from exertional heat stroke. *Current Sports Medicine Reports* 12(2): 106-109, 2013.
- Buono, M.J., **S. Avila, L. Garner, L. Fader**, and F.W. Kolkhorst. The effect of heat acclimation on maximal urine osmolality in humans. *Journal of Thermal Biology* 36:157-159, 2011.
- Cannon, D.T., A.C. White, M.F. Andriano**, F.W. Kolkhorst, and H.B. Rossiter. Skeletal muscle fatigue precedes the slow component of oxygen uptake kinetics during exercise in humans. *Journal of Physiology* 589(Pt 3): 727-739, 2011
- Vilke, G.M., C. Sloane, E.M. Castillo, F.W. Kolkhorst, T.S. Neuman, and T.C. Chan. Evaluation of the ventilatory effects of a restraint chair on human subjects. *Journal of Emergency Medicine* 40(6): 714-718, 2011.
- Scott, R.A., R. Irving, L. Irwin, E. Morrison, V. Charlton, K. Austin, D. Tladi, M. Deason, S.A. Headley, F.W. Kolkhorst, N. Yang, K. North, Y.P. Pitsiladis. ACTN3 and ACE genotypes in elite Jamaican and US sprinters. *Medicine and Science in Sports and Exercise* 42(1): 107-12, 2010.
- Bresciani, M.J., M. Oakleaf, K. Duncan, J. Barlow, F.W. Kolkhorst, and **J. Hickmott**. Examining inter-rater reliability for a research methodology rubric. *Journal on Practical Assessment, Research, and Evaluation* 14(13A):1-7, 2009.
- Buono, M.J., **T.R. Numan, R.M. Claros**, S.K. Brodine, and F.W. Kolkhorst. Is active sweating during heat acclimation required for improvements in peripheral sweat gland function? *American Journal of Physiology: Regulatory, Integrative and Comparative Physiology* 297(4): R1082-1085, 2009.
- Vilke G.M., C.M. Sloane, **A. Suffecool**, F.W. Kolkhorst, T.S. Newman, E.M. Castillo, and T.C. Chan. Physiologic effects of the TASER after exercise. *Academic Emergency Medicine* 16(8): 704-710, 2009.
- Marshall, S.J., S.S. Levy, C. Tudor-Locke, **K.M. Wooten**, F.W. Kolkhorst, M. Ji, C. Macera, and B.A. Ainsworth. Translating CDC/ACSM physical activity recommendations into pedometer-based step indices. *American Journal of Preventive Medicine* 636(5): 410-415, 2009.
- Cannon, D.T.**, F.W. Kolkhorst, and M.J. Buono. On the determination of ventilatory threshold and respiratory compensation point via respiratory frequency. *International Journal of Sports Medicine* 30(3): 157-62162, 2009.
- Elsner, K.L.** and F.W. Kolkhorst. Metabolic demands of simulated firefighter tasks. *Ergonomics* 51(9): 1418-1425, 2008.
- Kunert, K.**, M.L. King, and F.W. Kolkhorst. Perceptions of fatigue and sleep quality in nurses. *Journal of Psychosocial Nursing and Mental Health Services* 45(8): 30-37, 2007.
- Vilke, G.M., C. Sloane, **K.D. Bouton**, F.W. Kolkhorst, S. Levine, T.S. Neuman, E.M. Castillo, T.C. Chan. Physiological effects of the TASER X-26 on human subjects. *Annals of Emergency Medicine* 50(5): 569-575, 2007.
- Buono M.J., **K.D. Ball**, F.W. Kolkhorst. Effect of active heat acclimation on the sweat sodium ion concentration vs. sweat rate relationship in humans. *Journal of Applied Physiology* 103(3): 990-994, 2007.
- Cannon, D.T.**, F.W. Kolkhorst, and D.J. Cipriani. Effect of pedaling technique on cycling efficiency. *European Journal of Applied Physiology* 99(6): 659-664, 2007.
- Michalewicz, B.A.**, T.C. Chan, G.M. Vilke, S.S. Levy, T.S. Neuman, and F.W. Kolkhorst. Ventilatory and metabolic demands during aggressive physical restraint in healthy adults. *Journal of Forensics Sciences* 52(1): 171-175, 2007.
- Cannon, D.T.**, F.W. Kolkhorst, and D.J. Cipriani. Electromyographic data do not support a progressive recruitment of muscle fibers during exercise exhibiting a VO₂ slow component. *Journal of Physiological Anthropology* 99(6): 659-664, 2007.

- Lorenz, K.A., C. Hom, J. Lopez**, R.S. Pozos, M.J. Buono, and F.W. Kolkhorst. Effects of hypoxia on the onset of muscle deoxygenation and the lactate threshold. *Journal of Physiological Sciences* 56(4): 321-323, 2006.
- Buono, M.J., P.W. Miller, **C. Hom**, R.S. Pozos, F.W. Kolkhorst. Skin blood flow affects in vivo near-infrared spectroscopy measurements in human skeletal muscle. *Japanese Journal of Physiology* 55(4): 241-244, 2006.
- Kolkhorst, F.W., **R.S. Rezende**, S.S. Levy, and M.J. Buono. Effect of sodium bicarbonate on VO₂ kinetics during heavy exercise. *Medicine and Science in Sport and Exercise* 36(11): 1895-1899, 2004.
- DiPasquale, D.M.**, M.J. Buono, and F.W. Kolkhorst. Effect of skin temperature on cholinergic sensitivity to the human eccrine sweat gland. *Japanese Journal of Physiology*, 53(6): 427-430, 2003.
- Fox, C.W., C. Hall**, E. Hall, F. Kolkhorst, and W. Lockette. Cardiovascular baroreceptors mediate susceptibility to hypothermia in man. *Aviation, Space, and Environmental Medicine* 74(2): 132-1137, 2003.
- DiPasquale, D.M.**, C.L. Mason, P. Patterson, and F.W. Kolkhorst. Critical thinking in an inquiry-based exercise physiology laboratory course. *Journal of College Science Teaching* 32(6): 388-393, 2003.
- DiPasquale, D.M.**, F.W. Kolkhorst, J.F. Nichols, and M.J. Buono. Effect of acute altitude exposure on peripheral sweat rate *High Altitude Medicine and Biology* 3(3): 289-292, 2002.
- Kolkhorst, F.W., **D.M. DiPasquale**, and M.J. Buono. Effect of tap-water iontophoresis on sweat gland recruitment, skin temperature, and skin blood flow. *Journal of Dermatological Science* 28(2): 97-101, 2002.
- Francis, P.R., F.W. Kolkhorst, **M. Pennucci**, R.S. Pozso, and M.J. Buono. An electromyographic approach to the evaluation of abdominal exercises. *ACSM's Health & Fitness Journal* 5(4): 8-14, 2001.
- Buono, M.J. and F.W. Kolkhorst. Estimating ATP resynthesis during a marathon run: a method to introduce metabolism. *Advances in Physiology Education* 25(2): 70-71, 2001.
- Kolkhorst, F.W., C.L. Mason, **D.M. DiPasquale**, P. Patterson, and M.J. Buono. An inquiry-based learning model for an exercise physiology laboratory course. *Advances in Physiology Education* 25(2): 45-50, 2001.
- Kolkhorst, F.W., **C.L. Broshears, M.K. Hoeger**, and C.L. Thurman. Effect of a sport food bar on lipolysis and fat oxidation during prolonged exercise. *Sports Medicine, Training, and Rehabilitation* 9(1): 71-78, 1999.
- Kolkhorst, F.W., **J.N. MacTaggart**, and **M.R. Hansen**. Effects of a sports food bar on fat utilization and exercise duration. *Canadian Journal of Applied Physiology* 23(3): 271-278, 1998.
- Kolkhorst, F.W., J.J. Smaldino, **S.C. Bukatz-Wolf, L.R. Battani**, B.L. Plakke, S. Huddleston, and L.D. Hensley. Influence of physical fitness on susceptibility to noise-induced temporary threshold shift in females. *Medicine and Science in Sport and Exercise* 30(2): 289-293, 1998.
- Terrillion, K.A.**, F.W. Kolkhorst, F.A. Dolgener, and S.A. Joslyn. The effect of creatine supplementation on two 700-m maximal running bouts. *International Journal of Sport Nutrition* 7(2): 138-143, 1997.
- Kolkhorst, F.W., S.W. Mittelstadt, and F.A. Dolgener. Perceived exertion and blood lactate concentration during graded treadmill running. *European Journal of Applied Physiology and Occupational Physiology* 72(3): 272-277, 1996.
- Kolkhorst, F.W., **T.D. Toepfer**, and F.A. Dolgener. Expired air temperature during steady-state running. *Medicine and Science in Sports and Exercise* 27(12): 1621-1625, 1995.

- Kolkhorst, F.W., B.R. Londeree, and T.R. Thomas. Effects of consecutive exercise days of jogging or cycling on the resting metabolic rate and nitrogen balance. *Journal of Sports Medicine and Physical Fitness* 35(4): 343-350, 1994.
- Dolgener, F.A., F.W. Kolkhorst, and D.A. Whitsett. Long slow distance training at two frequencies and volumes in novice marathoners. *Research Quarterly for Exercise and Sport* 65(4): 339-346, 1994.
- Kolkhorst, F.W. and F.A. Dolgener. Nonexercise model fails to predict aerobic capacity in college students with high VO_{2max} . *Research Quarterly for Exercise and Sport* 65(1): 78-83, 1994.
- Thomas, T.R., B.R. Londeree, **D.A. Lawson**, and F.W. Kolkhorst. Resting metabolic rate before exercise vs a control day. *American Journal of Clinical Nutrition* 59(1): 28-31, 1994.
- Kolkhorst, F.W. Estimation of percent body fat by hydrostatic weighing in high schools. *Iowa Science Teachers Journal* 30(2): 2-7, 1993.
- Thomas, T.R., F.W. Kolkhorst, B.R. Londeree, **M. Granryd-Melkerson**, **S.T. Linsenhardt**, and M. Rutherford. Preparatory postural positions and body composition measurement by bioelectrical impedance. *Research Quarterly for Exercise and Sport* 61(2): 206-209, 1990.
- Thomas, T.R., T.B. Jordan, and F.W. Kolkhorst. Variable resistance and isotonic strength training programs in young adults. *Missouri Journal of Health, Physical Education, Recreation and Dance*, 1988.

BOOKS

Kolkhorst, F.W. and M.J. Buono. *Virtual Exercise Physiology Laboratory: CD-ROM with Lab Manual*. Baltimore: Lippincott Williams & Wilkins, 2004.

BOOK CHAPTERS / STUDY GUIDES

Kolkhorst, F.W. Assessment of body composition. In: F.A. Dolgener, and L.D. Hensley (eds.), *Personal Wellness*. Dubuque, IA: Eddie Bowers, 1998, pp. 209-239.

Kolkhorst, F.W. Weight management. In: F.A. Dolgener, and L.D. Hensley (eds.), *Personal Wellness*. B Dubuque, IA: Eddie Bowers, 1998, pp. 241-281.

Kolkhorst, F.W. *Fitness for Well-Being*. Center for Independent Study, University of Missouri, 1986 (received Meritorious Independent Study Course award from National University Continuing Education Association).

Kolkhorst, F.W. *Health*. Center for Independent Study, University of Missouri, 1984.

PROFESSIONAL PRESENTATIONS WITH PUBLISHED ABSTRACTS (student authors indicated in boldface)

Green, M.S., M.P Dusterhaus, M.J. Buono, H.B. Rossiter, F.W. Kolkhorst. Effects of exercise intensity on sweat-rate kinetics. American College of Sports Medicine Annual Meeting, Denver, CO, June 2011. [*Medicine and Science in Sports and Exercise* 43(5 Supplement): S3, 2011].

Johnson, E.C., F. W. Kolkhorst, A. Richburg, A. Schmitz, J.M. Martinez, L.E. Armstrong. Return to competition after exertional heatstroke, heat tolerance testing – triathlon. American College of Sports Medicine Annual Meeting, Denver, CO, June 2011. [*Medicine and Science in Sports and Exercise* 43(5 Supplement): S152, 2011].

Cannon, D.T., K.A. Ehlen, F.W. Kolkhorst, P.W. Miller, and M.J. Buono. Cerebral oxygenation during incremental ramp exercise under acute acetazolamide administration. American College of Sports Medicine Annual Meeting, Seattle, WA, May 2009. [*Medicine and Science in Sports and Exercise* 41(5 Supplement): S481, 2009].

Ehlen, K.A., M.J. Buono, F.W. Kolkhorst, P.W. Miller, and **D.T. Cannon**. Pulmonary ventilation during incremental ramp exercise under acute acetazolamide administration. American College of Sports Medicine Annual Meeting, Seattle, WA, May 2009. [*Medicine and Science in Sports and Exercise* 41(5 Supplement): S481, 2009].

Scott, R.A., R. Irving, L. Irwin, E. Morrison, V. Charlton, K. Austin, S. Headley, F. Kolkhorst, Y.P. Pitsiladis. Angiotensin-I converting enzyme polymorphism in elite Jamaican and USA sprinters. American College of Sports Medicine Annual Meeting, Seattle, WA, May 2009. [*Medicine and Science in Sports and Exercise* 41(5 Supplement): S123, 2009].

Irving, R., R.A. Scott, Laura Irwin, L. Irwin, E. Morrison, V. Charlton, K. Austin, S. Headley, F. Kolkhorst, Y.P. Pitsiladis. The Actn3 R577x polymorphism in elite Jamaican and USA sprinters. American College of Sports Medicine Annual Meeting, Seattle, WA, May 2009. [*Medicine and Science in Sports and Exercise* 41(5 Supplement): S123, 2009].

Barnard, A.C., C. Sloane, G.M. Vilke, T.C. Chan, T.S. Neuman, and F.W. Kolkhorst, Physiological effects of TASER X-26 after intense exercise. American College of Sports Medicine Annual Meeting, Indianapolis, IN, May 2008. [*Medicine and Science in Sports and Exercise* 40(5 Supplement): S473, 2008].

Cannon, D.T., F.W. Kolkhorst, and M.J. Buono. On the determination of ventilatory threshold and respiratory compensation point via respiratory frequency. American College of Sports Medicine Annual Meeting, Indianapolis, IN, May 2008. [*Medicine and Science in Sports and Exercise* 40(5 Supplement): S115, 2008].

- Cannon, D.T., A.D. Schenone**, and F.W. Kolkhorst. On the reproducibility of oxygen uptake kinetics during heavy exercise. *Experimental Biology*, San Diego, CA, April 2008. [*FASEB Journal* 22: 1176.8, 2008].
- Wooten, K.M.** and F.W. Kolkhorst. Effect of acidemia on oxygen uptake kinetics during high-intensity cycling. American College of Sports Medicine Annual Meeting, New Orleans, LA, June 2007. [*Medicine and Science in Sports and Exercise* 39(5 Supplement): S344, 2007].
- Bouton, K.D.**, G.M. Vilke, T.C. Chan, C. Sloane, S. Levine, T.S. Neuman, S.S. Levy, and F.W. Kolkhorst. Physiological effects of a five second TASER exposure. American College of Sports Medicine Annual Meeting, New Orleans, LA, June 2007. [*Medicine and Science in Sports and Exercise* 39(5 Supplement): S323, 2007].
- Marshall, S.J., S.S. Levy, B.E. Ainsworth, F.W. Kolkhorst, C. Tudor Locke, C.A. Macera, **K.M. Wooten**, and M. Ji. Translating CDC/ACSM physical activity recommendations into pedometer-based step indices. American College of Sports Medicine Annual Meeting, New Orleans, LA, June 2007. [*Medicine and Science in Sports and Exercise* 39(5 Supplement): S187, 2007].
- Chan T., S. Sloane, T. Neuman, S. Levine, E. Castillo, G. Vilke, **K. Bouton**, and F. Kolkhorst. The impact of the Taser weapon on respiratory and ventilatory function in human subjects. Society for Academic Emergency Medicine Annual Meeting, Chicago, IL, May 2007. [*Academic Emergency Medicine* 14(5 Supplement 1):S191-S192, 2007].
- Wooten, K.M., E.M. Sickinger, G.G. Guerrero, C.A. Garcia, D.R. Weim**, M.J. Buono, and F.W. Kolkhorst. Effects of short term endurance training on VO₂, HR, and StO₂ kinetics. American College of Sports Medicine Annual Meeting, Denver, CO, June 2006. [*Medicine and Science in Sports and Exercise* 38(5 Supplement):S492, 2006].
- Lorenz, K.A., C. Hom, J. Lopez**, R.S. Pozos, M.J. Buono, and F.W. Kolkhorst. Effects of hypoxia on the onset of muscle deoxygenation and the lactate threshold. American College of Sports Medicine Annual Meeting, Denver, CO, June 2006. [*Medicine and Science in Sports and Exercise* 38(5 Supplement):S527, 2006].
- Michalewicz, B.A.**, T.C. Chan, G.M. Vilke, S.S. Levy, T.S. Neuman, and F.W. Kolkhorst. Ventilatory and metabolic demands during aggressive physical restraint in healthy adults. American College of Sports Medicine Annual Meeting, Denver, CO, June 2006. [*Medicine and Science in Sports and Exercise* 38(5 Supplement):S452-S453, 2006].
- Kolkhorst, F.W., **C. Hom, J. Lopez**, R. Pozos, and M.J. Buono. Effect of exercise in heat on near-infrared spectroscopy measurements. American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 2005. [*Medicine and Science in Sports and Exercise* 37(5 Supplement):S168, 2005].
- Vilke G.M., **B. Michalewicz**, F.W. Kolkhorst, T. Neuman, T.C. Chan. Does weight force during physical restraint cause respiratory compromise? Society for Academic Emergency Medicine Annual Meeting, New York, NY, May, 2005. [*Academic Emergency Medicine* 12(5 Supplement):16, 2005].
- Kolkhorst, F.W., **R.S. Rezende**, S.S. Levy, and M.J. Buono. Effect of blood pH on VO₂ kinetics during high-intensity exercise. American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 2004. [*Medicine and Science in Sports and Exercise* 36(5 Supplement):S232, 2004].
- DiPasquale, D.M.**, M.J. Buono, and F.W. Kolkhorst. Anapyrexia: Effect of hypoxia on body temperature in humans. American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 2004. [*Medicine and Science in Sports and Exercise* 36(5 Supplement):S339, 2004].
- Kolkhorst, F.W., M.J. Buono, R.E. Klepper, and R.A. Sabbadini. Delayed-onset muscle soreness not related to TNF- α or CRP. American College of Sports Medicine Annual Meeting, San Francisco, CA, May 2003. [*Medicine and Science in Sports and Exercise* 35(5 Supplement):S238, 2003].

- DiPasquale, D.M.**, M.J. Buono, and F.W. Kolkhorst. Effect of skin temperature on the cholinergic sensitivity of the human eccrine sweat gland. American College of Sports Medicine Annual Meeting, San Francisco, CA, May 2003. [*Medicine and Science in Sports and Exercise* 35(5 Supplement):S31, 2003].
- DiPasquale, D.M.**, M.J. Buono, and F.W. Kolkhorst. Effect of acute exposure to moderate altitude on peripheral sweating. American College of Sports Medicine Annual Meeting, St. Louis, MO, June 2002. [*Medicine and Science in Sports and Exercise* 34(5 Supplement):S223, 2002].
- LaMaster, K.J., **D.M. DiPasquale**, P. Patterson, C.L. Mason, and F.W. Kolkhorst. Shifting instructor behaviors in an exercise physiology laboratory course using inquiry-based learning. American Alliance for Health, Physical Education, Recreation and Dance National Convention and Exposition, San Diego, CA, April 2002. [*Research Quarterly for Exercise and Sport* 73(1):A-74, 2002].
- DiPasquale, D.M.**, M.J. Buono, and F.W. Kolkhorst. Effect of sweat gland inactivation on skin temperature and skin blood flow during exercise in the heat. American College of Sports Medicine Annual Meeting, Baltimore, MD, June 2001. [*Medicine and Science in Sports and Exercise* 33(5 Supplement):S162, 2001].
- Kolkhorst, F.W., **M.T. Greene**, and M.J. Buono. VO_2 kinetics during high-intensity exercise are controlled by multiple mechanisms. American College of Sports Medicine Annual Meeting, Baltimore, MD, May 2001. [*Medicine and Science in Sports and Exercise* 33(5 Supplement):S59, 2001].
- Buono, M.J., **M.T. Greene**, and F.W. Kolkhorst. Nasal vs. oral ventilation during graded exercise. American College of Sports Medicine Annual Meeting, Baltimore, MD, June 1999. [*Medicine and Science in Sports and Exercise* 33(5 Supplement):S59, 2001].
- Kolkhorst, F.W., F.A. Dolgener, **C.L. Broshears**, **W.A. Sewell**, and **S.J. Musson**. Effects of prior supramaximal exercise on VO_2 kinetics. American College of Sports Medicine Annual Meeting, Seattle, WA, June 1999. [*Medicine and Science in Sports and Exercise* 31(5 Supplement):S333, 1999].
- Epperson, C.E.**, M.J. Buono, F.W. Kolkhorst, **K.K. Reynolds**, J.A. Nanista, and R.D. Sheffield. Correlation of lactate threshold, VO_{2max} , and running economy with 4.8 kilometer running performance. American College of Sports Medicine Annual Meeting, Seattle, WA, June 1999. [*Medicine and Science in Sports and Exercise* 31(5 Supplement):S104, 1999].
- Osei, A.K.**, F.W. Kolkhorst, F.A. Dolgener, and L.D. Hensley. Effect of ibuprofen on delayed-onset muscle soreness and subsequent exercise performance. American College of Sports Medicine Annual Meeting, Orlando, FL, June 1998. [*Medicine and Science in Sports and Exercise* 30(5 Supplement):S103, 1998].
- MacTaggart, J.N.**, **M.R. Hansen**, and F.W. Kolkhorst. Effect of the Access Fat Conversion Activity Bar on fat utilization and time to exhaustion. American College of Sports Medicine Annual Meeting, Denver, CO, May 1997. [*Medicine and Science in Sports and Exercise* 29(5 Supplement):S51, 1997].
- Voeltz, J.T.**, F.A. Dolgener, and F.W. Kolkhorst. The effect of high-dose ephedrine hydrochloride on high-intensity treadmill performance. American College of Sports Medicine Annual Meeting, Cincinnati, OH, June 1996. [*Medicine and Science in Sports and Exercise* 28(5 Supplement):S35, 1996].
- Terrillion, K.A.**, F.A. Dolgener, F.W. Kolkhorst, and S.A. Joslyn. The effect of creatine supplementation on two 700-m maximal running bouts. American College of Sports Medicine Annual Meeting, Cincinnati, OH, June 1996. [*Medicine and Science in Sports and Exercise* 28(5 Supplement):S36, 1996].
- Hoeger, M.K.**, F.W. Kolkhorst, and C.L. Thurman. Access™ Fat Conversion Activity Bar fails to increase fat utilization during exercise. American College of Sports Medicine Annual

- Meeting, Minneapolis, MN, June 1995. [*Medicine and Science in Sports and Exercise* 27(5 Supplement):S11, 1995].
- Kolkhorst, F.W., J.J. Smaldino, S. Huddleston, **L.R. Battani**, and B.L. Plakke. Influence of physical fitness on susceptibility to temporary hearing loss after noise exposure. American College of Sports Medicine Annual Meeting, Minneapolis, MN, June 1995. [*Medicine and Science in Sports and Exercise* 27(5 Supplement):S154, 1995].
- Williams, R.M.**, F.A. Dolgener, and F.W. Kolkhorst. Anaerobic performance in sprint-trained, middle-distance trained, and untrained women. American College of Sports Medicine Annual Meeting, Minneapolis, MN, June 1995. [*Medicine and Science in Sports and Exercise* 27(5 Supplement):S8, 1995].
- Kolkhorst, F.W., **T.D. Toepfer**, and F.A. Dolgener. Comparison of expired air temperature using a heated or unheated pneumotachometer. American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 1994. [*Medicine and Science in Sports and Exercise* 26(5 Supplement):S206, 1994].
- Dolgener, F.A. and F.W. Kolkhorst. The effects of training frequency and volume on performance in novice marathoners. American College of Sports Medicine Annual Meeting, Indianapolis, IN, June 1994. [*Medicine and Science in Sports and Exercise* 26(5 Supplement):S105, 1994].
- Kolkhorst, F.W., S.W. Mittelstadt, and F.A. Dolgener. Effects of running grade on oxygen consumption at blood lactate concentrations of 2.0 and 4.0 mM. American College of Sports Medicine Annual Meeting, Seattle, WA, June 1993. [*Medicine and Science in Sports and Exercise* 25(5 Supplement):S143, 1993].
- Kolkhorst, F.W., T.R. Thomas, and B.R. Londeree. Responses during repeated days of prolonged jogging and cycling. American College of Sports Medicine Annual Meeting, Dallas, TX, May 1992. [*Medicine and Science in Sports and Exercise* 24(5 Supplement):S176, 1992].
- Londeree, B.R., T.R. Thomas, and F.W. Kolkhorst. Reliabilities of metabolic variables, heart rate, and RPE during prolonged jogging on three consecutive days. American College of Sports Medicine Annual Meeting, Dallas, TX, May 1992. [*Medicine and Science in Sports and Exercise* 24(5 Supplement):S176, 1992].
- Thomas T.R., F.W. Kolkhorst, B.R. Londeree, and **B.J. Brooks**. Prolonged recovery from different types of exercise. American College of Sports Medicine Annual Meeting, Salt Lake City, UT, May 1990. [*Medicine and Science in Sports and Exercise* 22(2 Supplement):S84, 1990].
- Londeree, B.R., F.W. Kolkhorst, and T.R. Thomas. Thermic effects of a meal after different modes of prolonged exercise. American College of Sports Medicine Annual Meeting, Salt Lake City, UT, May 1990. [*Medicine and Science in Sports and Exercise* 22(2 Supplement):S50, 1990].

INVITED PROFESSIONAL PRESENTATIONS

- Kolkhorst, F.W. Integrated Systems Determinants of Exercise Intolerance, Symposium Chair, American College of Sports Medicine Annual Meeting, Seattle, WA, May 2009.
- Kolkhorst, F.W. Active learning in an exercise physiology lab course. CSU Exercise Physiology Meeting, San Diego, CA, November 2008.
- Kolkhorst, F.W. Statin intolerance, exercise, and muscle myopathies. Sport and Exercise Sciences Summer Research Symposium: Exercise, Health and Rehabilitation, University of Leeds (UK), August 2008.
- Kolkhorst, F.W. Metabolic calculations. ACSM Health/Fitness Instructor certification workshop. San Diego, CA, Summer 2001-2003.

- Kolkhorst, F.W. Nutritional concerns for increasing muscular size and strength: an overview of dietary supplements and procedures. ACSM Scientific and Applied Aspects of Resistance Exercise Training CEQ. San Diego, CA, April 2000.
- Kolkhorst, F.W. Effectiveness of the Access™ Fat Conversion Activity Bar as an ergogenic aid to exercise. Human Anatomy and Physiology Society Regional Conference. Waterloo, IA, April 1996.
- Kolkhorst, F.W. Workstations for the undergraduate physiology of exercise laboratory. American Institute of Biological Sciences Annual Meeting, San Diego, CA, August 1995.

PROFESSIONAL PRESENTATIONS (student authors indicated in boldface)

- Green, M.S., Duesterhaus, M.P.**, Buono, M.J., Rossiter, H.B., Kolkhorst, F.W. Effects of exercise intensity on sweat-rate kinetics. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, October 2010.
- Elsner, K.L.** and F.W. Kolkhorst. Energy requirements of simulated firefighting tasks. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, November 2007.
- Cannon, D.T.**, F.W. Kolkhorst, and M.J. Buono. On the determination of ventilatory threshold and respiratory compensation point via respiratory frequency. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, November 2007.
- Cannon, D.T.**, F.W. Kolkhorst, D.J. Cipriani. Effect of pedaling technique on cycling efficiency. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, November 2006. (received first place for student research award)
- Wooten, K.M.**, F.W. Kolkhorst. Effect of acidemia on oxygen uptake kinetics during high-intensity cycling. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, November 2006.
- Bouton, K.D.**, G.M. Vilke, T.C. Chan, C. Sloane, S. Levine, T.S. Neuman, S.S. Levy, and F.W. Kolkhorst. Physiological effects of a five second Taser exposure. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, November 2006.
- Kolkhorst, F.W. and K. Henige. Using inquiry-based learning in the undergraduate exercise physiology lab. American College of Sports Medicine Annual Meeting. Denver, CO, June 2006.
- Guerrero, G.G., C.A. Garcia, E.M. Sickinger, D.R. Weim, A.D. Schenone**, M.J. Buono, Fred W. Kolkhorst. Effects of an endurance training program on muscle oxygen saturation on-kinetics. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, November 2005.
- Sickinger, E.M., C.A. Garcia, D.R. Weim, G.G. Guerrero**, S.S. Levy, M.J. Buono, F.W. Kolkhorst. HR and VO₂ on-kinetic responses to short-term endurance training. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, November 2005.
- Kolkhorst, F.W., R.E. Klepper, M.J. Buono, and R.A. Sabbadini. Do pro-inflammatory cytokines and sphingolipids contribute to delayed-onset muscle soreness associated with eccentric exercise? Italian Association for Myology (AiM) Congress, Padava, Italy, June 2003.
- W. Fox, **C. Hall**, E. Hall, F. Kolkhorst, and W. Lockette. Cardiovascular baroreceptors mediate susceptibility to hypothermia in man. Aerospace Medical Association Annual Meeting, San Antonio, TX, May 2003.
- Kolkhorst, F.W. Using inquiry-based learning in the undergraduate exercise physiology lab. American College of Sports Medicine Annual Meeting. Baltimore, MD, June 2001.
- Kolkhorst, F.W., C.L. Mason, P. Patterson, and **D.M. DiPasquale**. Inquiry-based learning in the exercise physiology lab. Southwest Chapter of the American College of Sports Medicine Annual Meeting, San Diego, CA, November 2000.

- Kolkhorst, F.W., **Terrillion, K.A.**, F.A. Dolgener, and S.A. Joslyn. The effect of creatine supplementation on two 700-m maximal running bouts. 1997 International Symposium on Sport for All, Guangzhou, China, July 1997.
- Broshears, C.L.**, M. Matissek, J.R. Hill, J. Niak, A.C. Snyder, C. Foster, K.W. Rundell, and F.W. Kolkhorst. Knee angle and Hb/Mb O₂ desaturation in the vastus lateralis of speed skaters. American College of Sports Medicine Annual Meeting, Denver, CO, May 1997.
- Smaldino, J.J., **S.C. Bukatz**, F.W. Kolkhorst, and B.R. Plakke. Influence of physical fitness level on susceptibility to TTS as measured by pure tone thresholds and distortion product otoacoustic emissions. 12th National Conference and Workshops Audiological Society of Australia, Brisbane, Queensland, Australia, April 1996.
- Battani, L.**, J. Smaldino, F. Kolkhorst, and B. Plakke. Influence of physical fitness level on susceptibility to TTS as measured by distortion product otoacoustic emissions. American Academy of Audiology Annual Meeting, Phoenix, AZ, April 1993.
- Kolkhorst, F.W. and I.M. Simet. Longer incubation periods needed to obtain stable calculated total cholesterol values with Sigma Procedure No. 352. Iowa Academy of Science Annual Meeting and the University of Northern Iowa Sigma Xi Chapter Annual Meeting, Cedar Falls, IA, April 1992.
- Kolkhorst, F.W., T.R. Thomas, **M. Granryd-Melkerson**, **S. Linsenbardt**, B.R. Londeree, and M. Rutherford. Preparatory postural positions and body composition measurement by bioelectrical impedance. Central States Chapter of American College of Sports Medicine Annual Regional Meeting, Tulsa, OK, October 1988.

GRANTS AND CONTRACTS

- Ventilatory Effects of the Prone Maximum Restraint Position on Obese Human Subjects* funded by The Institute for the Prevention of In-Custody Deaths (received as a subcontract to SDSU from UCSD (Gary Vilke, UCSD, PI), F.W. Kolkhorst, Principle Investigator, \$1360. January 2010 – June 2011.
- Effect of High-Dose Simvastatin on Mitochondrial Functioning* funded by the San Diego State University Grants Program. F.W. Kolkhorst, Principal Investigator, \$7554, January 2010 – June 2011.
- Effect of Taser on Cardiac, Respiratory, and Metabolic Physiology in Human Subjects*, funded by the National Institute of Justice for \$231,754. T.C. Chan, Principal Investigator, F.W. Kolkhorst, Co-Investigator. October 2005 to March 2008.
- Validation of the SensorMedics Vmax Encore Metabolic Measurement System*, funded by VIASYS Healthcare in kind donation of a \$66,000 Vmax Encore system. F.W. Kolkhorst, Principal Investigator, S.S. Levy, Co-Principal Investigator. November 2004 to May 2006.
- Pedometers and Step Counters for Physical Activity Promotion Project*, funded by Department of Health and Human Services (SIP 9 – 04003 FY04) for \$551,611. S.J. Marshall, Principal Investigator, F.W. Kolkhorst, Co-Investigator. October 2004 to September 2007.
- Effects of CVAC Treatment on Maximal Oxygen Consumption, Lactate Threshold, Peak Sustained Power Output, and Exercise Recovery in Trained Cyclists*, funded by CVAC Systems for \$10,716. F.W. Kolkhorst, Principal Investigator, J.F. Nichols, Co-Principal Investigator. June 2003 to June 2004.
- Determination of Equivalent Energy Expenditures of Walking and Jogging Speeds to Various Cadences of a Mixed Ramping Routine*, funded by Gin Miller, Inc. for \$9,154. F.W. Kolkhorst, Principal Investigator. October 2002 to September 2003.
- Effect of Blood pH on VO₂ Kinetics during High-Intensity Cycling*, funded by the San Diego State University Faculty Grant-in-Aid. F.W. Kolkhorst, Principal Investigator. January 2002.

- Effect of Creatine Supplementation on VO₂ Kinetics in Older Cyclists*, funded by the SDSU Research, Scholarship, and Creative Activity Program. F.W. Kolkhorst, Principal Investigator. November 2001.
- Physiology of Exercise Laboratory Enhanced by Computer-Assisted Instruction and Inquiry-Based Investigation*, funded by the National Science Foundation Course, Curriculum, and Laboratory Improvement–Adaptation and Implementation program (DUE-9950622) and SDSU College of Professional Studies and Fine Arts for \$94,392. F.W. Kolkhorst, Principal Investigator, M.J. Buono, Co-Principal Investigator. July 1999 to June 2003.
- Effects of Repeated Bouts of Supramaximal Exercise on Oxygen Kinetics and Oxygen Deficit*, funded by the San Diego State University Faculty Grant-in-Aid. F.W. Kolkhorst, Principal Investigator. December 1998.
- Workstations for the Undergraduate Physiology of Exercise Laboratory*, funded by the National Science Foundation Instrumentation Laboratory Improvement program (DUE-9351841) and the University of Northern Iowa for \$81,640. F.W. Kolkhorst, Principal Investigator, F.A. Dolgener and W.J. Ryan, Co-Investigators. August 1993 to January 1996.
- Expired Air Temperature during Steady-state Running*, funded by from Hans Rudolph, Inc., Kansas City, MO for \$1,057 in kind donation of modified pneumotachometer, valves, and facemasks. F.W. Kolkhorst, Principal Investigator. November 1992.

GRADUATE THESES CHAIRED

- Dillon Gilbertson (Exercise Physiology, Summer 2014). Effects of environmental conditions on recruitment and peripheral fatigue.
- Daniel J. Cannon (Exercise Physiology, Spring 2008). On the determination of ventilatory threshold and respiratory compensation point via respiratory frequency.
- Kelly J. Duffy (Exercise Physiology, Spring 2007). Effect of heat on the lactate threshold and muscle deoxygenation.
- Kimberly L. Elsner (Exercise Physiology, Spring 2007). Relationships between VO_{2max}, energy requirement, and performance of firefighters on a firefighter skills test.
- Karen M. Wooten (Exercise Physiology, Summer 2006). Effect of systemic acidosis on oxygen uptake kinetics during high-intensity cycling.
- Kent A. Lorenz (Exercise Physiology, Fall 2005). Hypoxic-induced changes in muscle oxygenation and lactate threshold.
- Sean M. Burke (Exercise Physiology, Fall 2005). Evaluation of an arm-to-arm bioelectrical impedance analyzer as an estimate of body composition in highly and less active men.
- Tomohiro Fujitani (Physical Education, Fall 2005). Applications of Wi-Fi tracking technology to measure athletic movement.
- Betty A. Michalewicz (Exercise Physiology, Fall 2004). Effects of hogtie restraining process on cardioventilatory physiology.
- Mariana Shedden (Exercise Physiology, May 2003). Effect of creatine supplementation on VO₂ kinetics.
- John P. Muller (Physical Education, December 2002). Effects on power development by heavy resistance and dynamic weight training on adolescent athletes.
- Dana M. DiPasquale (Exercise Physiology, July 2001). The effect of sweat gland inactivation on skin temperature and skin blood flow during exercise in the heat.
- Charlotte A. Hall (Exercise Physiology, December 2000). Blood pressure predicts individual responses to thermal stress.
- Maeva Pennucci (Exercise Physiology, May 2000). Electromyographic activity of abdominal muscles during trunk curls with and without the Rol-A-Flex.

Kristie K. Reynolds (Exercise Physiology, May 2000). Physiological adaptations of VO_{2max} , blood lactate, running economy, and percent fat in females after a cross-country training season.

Atta K. Osei (Physical Education, University of Northern Iowa, December 1996). The effects of ibuprofen on exercise-induced muscle soreness and performance. (awarded first place in the 1997 UNI Outstanding Master's Thesis Award competition).

Po-Ching Feng (Physical Education, University of Northern Iowa, March 1996). The effect of supramaximal exercise intensity on the maximal accumulated oxygen deficit in trained females.

REVIEWER

- *American Journal of Physiology*
- *The Physician and Sportsmedicine*
- *Ergonomics*
- *Experimental Physiology*
- *Hormone and Metabolic Research*
- *International Journal of Sports Nutrition & Exercise Metabolism*
- *Iowa Association for Health, Physical Education, Recreation and Dance Journal*
- Iowa Science Foundation grant proposals
- *Journal of Applied Physiology*
- Mayfield Publishing Company
- McGraw-Hill Higher Education
- *Medicine and Science in Sports and Exercise*
- Midwestern Association of Graduate Schools regional thesis competition
- Pearson Benjamin Cummings
- Prentice Hall Health Publishing Company
- *Research Quarterly for Sport and Exercise*

UNIVERSITY COURSES TAUGHT

San Diego State University

- *Administration of Exercise and Fitness Programs*
- *Advanced Exercise Physiology Laboratory*
- *Exercise and Health*
- *Exercise Physiology Lab*, course director
- *Physiological Chemistry of Exercise*
- *Physiology of Exercise*
- *Exercise, Sport and Aging*
- *Seminar in Advanced Physiology of Exercise*
- *Seminar in Directed Readings in Exercise and Nutritional Sciences*

University of Northern Iowa

- *Anatomy and Physiology of Human Movement*
- *Conditioning Theory and Practice*
- *Graduate Colloquium*
- *Human Physiology*
- *Laboratory Instrumentation and Test Interpretation* (graduate course)
- *Muscle Physiology* (graduate course)

- *Personal Wellness*
- Physical education activity courses
- *Physiology of Exercise*
- *Principles of Physical Fitness*
- *Sport Nutrition* (graduate course)

University of Missouri-Columbia

- *Elements of Health Education*
- *Teaching of Health*
- Physical education activity courses

PROFESSIONAL SERVICE

- President, Southwest Chapter of American College of Sports Medicine, 2008-2009.
- Chair, Exercise Sciences Education Interest Group of the American College of Sports Medicine, 2003-2007 (initiated the interest group)
- University of Northern Iowa chapter of Sigma Xi, the Scientific Research Society (President-elect), 1997-1998 (resigned upon accepting SDSU appointment)

UNIVERSITY SERVICE

- Chair, Intercollegiate Athletics Council, 2010 to present
 - Member, 2006 to present
 - SDSU representative for Coalition on Intercollegiate Athletics Association (COIA), 2009 to 2010.
- Chair, Student Research Committee, 2007 to 2010 (initiated and organized first SRS)
- Member, University Research Council, 1998-2001, 2007 to 2010
 - Research Council representative on Faculty Grants Committee, 1998-2001
- Member, CSU Student Research Competition committee, 2002-2007
- Participation in the Young Natives Scholars academic outreach and support program (Stephanie Brodine, Principal Investigator), 2004 to 2009
- Participation in the SDSU 360 Tours (SDSU development activity), 2003 to 2007
- Member, Western Association of Schools and Colleges (WASC) SDSU re-accreditation committee, 2002 to 2005
- Participation in the SDSU BRIDGES *Imprint 2002*, October, 2002

COMMUNITY SERVICE

- Exercise testing of athletes from U.S. Olympic Training Center, Chula Vista, CA, 1998-2000
- Presentation of "Ergogenic Aids for Improving Athletic Performance," to U.S. Navy Helicopter Combat Support Squadron Eleven, San Diego, CA, November, 2000
- Presentation of "Physical Activity: It's Role in Health" to El Cajon High School health class, November, 1999
- Presentation of "Sports Nutrition for the High School Athlete" at Independence High School, IA, October 1996
- Presentations of an exercise physiology laboratory to Wartburg College students, Fall, 1994-1997
- Career Day presentations for Black Hawk Elementary School students, University of Northern Iowa, April, 1994-1997
- Presentation of physiology seminars to Price Laboratory high school students, University of Northern Iowa, December 1991
- Presentation of "How to live to be 113: reducing health risk factors" at Central Missouri Women in Insurance. Columbia, MO, April 1988

RECOGNITION / AWARDS

- Recipient of *TOP 25 AWARD* by President Weber, 2008
- Recognized by *Quest for the Best* for Vice Presidential Student Service Award, April, 2005.
- Conferred *Fellow* status by the American College of Sports Medicine, 2001
- *Faculty/Student Mentoring Program Honoree* from the College of Professional Studies and Fine Arts, May 2001
- Selected as *Faculty Fellow* by the National Partnership for Advanced Computational Infrastructure / California State University Education Center on Computational Science & Engineering, 2000-2001.
- 1988-89 Superior Graduate Student Achievement Award, University of Missouri-Columbia
- 1985-86 Outstanding Graduate Teaching Award, University of Missouri-Columbia

PRESENT AND PAST PROFESSIONAL AFFILIATIONS

American College of Sports Medicine
American Physiological Society
Iowa Academy of Science
National Association for Sport and Physical Education
San Diego State University Heart Institute
Sigma Xi, The Scientific Research Society