

CURRICULUM VITAE

THOMAS L. CLANTON, Ph.D.

Title:

BK and Betty Stevens Professor and Chair of Applied Physiology & Kinesiology,
University of Florida

Date and Place of Birth:

February 1, 1949.
Omaha, Nebraska.

Citizenship:

United States.

Current Address and Phone Number:

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Wife: Pamela Clanton
Son: Samuel Clanton

Education:

Gustavus Adolphus College, St. Peter, MN, B.A. (Chemistry), 1971.
University of Chicago Hospitals, Chicago, IL, Degree (Respiratory Therapy), 1973.
University of Nebraska Medical School, Omaha, NB, Ph.D. (Physiology and Biophysics),
1980.
Postdoctoral Fellowship, The Ohio State University, Dept. of Physiology, 1980-1982

Academic Postitions:

2015- Chair: Department of Applied Physiology and Kinesiology, University of Florida
2013-2014 Interim Chair of Health Education and Behavior, University of Florida
2007 - Professor of Applied Physiology & Kinesiology. University of Florida, 2007
2007- *Professor emeritus* (PI status), Department of Inter Med., The Ohio State University.
1997- 2007 Professor of Internal Medicine, Physiology and Cell Biology and Allied Medicine
1988 - 1997 Associate Professor of Medicine, Physiology and Allied Medicine; Director,
Pulmonary Diagnostic Laboratory. The Ohio State University, Columbus, Ohio.
1982 - 1988 Assistant Professor Medicine, Physiology, and Allied Medicine. The Ohio State
College of Medicine, Director, Pulmonary Diagnostic Laboratory. The Ohio State
University, Columbus, Ohio.
1980 – 1982 Postdoctoral Fellow, Department of Physiology. The Ohio State University,
Columbus, Ohio.
1976 – 1980 Graduate Research and Teaching Assistant, Physiology and Biophysics, U. of
Nebraska Medical School

Professional Memberships: Past and Present

American College of Sports Medicine (ACSM) (current)
American Physiological Society (ACSM) (current)

American Heart Association (current)
American Thoracic Society 1981-2007
American Federation for Clinical Research
American Association for the Advancement of Science
Biophysical Society
Ohio Thoracic Society
Society for Free Radical Biology & Medicine

Honors , Awards and Appointments:

Academic Scholarship, Gustavus Adolphus College, 1967 - 1969.
Guild of St. Ansgar (Leadership Award), Gustavus Adolphus College, 1971.
Parker B. Francis Fellow, 1980-1981.
American Heart Association Fellow 1981-1982
New Investigator Award, National Institutes of Health 1985-88
Technical Director: Pulmonary Diagnostic Services, Ohio State University Medical Center (1985 -2000)
Director: OSU Pulmonary Rehabilitation Program (1995 -2000)
American Lung Association Research Committee, 1987-1990
Chair: American Lung Association of Ohio Research Committee (1990)
American Heart Association Research Committee, 1987-88
Co-chair: College of Medicine, Animal Review Committee, (1988-1990)
Chair: Department of Internal Medicine, Research Advisory Committee (1991 -1993)
Member: Department of Internal Medicine, Research Advisory Committee (1993- 2000)
Planning Committee, Nominating Committee: American Thoracic Society, Assembly on Respiratory Structure and Function (1992-1995)
Ad Hoc Reviewer: National Institutes of Health, Respiratory and Applied Physiology Study Section (1990,1991,1995{x3},1996,).
Regular Member National Institutes of Health, NHLBI, Respiratory and Applied Physiology Study Section. (1997-2001)
Reviewer, J Appl. Physiol., Chest, Thorax, Heart and Lung, Int J Sports Med., Acta Physiologica Scand, Biochemistry, Free Radicals in Biology and Medicine, Antioxidants and Redox Signaling, American J of Physiol (Cell), American Journal of Physiology (Regulatory, Integrative and Comparative) , J of Physiology (London), Canadian J of Applied Physiology, American Journal of Respiratory and Critical Care Medicine, Muscle and Nerve, Antioxidants and Redox Signaling, Wellcome Trust Grants 2004, VA Merit Grants, Comprehensive Physiology
Frequent Session Chairperson: American Physiological Society (Exp Bio), American Thoracic Society, American College of Sports Medicine
Faculty Sponsor of the OSU College of Medicine, Postdoctoral Research Fellow Association (1992-1996)
Editorial Board: Journal of Applied Physiology (1996 - Present)
Section Leader of the Joint International Committee on Clinical Assessment of Respiratory Muscles, American Thoracic Society and European Thoracic Society (1996),
Graduate Studies Chair: OSU Interdisciplinary Program in Biophysics (2000-2001)
Director of the OSU Interdisciplinary Graduate Program in Biophysics (2001- 2006)

Co-Director of the OSU Interdisciplinary Graduate Program in Biophysics (2006-)
Director- Multiphoton and Confocal Imaging Core, Dorothy M. Davis Heart & Lung and
Research Institute (2001 - 2004)
Elizabeth Gross Award for Faculty Excellence in Biophysics
Associate Director, Dorothy M. Davis Heart & Lung Research Institute (2002-2007)
Space Committee, Core Laboratory Committee, Operations Committee, Dorothy M. Davis
Heart & Lung Research Institute (2002-)
Fellowship Committee, OSU Graduate School (2004-2005)
Department of Internal Medicine Promotions and Tenure Committee (2003-2007)
Stevens Visiting Scholar, University of Florida, (March 2004)
Davis Heart & Lung Research Institute Mentorship Award (Dec 2004)
Editorial Board: American Journal of Physiology, Regulatory Integrative and Comparative
Physiology (2008- present)
Chair College of Health and Human Performance T & P Committee (2010-2011)
Chair Department of Applied Physiology and Kinesiology T & P Committee (2009-2010)
BK and Betty Stevens Professorship, Applied Physiology and Kinesiology (2011-)
Member: University of Florida Academic Personnel Board APB (University T & P) (2012-
2013 acad yr)
Chair University of Florida Academic Personnel Board APB (University T & P) (2012-2013
acad yr)
American Physiological Society Exercise and Environmental Physiology Section Counselor
(2015-)

Grants /Contracts/Patents:

Past Funding

AHA, Central Ohio Heart Chapter, Research Chapter, Postdoctoral Fellowship, "Control of
rate and depth of breathing in chickens." 1980-1981. \$12,000.
AHA, Central Ohio Heart Chapter, Research Grant, "Origin of respiratory blood pressure
waves in chickens." October, 1981 - September, 1982. \$11,381.
Bremer Foundation, The Ohio State University College of Medicine, P.I. "Factors
influencing the development of respiratory muscle fatigue in man." 1982. \$5,000.
University Small Research Grant, The Ohio State University, P.I. "The effects of pulmonary
and systemic CO₂ on ventilatory reflexes in the dog." 1983. \$7,500.
National Institutes of Health, New Investigator Award, P.I. "Isokinetic analysis of inspiratory
muscle function." 1985 - 1988. \$37,500/year.
American Heart Association, "Does lack of O₂ limit maximum force in fatigued diaphragm?"
P.I. 1987 - 1989. \$25,000/year.
National Institutes of Health RO-1, "A dynamic tension-time index hypothesis." P.I. 1988 -
1991. \$84,614/year.
University Seed Grant, The Ohio State University, "Free Radical Mediated Diaphragm Injury
in Respiratory Failure." P.I., 1991 -92. \$11,739.00
American Lung Association Fellowship Grant for Philip Diaz, M.D., fellow being trained in
laboratory, 1990 - 1993, \$19,000/yr.
Ross Laboratories, "Interactions between surfactant replacement therapy and fluid

management in a model of ARDS” 1992-3, P.I. \$60,000/yr
Pfizer Corporation: The effects of an NK-1 (Substance P) antagonist on ventilatory drive in humans: P.I. Nicholas Gerber, Co-P.I. T. Clanton, approx. \$50,000.
Pfizer Corporation: Phase II Clinical Trial of an NK-1 substance P antagonist on bronchoconstriction in asthma. P.I. Nicholas Gerber, Co-Inv.:T.Clanton, \$60,000.
American Heart Association, Central Ohio Chapter, "Endogenous hydroxyl radical production and protein oxidation in skeletal muscle, P.I. Phil Diaz, Co.-Inv.: T. Clanton, \$30,000/yr.
American Heart Association, Central Ohio Chapter, "Potential Mechanisms of stress adaptation in skeletal muscle," \$30,000/yr (Fellowship support for Kathy Andersen, M.D.; 4th year fellow).
National Institutes of Health, RO-1 “HIV-induced emphysema: a challenge to conventional ideas. P.I. James Gadek, Co-I T. Clanton, 10%. 1993-1998, \$317,502/yr
National Institutes of Health, RO-1, "Lymphocytic alveolitis, IL-1B regulation and lung injury", P.I. Mark Wewers, Co-I. T. Clanton, \$250,000/yr.
National Institutes of Health, RO-1, "Mechanisms of oxidant production in respiratory failure", P.I. T. Clanton, 1994-1999 , \$192,077/yr
National Institutes of Health, R-21 “In vivo detection of free radicals using NMR ”, P.I. T Clanton, 1999-2001, \$110,000/yr
National Institutes of Health, Clinical center for lung volume reduction surgery for emphysema: a multicenter assessment and prospective patient registry P.I.: Philip Diaz, Patrick Ross; Co-I. T. Clanton, et. al. (10% Donated). Total award/year: \$200,000/yr 1997-2003.
National Institutes of Health: Macrophage HIV infection in the lung microenvironment. P.I. M. Wewers, Co-I T. Clanton (10%), \$200,000/yr 1999-2004
National Institutes of Health: RO1-53333-05-09 Redox mechanisms of respiratory muscle stress adaptation. P.I. T. Clanton \$250,000/yr, 1999-2004
National Institutes of Health: RO1-53333-09-14 Redox mechanisms of respiratory muscle stress adaptation. P.I. T. Clanton \$250,000/yr, 2004-2008
American Heart Association Grant in Aid (2011-2013), \$82,500/yr. Skeletal muscle interleukin-6 and the endocrine response to stress.
US ARMY Research Institute of Environmental Medicine (USARIEM) Development of a Heat Injury Model in Conscious Mice, \$99,000 through fall 2014

Current Funding

BK and Betty Stevens Endowed Professorship (2011-present) \$30,000-40,000/yr

Department of Defense; Broad Agency Announcement, Extramural Medical Research
Sept 2015-Sept 2018 P.I Clanton

“Prevention of organ injury in exertional heat stroke: preclinical evaluation of a new class of NSAIDs” \$875,938 UF Award Direct + Indirect costs over 3 years.

National Institutes of health RO1 NIGMS 1R01GM118895-01 July 2016-June 2020.

“Functional role of skeletal muscle in the innate immune response to sepsis”

PI: Clanton Modular \$197,000 direct costs/year for 4 years.

Patent

United States Patent 4854574 Inspiratory Muscle Trainer. Inventors: Thomas L. Clanton & Douglas Larson, Assignee: Healthscan Inc. (now Phillips), Filing Date: March 15, 1988, Continuous royalties, still commercially available, used throughout the world for pulmonary rehabilitation programs.

Graduate Students and Postdoctoral Fellows at University of Florida since 2007

*Steven Welch completed his Ph.D.. Currently doing a postdoc at UCLA with James Tidball.

* Neil Phillips, Ph.D student., University Fellow Student, completed M.S. in 2010. Left UF for medical/personal reasons. Returned to grad school at Johns Hopkins University.

Veronica Novosad Completed M.S. in 2011 in Clanton Lab. Currently a medical resident at Vanderbilt.

Anthony Payne, Ph.D. Completed 2 year postdoc training in Clanton lab. Currently a tenure track faculty at Frank H Netter School of Medicine.

Michelle King Completed her Ph.D. in December 2015, Currently Asst. Professor at Loyola, will begin Postdoc in June, 2016.

Peter Schwagerl 2nd Year Ph.D. Student. (TA), left U. of Florida to pursue other career opportunities.

Jennifer Richards. 2nd year non-thesis masters student currently working and applying for graduate school in physical therapy.

Alex Mattingly Second year Ph.D. student currently working in the lab.

Orlando Laitano, Ph.D. Postdoctoral fellow supported by the Brazilian government to work in the Clanton lab. Returning in July, 2016.

*UNIVERSITY FELLOWS

Undergraduate students trained in the lab at UF.

Daniel Chen. Worked in the laboratory 2 years. Is a co-author on one manuscript and will be a coauthor on a manuscript in the last stages of submission. He is accepted for medical school in 2013

Veronica Novosad. Performed an internship in our laboratory as an undergrad and then went on to complete a masters degree. Is now in Medical School at UF. She is on one manuscript as a co-author and will have a first author manuscript.

Ashley Van Putton completed her undergraduate University Research Assistantship in my laboratory. She completed a project on imaging Ca⁺² and presented it locally. She is now applying for training programs in biomedical science.

Deanna Dempsey completed 6 months of volunteering in our laboratory (2011). Is currently a graduate student in Exercise Physiology in Doug Casa's lab at University of Connecticut.

Angelika Linowski Completed 1 year of research experience in lab (2009-2010). Currently a sales representative for Orthopedic Surgical Medical Devices in Tampa.

Danielle Mustico Currently in Pediatrics school. .

Joel Haines Applying to Medical School, in training at Pre-professional program USF, 2014

David Van Steenberger Working in the lab since Spring 2015.

PUBLICATIONS

Peer Reviewed Literature

1. **Clanton TL**, Ballam GO, Moore RK, Kunz AL. Rapid ventilatory responses to changes in insufflated CO₂ in awake roosters. *J Appl Physiol* 53(6):1371-1377, 1982.
2. Ballam GO, **Clanton TL**, Kunz AL. Ventilatory phase duration in the chicken: role of mechanical and CO₂ feedback. *J Appl Physiol* 53(6):1378-1385, 1982.
3. **Clanton TL**, Lipscomb WT. The effects of hypercapnia on the Breuer-Hering threshold for inspiratory termination. *J Appl Physiol* 57(4):1211-1221, 1984.
4. Ballam GO, **Clanton TL**, Kunz AL. Pressure loading at constant pulmonary CO₂ concentrations in Gallus domesticus. *Resp Physiol* 58:197-206, 1984.
5. **Clanton TL**, Dixon GF, Drake JE, Gadek JE. Inspiratory muscle conditioning using a threshold loading device. *Chest* 87(1):62-66, 1985.
6. **Clanton TL**, Dixon GF**, Drake JE, Gadek JE. Effects of breathing pattern on inspiratory muscle endurance in humans. *J Appl Physiol* 59(6):1834-1841, 1985.
7. Ballam GO, **Clanton TL**, Kaminski RP, Kunz AL. Effect of sinusoidal forcing of ventilatory volume on avian breathing frequency. *J Appl Physiol* 59(3):991-1000, 1985.
8. **Clanton TL**, Dixon GF**, Drake JE, Gadek JE. Effects of swim training on lung volumes and inspiratory muscle conditioning in varsity female swimmers. *J Appl Physiol* 62(1):39-46, 1987.
9. Thomson DB**, **Clanton TL**. A simple dosimeter for bronchial provocation testing using a solid state electronic timing module. *Respir Care* 31:1204-1206, 1986.
10. **Clanton TL**, Ameredes BT*. An isokinetic approach to the study of inspiratory muscle endurance: effects of flow rate. "Respiratory Muscles and Their Neuromotor Control", *Neurology and Neurobiology*, Vol. 26. Sieck, et al., eds. Alan R. Liss, Inc. 347-351, 1987.
11. **Clanton TL**, Ameredes BT*. Fatigue of the inspiratory muscle pump in humans: an isoflow approach. *J Appl Physiol* 64(4):1692-1699, 1988.
12. Ameredes BT*, **Clanton TL**. Accelerated decay of inspiratory pressure during hypercapnic endurance trials in humans. *J Appl Physiol* 65(2):728-735, 1988.
13. Ameredes BT*, **Clanton TL**. Hyperoxia and moderate hypoxia fail to affect inspiratory muscle fatigue in humans. *J Appl Physiol* 66(2):894-900, 1989.
14. **Clanton TL**, Ameredes BT*, Thomson DB*, Julian MW. Sustainable inspiratory pressures over varying flows, volumes and duty cycles. *J Appl Physiol* 69(5):1875-1882, 1990.
15. Ameredes BT*, **Clanton TL**. Muscle shortening increases fatigue of canine diaphragm. *Progress in Clinical & Biological Research*. 785-787, 1990.
16. Ameredes BT*, **Clanton TL**. Increased fatigue of isovelocity vs. isometric contractions of canine diaphragm. *J Appl Physiol* 69(2):740-746, 1990.
17. Barohn RJ, **Clanton TL**, Sahenk Z, Mendell JR. Recurrent respiratory insufficiency and depressed ventilatory drive complicating mitochondrial myopathies. *Neurology* 40:103-106, 1990.
18. Ameredes BT*, **Clanton TL**, Julian MW*. Muscle shortening increases sensitivity of fatigue to severe hypoxia in canine diaphragm. *J Appl Physiol*. 71(6):2309-2316, 1991.
19. Grassino AE, **Clanton TL**. Respiratory muscle fatigue. *Seminars in Respiratory Medicine*. 12(4): 305-319, 1991

20. Kinker JR*, Haffor A, Stephan M, **Clanton TL**. Kinetics of CO uptake and diffusing capacity in the transition from rest to steady state exercise. *J Appl Physiol* 72(5):1764-1772, 1992
21. **Clanton TL**, Hartman E*, Julian MW. Preservation of sustainable inspiratory muscle pressure at increased end-expiratory lung volume. *Am Rev Resp Dis*. 147:385-391, 1993
22. Diaz PT**, **Clanton TL**, Pacht, ER. Emphysema-like pulmonary disease associated with human immunodeficiency syndrome. *Annals Int Med* 116(2):124-128, 1992
23. Diaz PT**, Julian, MW, Wewers MD, **Clanton TL**. Tumor necrosis factor and endotoxin do not directly affect *in vitro* diaphragm function. *Am Rev Resp Dis*. 148(2):281-288, 1993.
24. Diaz PT**, **Clanton TL**. Marked pulmonary function abnormalities in a case of HIV-associated pulmonary hypertension. *Chest* 104:313-315, 1993.
25. Diaz PT**, She ZW, Davis WB, **Clanton TL**. Hydroxylation of salicylate by the *in vitro* diaphragm: evidence for hydroxyl radical production during fatigue. *J Appl Physiol* 75(2):540-552, 1993.
26. Grassino AE, **Clanton T**. Mechanisms of muscle fatigue. *Monaldi Arch Chest Dis*. 48(1): 94-98, 1993.
27. Preusser B**, Winningham M, **Clanton TL**. High vs low intensity respiratory muscle interval training in patients with severe C.O.P.D. *Chest* 106:110-117, 1994.
28. Sawyer EH, **Clanton TL**. Improved pulmonary function and exercise tolerance with inspiratory muscle conditioning in children with cystic fibrosis. *Chest* 104:1490-97, 1993.
29. Diaz PT**, Brownstein E*, **Clanton TL**. Effects of N-acetylcysteine on *in vitro* diaphragm function are temperature dependent *J. Appl. Physiol.* 77(5):2434-2439, 1994.
30. Borzone G*, Julian MW, Merola AJ, **Clanton TL**. Loss of diaphragm glutathione is associated with respiratory failure induced by resistive breathing. *J. Appl. Physiol.* 76(6):2825-2831, 1994.
31. Borzone G*, Zhao B, Merola AJ, Berliner L, **Clanton TL**. Detection of free radicals by electron spin resonance in rat diaphragm following resistive loading. *J. Appl. Physiol.* 77(2):812-818, 1994.
32. Hartell MG*, Borzone G*, **Clanton TL**, LJ Berliner. Detection of free radicals in blood by electron spin resonance (ESR) in a model of respiratory failure in the rat. *Free Rad. Biol.Med.* 17(5):467-472, 1994.
33. **Clanton TL**, Diaz PT. Clinical assessment of the respiratory muscles. *Physical Therapy* 75(11):983-995, 1995
34. Andersen, KA**, PT Diaz**, VP Wright, **TL Clanton**. N-tert-butyl-a-phenylnitron: a free radical trap with unanticipated effects on diaphragm function. *J Appl Physiol* 80(3):862-868, 1996.
35. Diaz PT**, MJ Costanza*, VP Wright, MW Julian, JA Diaz, **TL Clanton**. Dithiothreitol improves recovery of *in vitro* diaphragm fatigue. *Med and Science in Sports and Exer.* 30(3): 1-6, 1998.
36. Narayan, M*, LJ Berliner, AJ Merola, PT Diaz**, **TL Clanton**. Biological Reactions of peroxynitrite: evidence for an alternative pathway of salicylate hydroxylation. *Free Rad. Research*, 27:63-72, 1997
37. Waugh, JB*, TB Opt'Holt, JE Gadek, **TL Clanton**. High dose furosemide alters gas exchange in a model of acute lung injury. *J.Crit. Care*, 11(3):129-137, 1996.
38. Pacht, ER, PT Diaz**, **TL Clanton**, J Hart, JE Gadek. Alveolar lining fluid glutathione is

- not reduced in asymptomatic HIV-seropositive subjects. *Am J Resp. Crit. Care Med*, 155(1):374-377, 1997.
39. **Clanton, TL**, A short history of nitric oxide and skeletal muscles. *Comp. Biochem. and Physiol.* 119(1): 165-66, 1997.
 40. Pacht, ER., P Diaz, **T Clanton**, J Hart, JE Gadek. Alveolar fluid glutathione decreases in asymptomatic HIV-positive subjects over time *Chest* 112:785-88, 1997.
 41. Andersen, KA **, **TL Clanton**. Redox regulation of shock protein expression and contractile function in skeletal muscle following heat stress. (*In Revision*, 1998)
 42. Mohanraj, P*, JA Merola, V Wright, **TL Clanton**. Antioxidants protect rat diaphragmatic muscle function under hypoxic conditions. *J Appl. Physiol.* 84(6):1960-1966, 1998. 1998.
 43. Pacht E, P Diaz, **T Clanton**, J Hart, J Gadek. Serum vitamin E decreases in HIV-seropositive subjects over time. *Lab. Clin. Med.*130(3):293-296. 1997.
 44. Wewers, M.D., P.T. Diaz, ME. Wewers, M.P. Lowe, M Flynn, A. Winnard, **T.L. Clanton**. Cigarette smoking n HIV infection induces a suppressive lung inflammatory environment that is independent of blood CD4counts. *Am J Respir Crit Care Med.* Nov;158(5 Pt 1):1543-1549,1998
 45. Gelman, M., MA King, DE Neal , ER Pacht, **TL Clanton**, PT Diaz. Focal air trapping in patients with HIV infection: CT evaluation and correlation with pulmonary function tests *Am J Roentgenol* 172(4):1033-8, 1999
 46. Khramtsov V, L J Berliner ,**TL Clanton**, NMR spin trapping: detection of free radical adducts using a phosphorus containing nitron spin trap, *Magn.Reson.Med* 42(2) 228-234: 1999.
 47. Waugh, JB*, T. B. Op't Holt, LE Olson, JE Gadek, **TL Clanton**. Surfactant alters gas exchange in a model of acute lung injury. *Critical Care Medicine* 28(8):2887-2892, 2000.
 48. Diaz, PT, M King, E. Pacht, HN Nagaraja, M. Wewers, **TL. Clanton**. Pathophysiology of diffusion impairment in HIV infection, *Am J Respir Crit Care Med.* Jul;160(1):272-7, 1999
 49. Diaz, PT, M. King ER Pacht, JE Gadek, H.N Nagaraja, J. Drake, **TL Clanton**. Increased susceptibility to pulmonary emphysema among HIV-seropositive smokers, *Annals of Int. Med.* 132 (5):369-372, 2000
 50. Diaz, P.T., M King, M.D. Wewers, J.E. Gadek, D. Neal, J. Drake, **T.L Clanton**. HIV-infection increases susceptibility to smoking-induced emphysema. *Chest* 117:285S, 2000
 51. **Clanton TL**, Klawitter P*, Zuo L. Oxidants in skeletal muscle function: physiologic and pathophysiologic implications. *Proc.Soc. Exp.Biol.Med.* 222:253-261, 1999.
 52. Zuo, L*, FL Christofi, VP Wright, CY Liu, AJ Merola, LJ Berliner, **TL Clanton** Intra- and extracellular reactive oxygen formation during heat stress in skeletal muscle *Amer. J. Physiol. (Cell)* 273:C1058-1066, 2000
 53. Angelos, M.G., P.F. Klawitter, H.N. Murray, **T.L. Clanton**. Low-flow perfusion in the heart following global ischemia impoves LV function. *Acad. Emerg. Med*, 7(1):1171, 2000
 54. Berliner, L.J., Khramtsov, V., Fujii, H., **T.L. Clanton**. Unique in vivo applications of spin traps. *Free Rad. Biol. Med.* 30(5), 489-499, 2001.
 55. Khramtsov, V.V., V.A. Reznikov, L.J. Berliner, A.K. Litkin, I.A. Grigor'ev, **T.L. Clanton**. NMR spin trapping: detection of free radical reactions with a new fluorinated DMPO analog. *Free Rad. Biol. Med.* 30(10)1099-1107, 2001
 56. **Clanton, TL**, Klawitter P*. *Physiological and Genomic Consequences of Intermittent Hypoxia. Invited Review: Adaptive responses of skeletal muscle to intermittent hypoxia: the*

- known and the unknown. *J. Appl. Physiology*, 90: 2476-2487, 2001.
57. Khramtsov, V.V., L.J. Berliner, **T.L. Clanton**. New approaches in spin labeling and spin trapping. Part Two. Kluwer Academic/Plenum Press (Ed. Greta Pifat), *Supramolecular Structure and Function* 7,89-105, 2001.
 58. **Clanton, T.L.**, V. Wright, PJ Reiser, P.T. Klawitter*, N. Prahbakar. *Physiologic and genomic consequences of intermittent hypoxia*. Selected Contribution: improved anoxic tolerance in rat diaphragm following intermittent hypoxia. *J. Appl. Physiol.* 90:2508-251, 2001
 59. Khramtsov V.V., Vladimir A. Reznikov, Lawrence J. Berliner, Artem K. Litkin, Igor A. Grigor'ev, and **T.L. Clanton**, "NMR spin trapping: detection of free radical reactions with a new fluorinated DMPO analog," in *Supramolecular Structure and Function* 7, (G. Pifat-Mrzljak, ed, Kluwer Academic/Plenum Publishers, New York) pp. 107-117 2001
 60. Klawitter, P.F., H.N. Murray, **T.L. Clanton**, M.G. Angelos. Reactive oxygen generated during myocardial ischemia enables energetic recovery during reperfusion. *Am J Physiol (Heart Circ)* 283: H1656-H1661, 2002
 61. Zuo, L*, **T.L. Clanton**. Detection of reactive oxygen and nitrogen species using redox-sensitive fluorescent probes. Invited Review: *Methods in Enzymology*, 325: 307-325, 2002
 62. Klawitter PF, Murray HN, Clanton TL, Palmer BS, Angelos MG Low flow after global ischemia to improve postischemic myocardial function and bioenergetics. *Crit Care Med.* 30(11):2603-4, 2002.
 63. **Clanton, TL**, P.M. Claverly, B.R. Celli. Tests of respiratory muscle endurance. ATS/ERS Statement on Respiratory Muscle Testing Editors. A. Grassino, J Moxham, *Amer J Resp Crit Care Med* 166:559-569, 2002
 64. Berliner, L.J., V. Khramtsov, **T.L. Clanton**, H. Fujii. NMR and MRI spin trapping: using NMR to learn about free radicals. *Current Topics in Biophysics*, 26(1):898-95, 2002
 65. Potapenko, D.G., **T.L. Clanton**, E.G. Bagryanskaya, N.P. Gritsan, V.A. Reznikov, V.V. Khramtsov. Nonradical mechanism of (bi)sulfite reactions with DEPMPO: cautionary note for $\text{SO}_3^{\bullet-}$ radical spin trapping. *Free Rad. Biol. Med.* 32 (2), 196-206, 2003
 66. Zuo, L, S. Pasniciuc, V.P. Wright, A.J. Merola, **T.L. Clanton**. Sources for superoxide release: lessons from blockade of electron transport, NADPH oxidase and anion channels in diaphragm *Antioxidants & Redox Signaling, Antioxid. Redox Signal.* 5, 667-675, 2003
 67. Bhatt N.Y., T.W. Kelley, V. Khramtsov, Y. Wang, G.K. Lam, **T.L. Clanton**, C.B. Marsh. M-CSF-induced Erk activation involves PI 3-kinase and ROS in human monocytes. *J. Immunol.* 169(11):6427-34, 2002
 68. Diaz PT, Wewers MD, Pacht E, Drake J, Nagaraja HN, **Clanton TL**. Respiratory symptoms among HIV seropositive individuals. *Chest*, 123(6):1977-82.2003.
 69. Klawitter, P.F., **Clanton, T.L.** Tension-time index, fatigue and energetics in isolated rat diaphragm: a new experimental model. *J. Appl. Physiology* 96(1):89-95, 2004
 70. Potapenko, D.I., E.G. Bagryanskaya, V.V. Reznikov, **T.L. Clanton** and V.V. Khramtsov, 2003, NMR and EPR studies of the reaction of nucleophilic addition of (bi)sulfite to the nitrene spin trap DMPO *Magn. Reson. Chem.* 41:603-608, 2003
 71. Stoner, J., Angelos, M.G., **Clanton, T.L.** Myocardial contractile function during post-ischemic low flow reperfusion: critical thresholds of NADH and O₂ delivery *Am. J. Physiol, Heart and Circulation* 286:H375-H380, 2003
 72. Bobko, A.A., Bagryanskaya, E.G., Reznikov, V.A., Kolosova, N.G., **Clanton, T.L.**,

- Khramtsov, V.V., Redox-sensitive mechanism of NO scavenging by nitronyl nitroxides. *Free Radic Biol Med.* 36(2):248-58,2004 .
73. Diaz, P.T., Wewers, M.D, King, M., Wade, J., Hart, J., **Clanton, T.L.** Regional differences in emphysema scores and BAL glutathione levels in HIV-infected individuals. *Chest* 126(5):1439-1442, 2004
74. Zuo, L, F.L. Christofi, S. Bao, V.P. Wright, **T.L. Clanton.** Lipoxygenase-dependent superoxide release in skeletal muscle. *J. Appl Physiol*, 97:661-668, 2004
75. Zuo, L., **Clanton, T.L.** Reactive oxygen formation in the transition to hypoxia in skeletal muscle. *Am. J. Physiol. (Cell)*, 2005 Jul; 289(1):C207-16.
76. Wright, V.P., Klawitter, P., Iscru, D.F, Merola, A.J., **Clanton, T.L** Superoxide scavengers augment contractile but not energetic responses to hypoxia in rat diaphragm. *J. Appl. Physiol.* 98(5):1753-60, 2005
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Invited Book Chapters and Editorials

101. **Clanton TL.** Book chapter: "Respiratory muscle endurance", *The Thorax*, : Part B: Applied Physiology, Ch Roussos, ed., *The Lung in Health and Disease Series*, Marcel Dekker, Inc. pp 1199-1230, 1995.
102. **Clanton, TL**, P.T. Diaz. Book Chapter: Respiratory muscle training in chronic obstructive pulmonary disease. in *Clinical Management of Stable COPD*, ed. Thomas Similowski, W.A. Whitelaw, J.P Derenne, Marcel Dekker, pp 759-780, 2002
103. Berliner, L.J., V.K.Khramtsov, H. Fujii. and **T.L. Clanton**, "Unique Applications Of Spin Traps As Indicators Of Oxidative Stress In Living Systems," in *Bio-Assays for Oxidative Stress Status (BOSS)*, W. A. Pryor, Ed., Elsevier, pp 262-272 (2001) [reprinted from *Free Rad. Biol. Med.* **30**, 489-499 (2001)].
104. **Clanton, TL** Invited editorial: A breakthrough in the functional evaluation of the inspiratory muscle pump. *Eur Respir J* 19(2):207-8, 2002
105. **Clanton, T.L.** Invited Editorial: Yet another oxygen paradox, *J of Appl. Physiol* 99:1245-1246, 2005

Recent National/International Presentations.

- Invited symposium Speaker. Title: “Overview of molecular mechanisms of ROS-induced cell signaling and transcriptional regulation.” American College of Sports Medicine, Seattle WA. May, 2009.
- Invited Speaker. “Oaths for Scientists and other Scholars” Meeting of the International Society for Science in Society, Cambridge England, Aug, 2009
- Invited symposium Speaker. Title: Common molecular mechanisms of ROS-induced cell signaling and transcriptional regulation. Experimental Biology, Anaheim CA, April 2010.
- Invited Symposium New insights into the role of cytokines in the pathophysiology of heat stroke. Title: Upregulation of IL-6 mRNA in response to hyperthermia. American College of Sports Medicine, Denver Colorado, May, 2011.
- Invited Symposium. Performance physiology in Heat: new concepts and controversies. Title: IL-6 supplementation increases thermotolerance and reduces intestinal permeability in anesthetized mice. Experimental Biology, 2011, Washington, D.C.
- Invited Oral Presentation: “Stress induced cytokine production in skeletal muscle: another element of the stress response? Gainesville Florida, 2012. Advances in Skeletal Muscle Biology in Health and Disease.
- Symposium Speaker. “Skeletal muscle myokines in exercise and health” Title: Skeletal muscle as an endocrine organ and cytokine generator. American College of Sports Medicine, May, 2012. San Francisco CA.
- Symposium Keynote Address: “Cellular Basis for Heat Stroke and Heat Injury. American College of Sports Medicine, Orlando, FL. May 2014.
- Invited Speaker, University of Florida, Muscle Physiology Meeting, “Acute regulation of IL-6 in stressed muscle fibers.” 2014. Gainesville, FL
- Invited Speaker, Nov 7, 2015 Sao Paulo Brazil GSSI Health Issues in the Summer Olympics 2016. “Update on the pathophysiology of exertional heat stroke”
- Invited Speaker: University of Florida 2016 Advances in skeletal muscle Biology in Health and Disease; Myology Institute Symposium “Surprise! Skeletal muscle is an immune organ” Jan 20, 2016.