

**CURRICULUM VITAE**  
**THOMAS L. CLANTON, Ph.D.**

**Title:**

Professor 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:**

University of Florida  
College of Health and Human Performance  
Department of Applied Physiology & Kinesiology  
Room 100 FLG PO Box 118205  
Gainesville FL  
32611  
Phone: 352-392-0584x1264  
FAX: 352-392-0316  
Email: tclanton@hhp.ufl.edu

Home address:  
5104 SW 94<sup>th</sup> St  
Gainseville, FL  
32608-4177

Wife: Pamela Clanton  
Son: Samuel Clanton

**Personal:**

Birth Date: February 1, 1949

**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:**

2007 - Professor of Applied Physiology & Kinesiology. University of Florida, Gainesville, FL

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:**

American Thoracic Society  
American Physiological Society  
American Federation for Clinical Research  
American Association for the Advancement of Science  
American Association of University Professors  
Biophysical Society  
Ohio Thoracic Society  
Society for Free Radical Biology & Medicine  
American College of Sports 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.  
American Heart Association Fellow 1981-1982  
New Investigator Award, National Institutes of Health 1985-88  
Associate Director: Pulmonary Diagnostic Services, Ohio State University Medical Center (1985 -2000)  
Associate Director: Pulmonary Rehabilitation Program (1995 -2000)  
Reviewer, American Lung Association Research Committee, 1987-1990  
Reviewer, American Heart Association Research Committee, 1987-88  
Co-chair: College of Medicine, Animal Review Committee, (1988-1990)  
Chairperson: 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, Canadian J of Applied Physiology, American Journal of Respiratory and Critical Care Medicine, Muscle and Nerve, Antioxidants and Redox Signaling, Wellcome Trust Grants 2004  
Frequent Session Chairperson: American Physiological Society Meetings, American Thoracic Society Meetings.  
Faculty Sponsor, 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- )  
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- )  
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- )

### **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 CO<sub>2</sub> 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 O<sub>2</sub> 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: approx. \$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: RO1-53333-09 Redox mechanisms of respiratory muscle stress adaptation. P.I. T. Clanton \$250,000/yr, 2001-2005

### **Current Funding**

National Institutes of Health: RO1-53333-10 "Redox mechanisms of respiratory muscle stress adaptation.  
P.I. T.L Clanton Direct Costs \$250,000/yr, 2006-2010.

National Institutes of Health RO1- HL083478-0 2005-2008 "Alveolar macrophage proteomics in HIV-induced emphysema"  
PI: Phil Diaz  
Co-I, Thomas Clanton subcontract (2.5%)

American Heart Association Grant in Aid 2006-2008. "Reperfusion and Induction of Myocardial Reactive Oxygen Species" Period 2 Start Date: 07/01/2008  
P.I. Mark Angelos  
Co-I. Thomas Clanton (10%)

### **Pending Funding**

National Institutes of Health. RO-1 1 R01 HL088499-01 NHLBI "New approaches to myocardial salvage in the arrested heart" Using newly devised models that mimic cardiac arrest and resuscitation we will use strategic approaches to minimize oxidant induced damage to the myocardium and coronary circulation. P.I. Mark Angelos Co-I 20% Thomas Clanton (played a major role in conception, writing and data collection). Status: Received score on first round of 221 (44%).  
Status: resubmitted March 1

### **Patent**

United States Patent 4854574 Inspiratory Muscle Trainer. Inventors: Thomas L. Clanton & Douglas Larson, Assignee: Healthscan Inc. (now Respironics),

Filing Date: March 15, 1988, Continuous royalties, still commercially available, used throughout the world for pulmonary rehabilitation programs.

### **PUBLICATIONS**

#### **Original Research Articles:**

1. **Clanton TL**, Ballam GO, Moore RK, Kunz AL. Rapid ventilatory responses to changes in insufflated CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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. Gary 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. Grassino AE, **Clanton T**. Mechanisms of muscle fatigue. *Monaldi Arch Chest Dis*. 48(1): 94-98, 1993.
24. 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.
25. Diaz PT, **Clanton TL**. Marked pulmonary function abnormalities in a case of HIV-associated pulmonary hypertension. *Chest* 104:313-315, 1993.
26. 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.
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. **Clanton TL**. "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.
35. Andersen, KA, PT Diaz<sup>\*\*</sup>, 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.
36. 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.
37. Narayan, M, LJ Berliner, AJ Merola, PT Diaz<sup>\*\*</sup>, **TL Clanton**. Biological Reactions of peroxynitrite: evidence for an alternative pathway of salicylate hydroxylation. *Free Rad. Research*, 27:63-72, 1997
38. 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.
39. 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.
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. 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.
42. **Clanton, TL**, A short history of nitric oxide and skeletal muscles. *Comp. Biochem. And Physiol.* 119A, 1997.
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, **TL 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. 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
57. **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
58. 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
59. **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.
60. 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.
61. 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
62. 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
63. 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.
64. **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
65. Zuo, L<sup>\*</sup>, **T.L. Clanton**. Detection of reactive oxygen and nitrogen species using redox-

sensitive fluorescent probes. Invited Review: *Methods in Enzymology*, 325: 307-325, 2002

66. 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
67. 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
68. 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
69. **Clanton, TL** A breakthrough in the functional evaluation of the inspiratory muscle pump. *Eur Respir J* 19(2):207-8, 2002
70. **Clanton, TL**, P.T. Diaz. 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
71. Diaz PT, Wewers MD, Pacht E, Drake J, Nagaraja HN, **Clanton TL**. Respiratory symptoms among HIV seropositive individuals. *Chest*, 123(6):1977-82.2003.
72. 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
73. 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 nitron spin trap DMPO *Magn.Reson.Chem.* 41:603-608, 2003
74. Stoner, J., Angelos, M.G., **Clanton, T.L.** Myocardial contractile function during post-ischemic low flow reperfusion: critical thresholds of NADH and O<sub>2</sub> delivery *Am. J. Physiol, Heart and Circulation* 286:H375-H380, 2003
75. 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 .
76. 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
77. Potapenko, D.I., E.G. Bagrayanskaya, AY.P. Tcentalovich, V.V. Reznikov, **T.L. Clanton**, V.V. Khramtsov. Reversible reaction of thiols and thiy radical radicals with nitron spin traps. *B*

108:9315-9324, 2004.

78. 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
79. 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.
80. 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.
81. **Clanton, T.L.** Invited Editorial: Yet another oxygen paradox, *J of Appl. Physiol* 99:1245-1246, 2005
82. Potapenko, D.I., Bagryanskaya, E.G., Grigoriev, I.A., Maksimov, A.M., Reznikov, V.A., Platonov, V.E., **Clanton, T.L.**, Khramtsov, V.V. Quantitative determination of SH groups using <sup>19</sup>F NMR spectroscopy and disulfide of the 2,3,5,6-tetrafluoro-4-mercaptobenzoic acid. *Magn. Reson. Chem* 43:902-909, 2005.
83. Wewers MD, Lemeshow S, Lehman A, **Clanton TL**, Diaz PT. Lung CD4 lymphocytes predict survival in asymptomatic HIV infection. *Chest*. 2005 Oct;128(4):2262-7.
84. Potapenko, D.I., Bagryanskaya, E.G., Grigoriev, I.A., Masimov, A.M., Reznikov, V.A., Platonov, V.E., **Clanton, T.L.**, Khramtsov, V.V. Quantitative determination of SH-groups using <sup>19</sup>F NMR spectroscopy and disulphide of 2,3,5,6-tetrafluoro-4-mercapto-benzoic acid *Magn Reson Chem*. Nov;43(11):902-9, 2005
85. Stoner JD, **Clanton TL**, Aune SE, Angelos MG, O<sub>2</sub> Delivery and redox state are determinants of compartment-specific reactive oxygen species in myocardial reperfusion. *Amer. J. Physiol* 292(1):H109-116, 2007
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