Michael Smith, PhD
College of Biomedical and Translational Sciences
Physiology & Anatomy
Email: MichaelL.Smith@unthsc.edu



Area of Expertise

Research efforts in the Smith lab focus on the neural control of cardiovascular function relating to mechanisms of sudden cardiac death, syncope, exercise training effects, and mechanisms of the association between obstructive sleep apnea and hypertension.

Qualifications

MS in Physiology, Southern Illinois University

BS in Biology, Texas Lutheran College

PhD in Biology, University of North Texas

Recent Publications

Effect of acute heat exposure on the pressor response to a voluntary hypoxic apnea
Hemingway, H. W., Richey, R. E., Moore, A. M., Saul, B. M., Shokraeifard, A. M., Cope, H. L., Olivencia-Yurvati, A. H., Cunningham, R. L., Smith, M. L. & Romero, S. A., 2023, In: Journal of Applied Physiology. 135, 3, p. 542-548 7 p.

Osteopathic Manipulative Treatment Alters Gastric Myoelectric Activity in Healthy Subjects
Shadiack, E., Jouett, N., Van Den Raadt, A., Liganor, R., Watters, J., Hensel, K. & Smith, M., Dec 2018, In: Journal of Alternative and Complementary Medicine. 24, 12, p. 1176-1180 5 p.

Rapid-eye-movement sleep-predominant central sleep apnea relieved by positive airway pressure: a case report
Jouett, N. P., Smith, M. L., Watenpaugh, D. E., Siddiqui, M., Ahmad, M. & Siddiqui, F., May 2017, In: Physiological Reports. 5, 9, e13254.

Losartan reduces the immediate and sustained increases in muscle sympathetic nerve activity after hyperacute intermittent hypoxia
Jouett, N. P., Moralez, G., Raven, P. B. & Smith, M. L., 2017, In: Journal of Applied Physiology. 122, 4, p. 884-892 9 p.

N-Acetylcysteine reduces hyperacute intermittent hypoxia-induced sympathoexcitation in human subjects
Jouett, N. P., Moralez, G., White, D. W., Eubank, W. L., Chen, S., Tian, J., Smith, M. L., Zimmerman, M. C. & Raven, P. B., 1 Mar 2016, In: Experimental physiology. 101, 3, p. 387-396 10 p.

Systolic pressure response to voluntary apnea predicts sympathetic tone in obstructive sleep apnea as a clinically useful index
Jouett, N. P., Hardisty, J. M., Mason, J. R., Niv, D., Romano, J. J., Watenpaugh, D. E., Burk, J. R. & Smith, M. L., 1 Jan 2016, In: Autonomic Neuroscience: Basic and Clinical. 194, p. 38-45 8 p.

Interactive effects of hypoxia, hypercapnia and lung volume on sympathetic nerve activity in humans
Jouett, N. P., Watenpaugh, D. E., Dunlap, M. E. & Smith, M. L., 1 Sep 2015, In: Experimental physiology. 100, 9, p. 1018-1029 12 p.

[2] Commentaries on Viewpoint: The ongoing need for good physiological investigation: Obstructive sleep apnea in HIV patients as a paradigm
Jouett, N. P. & Smith, M. L., 15 Jan 2015, In: Journal of Applied Physiology. 118, 2, p. 247 1 p.

Acute improvement in hemodynamic control after osteopathic manipulative treatment in the third trimester of pregnancy
Hensel, K. L., Pacchia, C. F. & Smith, M. L., Dec 2013, In: Complementary Therapies in Medicine. 21, 6, p. 618-626 9 p.

Suboccipital decompression enhances heart rate variability indices of cardiac control in healthy subjects
Giles, P. D., Hensel, K. L., Pacchia, C. F. & Smith, M. L., 1 Feb 2013, In: Journal of Alternative and Complementary Medicine. 19, 2, p. 92-96 5 p.

Sponsored Projects

A Wrist-Worn Biosensor System for Epileptic Seizure Alert
Smith, M. (PI)
Intramural Research(TxMRC)
1/06/13 → 30/05/14

Characterizing iPSC Pluripotentency and Differentiation by Inorganic Elemental Concentration Profiles (For: Victor Lin)
Smith, M. (PI)
Sigma Xi
30/12/13 → 30/12/14

ENALAPRIL ON REFLEX CONTROL OF SYMPATHETIC ACTIVITY IN END-STAGE CHF IN HUMANS
SMITH, M. (PI), SMITH, M. (PI) & Smith, M. (PI)
1/10/92 → 30/09/95

HSC Scholars in Cancer Researc
Vishwanatha, J. (PI), Yurvati, A. (CoI), Jones, H. (CoI), Smith, M. (CoI), Berg, R. (CoI), Basha, R. (CoI), Bunnell, B. (CoI) & Mathew, S. (CoI)
Cancer Prevention & Res Inst of TX
31/08/21 → 30/08/26

IN VIVO STUDIES OF IBUPROFEN IN PATIENTS WITH CYSTIC FIBROSIS
Smith, M. (PI), HUSO, D. (PI), BERGER, N. (PI), CHERNIACK, N. (PI), BERGER, N. (PI), BERGER, N. (PI), BEHRMAN, R. (PI), CHERNIACK, N. (PI), SUDAK, H. (PI), Konstan, M. (PI), MELTZER, H. (PI), ARAFAH, B. (PI), MELTZER, H. Y. (PI), RICH, E. (PI), GILBERT, I. (PI), DANISH, R. (PI), SMITH, M. (PI), LAZARUS, H. (PI), O'CONNOR, M. (PI), LANDEFELD, S. (PI), BANWELL, J. (PI), MC FADDEN, R. J. (PI), THIOBONNIER, M. (PI), HRICIK, D. (PI), KALHAN, S. (PI), MC CULLOUGH, A. (PI), SMITH, M. (PI), WILLSON, J. (PI), WRIGHT, J. J. (PI), PETRULIS, A. (PI), DOUGLAS, J. (PI), REED, R. (PI), CHISOLM, G. (PI), CLAPP, J. (PI), CATALANO, P. (PI), LITTLE, K. (PI), HUGEL, D. (PI), KEITH, M. (PI), DIMARCO, A. (PI), GROH-WARGO, S. (PI), NEUMAN, M. (PI), CRANE, S. (PI), ARNOLD, M. (PI), KHAN, M. (PI), SINGER, L. (PI), BESUNDER, J. (PI), SMIGAJ, D. (PI), KALAYJIAN, R. (PI), FREEMAN, D. (PI), MCFADDEN, R. J. (PI), BLUMER, J. (PI), MAY, E. (PI), MOSCA, N. (PI), YOUNGBLUT, J. (PI), HACK, M. (PI), ILAN, J. (PI), MCCULLOGH, A. (PI), MAES, M. (PI), ROSE, P. (PI), STEINBERG, L. (PI), COLTON, C. (PI), FRIEDLAND, R. (PI), WILLSON, J. (PI), DAHMS, W. (PI), STROHL, K. (PI), HASSOLD, T. (PI), STERN, R. (PI), ELLNER, J. (PI), NEARMAN, H. (PI), BERGER, M. (PI), O'CONNER, M. (PI), CARLSON, M. (PI), HAAGA, J. (PI), LEWIS, W. (PI), RICE, T. (PI), TOLTZIS, P. (PI), LAMONT, L. (PI), DAVIES, M. (PI), NEKL, K. (PI), FRIEDLAN, R. (PI), LEDERMAN, M. (PI), BLUMER, J. (PI), GERACI, K. (PI), LEVITAN, N. (PI), HUNT, P. (PI), MONNIER, V. (PI), PECKHM, H. (PI), POST, A. (PI), ROSENBERG, C. (PI), BRITTENHAM, G. (PI), DAHMS, W. (PI), MELTZER, H. Y. (PI), Konstan, M. (PI), MELTZER, H. (PI), ARAFAH, B. (PI), RICH, E. (PI), STERN, R. (PI), TOLTZIS, P. (PI), ELLNER, J. (PI), KALHAN, S. (PI), SUPER, D. (PI), LAZARUS, H. (PI), ASSEL, B. (PI), BEDNARCZYK, E. (PI), NEARMAN, H. (PI), SILVERMAN, P. (PI), MCFADDEN, R. J. (PI), GILBERT, I. (PI), FRIEDLANDER, M. (PI), LAMONT, L. (PI), BERGER, M. (PI), DANISH, R. (PI), LEDERMAN, M. (PI), O'CONNER, M. (PI), CARLSON, M. (PI), HAAGA, J. (PI), LEWIS, W. (PI), BICKERS, D. (PI), RICE, T. (PI), STROHL, K. (PI), MORTIMER, T. (PI), WRIGHT, J. (PI), WILLSON, J. (PI), DAVIES, M. (PI), NEKL, K. (PI), WEBSTER, F. (PI), MADER, S. (PI), O'CONNOR, M. (PI), LANDEFELD, S. (PI), HEDERA, P. (PI), WALDO, A. (PI), KAMMER, G. (PI), DIMARCO, A. (PI), GIBAS, A. (PI), RESNICK, M. (PI), NEBELING, L. (PI), JOHNSTON, V. (PI), MEHANDRU, P. (PI), BATTISTA, M. (PI), NAIR, R. (PI), HALL, H. (PI), ENNEVER, J. (PI), SCHREIBER, J. (PI), WILLSON, J. (PI), SORENSON, R. (PI), WEBER, F. (PI), Davis, P. B. (PI), McFadden, E. R. (PI), Arafah, B. M. (PI), Owens, R. P. (PI), OSORIO, I. (PI), SHEEHAN, J. (PI), BRITTENHAM, G. (PI), SORENSEN, R. (PI), GREEN, J. (PI), CRUM, E. (PI), STROHL, K. (PI), FULLER, R. (PI), HOPPEL, C. (PI), REED, M. (PI), KONSTAN, M. (PI), WEISS, Z. (PI), GONZALEZ, F. (PI), DOUGLAS, J. (PI), REED, R. (PI), Schulak, J. (PI), Munger, M. (PI), KRIEGLER, J. (PI), AUSTIN, C. (PI), WEISE, K. (PI), CRUM, E. (PI), RUDY, E. (PI), HOMES, T. (PI), Canwell, J. (PI), CAREY, J. (PI), Wisnieski, J. (PI), CZINN, S. (PI), KERR, D. (PI), BOYLE, J. (PI), GOTHE, B. (PI), HERZIG, R. (PI), CHERNIACK, N. (PI), BLUMER, J. (PI), FLEMING, D. (PI), DAVIS, G. (PI), DAVIS, P. (PI), DEARBORN, D. (PI), DUNN, M. (PI), RODMAN, H. (PI), GOLDMAN, M. (PI), HERSHEY, L. (PI), KENNELL, J. (PI), KLEINHENZ, M. E. (PI), LAMBERT, P. (PI), LEVINE, M. (PI), MANNI, A. (PI), MC LAREN, G. (PI), MUIR, A. (PI),

OWENS, R. (PI), OWENS, R. (PI), OWENS, R. (PI), PEARSON, O. (PI), POLMAR, S. (PI), REED, R. (PI), RHODES, R. (PI), LASS, J. (PI), SACHS, D. (PI), SCHNALL, A. (PI), SHUMATE, J. (PI), THOMPSON, L. (PI), WISH, J. (PI), Wisnieski, J. (PI), WOOD, R. (PI), ARONOFF, S. (PI), BANWELL, J. (PI), HOLT, J. (PI), HRICIK, D. (PI), KING, C. (PI), KLEIN, L. (PI), NARA, A. (PI), RICANATI, E. (PI), SCHUYLER, M. (PI), SPITZER, T. (PI), STEPHEN, A. (PI), WEBER, F. (PI), Konstan, M. (PI), MELTZER, H. (PI), ARAFAH, B. (PI), MELTZER, H. Y. (PI), RICH, E. (PI), GILBERT, I. (PI), DANISH, R. (PI), BANWELL, J. (PI), MCFADDEN, E. (PI), KALHAN, S. (PI), SMITH, M. (PI), WILLSON, J. (PI), WRIGHT, J. (PI), PETRULIS, A. (PI), DOUGLAS, J. (PI), CHISOLM, G. (PI), CLAPP, J. (PI), CATALANO, P. M. (PI), LITTLE, K. (PI), HUGEL, D. (PI), KEITH, M. (PI), GROH-WARGO, S. (PI), BAIRD, T. (PI), SINGER, L. (PI), SMIGAJ, D. (PI), KALAYJIAN, R. (PI), FREEMAN, D. (PI), YOUNGBLUT, J. (PI), HACK, M. (PI), MC CULLOUGH, A. (PI), ROSE, P. (PI), STEINBERG, L. (PI), BROOKS, L. (PI), FRIEDLAND, R. (PI), WILLSON, J. (PI), DAHMS, W. (PI), HASSOLD, T. (PI), TERAN, C. (PI), RAJKOVIC, A. (PI), POST, A. (PI), THIBONNIER, M. (PI), WOOD, G. (PI), GERSON, S. (PI), STERN, R. (PI), DUCHON, M. (PI), GERARD, S. (PI), GLAZER, G. (PI), DEARBORN, D. (PI), FINDLING, R. (PI), BARRY, C. (PI), ROBINSON, J. (PI), GOLDFARB, D. (PI), CHAKRAARTI, A. (PI), OSMAN, S. (PI), SCHNUR, G. (PI), LEVITAN, N. (PI), Konstan, M. (PI), ARAFAH, B. (PI), RICH, E. (PI), WRIGHT, J. (PI), DOUGLAS, J. (PI), CHISOM, G. (PI), CLAPP, J. (PI), CATALANO, P. M. (PI), HUDGEL, D. (PI), KEITH, M. (PI), BAIRD, T. (PI), HACK, M. (PI), ROSE, P. (PI), STEINBERG, L. (PI), MARTIN, R. (PI), SPIRO, T. (PI), DAHMS, W. (PI), GERSON, S. (PI), KIWI, R. (PI), DEARBORN, D. (PI), ROBINSON, J. (PI), LORET DE MOLA, R. (PI), FINDLING, R. (PI), LEVITAN, N. (PI), HUNT, P. (PI), KINGSBERG, S. (PI), REDLINE, S. (PI), SCHULZ, C. (PI), THIBONNIER, M. (PI), BLUMER, J. (PI), BUCKLEY, P. (PI), COLLINS, S. (PI), FANAROFF, A. (PI), KENNELL, J. (PI), ANDERSON, G. (PI), STERLING, R. (PI), SILVERMAN, P. (PI), BUGIANESI, E. (PI), LEWIN, J. (PI), WALDO, A. (PI), LANDES, A. (PI), COOPER, B. (PI), VOGT, B. (PI), CHAK, A. (PI), LEVI, R. (PI), KALAYJIAN, R. (PI), KAUFMAN, E. (PI), WINKELMAN, M. (PI), MARSOLAIS (PI), SCHWARTZ, S. (PI), BRUNENGRABER, H. (PI), MCFADDEN, E. (PI), GLAZER, G. (PI), DAVIS, I. (PI), DAVIES, M. (PI), WILLSON, J. (PI), COOPER, K. (PI), WIESNER, G. (PI), Remick, S. (PI), STERN, R. (PI), THAMES, M. (PI), MAVISSAKALIAN, M. (PI), CUTTLER, L. (PI), LEDERMAN, M. M. (PI), GORDON, J. (PI), HRICIK, D. (PI), DIMARCO, A. (PI), CREASY, G. (PI), SINGER, L. (PI), BALLOU, S. (PI), MEHTA, S. (PI), FROST, F. (PI), GROH-WARGO, S. (PI), UVENA, J. (PI), DANISH, R. (PI), LITTLE, K. (PI), TERAN, C. (PI), RAJKOVIC, A. (PI), WOOD, G. (PI), OSMAN, S. (PI), SCHNUR, G. (PI), BERRIDGE, M. (PI), AUSTIN, C. (PI), RICE, T. (PI), TAYLOR, G. (PI), ILAN, J. (PI), HOPPEL, C. L. (PI), SMITH, M. (PI), KO, W. (PI), KATZ, J. (PI), CACHO, C. (PI), FURMAN, L. (PI), UTIAN, W. (PI), STORK, E. (PI), RAHMAN, M. (PI), SILVER, B. (PI), HALL, H. (PI), HEIMBERG, C. (PI), VALDEZ, H. (PI), WARMAN, M. (PI), BLANKFIELD, R. (PI), KIRSCH, R. (PI), TABBAA, K. (PI), ANTHONY, M. (PI), ASHMEAD, G. (PI), Kumar, D. (PI), VROBEL, T. (PI), PECKHAM, H. (PI), MULLEN, K. (PI), HANNA, J. (PI), BIBLO, L. (PI), CHARLAND, D. (PI), SCHUBECK, D. (PI), CHAE, J. (PI), MALANGONI, M. (PI), PEERLESS, J. (PI), CORTEVILLE, J. (PI), CHAK, A. (PI), GLAZER, G. (PI), DAVIES, M. (PI), THAMES, M. (PI) & DAHMS, W. (PI)
1/01/01 → 30/11/00

Mechanisms of Manual Medicine - U19 Bridge Funding
Smith, M. (PI)
NCCAM: National Center for Complementary and Alternative Medicine
24/09/09 → 31/08/10

Mechanisms of Manual Medicine - U19 Bridge Funding
Smith, M. (PI)
NCCAM: National Center for Complementary and Alternative Medicine
24/09/09 → 31/08/10

Mechanisms of Manual Medicine - U19 Bridge Funding
Smith, M. (PI)
NCCAM: National Center for Complementary and Alternative Medicine
24/09/09 → 31/08/10

Mechanisms of Osteopathic Manipulative Medicine (OMM)
Smith, M. (PI)
30/09/04 → 31/08/10

MECHANISMS OF SYMPATHOEXCITATION IN SLEEP APNEA
Smith, M. (PI)
National Heart, Lung, and Blood Institute
30/09/94 → 31/08/00

MECHANISMS OF SYMPATHOEXCITATION IN SLEEP APNEA
Smith, M. (PI), SMITH, M. (CoPI), SMITH, M. (CoPI), SMITH, M. (PI) & Smith, M. (CoPI)
30/09/94 → 31/08/00

Osteopathic Scholars in Cancer Research (OSCR)
Vishwanatha, J. (PI), Smith, M. (CoI), Basha, R. (CoI) & Yang, S. (CoI)
Cancer Prevention & Res Inst of TX
1/03/17 → 28/02/22

Pain-Mediated Sympathoexcitation in Heart Failure
Smith, M. (PI) & Tierney, N. (CoI)
Intramural Research(UNTHSC)
15/01/12 → 14/01/13

Project 1 - Biomechanical Strain Regulation of Fibroblast Cytokines
Smith, M. (PI), Smith, M. (PI), STANDLEY, P. (PI), DOWNEY, F. (PI), STOLL, S. (PI), SMITH, M. L. (PI), STANDLEY, P. R. (PI), DOWNEY, F. (PI) & Stoll, S. T. (PI)
National Center for Complementary and Integrative Health
1/09/04 → 31/08/10

ROLE OF OPIOIDS IN AUTONOMIC CARDIOVASCULAR PHYSIOLOGY
Smith, M. (PI), Nagel, R. (PI), SMITH, M. (PI) & SMITH, M. (PI)
31/12/89 → 31/08/99

Sympathetic Threshold in Obstructive Sleep Apnea: The Role of Oxidative Stress (For Noah Jouett)
Smith, M. (PI)
Sigma Xi
1/01/15 → 31/01/16

Sympathetic Threshold in Obstructive Sleep Apnea: The Role of Oxidative Stress (For: Noah Jouett)
Smith, M. (PI)
American Medical Association
1/04/15 → 1/04/16

Trinity Trail Community Health Fair and Evaluation Fellowship for Kwong-Yao (Josh) Chow
Smith, M. (PI)
Arnold P. Gold Foundation
15/05/10 → 15/09/10