

Ann Schreihofner, PhD
Graduate School of Biomedical Sciences
Physiology & Anatomy
Email: Ann.Schreihofner@unthsc.edu



Area of Expertise

My goal is to better understand how the brain controls blood pressure, both under normal conditions and in the presence of disorders that raise blood pressure. Currently, my laboratory focuses on two conditions that lead to high blood pressure: obesity and sleep apnea. Both of these conditions change how the brain controls blood pressure, but the mechanisms are not well understood. Although, ideally, obesity and sleep apnea can be managed, many find it difficult to control body weight in the long term and not may tolerate current treatments for sleep apnea. As these conditions continue to become more prevalent, the cardiovascular disease that accompanies them also becomes a major health issue nationwide. The current treatments for high blood pressure are numerous, and many medications act within the brain to control blood pressure.

Our work examines which treatments are ideal for management of cardiovascular disease with these conditions by determining how the brain changes with obesity and sleep apnea and whether current medications can reverse these changes. Because high blood pressure has many causes, treatments should be individually optimized to best manage control of blood pressure in the context of the conditions that accompany it.

Qualifications

BS in Psychology, Emory University
PhD in Neuroscience, University of Pittsburgh

Recent Publications

Improved glucose homeostasis in male obese Zucker rats coincides with enhanced baroreflexes and activation of the nucleus tractus solitarius

Chaudhary, P. & Schreihofner, A. M., Dec 2018, In : American Journal of Physiology - Regulatory Integrative and Comparative Physiology. 315, 6, p. R1195-R1209

Exaggerated sympathoexcitatory reflexes develop with changes in the rostral ventrolateral medulla in obese Zucker rats

Huber, D. A. & Schreihofner, A. M., Aug 2016, In : American Journal of Physiology - Regulatory Integrative and Comparative Physiology. 311, 2, p. R243-R253

Development of attenuated baroreflexes in obese Zucker rats coincides with impaired activation of nucleus tractus solitarius

Guimaraes, P. S., Huber, D. A., Campagnole-Santos, M. J. & Schreihofner, A. M., 1 May 2014, In : American Journal of Physiology - Regulatory Integrative and Comparative Physiology. 306, 9, p. R681-R692

Increasing angiotensin-(1-7) levels in the brain attenuates metabolic syndrome-related risks in fructose-fed rats

Guimaraes, P. S., Oliveira, M. F., Braga, J. F., Nadu, A. P., Schreihofner, A., Santos, R. A. S. & Campagnole-Santos, M. J., May 2014, In : Hypertension. 63, 5, p. 1078-1085 8 p.

Insights into a successful dual scientific career and partnership.

Schreihofner, A. M. & Schreihofner, D., 1 Jun 2012, In : The Physiologist. 55, 3, p. 94-95 2 p.

Altered regulation of the rostral ventrolateral medulla in hypertensive obese Zucker rats

Huber, D. A. & Schreihofner, A. M., 1 Jul 2011, In : American Journal of Physiology - Heart and Circulatory Physiology. 301, 1, p. H230-H240

The Ventrolateral Medulla and Sympathetic Regulation of Arterial Pressure

Schreihofner, A. M. & Sved, A. F., 1 May 2011, *Central Regulation of Autonomic Functions*. Oxford University Press

Altered sympathetic reflexes and vascular reactivity in rats after exposure to chronic intermittent hypoxia
Silva, A. Q. & Schreihofner, A. M., 1 Mar 2011, In : Journal of Physiology. 589, 6, p. 1463-1476 14 p.

Attenuated baroreflex control of sympathetic nerve activity in obese Zucker rats by central mechanisms
Huber, D. A. & Schreihofner, A. M., 1 May 2010, In : Journal of Physiology. 588, 9, p. 1515-1525 11 p.

Modulation of the sympathetic response to acute hypoxia by the caudal ventrolateral medulla in rats
Mandel, D. A. & Schreihofner, A. M., 15 Jan 2009, In : Journal of Physiology. 587, 2, p. 461-475 15 p.

Sponsored Projects

Blood pressure control by caudal ventrolateral medulla

Schreihofner, A.

3/05/04 → 30/04/05

Brain Stem Mechanisms for Altered Autonomic Regulation of Blood Pressure in Obesity

Schreihofner, A.

NHLBI: Nat Heart, Lung & Blood Institute

1/07/17 → 31/08/21

Brain Stem Mechanisms for Altered Autonomic Regulation of Blood Pressure in Obesity

Schreihofner, A., Sumien, N. & Schreihofner, D.

NHLBI: Nat Heart, Lung & Blood Institute

1/07/17 → 31/08/21

Brain Stem Mechanisms for Respiratory-Related Regulation of Blood Pressure in Health and Hypertension

Schreihofner, A.

American Heart Association - SouthWest

1/01/16 → 31/12/17

Brain Stem Mechanisms of Autonomic and Cardiovascular Dysfunction in Obesity

Schreihofner, A. & Schreihofner, D.

American Heart Association - SouthWest

1/01/14 → 31/12/16

Brain Stem Mechanisms that Impair Autonomic Regulation of Blood Pressure with Obesity (For: Parul Chaudhary)

Schreihofner, A.

American Heart Association - SouthWest

1/01/16 → 31/12/17

CENTRAL CIRCUITRY OF AUTONOMIC RESPONSES TO HEMORRHAGE

Schreihofner, A.

1/01/97 → 31/12/97

Mechanisms for Improved Arterial Baroreflexes by Treatments to Prevent Hypertension and Restore Glycemic Control in Obese Zucker Rats

Schreihofner, A.

Intramural Research(UNTHSC)

1/07/16 → 31/12/17

Mechanisms of Altered Regulation of Sympathetic Nerve Activity and Blood Pressure after Chronic Intermittent Hypoxia - Postdoctoral Fellow, Ana Quenia Silva

Schreihofner, A.

American Heart Assn - Greater Southeast

1/07/10 → 30/06/12

Mechanisms underlying altered autonomic regulation of blood pressure in obesity

Schreihofner, A.

1/09/07 → 30/06/08

Mechanisms Underlying Altered Autonomic Regulation of Blood Pressure in Obesity

Schreihofner, A.

NHLBI: Nat Heart, Lung & Blood Institute

1/09/10 → 30/06/13

Promoting Diversity in Research Training for Health Professionals

Vishwanatha, J., Cunningham, T. & Schreihofner, A.

NHLBI: Nat Heart, Lung & Blood Institute

15/05/16 → 30/04/21