Revised [11/9/2017]

Curriculum Vitae

J. Thomas Cunningham, Ph.D.

Regents Professor, Integative Physiology and Anatomy

Associate Dean, Research, Graduate School of Biomedical Sciences

Chronology of Education

UNDERGRADUATE EDUCATION:

Years	Degree(s)	Institution, City, State
1982	B.A.	Easter Illinois University, Charleston, IL

GRADUATE EDUCATION:

Years	Degree(s)	Institution, City, State
1984	MA	University of Iowa, Iowa City, IA
1988	Ph.D.	University of Iowa, Iowa City, IA

POSTGRADUATE TRAINING:

Years	Training Level/Specialty	Institution, City, State
1988	Postodoctoral Fellow	McGIll University
1990-1992	Postdoct Fellow/Neuroscience	Ottawa Civic Hospital and the Univerisyt of Ottawa

Chronology of Employment

OTHER PROFESSIONAL EXPERIENCE:

Years	Title(s)	Institution, City, State
1988-1990	Postdoctoral Fellow	L.P. Renaud, M.D. Ph.D.; Neuroscience Unit, Montreal General Hospital and McGill University
1990-1992	Postdoctoral Fellow	L.P. Renaud, M.D. Ph.D.; Neuroscience Unit, Division of Neurology, Ottawa Civic
1990-1992	Research Associate	L.P. Renaud, M.D. Ph.D.; Neuroscience Unit, Division of Neurology, Ottawa Civic Hospital and the University of Ottawa
1992-1994	Research Fellow	Department of Internal Medicine and the Cardiovascular Center, University of Iowa.
1994-1995	Research Scientist	Department of Internal Medicine and the Cardiovascular Center, University of Iowa.
1995-2001	Assistant Professor	Department of Physiology and the Dalton Cardiovascular Research Center, University of Missouri.
2001-2003	Associate Professor with Tenure	Department of Physiology and the Dalton Cardiovascular Research Center, University of Missouri
2003-2009	Associate Professor	Department of Pharmacology, University of Texas Health Sciences Center at San Antonio.
2007-2008	Chair of Committee for Graduate Studies	Department of Pharmacology, UTHSCSA.
2009-present	Adjunct Professor	Depart. of Pharmacology, UTHSCSA
2010-present	Graduate Advisor	Integrative Physiology Program, UNTHSC
2015-present	Professor	Integrative Physiology and Institute of Cardiovascular and Metabolic Diseases, UNTHSC.
2009-2016	Professor	Department of Integrative Physiology, University of North Texas Health Science Center at Fort Worth
2009-2015	Director	Cardiovascular Research Institute, University of North Texas Health Science Center at Fort Worth

2016-Present	Regents Professor	Deaprtment of Physiology and Anatomy, University of North Texas Health Science Center at Fort Worth
2017-2018	Interim Associate Dean for Reseach	Graduate School of Biomedical Sciences, University of North Texas Health Science Center at Fort Worth
2018-2019	Interim Dean	Graduate School of Biomedical Sciences, University of North Texas Health Science Center at Fort Worth
2019-present	Assoicate Dean for Research	Graduate School of Biomedical Sciences, University of North Texas Health Science Center at Fort Worth
2019-2020	Interim Chair of Physiology and Anatomy	Graduate School of Biomedical Sciences, University of North Texas Health Science Center at Fort Worth

CURRENT TEACHING RESPONSIBILITIES:

Years	Course/Site	Role
2019-present	PHAN 6400: Physiology in health and disease; 10 student contact hours. Student based flipped classroom sessions on neuroscience.	Instructor
2016-present	BMSC 6204 Integrative Biomedical Science 4: 16 student contact hours. Lectures on cell physiology, membrane transport, Neuroscience, Neuroendocrinology.	Course Director of online and face to face sections.

2012-2016	BMSC 6303 Integrative Biomedical Science 3: Physiology Course Director; Student contact Hrs.: 8. Lectures on cell physiology an membrane transport, Neuroendocrinology. Developed 3 TBL session on Neurophysiology and experimental design.	Course Director
2014-2017	IPAN 6380 Neurohumoral Control of autonomic function: Student contact hrs: 10. This is a literature based course with discussions on History and systems, Neuroendcrinology, paraventricular nucleus, circumventricular organs, and water intake	Course Director
2009-2018	MPAS 5612 Human Physiology: Student contact Hrs: 9. Lectures on membrane potential, action potential propagation, neurotransmission motor systems and autonomic nervous system	School Health Professions
2012-present	DPHT 7501 Clincial Medicine: Student cotact hrs: 5. Lectures on cell physiology, action potential propagation, neurotransmission motor systems and autonomic nervous system; Endocrinology	DPT Program

Honors and Awards

Years	Honor/Award Type	Institution
1998	Award for Excellence in Preclinical Medical Education	University of Missouri-Columbia
1999	American Physiological Society Young Investigator Award in Regulatory and Integrative Physiology	University of Missouri-Columbia

2000	Dorsett L. Spurgeon, MD, Distiguished Medical Research Award	University of Missouri-Columbia, School of Medicine
2001	Award for Excellence in Preclinical Medical Education	University of Missouri-Columbia
2009	Excellence in Preclinical Education	School of Dentistry, UTHSCSA
2012	President's Award for faculty Research	UNT Health Science Center
2013	Presidents Award for Excellence in Research	UNT Health Science Center
2013	Golden Apple Teaching Award	Graduate School of Biomedical Sciences, UNTHSC
2013	Star Reviewer for ,American Journal of Physiology: Regulatory, Integrative and Comparative Physiology	American Journal of Physiology
2016	Regents Professor	UNT Health Science Center
2017	Outstanding Graduate Faculty Member	UNT Health Science Center
2018	Leonard Share Award	APS Water & Electrolyte Homeostasis Section

ADMINISTRATIVE EXPERIENCE

Administrative Duties

Years	Title/Role,	Institution, City, State, Country
1996-2003	Block Director/Medical School	Univ. of Missouri School of Medicine, Colimbia, MO
2007-2009	Director/Pharmacology and Neuroscience Gradaute Programs	UT Health Science Center at San Antonio
2009-2016	Director/ Cardiovascular Res. Institute.	UNT Health Science Center
2010-2017	Direcctor/Graduate Program, Integrative Physiology	UNT Health Science Center
2017-2018	Interim Associate Dean for Research, Graduate School of Biomedical Sciences	UNT Health Science Center

2018-2019	Interim Dean, Graduate School of Biomedical Sciences	UNT Health Science Center
2019-2020	Interim Chair, Department of Physiology and Anatomy	UNT Health Science Center
2020-present	Associate Dean for Research	UNT Health Science Center

Professional & Scientific Committees

Years	Title/Role,	Institution, City, State, Country
1997-2003	Member of the Committee for Student	University of Missouri-Columbia School of
2000	Member of the programming committee	University of Missouri-Columbia
2004-2007	Member of Committee for Graduate	UT Health Science Center at San Antonio
2005-2008	Member and Chair of Graduate School of Biomedical Sciences Awards Committee	UT Health Science Center at San Antonio
2007-2009	Chair of Committee for Graduate Studies, Department of Pharmacology.	UT Health Science Center at San Antonio
2009-2015	Member of Leadership Team	UNT Health Science Center
2009-2014	Chair of GSBS Bylaws Committee	UNT Health Science Center
2009-2016	Director Cardiovascular Research Institute	UNT Health Science Center
2010-2018	Graduate Advisor for Integrative Physiology	UNT Health Science Center
2010-2015	Departmental Promotion and Tenure Committee, Department of Integrative Physiology	UNT Health Science Center
2009-2018	Member of GSBS Integrative Physiology Bylaws Committee,	UNT Health Science Center
2010-2015	Research Advisory Council	UNT Health Science Center
2009-2018	Member of GSBS Integrative Physiology Curriculum Committee,	UNT Health Science Center
2009-2011	Member of GSBS Integrative Physiology Faculty Search Committee,	UNT Health Science Center

2018-present	President's Council on Research	UNT Health Science Center
2018	President's Council taskforce on faculty compensation	UNT Health Science Center
2018	President's Council taskforce on research space.	UNT Health Science Center
2019-present	UNT System committee on space optimization	UNT System

Grant Review Committee/Study Sections

Years	Title/Role,	Institution, City, State, Country
1995	Grant Reviewer	Missouri affiliate of the American Heart
1999	Reviewer	Welcome Trust, UK
2013-2014	Chair	AHA Cardiorenal 3 Study Section
2010-2014	Reveiwer	American Heart Association
2012-2013	Reveiwer	Medical Research Council of UK
2011	Member	LSU Board of Regents Internal grant
2011:	Ad hoc member	Neuroendocrinology, neurimmunology, rhythms, and sleep study section, NIH CSR
2007-2009	Member	UTHSCSA Seed Grant Program
2015	Study section chair	UNTHSC Office of Research Internal Grant Program
2015-2017	Regular Member	NNRS study section, NIH CSR
2017-2019	Chair	NNRS Study Section, NIH CSR
2021	Chair	2021/05 ZAG1 ZIJ-D (M4) Conference Grant Study section
Abstract Reviewer		
2013	Council for High Blood Pressure Research Meeting	
2015	Council for High Blood Pressure Research Meeting	

Symposium/Meeting Chair/Coordinator

Years	Title/Role,	Institution, City, State, Country
1999	Co-organizer	Featured Topic Symposium, Neural and Humeral Control of Blood Pressure and Volume for the Water and Electrolyte section of the American Physiological

2001	Symposium Co-organizer	American Physiological Society Experimental Biology Meeting 2001, Vasopressin: An Integrative Look at Regulation and Function. Co-Organizers, Joey P. Granger, University of Mississippi. and Celia D. Sladek, Finch University Health Science/Chicago Med. School
2001	Invited Speaker/co-organizer	American Society of Physiology Refresher Course on Integrating Endocrinology into Modern Medical School Curricula.
2002	Co-Chair/organizer	American Society of Physiology Refresher Course on Neuroscience
2005	Organizing Committee	APS Conference, Neurohypophyseal Hormones: From Genomics and Physiology to Disease, July 16-20, 2005, Steamboat Springs, CO
2013	Organizing Committee	National Directors of Graduate Studies in Pharmacology and Physiology Meeting, UNT Health Science Center, Fort Worth
2017-present	Organizing and Awards Commitee	Research Apprication Day, UNT Health Science Center
2021	Organizer and Chair	Microglia and Neuroinflammation: Featured Topic Session; EB2021

PROFESSIONAL COMMUNITY ACTIVITIES

Years	Title/Role,	Institution/Organization, City, State,
1985-present	Member	Society for Neuroscience
1995-present	Member	American Physiological Society

1995-present	Member	American Physiological Society
1996-present	Member	American Heart Association
2006-present	Member	American Society for Pharmacology and Experimental Therapeutics
1998	Member, Frontiers in Physiology Local OutreachTeam	American Physological Society
2000-2003	Member, Standing Committee for Education	American Physological Society
2005-2008	Councilor for Steering Committee	Water and Electrolyte Section of American Physiological Society
2007-2010	Member, Career Opportunities in Physiology Committee	American Physological Society
2008-2011	Secretary/Treasurer	Water and Electrolyte Section of APS
2011-2014	Member, Joint Programing Committee	Water and Electrolyte Section of American Physiological Society
1999-2014	Member of the Editorial Board For *American Journal of Physiology: Regulatory, Integrative and Comparative Physiology*	American Physological Society
1999-2001	Member of the Editorial Board For *American Journal of Physiology: Heart and Circulatory Physiology*	American Physological Society
2001- Present	Member of the Editorial Board for *Hypertension*	American Heart Association
2014-present	Consulting Editor Member of the Editorial Board for *Experimental Neurology*	American Physological Society
2016-present	Member of the Editorial Board for *Journal of Neuroendocrinology*	International Neuroendocrine Federation
Offices held:		
2005-2008	Coucilor	Water and Electrolyte Section of APS
2008-2011	Secretary/Treasurer	Water and Electrolyte Section of APS
2013-2014	Chair	AHA Cardiorenal 3 Study Section
2017-2019	Chair	NNRS Study section, NIH CSR

Educational/Scientific Consultant for…		
2014	External PhD Examiner	Department of Physiology, University of Melbourne, Australia.
2013	External PhD Examiner	Department of Physiology, University of Otago, New Zealand
2009	External PhD Examiner	Department of Anatomy and Cell Biology, University of Melbourne, Australia.
Activities involvement (national, state, local)		
Other Experience and Professional Memberships		
2001-2012	Member	Editorial Board for Experimental Neurology
2012-present	Member of the Editorial Board for *Fronteirs in Integrative Physiology*	

UNIVERSITY COMMUNITY ACTIVITIES

Years	Title/Role,	Institution/Organization, City, State,
2012-	AHA Research Reception	UNT Health Science Center
2012-	AHA Heart Walk	UNT Health Science Center
2015	Mensa Presentation, Fort Worth Chapter	UNT Health Science Center

Active Grants

1. Grants and contracts – funded

Current:

DHHS R01 HL142341 Neural Regulation of Vasopressin Release in a Model of Dilutional Hyponatremia

04/01/2018 – 03/31/2022

$560, 000 total annual costs

Principle Investigator: J. Thomas Cunningham

DHHS R01 HL155977 Intermittent Hypoxia and Hypertension: Role of the Lamina Terminalis

01/18/2021-12/31/2024

$617,566 total annual costs

Prinicple Investigator: J. Thomas Cunningham

DHHS R01 HL 141406 (Wainford, Cunningham CoI, Williams CoI)

4/1/2018 – 3/31/2022

Subcontract

$422,704 total annual costs

Central mechanisms and novel biomarkers of the salt sensitivity of blood pressure

DHHS R25 HL125447-01A1 Promoting Diversity in Research Training for Health Professional Students (PDRT)

April 2016 – March 2021

Principle Investigator: J.K. Vishwanatha

Role: Co-Investigator

DHHS P01 HL088052-06 Neurohumoral adaptations to chronic intermittent hypoxia

July 2015-June 2022 (NCE)

$1,511,360 total annual costs

PI: Steven W. Mifflin 2009-2019

PI: J. Thomas Cunningham, 2019-present

Role: Project 2 Leader and Core Director

Pending Grants

2. Grants and contracts – pending

3. Past Grants

Completed:

American Heart Association Predoctoral Fellowship

July 2018-June 2020

$26,844 total annual costs

PI: Kirthikaa Balapattabi

Role: Sponsor

DHHS R01 HL119458, Neural Regulation of Vasopressin Release: Role of BDNF.

April 2014-March 2019

$1,460,000 total costs.

DHHS R56 HL62576, Neural Control of Vasopressin Release.

September 2013 – August 2014.

$362,500 total costs.

Principle Investigator: J. Thomas Cunningham, Ph.D.

DHHS R01 HL62576, Neural Control of Vasopressin Release.

September 2000 – August 2012.

$963,208 total costs.

Principle Investigator: J. Thomas Cunningham, Ph.D.

DHHS P01 HL088052 Neurohumoral adaptations to chronic intermittent hypoxia

July 2008-June 2013

$1,511,360 total annual costs

PI: Steven W. Mifflin

Role: Project 2 Leader and Core Director

Awarded AHA Affiliate Postdoctoral Fellowship, Autonomic Control by Delta FosB and Renin-Angiotensin Signaling in the MnPO During Chronic Intermittent Hypoxia.

January 2012.

Trainee: W. David Knight, Ph.D.

Mentor: J. Thomas Cunningham, Ph.D.

(declined)

DHHS F30 DK083884 Role of Angiotensin in an animal model of dilutional hyponatremia

July 2008-June 2014

PI: Joseph D. Walch

Role: Mentor

DHHS R01 MH83933 Vagal Nerve Stimulation and Antidepressants: c-Fos, ΔFosB and Activation of TrkB

July 2008 – June 2013

$1,825,000 total costs

PI: Alan Frazer

Role: Consultant

Awarded AHA Affiliate Postdoctoral Fellowship, Central Opioid Control of Cardiovascular and Renal Function: CNS sites and Neural-Humoral Mechanisms.

June 2006.

Trainee: Helmut Gottlieb, Ph.D.

Mentor: J. Thomas Cunningham, Ph.D.

DHHS T32 HL007446 Pathobiology of Occlusive Vascular Disease

July 2007 – June 2012

$337,504 annual costs

PI: Linda McManus

Role: Training Grant Faculty

DHHS R01 DK57822, Control of Sodium Intake in the Hindlimb Unweighted Rat.

February 2001 – January 2007

$1,103,765 total costs.

Principle Investigator: J. Thomas Cunningham, Ph.D.

Central Mechanisms of Cardiovascular Disease: Neural Plasticity Resulting in Chronic Sympathetic and HPA Activation.

October 2004-Septemebr 2005

PI: Steve Mifflin

Agency: Presidential Research Enhancement Fund UTHSCSA

Role: Co-Investigator.

American Heart Association Missouri Affiliate, Standard Grant-In-Aid, Cardiovascular Control of Vasopressin Release.

July 2000 – June 2001.

$40,000 total costs.

Principle Investigator: J. Thomas Cunningham, Ph.D.

DHHS K02 HL03882 Independent Scientist Award, Neural Systems Regulating Vasopressin Release.

August 1998 – July 2003.

$337,500 total costs.

Principle Investigator: J. Thomas Cunningham, Ph.D.

DHHS T32 HL0721 Training Grant to The Department of Physiology

Cardiovascular-Renal Physiology, Pharmacology and Biochemistry,

September 2000-May 2005

$926,220 Total Costs

Principle Investigator: Virginia Huxley, Ph.D.

Co-investigator: J. Thomas Cunningham, Ph.D.

DHHS R01 HL36245, Ovarian Hormone Metabolites and Neural Circulatory Control. January 1998 – December 2002.

$636,489 total costs.

Principle Investigator: Cheryl M. Heesch, Ph.D.

Co-investigator: J. Thomas Cunningham, Ph.D.

Awarded AHA Missouri Affiliate Predoctoral Fellowship, Arterial Baroreceptor Regulation of Vasopressin Release.

July 1998 – June 1999.

$12,000 total costs.

Trainee: Ryan J. Grindstaff

Mentor: J. Thomas Cunningham, Ph.D.

American Physiological Society Frontiers in Physiology Local OutreachTeam grant.

Spring 1998.

$3,620 total costs.

Principle Investigator: James C. Schadt, Ph.D.

Co-investigator: J. Thomas Cunningham, Ph.D.

Awarded AHA Missouri Affiliate Postdoctoral Fellowship, Central Pathways Involved in the Response to Isotonic Volume Expansion in Rats.

July 1998.

Trainee: Kathleen S. Curtis, Ph.D.

Mentor: J. Thomas Cunningham, Ph.D.

(declined)

American Heart Association Missouri Affiliate, Standard Grant-In-Aid, Neurophysiology of Forebrain Neurons Involved in Blood Pressure Control.

July 1997 – June 1999.

$77,000 total costs.

Principle Investigator: J. Thomas Cunningham, Ph.D.

University of Missouri Research Board Award, Antisense Therapy in Experimental Hypertension.

1997.

$38,000 total costs.

Principle Investigator: J. Thomas Cunningham, Ph.D.

Co-Investigator: William Dale, Ph.D.

American Heart Association Missouri Affiliate, Standard Grant-In-Aid, Neural Basis of Angiotensin Hypertension.

July 1995 – June 1997.

$66,000 total costs.

Principle Investigator: Edward H. Blaine, Ph.D.

Co-investigator: J. Thomas Cunningham, Ph.D.

DHHS R29 HL55692, First Award, Neural Substrates of AVP Release.

June, 1995-May 2000.

$494,275 total costs.

Principle Investigator

Institutional Fellowship from the Cardiovascular Center, University of Iowa, October 1992-September 1994.

Fellowship from the Heart and Stroke Foundation of Ontario, Neural Substrates Mediating Baroreceptor Inhibition of Vasopressin Secreting Neurons.

November 1990 - October 1992.

DHHS NRSA F32 MH09766, Neural Substrates of Drinking Behavior and ADH Release, November 1988 - October 1990.

Traineeship from the Pharmacological Sciences Program Training Grant to the Dept of Pharmacology, University of Iowa.

May 1986 - August 1988.

Pending Contracts

Non-Disclosure Acreement

CrystalNeuro LLC

62 Brownson Dr., Shelton, CT,

Past Contracts

Completed:

Cyberonics Corp. Extramural Grant, Brain Areas Activated by Vagus Nerve Stimulation

January 2006 – February 2008

$125,000 total costs.

Role: Co-Investigator

TEACHING RESPONSIBILITIES/ASSIGNMENTS

For each of these categories, start the left column with

Course and Curriculum Development

Inclusive years (yyyy-yyyy)	Course title and number	Number of times the course is taught annually	Type of students taking the course (e.g., medical; dental; nursing; etc.	Number of students taking the course
1996-2003	Block 3 (2) Basic Science and Patient Based Learning (neuroscience and endocrinology) University of Missouri-Columbia	1	1st year medical	64
1998-2003	Neural Control of Circulation as a Topics in Physiology course. Univeriry of Missouri-Columbia	Alternate years	Graduate students	3-6
2005-2009	PHAR5091 Special Topics: Student Contact Hrs: 20 ; Micro-elective: Homeostasis, Peptides, and Catechoalmines was based on student presentations and preparing a research proposal. The student was required to read and present 12 papers selected from the literature and to write an NRSA style research proposal based on information from the course. Students who had not taken their comprehensive exam were required to do an oral presentation of the proposal	On demand	Gradute students	1-2
2012-present	Course Director: IPAN 6380 Neurohumoral Control of autonomic function: Student contact hrs: 10. This is a literature based course with discussions on	1	Graduate Students	1-6

	History and systems, Neuroendcrinology, paraventricular nucleus, circumventricular organs, and water intake			
2012-present	Course Director: BMSC 6303 Integrative Biomedical Science 3: Physiology Course Director; Student contact Hrs.: 8. Lectures on cell physiology an membrane transport, Neuroendocrinology. Developed 3 TBL session on Neurophysiology and experimental design.	1	graduate Students	15-30
2012-present	Team based learning exercises for BMSC 6303	1	graduate Students	15-30

Courses Directed

Inclusive years (yyyy-yyyy)	**Course title and number**	**Number of times the course is taught annually**	**Type of students taking the course (e.g., medical; dental; nursing; etc.**	**Number of students taking the course**
1996-2003	Block 3 (2) Basic Science and Patient Based Learning (neuroscience and endocrinology) University of Missouri-Columbia	1	1st year medical	64
2012-present	BMSC 6303 Integrative Biomedical Science 3: Physiology Course Director; Student contact Hrs.: 8. Lectures on cell physiology an membrane transport, Neuroendocrinology. Developed 3	1	graduate students	15-30

	TBL session on Neurophysiology and experimental design. UNT Health Science Center			
2012-2017	Course Director: IPAN 6380 Neurohumoral Control of autonomic function: Student contact hrs: 10. This is a literature based course with discussions on History and systems, Neuroendcrinology, paraventricular nucleus, circumventricular organs, and water intake. UNT Health Science Center	1	gradaute students	1-6

Course Lectures

Inclusive years (yyyy-yyyy)	Course title and number	Number of times the course is taught annually	Type of students taking the course (e.g., medical; dental; nursing; etc.	Number of students taking the course
1995	Block 2 Basic Science PBL (Neuroscience): lectures on autonomic nervous system; University of Missouri	1	1st year Medical	64

1995 - 2003	Mammalian Physiology 305 (401), section on autonomic physiology and neuroscience, Univerisyt of Missouri-Columbia	1	Graduate Students	5-10
1997-1998	Block 2 Basic Science PBL (Integrative Physiology and Anatomy): lectures on autonomic nervous system, Univeirty of Missouri-Columbia	1	1st year Medical	64
2005-2009	PHAR6016 Dental Pharmacology: Student contact Hrs: 3; Lectures on general and local anesthetics, opiates and NSAIDs, and pharmacogenomics, UT Health Sci. Ctr San Antonio	1	1st year dental students	40-50
2005-2009	INTD5043 Fundamentals of Neuroscience II: Student contact Hrs: 4; Lectures on the autonomic nervous system, neuroendocrinology, and the hypothalamus. UT Health Sci. Ctr San Antonio	1	Graduate Students	3-10
2009-present	MPAS 5612 Human Physiology: Student contact Hrs: 9. Lectures on membrane potential, action potential propagation, neurotransmission motor systems and autonomic nervous system; UNT Health Science Center	1	Physican Assist	40-50
2012-present	DPHT 7501 Clincial Medicine: Student cotact hrs: 5. Lectures on cell physiology, action potential propagation, neurotransmission motor systems and autonomic nervous	1	Physical Therapy	25-35

	system; UNT Health Science Center			

Laboratory Teaching

Inclusive years (yyyy-yyyy)	Teaching topic	Number of times the course is taught annually	Type of students taking the course (e.g., medical; dental; nursing; etc.	Number of students taking the course
1996-2003	Human Neuroanatomy, Univerisyt of Missour-Columbia School of Medicine	1	1st year medical students	64

Small Group Teaching

Inclusive years (yyyy-yyyy)	Course title and number	Number of times the course is taught annually	Type of students taking the course (e.g., medical; dental; nursing; etc.	Number of students taking the course
1990	Problem based learning Discussion Leader: Fall University of Ottawa School fo Med.	1	1st year Medical Students	10

1996	Tutor for PBL in Block 4 Immunology and Endocrinology; University of Missouri-Columbia	1	1st year medical students	8
2005-2009	PHAR2005 Pharmacology: Student Contact Hrs: 2 ; Group sessions for 2nd year medical students in Medical Pharmacology; UT Health Sci. Ctr at San Antonio	1	medical	12

Students Supervised

Inclusive years (yyyy-yyyy)	Student Name	Awards/Recgonitions that student received during your supervision	Where did student go after completing training with you?
Graduate Students			
1995-2000	Ryan J. Grindstaff	Ph.D.	Anethesia Asso. Of KC, Overland Park, KS
1996-2000	Regina Randolph Grindstaff	Ph.D.	Dept. Physiology, UMKC
2001-2003	James Austgen	M.S.	Expert Committee Manager, US Pharmacipeial

			Convention, Washington D.C.
2001-2003	Maurice L. Penny	M.S.	NISD, San Antonio, TX
2006	Kristen Matthews	M.S.	NA
2009-2011	Adam McGovern	M.S.	Clinical Research Assoicate, Worldwide Clinical Trials, Raleigh-Durham, NC
2009-2013	Joseph Walsh	M.D./Ph.D.	Dept. Anesthesiology, Wake Forest School of Medicine
2010-2015	Ashwini Saxena	PhD	Dept. Psychiatry, UT Health Science Center at Houston
2012-2015	Blayne Knapp	M.S.	West Virginia School of Osteophatic Medicine
2012-2017	Katelyn Faulk	Ph.D.	PA School, UNT Health Science Center
2013-2017	Brent Shell	Ph.D.	Assistant Professor, U. Mass- Lowel
2015-2019	Kirthikaa Balapattabi	Ph.D.	Postdoctoral Fellow, MCW
2015-2019	Alexandria Marciante	Ph.D.	Postdoctoral Fellow, University of Florida
2018 -present	Ato Akinis	Ph.D. student	UNT Health Science Center
2019-present	Dianna Nyugen	DO/PhD student	UNT Health Science Center
2019-present	Obed Paundralingga	PhD student	UNT Health Science Center
2020-present	Cephas Appiah	Ph.D. Student	UNT Health Science Center

Undergraduate Students			
1997	Arej Sawani	Howard Hughes Research Internship	MD, Internal Medicine, Lexington, KY
2003	Christopher Blanner	Life Science Undergraduate Summer Fellow	MD, Family Practice, O'Fallon, MO
2004	Elizabeth Rubino	Texas State Univ	Photographer, Glassell School of Art, Italy
2006	Stephen Hatley	Texas State Univ	
2005	Heath Jones	Texas State Univ	PhD, US Army Aeromedical Researdh Lab.
2006	Jennifer Carlile	Texas State Univ	
2016	Robert Emeh	SMART Program	
2017	Anna Amune	SMART Program	Medical Student, Texas A&M
2018	Tajauna Batchlor	SMART Program	
2019	Amanda Garcia	SMART Program	St. Mary's
Summer Fellowships and Advanced Basic Science for Medical Students			
Advanced Basic Sience for fourth year medical students.			
1999	Stephen J. Colbert		Orthopedic Surgery, MU Health, Columbai, MO
1999	Farrel Douglas		Neurology, Fall River, MA
Dalton Summer Fellowships for first year meical students			

1997	Alex K Jenkins	Effects of AT1 receptor antisense injection in the area postrema on angiotensin II hypertension	Psychiatry, Portland, OR
1998	Joseph Carmichael	Identifying nerve fibers in rat mesentery	Surgery, UC Irvine Health, Irvine, CA
1999	Danillo Mazzela	Effects of diagonal band lesions on angiotensin induced vasopressin release.	Internal Medicine, Aurora, CO
2002	Bradley Harrison	Effects of AT1 receptor blockade on sodium appetite produced by 24 h Hindlimb Unloading	Family Practice, Mahattan, KS
2002	B. Matthew Howe	Fos B expression after acute volume expansion	Department of Radiology, Mayo Clinic, Rochester, MN
Post-doctorate associates			
1996-1997	Qian Li	M.D./Ph.D.	Boreinger-Ingelhiem
1997-1999	Kathleen S Curtis	Ph.D.	Assoicate Professor, Oklahoma State Univ.
2005-2007	Helmut Gottlieb	Ph.D.	Assoicate Professor, Univerity of Incarnate Word
2007-2010	W. David Knight	PhD	Lecturer, Christopher Newport Univeristy
2006 – 2010	Flavia Correno	Ph.D.	Research Assist. Prof., Department of

			Pharmacology, UT Health San Antonio
2010-2014	T. Prashant Nedugadi	Ph.D.	Science Advisor, American Heart Assoication,
2016-Present	George (Gef) Farmer	Ph.D.	
2017-2020	Lei Wang	Ph.D.	Research Fellow Braod Institute, Boston, MA
2018-Present	Cortney Brock	Ph.D.	

PEER-REVIEWED JOURNAL ARTICLES (Bold/underline faculty member's name)

a. Full-length papers – published

Complete list of Published Work in My Bibliography

http://www.ncbi.nlm.nih.gov/sites/myncbi/j.cunningham.1/bibliography/40312142/public/?sort=date&direction=ascending

1. Balapattabi K, Little JT, Bachelor ME, Cunningham RL, **Cunningham JT**. (2020) Sex Differences in the Regulation of Vasopressin and Oxytocin Secretion in Bile Duct Ligated Rats. Neuroendocrinology. Apr 24.
2. Marciante AB, Farmer GE, **Cunningham JT**. (2020) G(q) DREADD activation of CaMKIIa MnPO neurons stimulates nitric oxide activity. J Neurophysiol. Aug 1;124(2):591-609.
3. Balapattabi K, Little JT, Bachelor M, **Cunningham JT** (2020) Brain-Derived Neurotrophic Factor and Supraoptic Vasopressin Neurons in Hyponatremia. Neuroendocrinology.
4. Marciante AB, Wang LA, Little JT, **Cunningham JT** (2020) Caspase lesions of PVN-projecting MnPO neurons block the sustained component of CIH-induced hypertension in adult male rats. Am J Physiol Heart Circ Physiol 318:H34-h48.
5. Carmichael CY, Kuwabara JT, Pascale CL, Moreira JD, Mahne SE, Kapusta DR, Rosene DL, Williams JS, **Cunningham JT**, Wainford RD (2020) Hypothalamic Paraventricular Nucleus Galphai2 (Guanine Nucleotide-Binding Protein Alpha Inhibiting Activity Polypeptide 2) Protein-Mediated Neural Control of the Kidney and the Salt Sensitivity of Blood Pressure. Hypertension 75:1002-1011.
6. Farmer GE, Amune A, Bachelor ME, Duong P, Yuan JP, and **Cunningham JT**. (2019) Sniffer cells for the detection of neural Angiotensin II in vitro. *Scientific reports* 9: 8820.
7. Frame AA, Carmichael CY, Kuwabara JT**, Cunningham JT,** and Wainford RD. (2019) Role of the afferent renal nerves in sodium homeostasis and blood pressure regulation in rats. *Exp Physiol*.
8. Balapattabi K, Farmer GE, Knapp BA, Little JT, Bachelor M, Yuan JP, and **Cunningham JT**. (2019) Effects of Salt Loading on Supraoptic Vasopressin Neurons Assessed by ClopHensorN Chloride Imaging. *J Neuroendocrinol* e12752.
9. Shell B, Farmer GE, Nedungadi TP, Wang LA, Marciante AB, Snyder BD, Cunningham RL, **Cunningham JT** (2019) Angiotensin Type 1a Receptors in the Median Preoptic Nucleus Support Intermittent Hypoxia-Induced Hypertension. Am J Physiol Regul Integr Comp Physiol. 316: R651-r665, 2019.

10. Marciante AB, Wang LA, Farmer GE, **Cunningham JT** (2019) Selectively Inhibiting the Median Preoptic Nucleus Attenuates Angiotensin II and Hyperosmotic-Induced Drinking Behavior and Vasopressin Release in Adult Male Rats. eNeuro 6

11. Balapattabi K, Little JT, Farmer GE, **Cunningham JT** (2018) High salt loading increases brain derived neurotrophic factor in supraoptic vasopressin neurones. J Neuroendocrinol 30:e12639.

12. Farmer GE, Balapattabi K, Bachelor ME, Little JT, **Cunningham JT** (2018) AT1a influences GABAA-mediated inhibition through regulation of KCC2 expression. Am J Physiol Regul Integr Comp Physiol 315:R972-r982.

13. Wu Q, **Cunningham JT**, Mifflin S (2018) Transcription factor DeltaFosB acts within the nucleus of the solitary tract to increase mean arterial pressure during exposures to intermittent hypoxia. Am J Physiol Heart Circ Physiol 314:H270-h277.

14. Snyder B, Shell B, **Cunningham JT**, Cunningham RL (2017) Chronic intermittent hypoxia induces oxidative stress and inflammation in brain regions associated with early-stage neurodegeneration. Physiological reports 5.

15. Faulk KE, Nedungadi TP, **Cunningham JT** (2017) Angiotensin converting enzyme 1 in the median preoptic nucleus contributes to chronic intermittent hypoxia hypertension. Physiological reports 5.

16. Faulk K, Shell B, Nedungadi TP, **Cunningham JT** (2017) Role of angiotensin-converting enzyme 1 within the median preoptic nucleus following chronic intermittent hypoxia. Am J Physiol Regul Integr Comp Physiol 312:R245-r252.

17. Carmichael, C.Y., Carmichael A.C., Kuwabara J.T., **Cunningham J.T.**, Wainford R.D. (2016) Impaired sodium-evoked paraventricular nucleus neuronal activation and blood pressure regulation in conscious Sprague-Dawley rats lacking central Galphai2 proteins. Acta Physiol (Oxf) 216:314-329. doi: 310.1111/apha.12610. Epub 12015 Oct 12619.

18. Saxena, A., Little J.T., Nedungadi T.P., **Cunningham J.T.** (2015) Angiotensin II type 1a receptors in subfornical organ contribute towards chronic intermittent hypoxia-associated sustained increase in mean arterial pressure. Am J Physiol Heart Circ Physiol 308:H435-446.

19. Choe, K.Y., Han S.Y., Gaub P., Shell B., Voisin D.L., Knapp B.A., Barker P.A., Brown C.H., **Cunningham J.T.,** Bourque C.W. (2015) High Salt Intake Increases Blood Pressure via BDNF-Mediated Downregulation of KCC2 and Impaired Baroreflex Inhibition of Vasopressin Neurons. Neuron 85:549-560.

20. Walch, J.D., Nedungadi T.P., **Cunningham J.T.** (2014) ANG II receptor subtype 1a gene knockdown in the subfornical organ prevents increased drinking behavior in bile duct-ligated rats. Am J Physiol Regul Integr Comp Physiol 307:R597-607.

21. Saxena, A., Bachelor M., Park Y.H., Carreno F.R., Nedungadi T.P., **Cunningham J.T.** (2014) Angiotensin II induces membrane trafficking of natively-expressed Transient Receptor Potential

vanilloid type 4 channels in hypothalamic 4B cells. Am J Physiol Regul Integr Comp Physiol 307:R945-R955.

22. Nedungadi, T.P., **Cunningham J.T.** (2014) Differential regulation of TRPC4 in the vasopressin magnocellular system by water deprivation and hepatic cirrhosis in the rat. Am J Physiol Regul Integr Comp Physiol 306:R304-314.

23. **Cunningham, J.T.** (2013) Editorial Focus: the brain renin-angiotensin system and hypertension. Focus on: hypertension in mice with transgenic activation of the brain renin-angiotensin system is vasopressin dependent. Am J Physiol Regul Integr Comp Physiol 305:R173-174.

24. Wang Y., Ding M., Chaudhari S., Ding Y., Yuan J., Stankowska D., He S., Krishnamoorthy R., **Cunningham J.T.**, Ma R. (2013) Nuclear Factor κB Mediates Suppression of Canonical Transient Receptor Potential 6 Expression by Reactive Oxygen Species and Protein Kinase C in Kidney Cells. Journal of Biological Chemistry 288:12852-12865.

25. Walch, J.D., Carreño F.R., **Cunningham J.T.** (2013) Intracerebroventricular losartan infusion modulates angiotensin II type 1 receptor expression in the subfornical organ and drinking behaviour in bile-duct-ligated rats. Experimental Physiology 98:922-933.

26. Sharpe ,A.L., Calderon A.S., Andrade M.A., **Cunningham J.T.**, Mifflin S.W., Toney G.M. (2013) Chronic intermittent hypoxia increases sympathetic control of blood pressure: role of neuronal activity in the hypothalamic paraventricular nucleus. Am J Physiol Heart Circ Physiol 305:H1772-1780.

27. Knight, W.D., Saxena A., Shell B., Nedungadi T.P., Mifflin S.W., **Cunningham J.T.** (2013) Central losartan attenuates increases in arterial pressure and expression of FosB/ΔFosB along the autonomic axis associated with chronic intermittent hypoxia. American Journal of Physiology - Regulatory, Integrative and Comparative Physiology 305:R1051-R1058.

28. Bathina, C.S., Rajulapati A., Franzke M., Yamamoto K., **Cunningham J.T.**, Mifflin S. (2013) Knockdown of tyrosine hydroxylase in the nucleus of the solitary tract reduces elevated blood pressure during chronic intermittent hypoxia. Am J Physiol Regul Integr Comp Physiol 305:R1031-1039.

29. **Cunningham, J.T.**, Nedungadi T.P., Walch J.D., Nestler E.J. & Gottlieb H.B. (2012). {Delta}FosB in the supraoptic nucleus contributes to hyponatremia in rats with cirrhosis. Am J Physiol Regul Integr Comp Physiol 303, R177-185.

30. Yao, S.T., Gouraud S.S., Qiu J., **Cunningham J.T.**, Paton J.F.R., Murphy D. (2012) Selective Up-Regulation of JunD Transcript and Protein Expression in Vasopressinergic Supraoptic Nucleus Neurones in Water-Deprived Rats. Journal of Neuroendocrinology 24:1542-1552.

31. Nedungadi, T.P., Dutta M., Bathina C.S., Caterina M.J. & **Cunningham .JT.** (2012). Expression and distribution of TRPV2 in rat brain. Exp Neurol 237, 223-237.

32. Nedungad, T.P., Carreno F.R., Walch J.D., Bathina C.S & **Cunningham J.T.** (2012). Region-specific changes in transient receptor potential vanilloid channel expression in the vasopressin magnocellular system in hepatic cirrhosis-induced hyponatraemia. J Neuroendocrinol 24, 642-652.

33. **Cunningham J.T.**, Knight W.D., Mifflin S.W. & Nestler E.J. (2012). An Essential Role for {Delta}FosB in the Median Preoptic Nucleus in the Sustained Hypertensive Effects of Chronic Intermittent Hypoxia. Hypertension 60, 179-187.

34. Gottlieb H.B., Ji L.L., **Cunningham J.T** .(2011) Role of superior laryngeal nerve and Fos staining following dehydration and rehydration in the rat. Physiology & Behavior 104:1053-1058.

35. Carreno F.R., Walch J.D., Dutta M., Nedungadi T.P. & **Cunningham J.T.** (2011). Brain-derived neurotrophic factor-tyrosine kinase B pathway mediates NMDA receptor NR2B subunit phosphorylation in the supraoptic nuclei following progressive dehydration. J Neuroendocrinol 23, 894-905.

36. Knight W.D., Little J.T., Carreno F.R., Toney G.M., Mifflin S.W. & **Cunningham J.T.** (2011). Chronic intermittent hypoxia increases blood pressure and expression of FosB/ΔFosB in central autonomic regions. American Journal of Physiology - Regulatory, Integrative and Comparative Physiology 301, R131-R139.

37. Knight, W. D., Ji, L. L., Little, J. T., & **Cunningham, J. T.** (2010). Dehydration followed by sham rehydration contributes to reduced neuronal activation in vasopressinergic supraoptic neurons after water deprivation. American Journal of Physiology - Regulatory, Integrative and Comparative Physiology, 299(5), R1232-R1240. doi: 10.1152/ajpregu.00066.2010

38. Zhang, W. R., Carreno, F. R., **Cunningham, J. T.,** & Mifflin, S. W. (2009). Chronic Sustained Hypoxia Enhances Both Evoked EPSCs and Norepinephrine Inhibition of Glutamatergic Afferent Inputs in the Nucleus of the Solitary Tract. Journal Of Neuroscience, 29(10), 3093-3102.

39. Carreno, F. R., Ji, L. L., & **Cunningham, J. T**. (2009). Altered central TRPV4 expression and lipid raft association related to inappropriate vasopressin secretion in cirrhotic rats. American Journal Of Physiology-Regulatory Integrative And Comparative Physiology, 296(2), R454-R466.

40. Ma, S., Mifflin, S. W., **Cunningham, J. T.** and Morilak, D. A. (2008) Chronic intermittent hypoxia sensitizes acute hypothalamic-pituitary-adrenal stress reactivity and Fos induction in the rat locus coeruleus in response to subsequent immobilization stress. Neuroscience, 154, 1639-1647.

41. Zhang, W. R., Carreno, F. R., **Cunningham, J. T**., & Mifflin, S. W. (2008). Chronic sustained and intermittent hypoxia reduce function of ATP-sensitive potassium channels in nucleus of the solitary tract. American Journal Of Physiology-Regulatory Integrative And Comparative Physiology, 295(5), R1555-R1562.

42. Shi, P., Martinez, M. A., Calderon, A. S., Chen, Q. H., **Cunningham, J. T**., & Toney, G. M. (2008). Intra-carotid hyperosmotic stimulation increases Fos staining in forebrain organum vasculosum

laminae terminalis neurones that project to the hypothalamic paraventricular nucleus. Journal Of Physiology-London, 586(21), 5231-5245.

43. **Cunningham, J. T**., Mifflin, S. W., Gould, G. G. and Frazer, A. (2008) Induction of c-Fos and DeltaFosB immunoreactivity in rat brain by Vagal nerve stimulation. Neuropsychopharmacology, 33, 1884-1895.

44. Gottlieb, H. B., Fleming, T. M., Ji, L. and **Cunningham, J. T**. (2007) Identification of central nervous system sites involved in the water diuresis response elicited by central microinjection of nociceptin/ Orphanin FQ in conscious rats via c-Fos and inducible cAMP early repressor immunocytochemistry. J Neuroendocrinol, 19, 531-542.

45. **Cunningham, J.T.**, Herrera-Rosales M., Martinez M.A., Mifflin S. (2007) Identification of active central nervous system sites in renal wrap hypertensive rats. Hypertension 49:653-658.

46. Ji L.L., Gottlieb H.B., Penny M.L., Fleming T., Toney G.M., **Cunningham J.T.** (2007) Differential effects of water deprivation and rehydration on Fos and FosB/DeltaFosB staining in the rat brainstem. Exp Neurol 203:445-456.

47. Mueller, P. J., Foley, C. M., Heesch, C. M., **Cunningham, J. T**., Zheng, H., Patel, K. P. and Hasser, E. M. (2006) Increased nitric oxide synthase activity and expression in the hypothalamus of hindlimb unloaded rats. Brain Res, 1115, 65-74.

48. Gottleib, H.L., Ji L.L., Penny M.L., Fleming T. and **Cunningham J.T.** (2006). Differential effects of water and saline intake on water deprivation induced c-Fos staining in the rat. Am J. Physiol. – Reg. Int. Comp. 290(5):R1251-1261.

49. Mueller, P.J., Sullivan M.J., Grindstaff R.R., **Cunningham J.T.** and Hasser E.M. (2006) Regulation of plasma vasopressin and renin acitivty in conscious hindlimb unloaded rats. Am J. Physiol. – Reg. Int. Comp. 291(1): R46-52.

50. Lohmeier, T.E., Hildebradt D.A., May P., Warren S.E., **Cunningham J.T.** (2005).Recent insight into interaction between the baroreflex and the kidneys in hypertension. American Journal of Physiology - Regulatory Integrative & Comparative Physiology. 288: R828-R836.

51. Penny, M.L., Cornelius J., Bruno S.B., Higgs KAN, **Cunningham J.T.** (2005). The effects of osmotic stimulation and water availability on c-Fos and FosB staining in the Supraoptic and Paraventricular nuclei of the Hypothalamus. Experimental Neurology. 194:191-202.

52. Ji, L.L., Penny M.L., Flemming T., Toney G.M., **Cunningham J.T.** (2005). Effects of water deprivation and rehydration on c-Fos and FosB staining in the supraoptic nucleus and the lamina terminalis region. American Journal of Physiology - Regulatory Integrative & Comparative Physiology. 288: R311-R321.

53. Stocker, S., **Cunningham J.T.**, Toney G.L. (2004). Water deprivation increases Fos immunoreactivity in PVN autonomic neurons with projections to the spinal cord and rostral ventrolateral medulla.

American Journal of Physiology - Regulatory Integrative & Comparative Physiology. 287: R1172-R1183.

54. **Cunningham, J.T.**, Penny M.L., Murphy D. (2004). Cardiovascular regulation of supraoptic neurons in the rat: synaptic inputs and cellular signals. Prog. Molec Neurobiol. 84: 183-196.

55. Sullivan, M.J., Hasser, E.M., Moffitt, J.A., Bruno, S.B. & **Cunningham, J.T.** (2004) Rats exhibit aldosterone dependent sodium appetite during 24 h hindlimb unloading. J. Physiol. 557(Pt 2):661-70.

56. Howe, B.M., Stiegers R.L., Higgs K.A.N., Bruno S.B. **Cunningham J.T.** (2004). FosB expression in the central nervous system following isotonic volume expansion in unanaesthetized rats. Exp. Neurol.. 187(1):190-8.

57. Sullivan, M.J., **Cunningham, J.T.,** Mazzella, D., Allen, A.M. Nissen, R., & Renaud L.P. (2003) Lesions of the diagonal band of Broca enhance drinking in the rat. J Neuroendo. 15: 907-915.

58. Fole,y C.M., Stanton J.J., Hasser E.M., **Cunningham J.T.**, Price E.M., Heesch C.M. (2003). GABAa receptor ?1, ?2, and ?3 subunit expression in discrete cardiovascular related brainstem regions in nonpregnant and pregnant rats. Brain Research 975(1-2):196-206.

59. Lohmeier, T.E., Warren,S. & **Cunnungham J.T.** (2003). Sustained activation of the central baroreceptor pathway in obesity hypertension. Hypertension 42(1):96-102.

60. **Cunningham, J.T.** Bruno, S.B., Higgs, K.A.N. & Sullivan, M.J. (2002). Intrapericardial procaine affects volume expansion-induced Fos Immunoreactivity in unanesthetized rats. Exp. Neurol. 174: 181-192.

61. **Cunningham, J.T.**, Grindstaff, R.J., Grindstaff R.R. & Sullivan M.J. (2002) Fos immunoreactivity in the diagonal band and the perinuclear zone of the supraoptic nucleus after hypertension and hypervolemia in unanesthetized rats. J. Neuroendo. 14: 219-227.

62. Lohmeier, T.E. Lohmeier, J.R. Warren, S., May, P.J. & **Cunningham, JT**. (2002) Sustained activation of the central baroreceptor pathway in angiotensin hypertension. Hypertension . 39:550-556.

63. **Cunningham, J.T**., Freeman, R.H., & Howokawa, M. (2001). Integration of neuroscience and endocrinology in hybrid PBL curriculum. Adv. Physiol. Educ. 25: 233-240.

64. Grindstaff, R.R. **Cunningham J.T.** (2001). Lesion of the perinuclear zone attenuates cardiac sensitivity of vasopressinergic supraoptic neurons. American Journal of Physiology - Regulatory Integrative & Comparative Physiology. 280(3):R630-R638.

65. Grindstaf,f R.J. Grindstaff R.R. **Cunningham J.T.** (2000). Baroreceptor sensitivity of rat supraoptic vasopressin neurons involves noncholinergic neurons in the DBB. American Journal of Physiology - Regulatory Integrative & Comparative Physiology. 279(5):R1934-R1943.

66. Grindstaff R.R, Grindstaff, R.J. & **Cunningham, J.T.** (2000). Effects of atrial stretch on vasopressin and oxytocin supraoptic neurons in the rat. American Journal of Physiology: Reg. Int. Comp. Physiol. 278, R1605-R1615.

67. Grindstaff, R.J., Grindstaff,, R.R., Sullivan, M.J. & **Cunningham, J.T.** (2000). The role of the locus coeruleus in the baroreceptor regulation of vasopressin supraoptic neurons. American Journal of Physiology: Reg. Int. Comp. Physiol. 279, R306-R319.

68. Curtis, K.S., **Cunningham, J.T**., & Heesch, C.M. (1999). Fos expression in brain stem nuclei of pregnant rats after hydralazine-induced hypotension. American Journal of Physiology: Reg. Int. Comp. Physiol., 277, R532-R540

69. Kraske, S., **Cunningham, J.T**., Sullivan, M.J., Haduczok, G., Wachtel, R.E., & Abboud, F.M. (1998). Mechanosensitive ion channels in putative aortic baroreceptor neurons. American Journal of Physiology: Heart & Circulatiory Physiology, 275, H1497-H1501.

70. Randolph, R.R. Li, Q., Curtis, K.S., Sullivan, M.J., & **Cunningham, J.T.** (1998) Fos Expression following isotonic volume expansion of the unanesthetized male rat. American Journal of Physiology: Reg. Int. Comp. Physiol., 274, R1345-R1352.

71. Li, Q., Sullivan, M.J., Dale, W.E., Hasser, E.M., Blaine, E.H. & **Cunningham, J.T.** (1998) Fos-like immunoreactivity in the medulla following acute and chronic angiotensin II infusion. J. Pharmacol. Exper. Therap, 284, 1165-1173.

72. **Cunningham, J.T**., Wachtel, R.E., & Abboud, F.M. (1997) Whole cell currents produced by neurite stimulation in putative aortic baroreceptor neurons in vitro. Brain Research, 757, 149-157.

73. Johnson A.K., **Cunningham J.T**., & Thunhorst R.L. (1996). Integrative Role of the Lamina Terminalis in the regulation of cardiovascular and body fluid homeostasis. Clinical and Experimental Pharmacology and Physiology, 23, 183-191.

74. Chapleau, M.W., **Cunningham, J.T**., Sullivan, M.J., Wachtel, R.E., & Abboud, F.M. (1995) Structural versus functional modulation of the arterial baroreflex. Hypertension, 26, 341-347.

75. **Cunningham, J.T**., Wachtel, R.E., & Abboud, F.M. (1995) Whole cell currents stimulated by hypoosmotic stretch in putative aortic baroreceptor neurons in vitro. Journal of Neurophysiology, 73, 2094-2098.

76. **Cunningham, J.T**., Nissen, R., & Renaud, L. P. (1994). Perinuclear zone and diagonal band lesions enhance angiotensin responses of rat supraoptic nucleus neurons. American Journal of Physiology, 267, R916-R920.

77. Nissen, R, **Cunningham, J.T**., & Renaud, L.P. (1993). Lateral hypothalamic lesions alter baroreceptor- and diagonal band-evoked inhibition of rat supraoptic vasopressin neurones. Journal of Physiology, 470, 751-766.

78. **Cunningham, J.T**., Nissen, R., & Renaud L.P. (1993). Noradrenaline injections in the diagonal band selectively reduce supraoptic vasopressin neural activity. Brain Research, 610, 152-155.

79. **Cunningham, J.T**., Nissen, R., & Renaud, L.P. (1992). Catecholamine depletion of the diagonal band attenuates baroreceptor-induced inhibition of rat supraoptic vasopressin neurons. American Journal of Physiology, 263, R363-R367.

80. **Cunningham, J.T**., Beltz, T.G., Johnson, R.F., & Johnson, A.K. (1992). The effects of ibotenate lesions of the median preoptic nucleus on experimentally induced and circadian drinking behavior in rats. Brain Research, 580, 325-330.

81. **Cunningham, J.T**., Nissen, R., & Renaud, L.P. (1992). Ibotenate lesions of the diagonal band of Broca attenuate baroreceptor sensitivity of rat supraoptic vasopressin neurons. Journal of Neuroendocrinology, 4, 303-309.

82. Hu, B., **Cunningham, J.T.,** Nissen, R., Renaud, L.P., & Bourque, C.W. (1992). Rat supraoptic nucleus is histologically and physiologically resistant to glutamate neurotoxicity. NeuroReport, 3, 87-90.

83. **Cunningham, J. T**. & Johnson, A.K. (1991). The effects of central norepinephrine infusions on drinking behavior induced by angiotensin after 6-hydroxydopamine injections into the anteroventral region of the third ventricle (AV3V). Brain Research, 558, 112-116.

84. **Cunningham, J.T**., Sullivan, M.J., Edwards, G.L., Farinpour, R., Beltz, T.G. & Johnson, A.K. (1991). Dissociation of experimentally induced drinking by ibotenate injections into the median preoptic nucleus. Brain Research, 554, 153-158.

85. Randall, W., **Cunningham, J.T.,** & Randall, S. (1990). Sounds from an animal colony entrain circadian rhythms in the cat, Felis catus L. Journal of Interdisciplinary Cycle Research, 21, 51-64.

86. Edwards, G.L., **Cunningham, J.T**., Beltz, T. G., & Johnson, A. K. (1990). Neuropeptide Y immunoreactive cells in the caudal medulla project to the median preoptic nucleus. Neuroscience Letters, 102, 29-34.

87. Callahan, M.F., Kirby, R.F., **Cunningham, J.T**., Sloop, S. L., Johnson, A.K., McCarty, R., & Gruber, K.A. (1989). Central oxytocin systems may mediate a cardiovascular response to acute stress in rats. American Journal of Physiology, 256, H1369-H1377.

88. **Cunningham, J.T**. & Johnson, A.K. (1989). Decreased norepinephrine in the ventral lamina terminalis region is associated with angiotensin II drinking response deficits following local 6-hydroxydopamine injections. Brain Research, 480, 65-71.

89. Callahan, M.F., **Cunningham, J.T.,** Kirby, R.F., Johnson, A.K., & Gruber, K.A. (1988). Role of the anteroventral third ventricle (AV3V) region of the rat brain in the pressor response to gamma2-melanocyte-stimulating hormone (gamma2-MSH). Brain Research, 444, 177-180.

90. McRae-Degueurce, A., **Cunningham, J.T**., Bellin, S., Landas, S. Wilkin, L., & Johnson, A.K. (1987). Fetal noradrenergic cell suspensions transplanted into amine-depleted nuclei of adult rats. Annals of the New York Academy of Sciences, 495, 757-759.

91. Randall, W., **Cunningham, J.T**., Randall, S., Liittschwager, J., & Johnson, R.F. (1987). A two-peak circadian system in activity and body temperature in the domestic cat. Journal of Thermal Biology, 12, 27-37.

92. Randall, W., Johnson, R.F., Randall, S., & **Cunningham, J.T**. (1985). Circadian rhythms in food intake and activity in the domestic cat. Behavioral Neuroscience, 99, 1162-1175.

REVIEW ARTICLES

1. Nguyen DH, **Cunningham JT**, Sumien N. Estrogen receptor involvement in vascular cognitive impairment and vascular dementia pathogenesis and treatment. Geroscience. 2020 Sep 9.

2. Shell B., Faulk K., **Cunningham J.T.** (2016) Neural Control of Blood Pressure in Chronic Intermittent Hypoxia. Curr Hypertens Rep 18:19. doi: 10.1007/s11906-11016-10627-11908.

3. Mifflin, S., **Cunningham J.T**., Toney G.M. (2015) Neurogenic mechanisms underlying the rapid onset of sympathetic responses to intermittent hypoxia. Journal of Applied Physiology 119:1441-1448.

4. Toney, G.M., **Cunningham J.T.,** Mifflin S.W. (2010) Early neural adaptations to intermittent hypoxia: triggers for the pathophysiology of sleep apnea. In: Recent Advances in Cardiovascular Research: From Sleep to Exercise (Ally, A. et al., eds), pp 75-96 Kerala, India: Research Signpost.

5. Mueller, P.J. **Cunningham, J.T**., Patel, K.P. & Hasser E.M. (2003) Proposed role of the paraventricular nucleus in cardiovascular deconditiong. Acta Physiol Scand, 177, 27-35.

6. **Cunningham, J.T**., Bruno, S.B., Grindstaff, R.J., Grindstaff, R.R., Higgs, K.A.N., Mazzella, D. & Sullivan, M.J. (2002). Cardiovascular regulation of supratopic vasopressin neurons. Prog. Brain Res. 139, 257-273.

7. Grindstaff, R.R. & **Cunningham, J.T.** (2001). Cardiovascular regulation of vasopressin neurons in the supraoptic nucleus. Exp. Neurol. 171, 219-226.

8. Hasser, E.M., **Cunningham, J.T**., Sullivan, M.J., Curtis, K.S., Blaine, E. H. & Hay, M.H. (2000). Area postrema and sympathetic nervous system effects of vasopressin and angiotensin II. Clin. Exper. Pharmacol. Physiol., 27, 432-436.

9. Blaine, E.H., **Cunningham, J.T**., Hasser, E.M., Dale W.E., Li, Q., & Sullivan, M.J. (1998). Angiotensin hypertension. Clin. Exper. Pharmacol. Physiol. 25(S), S16-S20.

10. Renaud, L.P., **Cunningham, J.T**., Nissan, R., and Yang, C.R. (1993). Electrophysiology of central pathways controlling the release of neurophypophseal hormones: Focus on the lamina terminalis and diagonal band inputs to the supraoptic nucleus. Annals of the New York Academy of Sciences, 689, 122-132.

11. Renaud, L.P., Allen, A.M., **Cunningham, J.T**., Jarvis, C.R., Johnson, S., Nissen, R., Sullivan, M.J., Van Vulpen, E.E., & Yang, C.R. (1992). Synaptic and neurotransmitter regulation of activity in mammalian hypothalamic magnocellular neurosecretory cells. In Progress in Brain Research vol. 92 "Peptidergic Neuron" (Eds. J. Joose, R. Buijs & S.H. Tilders) Elsevier, Amsterdam, 277-288.

12. Renaud, L.P., **Cunningham, J.T**., Jarvis, C.R., Nissen, R., Sullivan, M.J., Van Vulpen, E.E., & Yang, C.R. (1991). Neural afferent connections to magnocellular vasopressin-secreting neurons. In Vasopressin (Eds. S. Jard & R. Jamison) J. Libbey Eurotext Ltd, 223-230.

13. Johnson, A.K. & **Cunningham, J.T.** (1989). The role of basal forebrain norepinephrine and the control of extracellular depletion-induced drinking. Acta Physilogica Polinica 40, 282-292.

14. **Cunningham, J.T**. & Johnson, A.K. (1988). Models for the integration of humoral and neural factors critical to body fluid homeostasis. In Recent Progress in Posterior Pituitary Hormones. S. Yoshida & L. Share Eds. Excepta Medica: Amsterdam, 97-106.

15. Johnson, A.K. & **Cunningham, J.T.** (1987). Brain mechanisms and drinking: The role of lamina terminalis-associated systems in extracellular thirst. Kidney International, 32, S35-S42.

OTHER (Commentary/Letters/Editorials/Case Reports/Video/Film) Other

1. **Cunningham, J.T.** (2013) Editorial Focus: The brain renin-angiotensin system and hypertension. focus on: Hypertension in mice with transgenic activation of the brain renin-angiotensin system is vasopressin dependent. American Journal of Physiology - Regulatory Integrative and Comparative Physiology 305:R173-R174.

Abstracts

1. Kirthikaa Balapattabi, J.T. Little, M. Bachelor, R.L. Cunningham, and J. Thomas Cunningham. “Sex Difference and Hormones in the Regulation of Vasopressin Secretion during Dilutional Hyponatremia.” 2019. Oral and poster presentations. Women’s Cardiovascular and Brain Health Symposium, UNTHSC, TX.

2. Kirthikaa Balapattabi, J. T. Little, J. Thomas Cunningham. Brain Derived Neurotrophic Factor in the Regulation of Supraoptic Vasopressin Neurons in Development of Hyponatremia. 2019. Poster presentation. Pan American Neuroendocrine Society, New Orleans, LA.

3. Kirthikaa Balapattabi, J. T. Little, J. Thomas Cunningham. Brain Derived Neurotrophic Factor in the Regulation of Supraoptic Vasopressin Neurons in Development of Hyponatremia. 2019. Oral presentation. ENDO, New Orleans, LA.

4. Kirthikaa Balapattabi, J. T. Little, J. Thomas Cunningham. "Intracellular Chloride Regulation of Supraoptic Vasopressin Neurons during Salt Loading."2019. Oral presentation. Research Appreciation Day. UNTHSC, Fort Worth, TX.

5. Kirthikaa Balapattabi, J.T. Little, M. Bachelor, R.L. Cunningham, and J. Thomas Cunningham. "Sex Difference and Hormones in the Regulation of Vasopressin Secretion during Dilutional Hyponatremia." 2019. Oral and poster presentations. Experimental Biology. Orlando, FL.

6. Kirthikaa Balapattabi, G.E. Farmer, J.T. Little, M. Bachelor, and J. Thomas Cunningham. "Intracellular Chloride Regulation of Supraoptic Vasopressin Neurons during Salt Loading." 2019. Oral and poster presentations. Experimental Biology. Orlando, FL.

7. Kirthikaa Balapattabi, J. T. Little, G.E. Farmer, J. Thomas Cunningham; "Salt Loading Increases Brain Derived Neurotrophic Factor in Supraoptic Vasopressin Neurons." 2018. Oral presentation. International Congress of Neuroendocrinology, Toronto, Canada.

8. Kirthikaa Balapattabi, J.T. Little, M. Bachelor, R.L. Cunningham, and J. Thomas Cunningham. "Sex Difference and Hormones in the Regulation of Vasopressin Secretion during Dilutional Hyponatremia." 2019. Oral and poster presentations. Women's Cardiovascular and Brain Health Symposium, UNTHSC, TX.

9. Marciante A., Farmer G., Wang L., Cunningham J.T.; Selective MnPO inhibition attenuates ANG II-induced drinking behavior and neuroendocrine function. 9th International Congress of Neuroendocrinology (ICN 2018), July 15-18, 2018, Toronto, Canada

10. Marciante A., Farmer G., Wang L., Cunningham J.T.; DREADD-Induced Inhibition of the MnPO Affects Drinking Behavior and Neuroendocrine Function in Adult Male Rats. Experimental Biology, April 21-25, 2018, San Diego, CA

11. Farmer G., Little J.T., Marciante A., Cunningham J.T.; AT1aR dependent GABAr inhibition in the MnPO following chronic intermittent hypoxia. Experimental Biology, April 21-25, 2018, San Diego, CA

12. Marciante A., Cunningham J.T.; DREADD-induced cFos expression in the basal forebrain of male rats. Experimental Biology, April 22-26, 2017, Chicago, IL

13. Faulk, K., **Cunningham J.T.** (2015) Angiotensin Converting Enzyme 1 (ACE1) Knockdown in the Median Preoptic Nucleus (MnPO) Attenuates Downstream Neural Activation following Chronic Intermittent Hypoxia. The FASEB Journal 29.

14. Shell B., Nedungadi **T., Cunningham** J.T. (2015) AT1a Receptor Upregulation in the MnPO Following CIH Leads to Sustained Hypertension. The FASEB Journal 29.

15. Nedungad,T.P., **Cunningham J.T.** (2014) Chronic intermittent hypoxia is associated with elevated pro-opiomelanocortin mRNA and reduced microRNA-375 levels in arcuate nucleus of hypothalamus. Faseb Journal 28.

16. Faulk K, Nedungadi TP, **Cunningham JT** (2014) Angiotensin converting enzyme 1 knockdown in the median preoptic nucleus attenuates sustained diurnal hypertension following chronic intermittent hypoxia. Faseb Journal 28.

17. Saxena, A., Nedungadi T.P., Bachelor M., Carreno F.R., **Cunningham J.T.** (2013) Effect of Angiotensin on TRPV4 expression and TRPV4 agonist induced calcium transients in Hypothalamic cell line 4B. Faseb Journal 27.

18. Saini, N., Shell B., Nedungadi T.P., **Cunningham J.T.** (2013) Intermittent induced change in gene expression in the median preoptic nucleus (MnPO) of rats. Faseb Journal 27.

19. Shell, B., Little J., **Cunningham T.** (2013) AT1a Receptor Knockdown in the Median Preoptic Nucleus Attenuates the Sustained Component of Hypertension Resulting from Chronic Intermittent Hypoxia. Faseb Journal 27:1.

20. Faulk, K.E., Little J., **Cunningham T.** (2013) Median preoptic nucleus (MnPO) neurons activated following chronic intermittent hypoxia project to the paraventricular nucleus (PVN). Faseb Journal 27:1.

21. Nedungadi, T.P., Niu X.Y., **Cunningham J.T.** (2013) Differential regulation of TRPC4 expression in the magnocellular PVN and SON by hyperosmotic and hypoosmotic stress. Faseb Journal 27.

22. Nedungadi, T.P., Bachelor M., **Cunningham J.T.** (2013) Intermittent hypoxia in vitro reduces TRPC4 and neuropeptide expression in 4B cells. Faseb Journal 27.

23. Knapp, B., Nedungadi T.P., **Cunningham J.T.** (2013) Effect of Water Deprivation on KCC2 Expression in Hypothalamic Vasopressin Neurons in Rat. Faseb Journal 27.

24. Walch, J.D., **Cunningham J.T.** (2012) Angiotensin II receptor subtype 1a (AT1aR) gene silencing in neurons of the subfornical organ (SFO) prevents increased drinking behavior in bile duct ligated rats. Faseb Journal 26.

25. Saxena, A., Nedungadi T.P., Carreno F., Bachelor M., **Cunningham J.T.** (2012) Angiotensin II increases Transient Receptor Potential Vanilloid 4 channel Expression and Phosphorylation in Hypothalamic Cell line 4B. Faseb Journal 26.

26. Nedungadi, T.P., Walch J.D., **Cunningham J.T.** (2012) TRPC4 expression in Supraoptic (SON) and Paraventricular (PVN) Magnocellular Neurosecretory Cells. Faseb Journal 26.

27. Nedungadi, T.P., Walch J.D., **Cunningham J.T.** (2012) Regulation of TRPV2 in Magnocellular Neurons of the Supraoptic Nucleus in Rat. Faseb Journal 26.

28. Knight, W.D., Saxena A., Little J.T., Dutta M., **Cunningham J.T.** (2012) Central losartan attenuates CIH-induced hypertension and FosB/Delta FosB expression in hypothalamic autonomic regions. Faseb Journal 26.

29. Faulk, K.E., Knight W.D., Little J.T., **Cunningham J.T.** (2012) Colocalization of angiotensin converting enzyme 1 and FosB in the median preoptic nucleus (MnPO) following intermittent hypoxia. Faseb Journal 26.

30. Walch, J. D., Carreno, F. R., & **Cunningham, J. T.** (2011). Intracerebroventricular (ICV) Losartan infusion modulates Angiotensin type 1 receptor (AT1R) expression in the subfornical organ (SFO) and drinking behavior in bile duct ligated rats. The FASEB Journal, 25(1_MeetingAbstracts), 823.812.

31. Spear, M., **Cunningham, J. T**., & Carreno, F. R. (2011). Transient receptor potential vanilloid 4 channel (TRPV4) tyrosine phosphorylation and membrane expression are affected by angiotensin II treatment. The FASEB Journal, 25(1_MeetingAbstracts), 1080.1083.

32. Nedungadi, T. P., Dutta, M., Little, J. T., & **Cunningham, J. T**. (2011). Anatomical distribution of TRPV2 in the rat brain. The FASEB Journal, 25(1_MeetingAbstracts), 1080.1082.

33. Nedungadi, T. P., Carreno, F. R., Walch, J. D., Niu, X., & **Cunningham, J. T.** (2011). Changes in TRPV2 expression in paraventricular nucleus of bile duct ligated cirrhotic rats. The FASEB Journal, 25(1_MeetingAbstracts), 1080.1081.

34. Knight, W. D., Little, J., Mifflin, S., & **Cunningham, J. T.** (2011). Dominant negative inhibition of {Delta}FosB in the MnPO blocks increases in arterial pressure and increased expression of FosB/{Delta}FosB along the autonomic axis in chronic intermittently hypoxic rats. The FASEB Journal, 25(1_MeetingAbstracts), 822.815.

35. Griffith, B., Knight, W. D., Little, J. T., & **Cunningham, J. T.** (2011). Time course expression of FosB/{Delta}FosB in the forebrain of chronic intermittently hypoxic rats: relationship with arterial pressure. The FASEB Journal, 25(1_MeetingAbstracts), 823.811.

36. Bathina, C., Nedungadi, T., **Cunningham, J. T**., & Mifflin, S. (2011). Angiotensin AT1 receptor subtypes AT1A and AT1B mRNAs are expressed in tyrosine hydroxylase immunoreactive (TH-ir) neurons in the rat caudal nucleus of the solitary tract (NTS). The FASEB Journal, 25(1_MeetingAbstracts), lb608.

37. Walch, J. D., Little, J., Ji, L., Carreno, F., Knight, D., & **Cunningham, J. T.** (2010). Effects of water deprivation and Indomethacin on c-Fos staining in the Rat Supraoptic Nucleus (SON) of the hypothalamus. FASEB J., 24(1_MeetingAbstracts), 794.799.

38. McGovern, A. A., Carreno, F. R., & **Cunningham, J. T.** (2010). Fyn kinase-TrkB receptor-NMDAR2B glutamate receptor subunit (NR2B) physical interaction is increased in the supraoptic nuclei (SON) following dehydration in the rat. FASEB J., 24(1_MeetingAbstracts), 1025.1017.

39. Little, J. T., Knight, W. D., Ji, L. L., Gottlieb, H., & **Cunningham, J. T**. (2010). Sham rehydration contributes to increased Fos staining in the hindbrain after water deprivation in the rat. FASEB J., 24(1_MeetingAbstracts), 1025.1016.

40. Knight, W. D., Mifflin, S., & **Cunningham, J. T.** (2010). Intermittent Hypoxia in Rats Increases expression of AP-1 target genes in the median preoptic nucleus. FASEB J., 24(1_MeetingAbstracts), 809.812.

41. Gottlie, H. B., Knight, D. W., Ji, L., & **Cunningham, J**. (2010). Oropharyngeal regulation of urine output and cardiovascular function in rats with osmotic stimulation by sham ingestion. FASEB J., 24(1_MeetingAbstracts), 1025.1018.

42. Carreno, F. R., & **Cunningham, J. T**. (2010). Brain-derived neutrotrophic factor (BDNF) binding is required for its receptor TrkB activation in the supraoptic nuclei (SON) following dehydration in the rat. FASEB J., 24(1_MeetingAbstracts), 1025.1015.

43. Walch, J. D., Ji, L., Carreno, F. R., Hinojosa-Laborde, C., & **Cunningham, J. T.** (2009). Effects of Bile Duct Ligation (BDL) and Enalapril on Angiotensin receptors in the Subfornical Organ (SFO) in Rats. FASEB J., 23(1_MeetingAbstracts), 967.961.

44. Truong, H., Shah, A., **Cunningham, J. T**., Mifflin, S., & Frazer, A. (2009). Optimization of stimulation parameters for VNS therapy for treatment- Refractory depression. Society for Neuroscience Abstracts.

45. Knight, W. D., Ji, L. L., Campos, P., Gottlieb, H., & **Cunningham, J. T.** (2009). Oropharyngeal regulation of urine output and cardiovascular function in rats with osmotic stimulation by sham ingestion. FASEB J., 23(1_MeetingAbstracts), 605.608.

46. Knight, W. D., Ji, L., Little, J., Gottlieb, H., & **Cunningham, J. T.** (2009). Sham rehydration contributes to reduced Fos staining in the supraoptic nucleus (SON) after water deprivation. FASEB J., 23(1_MeetingAbstracts), 1015.1016.

47. Hinojosa-Laborde, C., Mehring, C., Tang, K., Fortepiani, L., **Cunningham, T.**, & Mifflin, S. (2009). Intermittent hypoxia increases blood pressure in old female rats. FASEB J., 23(1_MeetingAbstracts), 968.912.

48. Gottlieb, H. B., Ji, L., & **Cunningham, J.** (2009). Cardiovascular and Renal Responses Produced by the Central Microinjection of Salvinorin A in Ketamine/Xylaxine-Anesthetized Rats. FASEB J., 23(1_MeetingAbstracts), 1015.1018.

49. Carreno, F. R., Ji, L., & **Cunningham, J. T.** (2009). Specific changes in TRPV4 expression in the vasopressinergic cells in supraoptic nucleus of the rat brain following bile duct ligation (BDL) induced cirrhosis. FASEB J., 23(1_MeetingAbstracts), 967.910.

50. Carreno, F. R., Ji, L., & **Cunningham, J. T.** (2009). TrkB pathway may mediate NR1 phosphorylation in the supraoptic nuclei following dehydration in the rat. FASEB J., 23(1_MeetingAbstracts), 1015.1017.

51. Ji, L. L., Matthews, K., Carreno, F. R., Hinojosa-Laborde, C., Chakravarty, S., Nestler, E. J., & **Cunningham, J. T.** (2008). Role of FosB in the supraoptic nucleus of rats with hepatic cirrhosis. FASEB J., 22(1_MeetingAbstracts), 1161.1110.

52. Gottlieb, H., Martinez, M., Ji, L., & **Cunningham, J.** (2008). Microinjection of a selective kappa opioid agonist into the supraoptic nucleus (SON) increases inducible cAMP element repressor (ICER) expression. FASEB J., 22(1_MeetingAbstracts), 1159.1151.

53. **Cunningham, J. T.**, Toney, G. M., Hinojosa-Laborde, C., Chakravarty, S., Nestler, E. J., & Mifflin, S. W. (2008). Inhibition of FosB in the lamina terminalis (LT) blocks sustained hypertension in intermittent hypoxia (IH). FASEB J., 22(1_MeetingAbstracts), 969.925.

54. Carreno, F. R., Zhang, W., **Cunningham, T.,** & Mifflin, S. (2008). Chronic sustained and intermittent hypoxia reduce expression of ATP-sensitive K+ (K-ATP) channel subunits in the caudal NTS. FASEB J., 22(1_MeetingAbstracts), 960.918.

55. Carreno, F. R., Acosta, J., Ji, L., & **Cunningham, J. T**. (2008). Acute dehydration increases tyrosine kinase B receptor (TrkB) phosphorylation in the supraoptic nucleus (SON) of the rat. FASEB J., 22(1_MeetingAbstracts), 1161.1163

56. Shi P., Martinez M.A., **Cunningham J.T.,** Toney G.M. (2007) Central hyperosmolality increases Fos immunoreactivity in OVLT neurons projecting to the hypothalamic PVN. FASEB J 21:A1391-A1391.

57. Matthews, K., Ji L.L., Lumia A.R., **Cunningham J.T.** (2007) Water and salt intake in rats with hepatic cirrhosis. FASEB J 21:A507-A507

58. Gottlieb, H.B., Ji L., Martinez M., Little J.T., **Cunningham J.T.** (2007) ICER and c-Fos expression in the hindbrain following central administration of U-50488 (U-50), a selective kappa opioid agonist. FASEB J 21:A509-A509

59. **Cunningham, J.T.**, Mifflin S.W. (2007) Brain regions activated by chronic vagus nerve stimulation. Biol Psychiatry 61:29S-30S.

60. **Cunningham, J.T.,** Martinez M.A., Little J.T., Gottlieb H.B., Ji L.L. (2007) Oropharyngeal receptors and Fos staining following dehydration and rehydration in the rat. FASEB J 21:A515-A515

61. Carreno, F.R., Ji L.L., **Cunningham J.T.** (2007) Compartmentalization of hypothalamic TRPV4 in lipid rafts in the rat: putative role in the central control of body fluid homeostasis. FASEB J 21:A1406-A1406

62. 50 Carlisle J.N., Martinez M.M., Little J.T., Carreno F.R., Ji L.L., Matthews K.I., **Cunningham J.T.** (2007) TRPV1 and Fos staining in the forebrain of rats following water deprivation. FASEB J 21:A516-A516

63. Toney, G.M., Hunwick K., **Cunningham J.T.**, Mifflin S.W. (2006) Chronic intermittent hypoxia (CIH) enhances the lumbar sympathoexcitatory response to central hyperosmotic NaCl. FASEB J 20:A360-A360.

64. Hinojosa-Laborde, C., Craig T., Herrera-Rosales M., Tolstykh O., **Cunningham J.T.**, Mifflin S. (2006) Sodium and water homeostasis during chronic intermittent hypoxia in female rats. FASEB J 20:A1193-A1194

65. Gottlieb, H.B., Penny M., Ji L., **Cunningham J.T.** (2006) Intracerebroventricular (ICV) microinjection of a selective kappa opioid agonist increases inducible cAMP element repressor (ICER) expression in the supraoptic nucleus of conscious rats. FASEB J 20:A332-A333

66. Gottlieb, H.B., Fleming T.M., Ferguson A., **Cunningham J.T.** (2006) Central Nociceptin/Orphanin (N/OFQ) increases inducible cAMP element repressor (ICER) expression in the rat forebrain. FASEB J 20:A331-A331

67. Gottlieb, H., Ji L., Martinez M., **Cunningham J.T.** (2006) ICER and c-Fos expression in the hindbrain following central administration of nociceptin. Front Neuroendocrinol 27:13.

68. Garza, J.C., Martinez M.A., Gottlieb H.B., **Cunningham J.T.** (2006) Co-localization of FosB and cFos in the supraoptic nucleus (SON) of dehydrated male rats. FASEB J 20:A359-A359.

69. **Cunningham, J.T.,** Ji L.L., Penny M.L., Martinez M.A., Gottlieb H.B. (2006) Role of the central nervous system in chronic increases in vasopressin associated with cirrhosis. Front Neuroendocrinol 27:127-127.

70. **Cunningham, J.T.,** Fleming T., Penny M.L., Herrera-Rosales M., Mifflin S.W. (2006) Increased c-Fos in medullary cardiovascular nuclei in acute and chronic renal wrap hypertension. FASEB J 20:A1205-A1206.

71. D.A.Morilak*; S.Ma2; T.Fleming2; L.L.Ji2; S.W.Mifflin2; **JT. Cunningham2**. (2005) Chronic cold stress and chronic intermittent hypoxia sensitize acute stress-induced ACTH secretion and Fos staining in LC and forebrain of rats. Washington, DC: Society for Neuroscience, 2005. Online

72. C.S. Kim; H. Yao; W. Zhang; **J.T. Cunningham***; X.Y. Lu (2005) Arcuate nucleus is a component of stress circuits. Washington, DC: Society for Neuroscience, 2005. Online

73. **Cunningham, J.T**.,T. Fleming, S. Ma, D.A. Morilak and S.W. Mifflin (2005) Chronic intermittent hypoxia increases FosB staining in the rat brain stem. EB2005

74. Ma, S., D.A. Morilak, T. Fleming, L.L. Ji, S.W. Mifflin and **J.T. Cunningham** (2005) Chronic cold stress and intermittent hypoxia enhance the ACTH response to acute stress but not c-Fos staining in the paraventricular nucleus of the hypothalamus. EB2005.

75. Maric, C., R. Babayan, **J.T. Cunningham**, S.W. Mifflin and C. Hinojosa-Laborde (2005) Increased superoxide anion generation and p47phox expression with intermittent hypoxia. EB2005

76. Gottlieb, H.B., T. Fleming, L.L. Ji and **J.T. Cunningham** (2005) The renal effects and forebrain cFos activation produced by microinjection of a kappa opioid agonist, U-50488H, into the lateral ventricle of conscious rats. EB2005

77. Fleming, T., M.L. Penny, L.L. Ji and **J.T. Cunningham** (2005) Region specific effects of water deprivation and rehydration on c-Fos and FosB staining in the brainstem. EB2005.

78. Ji, L.L., T. Fleming, M.L. Penny, H.B. Gottlieb and **J.T. Cunningham** (2005) The effects of water deprivation and rehydration on c-Fos staining in the supraoptic nucleus and perinuclear zone.EB2005

79. Lau, Y.E., **Cunningham J.T,**, Fink G.D. (2004) Fos expression in the brain during systemic stimulation of endothelin ETB receptors FASEB J. 18: A646.

80. **Cunningham JT**, Penny ML, Fleming T, Ji LL (2004) The effects of water deprivation and rehydration on cFos and FosB in the rat forebrain. FASEB J. 18: A296.

81. Penny, M.L., Fleming T., Ji L.L., Stocker S.D., Toney G.M., **Cunningham J.T.** (2004) The effects of water deprivation on cFos activation in the ventrolateral medulla. FASEB J. 18:A296.

82. Stocker, S.D., **Cunningham J.T.**, Toney G.M. (2004) Water deprivation increases Fos immunoreactivity in parvocellular neurons of the hypothalamic paraventricular nucleus. FASEB J. 18: A295.

83. **Cunningham, J.T**., Cornelius, J., Ghorbel, M. & Murphy D. (2003) Water deprivation suppresses Jun D stainng in the supraoptic nucleus of the rat. FASEB J.

84. Austgen, J.R., Higgs K.A.N, Bruno S.B., Cornelius, J., & C**unningham, J.T.**, (2003) c-Fos expression in the paraventricular nucleus of the hypothalamus is influenced by murine leptin. FASEB J.

85. Penny, M., Higgs, K.A.N., Cornelius, J. and **Cunningham, J.T.** (2003). Effect of water restriction on Fos B staining in rat supraoptic nucleus (SON) after hypertonic saline injection. FASEB J.

86. Howe, B.M., Higgs K.A.N., Bruno S.B. & **Cunningham J.T.** (2003). Chronic Fos B expression in the hypothalamus after volume expansion in conscious rats. FASEB J.

87. Hollenbeck A.C., **Cunningham J.T**., Higgs K.A.N., Bruno, S.B. & Cornelius J. (2003). Rat hindlimb unweighting increases Fos B expression in the nucleus of the solitary tract. FASEB J.

88. Bruno, S.B., Cornelius, J., Hasser E.M. & **Cunningham, J.T.** (2003) Spironolactone blocks increased salt intake during 24-h hindlimb unloading in male rats. FASEB J.

89. Mueller, P.J., **Cunningham, J.T**., Grindstaff, R.R., Zheng, H., Patel K.P., & Hasser, E.M. (2002) NADPH-diaphorase postive neurons in the hypothalamus of hindlimb unweighted rats. FASEB J.

90. Mueller, P.J., **Cunningham, J.T**., Grindstaff, R.R., Laughlin M.H., Hasser, E.M. (2002) Hypotension-induced Fos in the hypothalamus of exercise trained rats. FASEB J.

91. Penny, M., Higgs, K.A.N., Cornelius, J., **Cunningham, J.T.** (2002). Fos B staining in rat supraoptic nucleus (SON) after hypertonic saline injection. FASEB J.

92. Sullivan, M.J., Hasser, E.M., Moffitt, J.A., Bruno, S.B., **Cunningham J.T.** (2002). Changes in Salt Intake, Plasma Volume and Aldosterone during 24 Hindlimb Unloading in Male Rats. FASEB J.

93. Bruno, S.B., Cornelius, J., Foley, C.M. Hasser E.M., **Cunningham, J.T.** (2002) Increased Sodium Intake is Maintained in 2 Week Hindlimb Unloaded (HU) Rats. FASEB J.

94. Grindstaff, RR, **Cunningham J.T**. (2000) Sensitivity of vasopressin SON neurons of PNZ lesioned rats to caval-atrail stretch. Soc. for Neurosciences, 26, 130.

95. Hasser, E.M., Sullivan M.J., **Cunningham J.T.** (2000) Reflex control of vasopressin release following hindlimb unloading Society for Neurosciences, 26, 1948.

96. Foley, C.M., Stanton J.J., Hasser E.M., **Cunningham J.T.**, Price E.M., Heesch C.M. (2000). GABAa receptor □1, □2, and □3 subunit expression in discrete cardiovascular related brainstem regions in nonpregnant and pregnant rats. FASEB J., 14.

97. Stanton, J.J., Foley C.M., **Cunningham J.T.**, Price E.M., Hasser E.M., Heesch C.M. (2000) Alterations in GABAa receptor □1 and □2 subunit expression in the supraoptic and paraventriuclar nuclei of pregnant rats. FASEB J., 14.

98. Mazzella, D., **Cunningham J.T.,** Sullivan M.J. (2000) The effects of diagonal band (DBB) on vasopressin release. FASEB J., 14.

99. Grindstaff, R.R., Grindstaff R.J., **Cunningham J.T.** (2000) Activation of cardiac receptors alters the activity of supraoptic vasopressin but not oxytocin neurons in the rat. FASEB J., 14.

100. **Cunningham, J.T.**, Bruno S.B., Higgs KAN, Sullivan M.J. (2000) Intrapericardial prociane effects volume expansion-induced Fos expression in conscious rats. FASEB J., 14.

101. Grindstaff, R.J., Randolph R.R., Curtis K.S., **Cunningham J.T**. (1999) Effect of sinoaortic denervation on Fos expression in the locus coeruleus following 2 hour phenylephrine-induced hypertension. FASEB J., 13, A779.

102. Randolph, R.R., Grindstaff R.J., Curtis K.S., **Cunningham J.T**. (1999) Effect of sinoaortic denervation on phenylephrine-induced Fos expression in the brainstem of rats. FASEB J., 13, A779.

103. Grindstaff, R.J., **Cunningham J.T.** (1999) Excitotoxic lesions of the locus coruleus attenuate baroreceptor-mediated inhibition of vasopressin neurons in the supraoptic nucleus. FASEB J., 13, A457.

104. Curtis, K.S., Randolph R.R., Sullivan M.J.**, Cunningham J.T**. (1999) Fos expression in the hypothalamus of rats with area postrema lesions after isotonic volume expansion. FASEB J. 13, A125.

105. Carmicheal, J.C., **Cunningham J.T..**, Sullivan J., Curtis K.S., Meyer D.J., Huxley V.H. (1999) Nerves associated with microvessels are adrenergic. FASEB J., 13, A33

106. Meyer, D.J., **Cunningham, J.T**., Sullivan, M.J., Curtis, K.S., Vuchetich, J.P., & Hay, M (1998) In vivo neural activation measured with FM1-43 in rat mesenteric microcirculation. FASEB J., 12, A741.

107. Randolph, R.R., Curtis, K.S. Sullivan, M.J. & **Cunningham, J.T.** (1998) Comparison of volume expansion-induced Fos expression among proestrus, deistrus and ovarexctomized female rats. FASEB J., 12, A695.

108. Grindstaff, R.J., Randolph, R.R., Sullivan, M.J. & **Cunningham, J.T.** (1998) The effects of atrial stimulation on magnocellular supraoptic neurons in the rat. FASEB J. 12, A692.

109. Curtis, K.S., Randolph, R.R., Sullivan, M.J. & **Cunningham, J.T.** (1998) Attenuated Fos experession in the caudal ventrolateral medulla of rats with area postrema lesions after isotonic volume expansion. FASEB J., 12, A692.

110. Moffitt, J.A., Hasser, E.M., Curtis, K.S., Smith, J.A., Sullivan, M.J. & **Cunningham, J.T.** (1998). Attenuated Fos expression in the rostral ventrolateral medulla (RVLM) of hindlimb unloaded rats after hysralazine treament. FASEB J., 12, A63.

111. Curtis, K.S., Laiprasert, J.D., Heesch, C.M., **Cunningham J.T**. (1997) Attenuated Fos expression in the rostral ventrolateral medulla of pregnant rats after hydralazine treatment. Society for Neuroscience Abstracts.

112. Grindstaff R.J, Sawani A., Baker J.W., Sullivan M.J., & **Cunningham, J.T.** (1997) Baroreceptor afferents to the diagonal band of Broca. Society for Neuroscience Abstracts.

113. Randolph, R.R., Curtis, K.S., Li, Q., Sullivan, M.J., & **Cunningham, J.T.** (1997) Fos Expression in male rats following isotonic volume expansion. FASEB Journal, 11, A255.

114. Curtis, K.S., Li, Q., Sullivan, M.J., Dale W.E., Hasser, E.M., Blaine, E.H., & **Cunningham, J.T.** (1997) Attenuated pressor responses and Fos-like immunoreactivity to chronic angiotensin infusion in rats with area postrema lesions. FASEB Journal, 11, A255.

115. Li, Q., Sullivan, M.J., Dale W.E., Hasser, E.M., Blaine, E.H., & **Cunningham, J.T**. (1997) Fos-like immunoreactivity in the medulla following acute and chronic angiotensin II in sinoaortic denervated rats. FASEB Journal, 11, A255.

116. **Cunningham, J.T**., Ohman, L.E. Hasser, E.M., Sullivan, M.J. & Schadt, J.C. (1996) Fos immunoreacticity after nonhypotensive and hypotensive hemorrhage in conscious rabbits. FASEB Journal, 10, .

117. Li, Q., Ohman, L.E., Sullivan, M.J., Dale W.E., Blaine, E.H., & **Cunningham, J.T**. (1996) Expression of Fos-like immunoreactiviey in the medulla following acute and chronic angiotensin infusion. FASEB Journal, 10, .

118. **Cunningham, J.T**., Kraske, S., Sullivan, M.J., Wachtel, R.E., & Abboud, F.M. (1995) Mechanosensitive ion channels in putative aortic baroreceptor neurons are influenced by culture conditions. American Heart Association.

119. Allen, A.M., **Cunningham, J.T**., Sullivan, M.J., Wachtel, R.E., & Abboud, F.M. (1995). Angiotensin supresses an M-type currnet in nodose ganglia neurons in vitro. Society for Neuroscience Abstracts, 21

120. **Cunningham, J.T.,** Kraske, S., Sullivan, M.J., Wachtel, R.E., & Abboud, F.M. Mechanosensitive ion channels in putative aortic baroreceptor neurons. (1995) Society for Neuroscience Abstracts. 21,

121. **Cunningham, J.T**., Waite L, Wachtel, R.E. & Abboud, F.M. (1994) Mechanical stimulation of neurites of nodose baroreceptor neurons in culture induces a whole cell current. The Physiologist, 37, A11.

122. **Cunningham, J.T**., Kraske, S., Fankhauser, L.J., Wachtel, R.E., Chapleau, M.W. & Abboud, F.M. (1994). Whole cell currents induced by hypoosmotic stretch in nodose ganglion neurons. FASEB 94, 8, A332.

123. **Cunningham, J.T.,** Zardetto-Smith, A.M., Cicha, M. Z., Johnson, A. K., & Lewis, S. J. (1993). Forebrain fos staining produced by carotid sinus nerve stimulation in nembutal and urethane anesthetized rats. Society for Neuroscience Abstracts, 19, 956.

124. Shaffer, R.A., Davission, R.L., **Cunningham, J.T**., Ohta, H., Johnson, A.K., & Lewis, S.J. (1993). Identification of NADPH diaphorase by in vivio injection of nitro blue tetrazolium (NBT). FASEB J, 7, A432.

125. **Cunningham, J.T**., Sullivan, M.J., Nissen, R. & Renaud L.P. (1993). Lesions of the diagonal band of broca (DBB) enhance neuroendocrine and behavioral responses to peripheral angiotensin II (A II). FASEB J, 7, A434.

126. **Cunningham, J.T**., Jarvis, C.R., Hu, B., & Renaud, L.P. (1992). Intracellular recordings from rat diagonal band of Broca (DBB) neurons and responses to norepinephrine (NE) in basal-forebrain hypothalamic explants. Society for Neuroscience Abstracts, 18, 1175.

127. Sullivan, M.J., **Cunningham, J.T.,** Nissen, R., Allen, A.M., Coderre, E., & Renaud, L. P. (1991). Ibotenic acid lesions of the diagonal band of Broca results in exaggerated polyethelene glycol-induced drinking behavior. Society for Neuroscience Abstracts, 17, 885.

128. Nissen, R., **Cunningham, J.T**., Allen, A.M., & Renaud, L.P. (1991). Ibotenic acid lesions of the median preoptic nucleus do not influence baroreceptor induced inhibition of supraoptic vasopressin secreting neurons in the rat. Society for Neuroscience Abstracts, 17, 1189.

129. **Cunningham, J.T**., Nissen, R., & Renaud, L.P. (1991). Injections of norepinephrine (NE) in the diagonal band of Broca (DBB) attenuate the activity of rat supraoptic (SON) vasopressin neurons. Society for Neuroscience Abstracts, 17, 1189.

130. **Cunningham, J.T.,** Nissen, R., & Renaud, L.P. (1991). Ibotenate lesions of the perinuclear zone (PNZ) attenuate diagonal band of Broca (DBB) mediated inhibition of supraoptic vasopressin neurons in the rat, FASEB Journal, 5, A373.

131. Hu, B., **Cunningham, J.T**., Renaud, L.P., & Bourque, C.W. (1990). Rat hypothalamic magnocellular neurosecretory cells (MNCs) are morphologically and physiologically resistant to glutamate neurotoxicity. Symposium on Excitatory Amino Acids, Montreal Neurological Institute.

132. Renaud, L.P., Nissen, R., & **Cunningham, J.T**. (1990). Angiotensin II (AII) enhanced activity of supraoptic vasopressin (VP) neurons is potentiated in rats with ibotenate lesions of either the diagonal band of Broca (DBB) or the perinuclear zone (PNZ). Society for Neuroscience Abstracts, 16, 867.

133. Nissen, R., **Cunningham, J.T**., & Renaud, L.P. (1990). Ibotenate lesions in the perinuclear region of the supraoptic nucleus (SON) attenuates baroreceptor but not median preoptic nucleus-induced inhibition of vasopressin (VP) neurons in the rat. Society for Neuroscience Abstracts, 16, 867.

134. **Cunningham, J.T**., Nissen, R., & Renaud, L.P. (1990). Catecholamine depletions of the diagonal band of Broca (DBB) attenuate baroreceptor sensitivity of rat supraoptic (SON) vasopressin neurons. Society for Neuroscience Abstracts, 16, 1141.

135. **Cunningham, J.T**., Nissen, R., & Renaud, L.P. (1990). Ibotenate lesions of the diagonal band of Broca (DBB) attenuate baroreceptor inhibition of putative-vasopressin (Vp) neurons in the supraoptic nucleus (SON) in the rat. FASEB Journal, 4, A683.

136. Ohta, H., **Cunningham, J.T**., Beltz, T., Johnson, A.K., & Brody, M.J. (1989). Effects of ibotenic acid (IBO)-induced lesions in the median preoptic nucleus (MnPO) on cardiovascular function in rats. Society for Neuroscience Abstracts, 15, 336.

137. **Cunningham, J.T**., Nissen, R., & Renaud, L.P. (1989). Lamina terminalis input to rat supraoptic nucleus visualized with retrograde transport of labeled microspheres. Society for Neuroscience Abstracts, 15, 1078.

138. **Cunningham, J.T.** & Johnson, A.K. (1988). Central infusions of norepinephrine reverse angiotensin-induced drinking response deficits produced by 6-hydroxydopamine injections into the median preoptic nucleus and the organum vasculosum of the lamina terminalis. Society for Neuroscience Abstracts, 14, 196.

139. Edwards, G.L., **Cunningham, J.T**., Beltz, T.G., & Johnson, A.K. (1988). Medullary neuropeptide-Y immunoreative neurons project to the median preoptic nucleus of the hypothalamus. FASEB Journal, 2, A1319.

140. **Cunningham, J.T**., Sullivan, M.J., Edwards, G.L., Farinpour, R., Beltz, T. G., & Johnson, A.K. (1988). Differential effects of anesthetic on drinking deficits produced by ibotenate lesions of the median preoptic nucleus. FASEB Journal, 2, A1320.

141. Edwards, G.L., **Cunningham, J.T**., Beltz, T.G., & Johnson, A.K. (1987). Medullary projections to the pons and basal forebrain: possible substrates involved in drinking behavior. Society for Neuroscience Abstracts, 13, 528.

142. **Cunningham, J.T**., Sullivan, M.J., Edwards, G.L., Farinpour, R., & Johnson, A.K. (1987). The effects of ibotenate lesions of the median preoptic nucleus on drinking behavior in the rat. Society for Neuroscience Abstracts, 13, 1170.

143. **Cunningham, J.T**., McGinity, K., Kirby, R.F., & Johnson, A.K. (1987). Decreases in AV3V norepinephrine content produce drinking response deficits to angiotensin II (ANG II). Federation Proceedings, 46, 1235.

144. Callahan, M.F., Kirby, R.F., Eskrige, S.L., **Cunningham, J.T**., Johnson, A. K., & Gruber, K. A. (1987). Blockade of hindbrain V1 vasopressin receptors blocks the tachycardia response to acute footshock stress. Federation Proceedings, 46, 1251.

145. **Cunningham, J.T**., McRae-Degueurce, A., Bellin, S.I., Wilkin, L.D., Landas, S., & Johnson, A.K. (1986). Locus coeruleus transplants reverse central angiotensin II drinking response deficits in 6-hydroxydopamine lesioned rats. Society for Neuroscience Abstracts, 12, 1475.

146. McRae-Degueurce, A., **Cunningham, J.T.,** Bellin S., Landas, S., Wilkin, L., & Johnson, A.K. (1986) Fetal neuronal catecholamine transplantation into brain damaged adult rats: The role of norepinephrine in drinking and hypertension elicited by angiotensin II. The New York Academy of Science.

147. Johnson, A.K., Callahan, M.F., **Cunningham, J.T**., & Kirby, R.F., (1986). Lesions of the AV3V attenuate cardiovascular responses to acute footshock stress. Federation Proceedings, 45, 897.

148. **Cunningham, J.T**., Callahan M.F., Kirby, R.F., Gruber, K. A., & Johnson, A.K. (1986). AV3V lesions block the cardiovascular effects of gamma-MSH. Federation Proceedings, 45, 391.

149. **Cunningham, J.T.** (1982). Hemispheric differences in the processing of emotional and nonemotional stimuli. Psi Chi Undergraduate Convention, Indiana State University at Evansville.

ORAL PRESENTATIONS

Keynote/Plenary Lectures

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1999 Young Investigator Award from the Water and Electrolyte Homeostasis Section of the American Physiological Society. Neural Regulation of Vasopressin Release, Experimental Biology Meeting in Washington D.C..

2001 Invited Speaker for American Society of Physiology Refresher Course on Integrating Endocrinology into Modern Medical School Curricula. Experimental Biology.

2001	Invited Speaker, Cardiovascular Regulation of Supraoptic Vasopressin Neurons. World Congress on Neurohypophysial Hormones 4, Bordeaux, France.
2003	Featured Speaker, Regulation of supraoptic neurons in the rat: synaptic inputs and cellular signals. Neurohumoral control of cardiovascular function—from genes to physiology, Bristol Symposium I. Organized by Drs. Murphy, Paton and Kasprov from the University of Bristol, UK.
2005	Featured Speaker, Hypothalamus integration and body fluid homeostasis, eFESBE meeting Aqua de Lindoia, Brazil.
2005	Invited Speaker, Regulation of vasopressin neurosecretory neurons, Department of Physiology, School of Medicine at Ribeirao Preto, University of San Paulo, San Paulo, BR.
2005	Invited Speaker, The role of oropharyngeal afferents in the regulation of supraoptic neurons, Department of Physiology and Pathology, School of Dentistry, Universidade Estadual Paulista, Araraquara, BR.
2005	Invited Speaker, Changes in c-Fos and ICER expression in the regulation of supraoptic neurons, Departments of Physiology and Pharmacology, School of Medicine, UNIFESP - Escola Paulista, San Paulo, BR.
2006	Invited Speaker, SON and body fluid homeostasis, Canadian Physiological Society Meeting, Lake Louise, Alberta, CA.
2006	Invited Speaker, Role of the central nervous system in chronic increases in vasopressin associated with cirrhosis. International Symposium of neuroendocrinology: Neuroendocrine control of body fluid homeostasis: past Present and Future. Department of Physiology, School of Medicine of Ribeiro Preto– USP, Brazil.
2015	Invited Speaker, Regulation of vasopressin in neurons and fluid balance in a model of diluaional hyponatremia, World Congress of Neurohypophysial Hormones 11, Queenstown, New Zealand.

Meeting Presentations

International

Year	Author(s). Title of Presentation. Sponsoring Institution/Organization, City, State, Country

2001	Symposium Speaker for American Physiological Society, Experimental Biology Meeting 2001, Vasopressin: An Integrative Look at Regulation and Function.
2001	Invited Speaker, Cardiovascular Regulation of Supraoptic Vasopressin Neurons. World Congress on Neurohypophysial Hormones 4, Bordeaux, France.
2002	Featured Speaker and session Co-Chair, Cardiovascular Regulation of Supraoptic Vasopressin Neurons. FASEB Summer Conference, Snowmass, CO.
2003	Featured Speaker, Regulation of supraoptic neurons in the rat: synaptic inputs and cellular signals. Neurohumoral control of cardiovascular function—from genes to physiology, Bristol Symposium I. Organized by Drs. Murphy, Paton and Kasprov from the University of Bristol, UK
2006	Hypothalamic integration and cardiovascular regulation, Experimental Biology, Sponsored by the Association of Latin American Physiological Societies, San Francisco, CA (Invited Speaker).
2005	Featured Speaker, Hypothalamus integration and body fluid homeostasis, eFESBE meeting Aqua de Lindoia, Brazil.
2005	Regulation of vasopressin neurosecretory neurons, Department of Physiology, School of Medicine at Ribeirao Preto, University of San Paulo, San Paulo, BR.
2005	The role of oropharyngeal afferents in the regulation of supraoptic neurons, Department of Physiology and Pathology, School of Dentistry, Universidade Estadual Paulista, Araraquara, BR.
2005	Changes in c-Fos and ICER expression in the regulation of supraoptic neurons, Departments of Physiology and Pharmacology, School of Medicine, UNIFESP - Escola Paulista, San Paulo, BR.
2006	SON and body fluid homeostasis, Canadian Physiological Society Meeting, Lake Louise, Alberta, CA.
2006	Role of the central nervous system in chronic increases in vasopressin associated with cirrhosis. International Symposium of neuroendocrinology: Neuroendocrine control of body fluid homeostasis: past Present and Future. Department of Physiology, School of Medicine of Ribeiro Preto– USP, Brazil.
2015	Regulation of vasopressin in neurons and fluid balance in a model of diluaional hyponatremia, World Congress of Neurohypophysial Hormones 11, Queenstown, New Zealand.
2018	"Role of the Brain Angiotensin System in Chronic Intermittent Hypoxia Induced Hypertension, Angiotrensin Gordon Research Conference, Ventura, CA

National

1996 Baroreceptor regulation of hypothalamic neurosecretory neurons, Department of Pharmacology, University of Texas at San Antonio Health Sciences Center.

1996 Mechanosensitive ion channels in rat aortic baroreceptor neurons, Medical Research Colloquium, University of Missouri.

1997 Cardiovascular regulation of hypothalamic neurosecretory neurons, Department of Anatomy and Physiology, School of Veterinary Medicine, Kansas State University.

1998 Cardiovascular regulation of hypothalamic neurosecretory neurons. Department of Physiology and Biophysics, University of Mississippi Medical Center.

2004 Regulation of vasopressin supraoptic neurons in the rat, Neuroscience Program, University of Minnesota (Invited Speaker).

2006 Regulation of Vasopressin Release: Physiology and Pathophysiology. Department of Pharmacology and Physiology. St. Louis University School of Medicine.

2006 Brain Regions activated by chronic vagal nerve stimulation. Cyberonics Medical Advisory Board, Palm Beach, FL. August.

2009 Neural Regulation of Vasopressin Release in a Model of SIADH, Department of Pharmaoclogy and Neuroscience Program, UNTHSC.

2008 Neural Regulation of Vasopressin Release in a Model of SIADH, Neuroscience Program, University of Wyoming.

2009 Neural Regulation of Vasopressin Release: Physiology and Pathophysiology, Department of Pharmacology, Louisanna State Univeristy Health Science Center.

2011 Neural Control of the Circulation in Chronic Intermittent Hypoxia: Role of the Lamina Terminalis, Department of Physiology, Pennsylvannia State Univeristy-Hershy.

Invited/Visiting Professor Presentations

Local and state

1999 Regulation of Vasopressin Secreting Hypothalamic Neurons, UM-Columbia Department of Pharmacology.

2006 The hypothalamus and body fluid homeostasis, Seminar Series, Department of Pharmacology, University of Texas Health Science Center, San Antonio, TX.

2011 Neural Control of the Circulation in a Model of Sleep Apnea, Department of Biology, Tarlington State University.

2012 Neural Control of the Circulation in a Model of Sleep Apnea, Department of Biology, Trinity University.

2012 Neural Control of the Circulation in a Model of Sleep Apnea: Update, Department of Biology, Tarlington State University.

National

1996 Baroreceptor regulation of hypothalamic neurosecretory neurons, Department of Pharmacology, University of Texas at San Antonio Health Sciences Center.

1996 Mechanosensitive ion channels in rat aortic baroreceptor neurons, Medical Research Colloquium, University of Missouri.

1997 Cardiovascular regulation of hypothalamic neurosecretory neurons, Department of Anatomy and Physiology, School of Veterinary Medicine, Kansas State University.

1998 Cardiovascular regulation of hypothalamic neurosecretory neurons. Department of Physiology and Biophysics, University of Mississippi Medical Center.

2004 Regulation of vasopressin supraoptic neurons in the rat, Neuroscience Program, University of Minnesota.

2006 Regulation of Vasopressin Release: Physiology and Pathophysiology. Department of Pharmacology and Physiology. St. Louis University School of Medicine.

2006 Brain Regions activated by chronic vagal nerve stimulation. Cyberonics Medical Advisory Board, Palm Beach, FL.

2009 Neural Regulation of Vasopressin Release in a Model of SIADH, Department of Pharmaoclogy and Neuroscience Program, UNTHSC.

2008 Neural Regulation of Vasopressin Release in a Model of SIADH, Neuroscience Program, University of Wyoming.

2009 Neural Regulation of Vasopressin Release: Physiology and Pathophysiology, Department of Pharmacology, Louisanna State Univeristy Health Science Center.

2011 Neural Control of the Circulation in Chronic Intermittent Hypoxia: Role of the Lamina Terminalis, Department of Physiology, Pennsylvannia State Univeristy-Hersh.

2013 Neural Regulation of Vasopressin Release: Physiology and Pathophysiology, Department of Biological Sciences, Colorado State University, Fort Collins, CO

2015 Role of the Lamina Terminalis in Intermittent Hypoxia Induced Hypertension, Department of Pharmacology, Louisanna State Univeristy Health Science Center.

2015 Role of the Lamina Terminalis in Intermittent Hypoxia Induced Hypertension, Department of Physiology and Pharmacology, St Louis University.

2016 Neural regulation of vasopressin release: Physiology and pathophysiology, Neuroscience Program, Pennsylvannia State Univeristy-Hershy

2018 Neural control of vasopressin release: Physiology and pathophysiology, Department of Physiology, Tulane University Medical School

2018 Role of the Brain Angiotensin System in Intermittent Hypoxia-Induced Hypertension, Department of Physiology, Tulane University Medical School

2018 Role of the brain angiotensin system in intermittent hypoxia-induced hypertension, Department of Neuroscience, Medical College of Georgia, Augusta Univerity, Augusta, GA

2019 Role of the brain angiotensin system in intermittent hypoxia-induced hypertension, Department of Pharmacology, University of Iowa, Iowa City, IA.

International

2001 Invited Speaker, Cardiovascular Regulation of Supraoptic Vasopressin Neurons. World Congress on Neurohypophysial Hormones 4, Bordeaux, France.

2003 Featured Speaker, Regulation of supraoptic neurons in the rat: synaptic inputs and cellular signals. Neurohumoral control of cardiovascular function—from genes to physiology, Bristol Symposium I. Organized by Drs. Murphy, Paton and Kasprov from the University of Bristol, UK.

2005 Featured Speaker, Hypothalamus integration and body fluid homeostasis, eFESBE meeting Aqua de Lindoia, Brazil.

2005 Regulation of vasopressin neurosecretory neurons, Department of Physiology, School of Medicine at Ribeirao Preto, University of San Paulo, San Paulo, BR.

2005 The role of oropharyngeal afferents in the regulation of supraoptic neurons, Department of Physiology and Pathology, School of Dentistry, Universidade Estadual Paulista, Araraquara, BR.

2005 Changes in c-Fos and ICER expression in the regulation of supraoptic neurons, Departments of Physiology and Pharmacology, School of Medicine, UNIFESP - Escola Paulista, San Paulo, BR.

2006 SON and body fluid homeostasis, Canadian Physiological Society Meeting, Lake Louise, Alberta, CA.

2006 Role of the central nervous system in chronic increases in vasopressin associated with cirrhosis. International Symposium of neuroendocrinology: Neuroendocrine control of body fluid homeostasis: past Present and Future. Department of Physiology, School of Medicine of Ribeiro Preto– USP, Brazil.

2016 Regulation of vasopressin in neurons and fluid balance in a model of diluaional hyponatremia, World Congress of Neurohypophysial Hormones 11, Queenstown, New Zealand.

2018 Role of the Brain Angiotensin System in Chronic Intermittent Hypoxia Induced Hypertension, Angiotrensin Gordon Research Conference, Ventura, CA

2019 Sex differences in a model of hyponatremia, The neurohumoral control of body fluid and cardiovascular homeostasis in males and female-svive la difference, Ferreyra Institute (INIMEC-CONICET-UNC), Cordoba, Argentina.

Outreach Presentations

2011 Cunningham, JT . Cardiovascular Research at UNT Helath Science Center /American Heart Assoication Research Reception, Fort Worth, State, TX

2015 Cunningham, JT **The Role of the Central Nervous System in Hypertension Associated with Sleep Apnea**./DFW Mensa Chapter, Arlington, TX