Curriculum Vitae

John W. Osborn
Professor
Marvin and Hadassah Bacaner Chair in Cardiovascular Physiology
University of Minnesota

Work Address

University of Minnesota
Department of Integrative Biology and Physiology
321 Church St. SE
Rm. 6-125 Jackson Hall
Minneapolis, MN 55455
Phone: (612) 624-3074
FAX: (612) 625-5149
E-mail: osbor003@umn.edu

Education

1986 - 1988	Johns Hopkins School of Medicine- Biomedical Engineering Post-doctoral Fellowship
1981 - 1986	Medical College of Wisconsin - Physiology - Ph.D.
1977 - 1981	Michigan State University - Physiology - B.S.

Academic Appointments

2006 -	Adjunct Faculty Member Department of Pharmacology and Toxicology Michigan State University
2002 -	Professor and Bacaner Chair in Cardiovascular Physiology Department of Integrative Biology and Physiology University of Minnesota
2003 - 2004	Visiting Professor Department of Physiology University of Auckland Auckland, New Zealand
1997 - 2002	Professor of Physiology Departments of Animal Science and Physiology University of Minnesota
1993 - 1997	Associate Professor of Physiology

Departments of Animal Science and Physiology
University of Minnesota

1992 - 1993 Assistant Professor
Department of Physiology
University of Minnesota

1991 - 1993 Assistant Professor
Department of Animal Science
University of Minnesota

1988 - 1991 Assistant Professor
Department of Veterinary Biology
University of Minnesota

1987 - 1988 Research Associate
Department of Biomedical Engineering
Johns Hopkins School of Medicine
Baltimore, MD

1986 - 1987 Postdoctoral Fellow
Biomedical Engineering
Johns Hopkins School of Medicine
Baltimore, MD

Graduate Programs

2008 - Director of Graduate Studies
Graduate Program in Integrative Biology and Physiology

1992 - Graduate Program in Cellular and Integrative Physiology
University of Minnesota

Graduate Program in Animal Physiology
University of Minnesota

1989 - Graduate Program in Neuroscience
University of Minnesota

1988 - Graduate Program in Molecular Veterinary Biosciences (formerly Veterinary Biology)
University of Minnesota

Teaching Experience

2005 - Lecturer
Medical Physiology
Medical School

University of Minnesota

2003 - Lecturer
Physiology
School of Pharmacy
University of Minnesota

1995 - Course Co-director and Lecturer
Central Regulation of Autonomic Function (NSc-8222)
Graduate Program in Neuroscience
University of Minnesota

1992 - 1995 Lecturer
Medical Physiology (Phsl 5110)
Medical School
University of Minnesota

1991 - 2002 Lecturer
Systemic Physiology (AnSci 3301)
College of Agriculture
University of Minnesota

1988 - 2002 Course Director and Lecturer
Veterinary Physiology (VB 5306)
College of' Veterinary Medicine
University of Minnesota

1986 - Lecturer
Advanced Cardiovascular Physiology
School of Medicine
Georgetown University

Research Trainees

Post-doctoral fellows

Frederic Jacob, D.V.M., Ph.D.; 2002-2005.
Currently in private practice.

Michael Hendel, M.D., Ph.D. 2006-2007.
Currently Orthopedic Surgical Resident, Hospital for Special Surgery, New York.

Misa Yoshimoto, Ph.D. 2006-2008.
Currently Research Scientist, National Cerebral and Cardiovascular Center, Osaka, Japan.

Doctoral students

Kendrick Trostel, M.D., Ph.D. (1989-1992)

Currently physician in private practice, Madison, WI.
Dissertation title: “Submedullary sympathetic nerve activity in conscious rats”

Scott Carlson, Ph.D. (1992-1996)
Currently Professor of Biology, Luther College, IA
Dissertation title: “The role of peripheral osmoreceptors in the control of arginine vasopressin release”

David Slovut, M.D., Ph.D. (1995-1998)
Currently Associate Professor of Clinical Cardiovascular and Thoracic Surgery, Department of Cardiovascular and Thoracic Surgery (Vascular Surgery), Albert Einstein College of Medicine.
Dissertation title: “Mechanisms of heart rate variability after cardiac allograft transplantation”

John Collister, D.V.M., Ph.D. (1994-1999)
Currently Associate Professor of Veterinary PathoBiology (with tenure), University of Minnesota
Dissertation title: “Angiotensin II – Neural interactions in cardiovascular control”

Joanna Abrams, Ph.D. (2004-2008)
Currently Faculty, Science/Physical Education, St. Louis Community College
Dissertation title: The effect of mineralocorticoid treatment on sodium homeostasis and cardiovascular function in the rat: a role for brain benzamil-sensitive proteins

Britta Veitenheimer, Ph.D. (2006-2012)
Currently, Faculty, Bard College. Dissertation title: Spinal regulation of sympathetic nerve activity and arterial pressure under conditions of increased plasma osmolality

Viktoria Averina, Ph.D. candidate, in progress.

Marcos Kuroki, MD, PhD candidate, in progress.

Jason Foss, Ph.D. candidate, in progress.

Masters of Science Students

Deborah M. Fine, D.V.M., M.S. (2002-2004)

Kelly Wei, Ph.D., M.S. (2007-2010)

Marina Brockway, Ph.D., M.S. candidate, in progress.

Medical Students

Opeyemi Daramola, 2st year Medical Student (2005). Mr. Daramola received a grant from the Minnesota Medical Foundation “Effects of intracerebroventicular benzamil blockade of

sodium channels on the systemic hemodynamic profile of DOCA-salt induced hypertension."

Undergraduate Students

Lori Bremer, Honors Student (Animal Science,1998)
Honors Thesis Title: "The role of hepatoportal osmoreceptors in the long-term control of arterial pressure"

Aida Attar, Honors Student (Neuroscience, 2007)
Honors Thesis Title: "Central administration of benzamil mitigates DOCA-salt hypertension by abating activity in the paraventricular nucleus".

Valerie Grant (University of Michigan), Life Sciences Summer Undergraduate Research Programs visiting student, 2007.

Myraida Rodriquez, (University of Puerto Rico), Life Sciences Summer Undergraduate Research Programs visiting student, 2008.

Research and Teaching Honors and Awards

2002 - present	Marvin Bacaner Endowed Chair in Cardiovascular Physiology Academic Health Center University of Minnesota
1998 - 2002	National Institutes of Health Experimental Cardiovascular Sciences Study Section Regular Member Washington, D.C.
2001	National Basic Science Teacher of the Year American Veterinary Medical Association Boston, MA
2000	Class of 2003 Outstanding Teaching Award College of Veterinary Medicine University of Minnesota
1999	Class of 2002 Outstanding Teaching Award College of Veterinary Medicine University of Minnesota
1998	Class of 2001 Outstanding Teaching Award College of Veterinary Medicine University of Minnesota
1997	Elected Fellow of Council for High Blood Pressure Research American Heart Association

1996 Young Investigator Award in Regulatory and Integrative Physiology
American Physiological Society
Washington, D.C.

1993 Distinguished Teacher of the Year
College of Agriculture
University of Minnesota

1984 Julius Babush Award for Excellence in Scientific Research and Teaching
Department of Physiology
Medical College of Wisconsin

University, Collegiate and Departmental Service

2013-present 3M Fellowship Selection Committee
Academic Health Center

2012-present Milne-Brandenburg Selection Committee
Academic Health Center

2009 – present MD/PhD Training Program
Steering Committee

2008 - present Director of Graduate Studies
Graduate Program in Integrative Biology and Physiology

2008 Steering Committee
Lillehei Heart Institute
University of Minnesota

2006 Search Committee Member
Head Integrative Biology and Physiology
Medical School

2006 Interviewer
Medical School Admissions
University of Minnesota

2004 Examination and Curriculum Committee
Graduate Program in Neuroscience
University of Minnesota

2003 Task Force; Graduate Program in Cellular and Integrative Physiology Chair
University of Minnesota

2003 Review Committee
Steer-Pruitt Award in Cardiovascular Research
Minnesota Medical Foundation

2003	Awards and Recognition Committee Graduate Program in Neuroscience University of Minnesota
2003	Steering Committee Lillehei Heart Institute University of Minnesota
2001- 2002	Faculty Consultative Committee Department of Animal Science University of Minnesota
2000	Physiology Industrial Advisory Board Medical School University of Minnesota
1997 - 2000	Tenure and Promotion Committee Department of Animal Science University of Minnesota
1997 - 2000	College of Veterinary Medicine Research Committee University of Minnesota
1996	Departmental Head Search Committee College of Agricultural, Food and Environmental Sciences University of Minnesota
1995	Strategic Planning Committee Department of Animal Science University of Minnesota
1994 - 1995	Faculty Consultative Committee Department of Animal Science University of Minnesota
1994	Admissions Committee Graduate Program in Cellular and Integrative Physiology University of Minnesota
1993 - 1994	Student Perspectives Committee Department of Animal Science University of Minnesota
1993 - 1994	Long Range Planning Committee Graduate Program in Physiology University of Minnesota

1991 - 1993 Chair, Animal Care Committee
College of Veterinary Medicine
University of Minnesota

1990 Salary Adjustments Committee
Department of Veterinary Biology
College of Veterinary Medicine
University of Minnesota

1989 – 1990 Research Committee
College of Veterinary Medicine
University of Minnesota

Research Grants

2013-2017 "Targeted Sympathetic Ablation for Treatment of Hypertension"
National, Heart, Lung and Blood Institute, National Institutes of Health
Grant No. R01 HL116476
Total Direct Costs: $1,396,772
Principal Investigator

2012- 2015 "NPY, Neurovascular Niches and Stress-Induced Remodeling of Adipose Tissue"
National Heart, Lung and Blood Institute, National Institutes of Health
Grant No. R01 HL067357-13
Total Direct Costs: $750,00
Principal Investigator (PI transfer following passing of Dr. Zukowska in 2012)

2004 - 2010 "Long-term Neural Determinants of Cardiovascular Diseases"
National Heart, Lung and Blood Institute, National Institutes of Health
Grant No. R01 HL076312
Total Direct Costs: $5,890,497
Program Director: Neurogenic Cardiovascular Diseases Consortium

2000 - 2012 "Neural Mechanisms of Long-Term Cardiovascular Control"
National Heart, Lung and Blood Institute, National Institutes of Health
Grant No. R01 HL64176-05
Total Direct Costs: $3,000,000
Principal Investigator

1992 - 2002 "Nutritional Determinants of Cardiovascular Disease"
Minnesota Agricultural Experimental Station
Total Direct Costs: $280,000
Principal Investigator

1998 - 2003 AngII-Neural Interactions in Cardiovascular Control
Mentored Clinical Scientist Award (John P. Collister)
Grant No. K08 HL03790
National Heart, Lung and Blood Institute, National Institutes of Health

Total Direct Costs: $379,204
Mentor

1993 - 1998 “Hormonal Sympathetic Interactions in Hypertension”
National Heart, Lung and Blood Institute, National Institutes of Health
Grant No ROI HL50371
Total Direct Costs: $1,180,000
Principal Investigator

1994 “Blood Flow Telemetry Implant”
National Heart, Lung and Blood Institute, National Institutes of Health
Grant No. R43 HL 52399 (Small Business Grant)
Co-Investigator with Data Sciences International

1988 - 1993 “Arterial Pressure in Paraplegia: Role of Spinal Systems"
National Heart, Lung and Blood Institute, National Institutes of Health
Grant No R29 HL39619
Total Direct Costs: $1,250,000
Principal Investigator

1990 - 1991 “Role of Peripheral Sodium Receptors in Salt-Sensitive Hypertension."
Grant-In-Aid, University of Minnesota Graduate School.
Total Direct Costs: $5,000
Principal Investigator

1988 - 1989 “Mechanisms of Neurogenic Hypertension"
Grant-In-Aid, University of Minnesota Graduate School
Total Direct Costs: $19,905
Principal Investigator

Professional Societies

American Physiological Society
Society for Neuroscience
American Association for the Advancement of Science
American Society of Hypertension

National and International Symposia and Conferences

1990 Speaker, FASEB Summer Research Conference on Neural Mechanisms of Cardiovascular Regulation. "Spinally Generated Sympathetic Nerve Activity: Is it Functionally Significant?" Saxtons River, VT.

1996 Organizer and Chair, Experimental Biology (American Physiological Society) "Central Mechanisms of Long-Term Arterial Pressure Regulation: A New Perspective,” Washington D.C.

1996 Speaker, Annual Meeting of The American Association of Laboratory Animal Science, “Telemetry in Laboratory Animal Science: Past, Present and Future.” Minneapolis, MN

1997 Speaker, International Society for Autonomic Neuroscience, "Peripheral Osmoreceptor and Ang II Inputs to the Area Postrema: Are They Important in Long-Term Control of Arterial Pressure During Changes in Salt- Intake?" Cairns, Australia.

1998 Co-Chair and Speaker, III International Congress of Pathophysiology, "Neurogenic Mechanisms of Salt-Dependent Hypertension," Lahti, Finland.

1999 Session Organizer and Chair, FASEB Summer Research Conference on Neural Mechanisms of Cardiovascular Regulation. “Neurogenic Models for Long-Term Control of: Arterial Pressure," Saxtons River, VT.

2000 Organizer and Chair of Featured Topics Session
“Salt, Sympathetic Nervous System and Hypertension”
Annual Meeting of Experimental Biology, San Diego, CA

2001 Keynote Speaker, “Cardio-Renal Control in Health and Disease” Satellite Meeting of the XXXIV International Congress of Physiological Sciences, Queenstown, New Zealand

Invited Speaker, “Central Mechanisms of Cardiovascular Control” Satellite Meeting of the XXXIV International Congress of Physiological Sciences, Sydney, Australia

Invited Speaker, “Homeostatic Mechanisms Regulating Body-Fluid Balance”, Heron Island, Australia.

2004 Invited Speaker, “Role of baroreceptor reflexes in the long-term control of arterial pressure”, Symposium at the Annual Meeting of Experimental Biology, Washington, D.C.

2005 Invited Speaker, Homeostatic Mechanisms in Regulating Body-Fluid Balance, Belize.

Keynote Speaker, Physiology Meeting and Workshop on Cardiovascular Diseases, Srinakharinwirot University, Bangkok, Thailand

Invited Speaker, Chulalongkorn University, Bangkok, Thailand

Invited Speaker, 8th Meeting of Total Solution of Laboratory Animal Science, Tokyo, Japan

2006 Keynote Speaker, 10th Annual Iowa Physiological Society Meeting, Iowa City, IA

2007 Faculty, American Heart Association 6th Hypertension Summer School, Fort Collins, CO

2008 Invited Speaker, Joint meeting of The American Society of Hypertension and The AHA Council for High Blood Pressure Research, New Orleans, LA

Co-Organizer and Speaker, "2nd Cardiovascular Control Conference", Tamil Nadu, India

2009 Co-Chair and Speaker, Experimental Biology Symposium, "Organ Specific Regulation of Sympathetic Nerve Activity in Health and Disease", New Orleans, LA

Invited Speaker, International Union of Physiological Societies Meeting, "Neurogenic Hypertension", Kyoto, Japan.

2010 Invited Speaker, FASEB Summer Conference on Neural Control of the Circulation, Saxtons River, VT

2012 Co-Chair, 1st Medtronic Sympathetic Nervous System Scientific Summit, Prague, Czech Republic

Invited Speaker, Meeting of the Korean Society of Hypertension, Seoul, Korea.

2013 Invited Faculty, International Symposium on Endovascular Therapy, Miami, FL

Co-Chair, 2nd Medtronic Sympathetic Nervous System Scientific Summit, Rome, Italy

Invited Speaker, Symposium on Sympathetic Activity in Blood Pressure Regulation: Sodium and Hormonal Mechanisms, Experimental Biology, Boston, MA

Chair and Invited Speaker, FASEB Summer Conference on Neural Control of the Circulation, Glenden Beach, OR

Invited Seminars

1987 Georgetown University School of Medicine, Department of Physiology
Albany Medical College, Department of Pharmacology
Northeastern Ohio Universities School of Medicine, Department of Physiology
University of Minnesota, Department of Veterinary Biology
Medical College of Wisconsin, Department of Anesthesiology

1989 Hennepin County Medical Center, Regional Kidney Disease Program
Medical College of Wisconsin, Department of Physiology.

1991 University of Minnesota, Department of Physiology

1992 Sister Kenny Institute, Abbott Northwestern Hospital, Spinal Cord Injury Program
Medical College of Wisconsin, Department of Physiology

1994 Medical College of Ohio, Department of Physiology
Northwestern University Medical School, Department of Physiology

1995 University of Wisconsin, Department of Comparative Biosciences
Medical College of Wisconsin, Department of Physiology
Mayo Clinic, Department of Pharmacology
Michigan State University, Graduate Program in Neuroscience

1996 Oregon Health Sciences University, Department of Physiology
University of Saskatchewan, Department of Pharmacology

1998 University of Warsaw, Department of Physiology, Warsaw, Poland

2001 Michigan State University, Cardiovascular Research Center, Distinguished Lectureship Series

2002 Medical College of Wisconsin, Department of Physiology

2003 University of Minnesota, Department of Physiology
University of Mississippi, Department of Physiology and Biophysics
Georgetown University School of Medicine, Department of Physiology

2004 University of Auckland, New Zealand, Department of Physiology
University of Auckland, New Zealand, Biomedical Engineering Institute
Monash University, Australia, Department of Physiology
Howard Florey Institute of Physiology, Melbourne, Australia

2005 St. Louis University, Department of Physiology and Pharmacology
University of Minnesota, Lillehei Heart Institute
Medtronic, Minneapolis, MN
Guidant Corporation, Minneapolis, MN
Neurology Grand Rounds, University of Minnesota

2006 Nara Womens University, Department of Physiology, Nara, Japan
Michigan State University, Department of Pharmacology
University of Minnesota, Lillehei Heart Institute

2007 University of Minnesota, College of Veterinary Medicine

2009 Medtronic Hypertension Summit

2010 Michigan State University, Neuroscience Program
2012 Wayne State University, Department of Physiology
University of Minnesota, City Wide Endocrine Conference

2013 University of Oregon, Department of Human Physiology

Grant Peer Review Committees and Study Sections

1990 Spinal Cord Research Foundation
Washington D.C.

1990 - 94 American Heart Association (Minnesota Affiliate)
Minneapolis, MN

1996 - 98 American Heart Association
Cardiovascular Regulation I Study Committee
National Center
Dallas, TX

1998 - 02 National Institutes of Health
Regular member
Experimental Cardiovascular Sciences Study Section
Washington, D.C.

2003 National Institutes of Health
Ad Hoc Reviewer, Program Project Grant
"Exercise and Sympathetic Activity"
Principal Investigator: Donal O'Leary
Wayne State University

National Institutes of Health
Ad Hoc Reviewer, Program Project Grant
"Integrative Cardiovascular Dynamics"
Principal Investigator: John Hall
University of Mississippi

2005 National Institutes of Health
Chair of Special Emphasis Review Panel
Heart, Lung and Blood Institute
"Arterial 5-HT Transport"

2006 National Institutes of Health
Chair of Special Emphasis Review Panel
Heart Lung and Blood Institute
"Renin-Angiotensin-Aldosterone System, Hypertension and Microcirculation"

2007 American Heart Association-National
Vascular Biology and Blood Pressure Study Section
Dallas, TX

2012 National Institutes of Health
Heart, Lung and Blood Institute
Special Emphasis Panel
Vascular Innovations and Therapeutic Advances (VITA)

2013 National Institutes of Health
Ad Hoc Reviewer, Program Project Grant

Salt-Dependent Hypertension: Integration of CNS, Vasculature and Kidneys
Principal Investigator: Mordecai Blaustein
University of Maryland

Journal Referee

American Journal of Hypertension
American Journal of Physiology (Heart and Circulation)
American Journal of Physiology (Regulatory, Integrative and Comparative Physiol)
Canadian Journal of Physiology and Pharmacology
Cardiovascular Research (London)
Circulation Research
Diabetes
European Journal of Pharmacology
Hypertension
Journal of Molecular and Cellular Cardiology
Journal of Pharmacology and Experimental Therapeutics
Journal of Physiology (London)
Proceedings of the Society of Experimental Biology and Medicine
Journal of Laboratory and Clinical Medicine

Editorial Boards

2010 - Associate Editor, *Frontiers in Integrative Physiology*

2009 - 2012 Editor, *Experimental Physiology*

2006- Faculty of 1000

1994 - 2002 Editorial Board, *American Journal of Physiology (Regulatory, Integrative and Comparative Physiology)*

1994 - 1995 Associate Editor, Publications Committee, Council for High Blood Pressure Research, American Heart Association

Service for Scientific Societies

1997 - 1999 Program Committee Member, Council for High Blood Pressure Research, American Heart Association

PUBLICATIONS
(abstracts not included)

1. Fink, G., W. Bryan, **J. Osborn**, and A. Werber. Cardiovascular and fluid homeostasis in rats with hypertension produced by aortic baroreceptor deafferentation. In: Arterial Baroreceptors and Hypertension. Edited by P. Sleight. Oxford, Oxford University, pp. 425-429, 1980.
2. Fink, G., W. Bryan, M. Mann, **J. Osborn** and A. Werber. Continuous blood pressure measurement in rats with aortic baroreceptor deafferentation. Am. J. Physiol, 241 (Heart Circ. Physiol.10):H268-H272, 1981. PMCID: PMC7270715.
3. Cowley, A.W., Jr., D. Merrill, **J. Osborn** and B.J. Barber. Influence of vasopressin and angiotensin on baroreflexes in the dog. Circ. Res. 54:163-172, 1984. PMCID: PMC6692503.
4. Cowley, A.W., Jr., J.F. Liard, M.M. Skelton, E.W. Quillen, Jr., **J.W. Osborn** and R.L. Webb. Vasopressin-neural interactions in the control of cardiovascular function. In: Vasopressin- Edited by R. Schrier, Raven Press, pp. 1-10, 1985.
5. **Osborn, J.W**., B.J. Barber, E.W. Quillen, Jr., R.J. Abram and A.W. Cowley. Chronic measurement of cardiac output in unanesthetized rats using miniature thermocouples. Am. J. Physiol. 251 (6):HI365-H1372, 1986. PMCID: PMC3789186.
6. Webb, R.L., **J.W. Osborn** and A.W. Cowley, Jr. Cardiovascular actions of vasopressin: baroreflex modulation in the conscious rat. Am. J. Physiol, 251 (6):H1244-HI251, 1986. PMCID: PMC3789178.
7. **Osborn, J.W.**, M.M. Skelton and A.W. Cowley, Jr. Hemodynamic effects of arginine vasopressin compared to angiotensin II in conscious rats. Am. J. Physiol, 252 (Heart Circ. Physiol. 21): H628-H637, 1987. PMCID: PMC3826404.
8. **Osborn, J.W.**, J. F. Liard and A.W. Cowley, Jr. Effect of AVP on pressor responses to peripheral sympathetic stimulation in the rat. Am. J. Physiol, 252 (Heart Circ. Physiol. 21): H675-H680, 1987. PMCID: PMC3565586.
9. **Osborn, J.W.**, R. Livingstone and L.P. Schramm. Elevated renal nerve activity after spinal transaction: its effects on renal function. Am. J. Physiol. 253 (Regulatory Integrative Comp. Physiol. 22):R619-R625, 1987. PMCID: PMC3661757.
10. Nakamura, K., **J.W. Osborn,** and A.W. Cowley, Jr. Pressor responses to small elevations of cerebroventricular pressure in conscious rats. Hypertension 10: 635-641, 1987. PMCID: PMC3692574.
11. **Osborn, J.W.**, R. Taylor and L.P. Schramm. Determinants of arterial pressure after chronic spinal transection in rats. Am. J. Physiol, 256:R666-R673, 1989. PMCID: PMC2923255.
12. Hinojosa-Laborde, C., **J.W. Osborn,** and A.W. Cowley, Jr. Hemodynamic effects of endothelin in conscious rats. Am. J. Physiol, 256 (Heart Circ. Physiol. 25):HI742-746, 1989. PMCID: PMC2660597.
13. **Osborn, J.W.**, R. F. Taylor and L.P. Schramm. Chronic cervical spinal cord injury and autonomic hyperreflexia in the rat. Am. J. Physiol. 258:RI69-RI74, 1990. PMCID: PMC2301629.
14. **Osborn, J.W.**, and S.K. England. Normalization of arterial pressure after barodenervation: Role of pressure natriuresis. Am. J. Physiol. 259:R 1172-R1180, 1990. PMCID: PMC2260728.
15. Trostel, K., S. Katz and **J. W. Osborn,** Functional evidence for sympathetic nerve activity in conscious cervical spinal rats. Am. J. Physiol, 261:R434-R441, 1991. PMCID: PMC1877700.
16. **Osborn, J.W.** Pathogenesis of hypertension in the sinoaortic-denervated spontaneously hypertensive rat. Hypertension 18:475-482, 1991. PMCID: PMC1916992.
17. **Osborn, J.W.,** and B.J. Provo. Salt-dependent hypertension in the sinoaortic denervated rat. Hypertension 19:658-662, 1992. PMCID: PMC1592463.
18. Trostel, K. and **J. W. Osborn.** Do renal nerves chronically influence renal function and arterial pressure in spinal rats? Am. J. Physiol. 263:R1265-R1270, 1992. PMCID: PMC1481937.
19. **Osborn, J.W.**, B.J. Provo, J. Montana and K. Trostel. Salt-sensitive hypertension caused by chronic alpha-adrenergic blockade in the rat. Hypertension 21:995-999, 1993. PMCID: PMC8099346.

20. Trostel, K.A. and **J.W. Osborn, Jr.** Does the spinal cord generate functionally significant sympathetic activity in the awake rat? Am. J. Physiol. 266: R1102-R1110, 1994. PMCID: PMC7910433.
21. Santajuliana, D., Z. Zukowska-Grojec and **J.W. Osborn.** Contribution of alpha and beta adrenoceptors and neuropeptide-Y to autonomic dysreflexia. Clin. Autonomic Res, 5:91-97, 1995. PMCID: PMC7620299.
22. Brooks, V.L. and **J.W. Osborn.** Hormonal-sympathetic interactions in long-term regulation of arterial pressure: An hypothesis. Am. J. Physiol. 268:R1343-R1358, 1995. PMCID: PMC7611509.
23. Collister, J.P., B.J. Hornfeldt and **J.W. Osborn.** Hypotensive response to losartan in normal rats: Role of AII and the area postrema Hypertension 27:598-606, 1996. PMCID: PMC8613210.
24. Santajuliana, D., and B.J. Hornfeldt, **J. W. Osborn.** Use of ganglionic blockers to assess neurogenic pressor activity in conscious rats J.Pharm.Tox.Methods 35:45-54, 1996. PMCID: PMC8645881.
25. Tjen-A-Looi, S., R. Ekrnan, **J.W. Osborn** and I. Keith. Pulmonary vascular pressure effects by endothelin-1 in normoxia and chronic hypoxia: A longitudinal study Am. J. Physiol., 271: H2246-H2253, 1996. PMCID: PMC8997280.
26. Carlson, S., A. Beitz and **J.W. Osborn.** Intragastric hypertonic saline increases vasopressin and central Fos immunoreactivity in conscious rats. Am. J. Physiol. 272:R750-R758, 1997. PMCID: PMC9087636.
27. **Osborn, J.W**. The sympathetic nervous system and long-term control of arterial pressure: What are the critical questions? Clin. Exp. Pharm. Phys, 24:68-71, 1997. PMCID: PMC9043808.
28. **Osborn, J.W.** Hormones as long-term error signals for the sympathetic nervous system: Importance of a new perspective. Clin. Exp. Pharm. Phys. 24:109-115, 1997. PMCID: PMC9043815.
29. Collister, J.P. and **J.W. Osborn.** Area postrema lesion attenuates the long-term hypotensive effects of losartan in salt-replete rats. Am. J. Physiol. 274:R357-R366, 1998. PMCID: PMC9486292.
30. Carlson, S. and **J.W. Osborn.** Splanchnic and vagal denervation attenuate central Fos but not AVP responses to intragastric salt in rats Am. J. Physiol. 274:R1243-R1252, 1998. PMCID: PMC9644036.
31. Xu, L., J.P. Collister, **J.W. Osborn** and V.L. Brooks. Endogenous ANG II supports lumbar sympathetic activity in conscious sodium-deprived rats: role of area postrema. Am.J. Physiol 275: R46-R55, 1998. PMCID: PMC9688959.
32. Carlson, S., **J. W. Osborn** and J. M.Wyss. Hepatic denervation produces chronic hypertension in Wistar-Kyoto rats. Hypertension 32:46-51, 1998. PMCID: PMC9674636.
33. Slovut, D.P., I.C. Wenstrom, R.B. Moeckel, R.F. Wilson, **J.W. Osborn** and J.H. Abrams. Respiratory sinus arrhythmia persists in transplanted human hearts following autonomic blockade. Clin. Exp. Pharm. Physiol 25:322-330, 1998. PMCID: PMC9612658.
34. **Osborn, J.W**. and B.J. Hornfeldt. Arterial baroreceptor denervation impairs long-term control of arterial pressure during dietary salt loading Am. J. Physiol. 275:H I 558-H1566, 1998. PMCID: PMC9815061.
35. Carlson, S.H., Collister, J.P. and **J.W. Osborn.** The area postrema modulates hypothalamic Fos responses to intragastric hypertonic saline in conscious rats. Am.J.Physiol. 275:RI921-RI927, 1998. PMCID: PMC9843881.
36. Collister, J.P. and **J.W. Osborn.** The area postrema does not modulate long-term salt-sensitivity of arterial pressure. Am. J. Physiol. 275:RI209-RI217, 1998. PMCID: PMC9756552.

37. Slovut, D.P., J.C. Wenstrom, R.B. Moeckel, C.T. Salerno, S.J. Park and **J.W. Osborn.** Beat-to-beat modulation of heart rate is coupled to coronary perfusion pressure in the isolated heart. J. Appl. Physiol.86 (2): 694-700, 1999. PMCID: PMC9931210.
38. Collister, J.P. and **J.W. Osborn**. The chronic infusion of hexamethonium and phenylephrine to effectively clamp sympathetic vasomotor tone: A novel approach. J. Pharmacol.Toxicol. 42:135-147, 1999. PMCID: PMC10964011.
39. **Osborn, J.W.**, J.P. Collister and S.H. Carlson. Angiotensin and osmoreceptor inputs to the area postrema: Role in long-term control of fluid homeostasis and arterial pressure. Clin. Exp. Pharm. Physiol. 27:443-449, 2000. PMCID: PMC10831251.
40. Collister, J.P., S. L. Soucheray and **J.W. Osborn**. The chronic hypotensive effects of losartan are not dependent on the actions of angiotensin II at AT2 receptors. J.Cardiovasc.Pharm. 39:107-116, 2002. PMCID: PMC11743233.
41. Jacob, F., P. Ariza and **J. W. Osborn.** Renal denervation chronically lowers arterial pressure independent of salt intake in normal rats. Am. J. Physiol., 284:H2302-H2310, 2003. PMCID: PMC12609824.
42. **Osborn, J.W.**, P.A. Ariza-Nieto J.P. Collister, S. Soucheray, B. Zimmerman and S. Katz. Responsiveness versus Basal Activity of Plasma Angiotensin II as a Determinant of Arterial Pressure Salt-Sensitivity. Am.J. Physiol., H2142-H2149, 2003. PMCID: PMC12881218.
43. Fine, D., P. Ariza and **J.W. Osborn**. Does whole body autoregulation mediate the hemodynamic responses to increased dietary salt in rats with clamped angiotensin II? Am.J.Physiol. 285:H2760-H2678, 2003. PMCID: PMC12907421.
44. Wotus, C. W., **J. W. Osborn**, P. Ariza and W. C. Engeland. Regulation of corticosterone production by vasopressin during water-restriction and after drinking in rats. J. Neuroendocrinology 78:301-311, 2003. PMCID: PMC14688443.
45. **Osborn, J.W**., F. Jacob and P. Guzman. A neural set point for long-term control of arterial pressure: beyond the arterial baroreceptor reflex. Am. J. Physiol. 288:R846-R855, 2005. PMCID: PMC15793038.
46. **Osborn, J.W.** Set points and long-term control of arterial pressure: A theoretical argument for a long-term arterial pressure control system in the brain rather than the kidney. Clin. Exp. Physiol. Pharmacol. 32:384-394, 2005. PMCID: PMC15854147.
47. Evans, R.G., S.C. Malpas, **J.W. Osborn** and G.D. Fink. Neural, hormonal and renal interactions in long-term blood pressure control. Clin.Exp.Physiol.Pharm. 32:372-373, 2005. PMCID: PMC15854144.
48. Jacob, F., B.G. LaBine, P. Ariza, S.A. Katz and **J.W.Osborn**. Renal denervation causes chronic hypotension in rats: role of beta-1 adrenoceptor activity. Clin. Exp. Physiol. Pharm. 32: 255-262, 2005. PMCID: PMC15810988.
49. Collister, J.P. and **J.W. Osborn**. Role of a responsive sympathetic nervous system in the chronic hypotensive effects of losartan in normal rats. J.Cardiovasc. Pharm. 46:147-154, 2005. PMCID: PMC16044025.
50. Jacob, F., L.A. Clark, P.A. Guzman and **J.W. Osborn**. Role of renal nerves in the development of hypertension in the DOCA-salt model in rats: A telemetric approach. Am.J.Physiol. 289: H1519-H1529, 2005. PMCID: PMC15937098.
51. **Osborn, J. W.**, Jacob, F. M. Hendel, J.P. Collister, L.A. Clark, P. Guzman. Effect of subfornical organ lesion on the development of mineralocorticoid-salt hypertension. Brain Research 1109: 74-82, 2006. PMCID: PMC16859651.
52. McBryde, F., S. J. Guild, C. Barrett, **J. Osborn** and S. Malpas. Angiotensin II-based hypertension and the sympathetic nervous system – The role of dose and increased dietary salt. Exp. Physiol. 92.5: 831-840, 2007. PMCID: PMC17468201.

53. **Osborn, J.W.**, Gregory D. Fink, Alan F. Sved, Glenn M. Toney and Mohan K. Raizada. Circulating angiotensin II and dietary salt: converging signals for neurogenic hypertension. Current Hypertension Reports. 9: 228-235, 2007. PMCID: PMC17519130.
54. King, A., **J. Osborn** and G. Fink. Splanchnic circulation is a critical neural target in angiotensin II-salt hypertension in rats. Hypertension. 50(3);547-556, 2007. PMCID: PMC17646575.
55. Fink, G., M. Li, Y. Lau, **J. Osborn**, S. Watts. Chronic activation of endothelin Et_b receptors: a new model of experimental hypertension. Hypertension 50(3): 512-518, 2007. PMCID: PMC17664390.
56. **Osborn, J.W.,** P. Ariza, J.P. Collister Effect of sympathetic dysfunction on salt-sensitivity of arterial pressure: A re-evaluation. Clin. Exp. Physiol. Pharm. 35(3):273-9, 2008. PMCID: PMC17973927.
57. Abrams, J. and **J. W. Osborn.** Role of benzamil blockable sodium channels in the brain in salt-sensitive hypertension. Clin. Exp. Physiol. Pharm. 35(5-6):687-694, 2008. PMCID: PMC18387084.
58. Yoshimoto, M., E.A. Wehrwein, M. Novotny, G. M. Swain, D. L. Kreulen and **J. W. Osborn.** Effect of stellate ganlionectomy on basal cardiovascular function and responses to chronic β_1 adrenoceptor blockade in the rat. Am J. Physiol. H2447-H2454, 2008. PMCID: PMC2614551
59. **Osborn, J.W.**, V. A. Averina and G. D. Fink. Current mathematical models do not reveal the importance of the nervous system in long-term control of arterial pressure. Exp Physiol. 94 (4): 381-397, 2009. PMCID: PMC2684060
60. **Osborn, J.W.** V. A. Averina and G. D. Fink. Commentary on 'Understanding the contribution of Guyton's large circulatory model to long-term control of arterial pressure'. Exp Physiol. 94 (4): 388-389, 2009.
61. M.M. Knuepfer and **J.W. Osborn.** Direct assessment of organ specific sympathetic nervous system activity in normal and cardiovascular disease states. Exp Physiol. 95(1): 32-33, 2010.
62. **Osborn, J.W.** and G.D. Fink. Region specific changes in sympathetic nerve activity in AngII-salt hypertension in the rat. Exp Physiol. 95(1): 61-68, 2010.
63. Yoshimoto, M., K. Miki, G. D. Fink, A. King and **J. W. Osborn.** Chronic angiotensin II infusion causes differential responses of regional sympathetic activity in rats. Hypertension, 55: 644-651, 2010.
64. Charkoudian, N., E. Gusman, M.J. Joyner, B.G. Wallin and **J. Osborn.** Integrative mechanisms of blood pressure regulation in humans and rats: cross-species similarities. Am. J. Physiol. 298: R755-R759, 2010.
65. Toney, G. M.**,** G. R. Pedrino**,** G. D. Fink and **J. W. Osborn.** Does enhanced respiratory-sympathetic coupling contribute to peripheral neural mechanisms of AngII-salt hypertension? Exp Physiol. 95(5): 587-594, 2010.
66. Charkoudian, N., B. G. Wallin, M.J. Joyner and **J. Osborn.** Inter-individual heterogeneity in integrative physiology. Am. J. Physiol. 298: R1706, 2010.
67. Abrams, J., W. Engeland and **J. W. Osborn**. Effect of intracerebroventricular benzamil on cardiovascular and central autonomic responses to DOCA-salt treatment. Am. J. Physiol. 299: 1500-1510, 2010.
68. **Osborn, J.W.** and G.D. Fink. Comments on Point:Counterpoint: The dominant contributor to systemic hypertension:Chronic activation of the sympathetic nervous system vs. Activation of the intrarenal renin-angiotensin system. J. Appl. Physiol. 109:2003-2014, 2010.
69. Veitenheimer, B. and **J. W. Osborn.** Role of spinal V1a receptors in mediating regulation of arterial pressure during acute and chronic osmotic stress. Am. J. Physiol. 300:R460-R469, 2011.

70. Xie, X., P. A. Guzman, R. Visweswaran, **J. W. Osborn** and A. G. Talkchova. The effect of cardiac sympathetic denervation through bilateral stellate ganglionectomy on electrical properties of the heart. Am. J. Physiol. 301(1): H192-H199, 2011.
71. **Osborn, J.W.**, G.D. Fink and M. Kuroki. Neural mechanisms of angiotensin II-salt hypertension: Implications for therapies targeting neural control of the splanchnic circulation. Current Hypertension Reports, 13:221-228, 2011.
72. **Osborn, J.W.,** M. Hendel, J.P. Collister and G. D. Fink. Role of the subfornical in angiotensin II-salt hypertension. Exp. Physiol., 97(1): 80-88, 2012.
73. Kuroki, M., G.D. Fink and **J.W. Osborn.** Time dependent changes in autonomic control of splanchnic vascular resistance and heart rate in AngII-salt hypertension. Am. J. Physiol. 302: H763-H769, 2012.
74. Fink, G.D. and **J. W. Osborn.** The splanchnic circulation. In: Primer on the Autonomic Nervous System. Oxford: Academic Press, Ch: 43; pp. 211-214, 2012.
75. **Osborn, J.W.** and M. T. Kuroki. Sympathetic signatures of cardiovascular disease: A blueprint for development of targeted sympathetic ablation therapies. Hypertension. 59: 545-547, 2012.
76. Averina, V., H. Othmer, G. D. Fink and **J. W. Osborn.** A new conceptual paradigm for the hemodynamics of salt-sensitive hypertension: a mathematical modeling approach. J. Physiol., 590(23), 5975-5992, 2012.
77. Veitenheimer, B., G. D. Fink and **J.W. Osborn**. Effect of global and regional sympathetic blockade on regulation of arterial pressure during water deprivation. Am. J. Physiol. 303: H1022-H1034, 2012.
78. Brooks, V. L. and **J.W. Osborn**. High fat food, sympathetic nerve activity and hypertension: Danger lurks with the first bite? Hypertension, 60(6): 1387-1388, 2012.
79. Veitenheimer, B. and **J. W. Osborn**. Effects of intrathecal kynurenate on arterial pressure during chronic osmotic stress in conscious rats. Am. J. Physiol., 304(2): H303-H310, 2013.
80. Foss, J., G.D. Fink and **J. W. Osborn.** Reversal of genetic salt-sensitive hypertension by targeted sympathetic ablation. Hypertension, 61(4) 806-811, 2013.
81. Lund TC, Kobs AJ, Kramer A, Nyquist M, Kuroki MT, **Osborn J**, Lidke DS, Low-Nam ST, Blazar BR, Tolar J. Bone marrow stromal and vascular smooth muscle cells have chemosensory capacity via bitter taste receptor expression. PLoS One. 2013;8(3): e58945, 2013.
82. Sobotka, P.A., **J. W. Osborn** and J.F.R.Paton. Restoring autonomic balance: Future therapeutic targets. Eur. J. Interven. 9 (Suppl R): R140-R148, 2013.
83. Averina, V., H. Othmer, G. Fink and **J. Osborn**. Reply from V. A. Averina, H.G. Othmer, G.D. Fink and J.W. Osborn. J. Physiol. 591 (pt 11) 2965, 2013.
84. Collister, J.P., M. Olson, D. Nahey, A. Vieira and **J. W. Osborn.** OVLT lesion decreases basal arterial pressure and the chronic hypertensive response to AngII in rats on a high salt diet. Physiol. Reports 1(5) e00128, 2013.

In Review

85. Wehrwein, E., M. Yoshimoto and **J. W. Osborn**. Effect of stellate ganglionectomy on DOCA-salt hypertension. Am. J. Physiol.
86. Schlaich, M.P., M.D. Esler, G.D. Fink, **J.W. Osborn** and D.E. Euler. Targeting the sympathetic nervous system: Critical issues in patient selection, efficacy and safety of renal denervation. Hypertension.

In Preparation

87. Abrams, J.**,** L. Clarke, P. Ariza, E. Guzman and **Osborn, J. W.** Long-term dose-response study of DOCA-salt hypertension in the rat. Am.J.Physiol.
88. Guzman, E. and **J. W. Osborn.** Hemodynamic profile of DOCA-salt hypertension in the rat. Am J. Physiol.
89. Hirsch, D. and **J.W. Osborn**. Role of cardiac sympathetic nerves in AngII-salt hypertension. Am. J. Physiol.
90. **Osborn, J.W.,** M. Rodriguez, D. M. Hirsch, P. Guzman, G. M. Toney and G.D. Fink. The neurogenic phase of angiotensin II-salt hypertension is prevented by chronic intracerebroventricular administration of benzamil. Am. J. Physiol.